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**MONEY MARKET FUNDS
IN THE US AND THE EU:
A LEGAL AND COMPARATIVE ANALYSIS**

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PhD

2012

**MONEY MARKET FUNDS
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A LEGAL AND COMPARATIVE ANALYSIS**

VIKTORIA BAKLANOVA, CFA

**A thesis submitted in partial fulfilment of the
Requirements of the University of Westminster
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April 2012

To Cheb and Gena

ABSTRACT

The failure of the Reserve Primary Fund, a US money market fund, in September 2008 triggered a widespread withdrawal of assets from other money market funds in the US. The withdrawals led the US Government to adopt emergency measures to maintain market stability. The ability of money market funds to rapidly withdraw funding from the financial system also showed during the European sovereign debt crisis in the summer of 2011. The crisis prompted further regulatory debate on both sides of the Atlantic on how to make money market funds more resilient to investors' runs and systemic shocks. The solutions that are currently discussed propose to eliminate the essential bank-like feature of money market funds – their ability to transact at a stable share price – and thereby reduce their attractiveness to investors seeking cash management options outside the banking system. This thesis detaches from those discussions originally enquiring on how should money market funds be regulated in the US and in the EU. As a theoretical premise, this research identifies two overarching goals for money market funds regulation, namely, investor protection and systemic stability. The prevalent proposals for regulation are thus seen as misguided because the change in money market funds pricing mechanisms and the accounting convention would demonstrably not satisfy these goals.

In order to formulate the new propositions for the regulation of money market funds in the US and the EU, therefore, this thesis first critically evaluates the existing US and EU regulatory frameworks applicable to money market funds from the standpoint of the dual policy goal of investor protection and systemic stability. Secondly, it introduces an alternative path for achieving this dual goal. It is argued that the blueprint of the international money market fund regulation *ought to* focus on full disclosure of the funds' assets and liabilities – portfolio holdings and fund investors – as the primary measure of investor protection. Such disclosure also addresses systemic stability concerns by empowering regulators to properly monitor the transmission channels of funding risk. While my study does not purport to do away with risk limiting rules for money market funds, it cautions against copying the US-centric view of the investment standards to the much shallower European markets under the banners of harmonisation. Instead, this thesis advocates a harmonised international approach to the *transparency* of money market fund activities and the creation of a global database of market

exposures that would subject asset managers to public scrutiny and enable regulators to monitor the major risk transmitting channels. By these means the dual regulatory goal in money market fund regulation – investor protection and systemic stability – shall be upheld.

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While acknowledging these contributions, I hereby declare that the work is my own.

ABBREVIATIONS

ABCP	Asset-Backed Commercial Paper
ABS	Asset-Backed Securities
AMLF	Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility
CDS	Credit Default Swap
CESR	Commission of European Securities Regulators
CEF	Closed-end Investment Company (Fund)
CNAV	Constant Net Asset Value
CP	Commercial Paper
DJIA	Dow Jones Industrial Average
ECB	European Central Bank
EDGAR	Electronic Data Gathering, Analysis, and Retrieval system
EFAMA	European Fund and Asset Management Association
EONIA	Euro Overnight Index Average
ESMA	European Securities and Markets Authority
EURIBOR	Euro Interbank Offered Rate
FHLMC	Federal Home Loan Mortgage Corporation (Freddie Mac)
FNMA	Federal National Mortgage Association (Fannie Mae)
FR	Federal Register
FRBB	Federal Reserve Bank of Boston
FSA	U.K. Financial Services Authority
FSB	Financial Stability Board
ICA	Investment Company Act of 1940
ICI	Investment Company Institute
IMMFA	International Money Market Fund Association
LIBOR	London Interbank Offered Rate
MiFID	Markets in Financial Investments Directive
MMF	Money Market Fund
MMMF	Money Market Mutual Fund

NAV	Net Asset Value
NBER	National Bureau of Economic Research
NRSRO	Nationally Recognized Statistical Rating Organisation
Repo	Repurchase Agreement
RIC	Registered Investment Company
SEC	US Securities and Exchange Commission
SIV	Structured Investment Vehicle
TAN	Tax Anticipation Note
UCITS	Undertaking for Collective Investments in Transferable Securities
VNAV	Variable Net Asset Value
WAM	Weighted-Average Maturity
WAL	Weighted-Average Life

...an innate necessity for universal union constitutes the third
and the final affliction of mankind.

“The Great Inquisitor”, Fyodor Dostoevsky

Then you will know the truth, and the truth will set you free

John 8:32

CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

1.1 Introduction

In the summer of 2011, when the first draft of my thesis was being written, my college-age daughter obtained a summer internship at Fitch Ratings, where I work as a money market fund analyst. That was a ‘hot’ summer for large European banks, critically exposed to debt issued by European peripheral countries. The situation of the European banks in turn caused serious concerns for the US money market funds, who were important investors in these banks’ short-term debt. As I encouraged my daughter to learn more about money market funds, because “it is where banks get money”, the words of mother were answered with her shrug: “*banks get money from exploiting proletariat*”. I wish it was that easy. Banks’ business is to make loans; and just like any other enterprises banks have to find ways of financing their lending activities.

Here money market funds enter the picture as providers of liquid capital to various economic actors from governments to banks and retail investors. Their importance as global financial intermediaries of cash is match by their sturdy and mounting size. Assets under management of money market funds reached their all times high of \$5.8 trillion in the first quarter of 2009, exceeding the gross domestic product of Japan registered in the same year.¹ Clearly, a study of these funds managing capital of such a size presents the most immediate practical significance. Money market funds have a profound impact on the contemporary financial landscape introducing millions of individuals to financial markets and investments. Money market funds facilitate household savings, serve as a source of funding for corporations and financial institutions worldwide and arguably came to re-define the very notion of *cash*. Furthermore, the role of money market funds in transmitting risk in the financial system identified this sector with the financial crisis of 2007 – 2009, the worst financial meltdown since

¹ *Sources:* for the assets under management of money market funds the source is the European Fund and Asset Management Association at www.efama.org; for the gross domestic product by country the source is the International Monetary Fund at www.imf.com.

the Great Depression.² Yet, until very recently these funds have remained a quiet, under-researched corner of the capital markets.

These are the considerations that led me to undertake a doctoral thesis on the regulation of money market funds. This thesis amalgamates over ten years of professional experience as a rating agency analyst in charge of assigning ratings to money market funds.³ Working first for Moody's Investors Services and, later, for Fitch Ratings, I had the opportunity to learn about money market funds from portfolio managers of major global investment management firms. Nonetheless, this study is conceived as an independent and original work upholding the best standards of academic research.

This thesis comprises descriptive, comparative and normative parts. The descriptive part is based on exhaustive research into details of origin and development of money market funds in the US and the EU and accompanying changes in regulatory practices. The comparative part delves into applicable laws and regulations in the realm of money market funds along jurisdictional lines. The method of this study is a syncretic critical approach that cuts across exclusive academic boundaries and challenges the basic premises of financial economics commonly applied to the money market fund analysis. Rather I consider economical, political and ethical dimensions and take the best or most useful concepts.

Most importantly, in addition to its extensive descriptive and comparative contributions, this thesis offers normative proposals for a desirable money market fund regulation. This

² See generally Financial Regulatory Reform. A New Foundation -- Rebuilding Financial Supervision and Regulation (The US Department of the Treasury 2009). The blueprint for financial regulatory reform mandates the US Securities and Exchange Commission to "...move forward with its plans to strengthen the regulatory framework around money market funds to reduce the credit and liquidity risk profile of individual money market funds and to make the money market fund industry as a whole less susceptible to runs". PAUL TUCKER, Shadow Banking, Financing Markets and Financial Stability (Remarks of the Deputy Governor for Financial Stability at the Bank of England at Bernie Gerald Cantor (BGC) Partners Seminar, London 21 January 2010) [Shadow Banking] at 2-3. The Deputy Governor expresses the view that money market funds operating like banks should be regulated like banks.

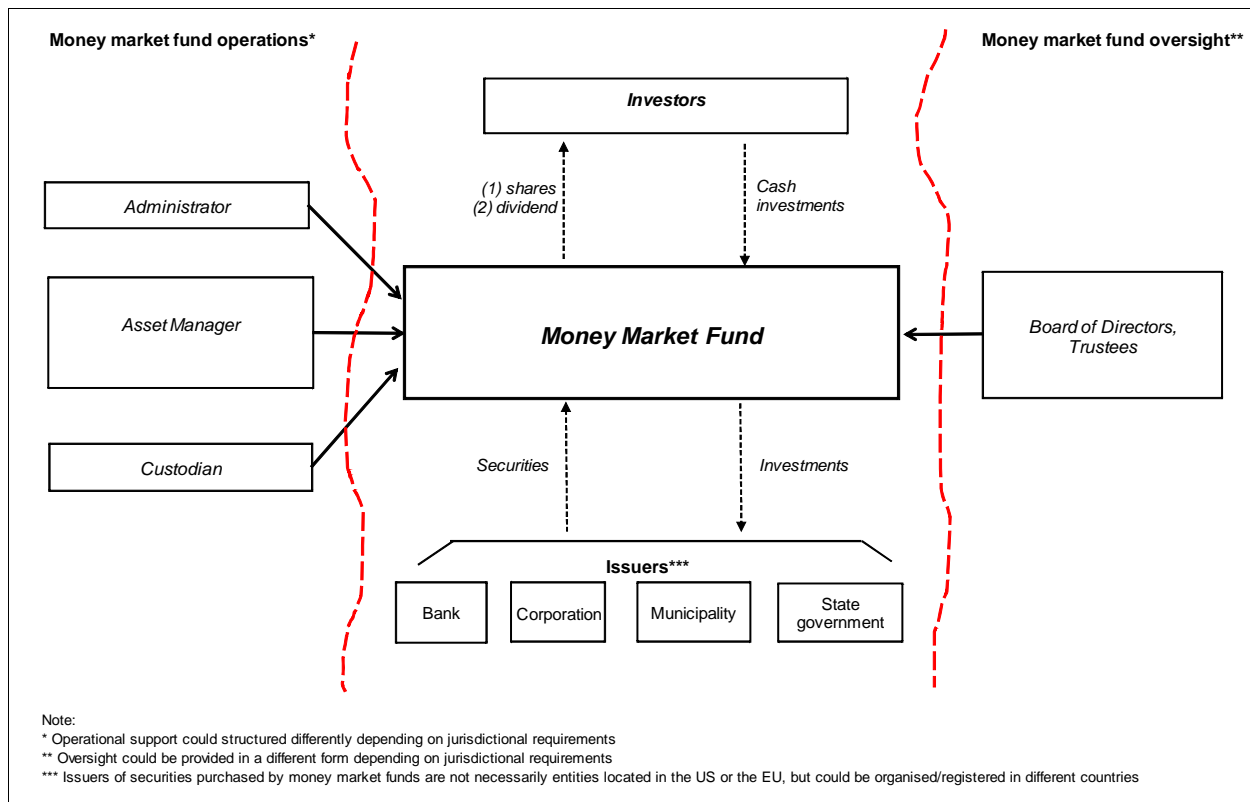
³ Money market funds are described in section 1.1.1 *infra*. The legal definitions of money market funds in the US and the EU are analysed in chapters 3 and 4, respectively. It should be noted that money market funds can also be referred to as money market mutual funds or abbreviated as MMFs or MMMFs. These terms and abbreviations are often used interchangeably in various sources.

introductory chapter presents my research question, lays out my theoretical framework, discusses the aims and objectives of this research and highlights its significance.

1.1.1 Research subject: money market funds in the US and the EU

The scope of my inquiry specifically regards money market funds. It is noted that despite all the attention these funds have received in the recent years, a common definition of a money market fund remains elusive.⁴ Indeed, we shall see within this thesis that there exist numerous types of money market funds in numerous jurisdictions. Nevertheless, it is possible to provide a general, broad stroke description of money market funds. Money market funds essentially are low risk collective investment schemes that serve as a conservative investment option for risk-averse investors and a temporary parking place for cash. Exhibit 1 illustrates this view in a form of a diagram presenting the main features of a money market fund structure.

Exhibit 1: Money market fund structure



⁴ *Id.*

The diagram depicts a flow of investments into a money market fund in exchange for shares and dividends. A money market fund, in turn, invests the proceeds from the sale of its shares in securities issued by various entities such as banks, corporations, municipal and state governments that could be located in any country. When investors need their cash back, the process reverses. To raise cash, a money market fund may rely on due proceeds from securities or sell its portfolio assets in the secondary market. Because money market funds only invest in high quality securities⁵ with short maturities, generally within one year, it is expected that a money market fund would be able to sell its assets without incurring material losses.⁶ Therefore, investors in a money market fund, in turn, expect to sell their shares back to the fund with no loss of the purchase price. This expectation explains an essential characteristic of a money market fund for investors: it is a collective investment scheme that provides safety of principal, liquidity and yield consistent with short-term market rates.⁷

A substantial part of this thesis is devoted to an analysis of various formal definitions of money market funds adopted in the US and the EU. Specifically, the US Securities and Exchange Commission defines the US money market funds under federal securities laws by referring to their principal characteristics, which include limitations on investment risks, specific operational and accounting practices as well as unique disclosure requirements.⁸ The definition

⁵ In the money markets, high quality securities are normally understood as securities having the strongest capacity for timely payment of financial commitments. Such securities are often rated by credit rating agencies in the highest short-term rating category, e.g., P-1 (by Moody's Investors Service, see www.moodys.com), A-1 (by Standard & Poor's, see www.standardandpoors.com) or F1 (by Fitch Ratings, see www.fitchratings.com) or judged to be of comparable quality by the investor.

⁶ For a discussion of what could be considered a "material loss" of value of an individual debt security see JILL E. FISCH & ERIC D. ROITER, *A Floating NAV for Money Market Funds: Fix or Fantasy?*, U of Penn, Inst for Law & Econ Research Paper No. 11-30 (2011) at 12. The materiality threshold could be as little as one-tenth of one per cent. However, for a money market fund portfolio as a whole, a deviation of its per-share price of one-half of one per cent from the fund's stable value is considered material enough for the fund's Board of Director to consider actions with respect to such a deviation. See 17 CFR § 270.2a-7 Money market funds (c)(8)(ii)(b). See also section 3.3.3.3 *infra* for an in-depth analysis of this rule.

⁷ Report of the President's Working Group on Financial Markets "Money Market Fund Reform Options" (2010) [PWG Report] at 7. The report defines money market funds as 'intermediaries between shareholders who desire liquid investments, often for cash management, and borrowers who seek term funding'. See also *Investor Bulletin: Focus on Money Market Funds*, US Securities and Exchange Commission. (2011), at <http://www.sec.gov/investor/alerts/mmf-investoralert.htm>. The bulletin highlights use of money market funds as cash storage.

⁸ The principal characteristics of the US money market funds are codified in 17 CFR § 270.2a-7 Chapter 3 *infra* contains a detailed analysis of the US money market fund regulation.

of money market funds in the EU is formalised under the “CESR’s Guidelines on a common definition of European money market funds” that came into effect only in July 2011 and are currently administered by the European Securities and Markets Authority.⁹ The CESR’s Guidelines outline a two-tier money market fund industry structure in the EU comprising European *short-term money market funds* and European *money market funds*, with funds in each tier having different investment characteristics.¹⁰

The linguistic ambiguity of the CESR’s Guidelines with respect to the use of the term “a money market fund” should be noted.¹¹ On the one hand, the CESR’s Guidelines uses the term “a money market fund” in a generic sense to encompass those collective investment schemes subject to the said Guidelines. On the other hand, the CESR’s Guidelines refer to *money market funds* as a special type of “money market funds” that are managed to a broader risk profile.¹² Understandably, investors perceive this definition as cumbersome and unduly confusing.¹³ To avoid confusion, in this thesis I refer to those funds managed to a broader risk profile under the “CESR’s Guidelines for a common definition of European money market funds” as “(regular) *money market funds*” inserting the word ‘regular’ into brackets to distinguish these funds from *short-term money market funds*.¹⁴

⁹ CESR's Guidelines on a common definition of European money market funds (European Securities and Markets Authority 19 May 2010) [CESR’s Guidelines]. See section 4.3.4 *infra* for a detailed analysis of a common definition of European money market funds. It should be noted that the territorial applicability of the CESR’s Guidance is not completely clear; while the title of document refers to ‘European money market funds’, it is unlikely that European money market funds outside the EU would be subject to its rules. To be more specific, in this thesis I focus on those European money market funds operating in the EU.

¹⁰ Investment characteristics of European money market funds set out by the CESR’s Guidelines are analysed in section 4.3.4 *infra*.

¹¹ CESR's Guidelines *supra* note 9.

¹² *Id.*

¹³ See, e.g., JP Morgan Asset Management response to CESR consultation paper 09-850 “A common definition of European money market funds” (31 December 2009) [JP Morgan Comment to CESR] at 2. The letter stated that it would be desirable to see “a single definition that is closer in nature to the ‘short term’ money market funds”. The letter further stated that other longer-term money market funds should not be allowed to operate as money market funds and belong in the short term fixed income universe as opposed to the ‘cash’ asset class.

¹⁴ *Id.*

Lastly, the majority, but not all of money market funds in the EU are registered under the Undertaking for Collective Investments in Transferable Securities Directive.¹⁵ The UCITS Directive does not specifically target money market funds, but it nonetheless provides certain investment, operational and disclosure standards that are essential for money market fund activities. Prior to the CESR's Guidelines being adopted in July 2011, other Community regulators have introduced bespoke definitions of money market funds, which are still used for their internal purposes.¹⁶ It will be shown in this thesis that those multiple money market fund definitions are dissimilar, given their different purposes. For the purpose of this thesis money market funds are defined by their common characteristics of safety, liquidity and investment return consistent with the short-term market indices. These characteristics have been extracted from examinations of various regulatory definitions, which will be closely analysed later in this thesis.¹⁷

The importance of money market funds has manifested itself during the recent financial crisis that started in August 2007 and continued through the end of 2009.¹⁸ During this period an ability of these funds to transmit funding risk has captured attention of regulators and academic researches.¹⁹ The ability of global banks to source funding from the US money market funds

¹⁵ DIRECTIVE 2009/65/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) (OJ L302/32 17 November 2009). See also section 4.3.1 *infra* for a detailed overview of the UCITS framework applicable to money market funds.

¹⁶ REGULATION (EC) No 2423/2001 OF THE EUROPEAN CENTRAL BANK of 22 November 2001 concerning the consolidated balance sheet of the monetary financial institutions sector (ECB/2001/13) (OJ L333/1 17 December 2001). The European Central Bank's definition of money market funds used for statistical purposes aiding in collection of banks' balance sheet information. COMMISSION DIRECTIVE 2006/73/EC of 10 August 2006 implementing Directive 2004/39/EC of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive (OJ L 241/26 2 September 2006). The Markets in Financial Instruments Directive introduced a definition of *a qualifying money markets fund* deemed appropriate for holding clients' money.

¹⁷ See 17 CFR § 270.2a-7 (analysed in section 3.3.2 *infra* covering the US money market funds) and CESR's Guidelines *supra* note 9 (analysed in section 4.3.4 *infra* covering money market funds in the EU). The concepts of safety and liquidity will be further qualified to highlight differences in their meanings to different types of investors and variety of regulatory approaches.

¹⁸ Throughout this thesis references to the financial crisis mean the time period starting in August 2007 through the end of 2009 unless noted otherwise.

¹⁹ Funding risk, also referred to as funding liquidity risk is defined as the possibility that over a specific horizon the bank, or any other entity, will become unable to settle its obligations with immediacy.

during the European sovereign debt crisis unravelling in 2010 and 2011 further exacerbated the regulatory concerns related to systemic stability.²⁰ Lost in the heated debate was the positive role that money market funds play as providers of capital and liquidity to various economic actors.²¹ To fill this gap, I review in this thesis both positive and negative aspects of money market fund activities from multiple angles taking in social, political, legal and economic dimensions across the US and the EU.²²

From the jurisdictional standpoint, I focus my study on those money market funds domiciled in the US and the EU because of a high level of concentration of money market fund assets in these regions.²³ My historical journey starts in 1971, when the first US money market fund applied for registration and extends through the end of 2011 covering 40 years of the money market fund industry and regulatory developments.

See, e.g., MATHIAS DREHMANN & KLEOPATRA NIKOLAOU, *Funding liquidity risk: definition and measurement* 316 BIS Working Papers (July 2010) at 1.

²⁰ Throughout this thesis references to the European sovereign debt crisis mean the time period starting in the spring of 2009 through the end of 2011. Chapter 2 *infra* contains an exhaustive review of the essential functions of money market funds in the global capital markets.

²¹ It is worth mentioning that money market funds have been regarded as the most significant financial product innovation of the past half-century. *See* Report of the Money Market Working Group Submitted to the Board of Governors of the Investment Company Institute (Investment Company Institute 17 March 2009) [ICI Report] at 1.

²² Chapter 2 *infra*.

²³ According to the Investment Company Institute, at the end of 2010, money market funds managed \$4.5 trillion worldwide with \$2.7 trillion in the US money market funds and \$1.6 trillion in Europe. The rest of the world accounts for \$0.2 trillion of money market fund assets. *See Worldwide Mutual Fund Assets And Flows: Q4 2010*, Investment Company Institute (2010), at http://www.ici.org/research/stats/worldwide/ww_12_10. *See also The China Bank Money Market Fund -- Performance Update*. (31 May 2011), at http://www.chinabank.ph/pdf/MM_Fund_Update.pdf. Despite the focus of this research on the US and the EU, money market funds could nowadays be regarded as a global phenomenon with this type of funds found in the Asian markets, Africa and Latin America. However, due to relative novelty of money market funds outside the US and EU markets, an immaterial size and lack of comparability I excluded other regions from the scope of my research. *See, e.g.,* ORAWAN KAROONKORNSAKUL, et al., TMB Money Fund - Full Rating Report (Fitch Ratings 29 July 2011). The TMB Money Fund is domiciled in Thailand. DEEP N MUKHERJEE & ARVIND RANA, Fitch Affirms Benchmark Liquid BeES Mutual Fund at 'AAAmmf(ind)' (Fitch Ratings 12 July 2011) The Benchmark BeES Mutual Fund is a money market funds domiciled in India. AYMERIC POIZOT & NICOLAS BENETON, Fonds monétaire Rapport de notation: BMCI Trésorerie (Fitch Ratings 16 juin 2010). BMCI Trésorerie is a money market fund domiciled in Morocco. All Fitch Rating reports are available at www.fitchratings.com.

1.1.2 Research question: regulation of money market funds

My research question relates to money market fund regulation. Since the mid-1980s, the financial systems went through extensive changes in credit intermediation. Traditional banking is no longer the only way for business and households to obtain credit. New types of financial intermediaries, of which money market funds were a part, emerged contributing to the availability and affordability of credit by converting risky, less liquid assets into seeming less risky and shorter-term liabilities.²⁴ The inability of financial regulators to adequately control the idiosyncratic²⁵ and systemic risks²⁶ of these intermediating activities was at the core of the recent crisis and triggered a wholesale review of the regulatory canon particularly in the US and the EU.²⁷

Faith in the self-correcting nature of the free market and in the ability of financial institutions to effectively police themselves has been challenged amidst calls for tighter, more stringent government supervision of financial entities and their employees.²⁸ One of the most notable lawmaking initiatives in response to financial abuses of the era of credit expansion in the late 1990s through the early 2000s is the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 enacted on 21 July 2010. The Dodd-Frank Act emphasises accountability and market transparency, and intends to improve consumer protection from abusive practices in financial services.²⁹ Similarly, in Europe, Basel III – a comprehensive set of guidance documents

²⁴ Financial entities operating outside of the traditional banking system are often referred to as “shadow banks”. See, e.g., ZOLTAN POZSAR, et al., *Shadow Banking* (Federal Reserve Bank of New York Staff Report no. 458 July 2010).

²⁵ See *Morningstar Investing Glossary: Idiosyncratic Risk*, Morningstar (2012), at http://www.morningstar.com/InvGlossary/Idiosyncratic_risk_definition_what_is.aspx. Idiosyncratic risk is the risk of incurring volatility or permanent loss of capital based on the unique circumstances of a security, rather than general market movements.

²⁶ For the definition of systemic risk see section 1.3.4 *infra*.

²⁷ The Financial Crisis Inquiry Report (The Financial Crisis Inquiry Commission January 2011) [FCIC Report] at *xviii*. The report on the causes of the financial and economic crisis in the United States concluded that “widespread failures in financial regulation and supervision proved devastating to the stability of the nation’s financial markets”.

²⁸ See, e.g., *Financial Reform: A Framework for Financial Stability* (The Group of Thirty 15 January 2009) at 12 – 14.

²⁹ The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub.L. 111-203, H.R. 4173) at 1. The act is to promote the financial stability of the United States by improving accountability and transparency in the financial system, to end “too big to fail”, to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes.

developed by the Basel Committee on Banking Supervision – is aimed to improve the banking sector’s financial profile, risk management and governance.³⁰

Money market funds, however, still remain an open regulatory issue. Financial regulators on both sides of the Atlantic point out to the money market funds’ vulnerability to investor runs and call for policy steps to mitigate the associated risks.³¹ Specifically targeted to the oversight and better regulation of the market-based financial system role, the Financial Stability Board has been developing recommendations for money market fund regulatory reform and has asked the International Organisation of Securities Commissions to undertake work in this area.³² To be clear, money market funds in the US and the EU are already tightly supervised entities.³³ Operating rules of the US money market funds have been sufficiently re-drafted post-crisis, while European money market funds have become subject to specific investment standards under the CESR’s Guidelines implemented in July 2011.³⁴ Nevertheless, the lingering question remains whether the existing regulatory framework is effective enough.³⁵ Not only should the regulatory review take into account vulnerabilities that manifested themselves during the financial crisis, but strive to forestall potential unintended consequences and foreseeable types of abuses.³⁶

³⁰ See Basel III: A global regulatory framework for more resilient banks and banking systems (Basel Committee on Banking Supervision 2010) [Basel III Global Regulatory Framework] and Basel III: International framework for liquidity risk measurement, standards and monitoring (Basel Committee on Banking Supervision 2010) [Basel III Liquidity Framework]. Both reports are *available* at www.bis.org. The Basel Committee on Banking Supervision is an international forum for cooperation on banking supervision. Its objective is to enhance understanding of key supervisory issues and improve the quality of banking supervision worldwide.

³¹ See, e.g., TUCKER, *supra* note 2 at 2 – 3. See also MARY L. SCHAPIRO, *Remarks at SIFMA’s 2011 Annual Meeting*, US Securities and Exchange Commission. (7 November 2011), at <http://www.sec.gov/news/speech/2011/spch110711mls.htm>. Mary Schapiro, the chairwoman of the US Securities and Exchange Commission stated that additional steps should be taken to address the structural features that make money market funds vulnerable to runs.

³² Shadow Banking: Strengthening Oversight and Regulation (Financial Stability Board 21 October 2011) [FSB Report] at 20 – 21.

³³ See chapters 3 and 4 *infra* presenting money market regulatory frameworks in the US and EU, respectively.

³⁴ SEC Rel. No. IC-29132 *Money Market Fund Reform* (Adopting Release) (75 FR 10060 4 March 2010). CESR’s Guidelines *supra* note 9.

³⁵ See, e.g., EMILY CHASAN, *SEC Chairman: Money Funds Living on ‘Borrowed Time’* CFO Journal at <http://blogs.wsj.com/cfo/2012/02/24/sec-chairman-money-market-funds-living-on-borrowed-time/#>.

³⁶ See generally MARKUS K. BRUNNERMEIER, et al., *The Fundamental Principles of Financial Regulation* (Geneva Reports on the World Economy 11 2009) at Ch. 1. The report provides an overview of shortcomings of financial regulations leading to unintended consequences. For example, creation of

Importantly, this should be done thoughtfully without taking away benefits of the successful financial product including its stability, liquidity and tax efficiency.³⁷

With these objectives in mind, I formulate my research question as follows: *how should money market funds be regulated?* A decision of *how* to regulate postulates a plausible answer to the question of *why* to regulate, which, in turns, rests on an assumption that there is a defined set of socially desirable ends money market fund regulation is expected to achieve. In relation to the *why* to regulate, two overarching regulatory goals in this sector, namely investor protection and systemic stability, are identified in the next section 1.1.3, the theoretical framework. These goals are further elaborated in section 1.2 presenting a review of the traditional justifications for financial regulation and their relevance to money market funds. In effect, the analysis presented in section 1.2 discusses whether the contemporary approach to financial market regulation rooted in the neoclassical economic theory remains an appropriate foundation for the new regulatory architecture.³⁸

By asking *how to regulate* I intend to formulate *normative* proposals. The proposals recognise the practical and cultural diversity of money market funds on both sides of the Atlantic and therefore recommend preserving the unique features of the local markets as a means to promote systemic stability through encouraging product diversification. Thus, the proposals notably distance from the calls for further harmonisation of money market funds, which are very prevalent today, particularly in Europe.

‘national champions’ in banking industry comes contrary to one of the stated regulatory goals of maintaining efficient and competitive markets.

³⁷ See, e.g., KARRIE MCMILLAN, *Clouds Overhead: Financial Regulation After the Crisis - General Counsel's Address* Mutual Funds and Investment Management Conference / Investment Company Institute at http://www.ici.org/policy/current_issues/12_km_mfim_conf. The speaker refers to those regulatory proposals aimed at reducing money market funds' liquidity and tax efficiency as “outrageous”.

³⁸ See THORSTEIN VEBLER, *The Preconceptions of Economic Science, Part III*, 14 *The Quarterly Journal of Economics* (1900). Thorstein Veblen introduced the term “neoclassical economics”, which is now used to encompass approaches to economics focusing on the determination of prices, outputs, and income distributions in markets through supply and demand. Normally, in these approaches income-constrained individuals act to maximise utility of the product or cost-constrained firms act to maximise profits employing available information.

1.1.3 Theoretical framework

As explained in section 1.1.1, due to their seemingly low risk profile, until very recently money market funds have remained an obscure, under-researched corner of the capital markets. Pre-crisis money market fund-related scholarship was very mainly limited to financial studies and did not subscribe to any of the established economic or legal theories.³⁹ Numerous academic papers published post-crisis are based on the assumption that the banking regulatory model is superior to the regulation traditionally covering money market funds.⁴⁰ Therefore, these papers mainly advocated bank-like regulation for money market funds.⁴¹ As shown later in this thesis, targeted money market fund regulation on both sides of the Atlantic has adopted a rule-based approach and does not assume any particular theoretical grounds, but rather rests on a combination of views advanced by neoclassical and behavioural economists.⁴²

From the standpoint of the neoclassical economics the effectiveness of regulatory intervention is judged according to welfare-economics principles, which postulate that “society fares best when markets are competitive”.⁴³ The recent financial crisis, however, has profoundly shaken the main premise of the welfare-economics. Global regulators are strongly focused on creating a system that controls activities of financial actors, shields consumers against financial abuses and protects taxpayers; thus the invisible hand of the market has been replaced by a visible hand, the hand of the government. In light of these sentiments, the traditional justifications for financial regulation are critically reviewed in section 1.2 from the standpoint of

³⁹ Section 1.3 *infra* provides a brief review of related literature.

⁴⁰ Section 1.3.3 *infra*.

⁴¹ For an alternative view of the massive failure of banking regulation during the financial crisis and numerous bank failures *see* JOHN D. HAWKE JR., File No. 4-619; Release No. IC-29497 President's Working Group Report on Money Market Fund Reform; Supplemental Comment of Federated Investors, Inc. in Response to Comment of Mr. Paul A. Volcker (US Securities and Exchange Commission 15 March 2011) at 4. The response points out to 2,800 cases of failures of insured depository institutions during the last four decades while only two money market funds failed during the same period of time. For literature advocating bank-like regulation for money market funds *see, e.g.,* MORGAN RICKS, *Regulating Money Creation after the Crisis*, 1 Harvard Business Law Review 75, (2011) and MORGAN RICKS, *Shadow Banking and Financial Regulation* (Columbia Law and Economics Working Paper No. 370 2010). *See also* GARY B. GORTON & ANDREW METRICK, *Regulating the Shadow Banking System*, Brookings Papers on Economic Activity 261, (2010). The authors call for insurance of money market funds to guarantee their investors' payment and eliminate incentives to run.

⁴² Section 1.2 *infra*. *See also* chapters 3 and 4 *infra* for an analysis of money market fund regulation in the US and the EU, respectively.

⁴³ *See, e.g.,* WILLIAM J. BAUMOL & ALAN S. BLINDER, *Economics: Principles and Policy* (10th ed. 2007).

their applicability to money market funds. It is advanced here as a theoretical framework that the objectives of the post-crisis regulation should shift from the efficient allocation of society resources to building a robust financial system focused on *investor protection* and *systemic stability*, resilient to the future shocks.⁴⁴

To be clear, the investor protection-based argument has consistently been featured amongst the main components of most financial regulatory schemes.⁴⁵ Indeed, the financial crisis once again highlighted the damaging economic consequences of the loss of investor confidence in the aftermath of market failures, which was especially evident in the behaviour of money market funds investors.⁴⁶ As shown later in this thesis, investor confidence does matter for the money market fund industry.⁴⁷ There is also an abundance of empirical evidence suggesting the existence of a strong causal link between investor protection rules and financial market.⁴⁸ Therefore my normative proposals are designed to heed to investor protection.

⁴⁴ See, e.g., ELISSE B. WALTER, *Remarks at the 2012 Mutual Funds and Investment Management Conference* US Securities and Exchange Commission at <http://www.sec.gov/news/speech/2012/spch031912ebw.htm>. The US SEC Commissioner stated in her speech that “...we need to remember that we must anticipate the future. Money market funds today present important questions implicating critical policy goals, related to not only investor protection but also...to systemic risk.”

⁴⁵ U.S. SECURITIES AND EXCHANGE COMMISSION, *The Investor's Advocate: How the SEC Protects Investors, Maintains Market Integrity, and Facilitates Capital Formation*. (2008), at <http://www.sec.gov/about/whatwedo.shtml>. See also Objectives and Principles of Securities Regulation (International Organization of Securities Commissions May 2003) [IOSCO Objectives].

⁴⁶ See, e.g., LAURA BRUCE, *Is your money market fund safe?* Bankrate.com at <http://www.bankrate.com/finance/money-market/is-your-money-market-fund-safe--1.aspx>. The article states that the Reserve Primary Fund, which sustained losses due to holding of \$785 million of defaulted commercial paper issued by Lehman Brothers, had approximately \$62 billion in assets until panicked investors withdrew more than \$27 billion within two days after the news of the Lehman Brother's default broke. An attempt by the Reserve Primary Fund to liquidate its multi-billion portfolio to meet mounting redemption requests led to a widespread freeze in the secondary market activities. See FCIC Report *supra* note 27 at 356 – 360.

⁴⁷ For example, the US money market fund industry that is covered by the most comprehensive regulatory framework analysed in-depth in chapter 3 *infra*, is also the largest segments of the global assets under management of these funds. See exhibit 2 *infra*.

⁴⁸ See, e.g., RAFAEL LA PORTA, et al., *Legal Determinants of External Finance*, 52(3) *Journal of Finance* 1131, (1997). The study showed that countries with weaker investor protection rules “have smaller and narrower capital markets”. See also RAFAEL LA PORTA, et al., *Investor Protection and Corporate Governance*, 58 *Jnl of Financial Economics* 3, (2000). The empirical study of capital markets in different countries vis-à-vis investor protection found correlation between strong laws protecting investors and “valuable and broad financial markets”.

Notwithstanding the highlighted widespread acceptance of investor protection as a worthy regulatory goal, national arrangements and implementation details of specific policy measures may differ significantly.⁴⁹ Currently, investor protection in money market funds is mainly understood in terms of developing a detailed set of investment standards that stirs the fund manager's preferences towards those assets deemed appropriate for a conservative risk profile of money market funds.⁵⁰ Another pillar of investor protection in money market funds is compulsory disclosure requirements albeit with a different degree of emphasis depending on whether the US or the EU funds are concerned.⁵¹ This thesis shall recommend *good disclosure* as the best regulatory measure with respect to both, investor protection and systemic stability. *Good disclosure* practices, which provide specific and practical disclosure, are distinguished from bad disclosure practices, such as boilerplate prospectus disclaimers. Indeed the view of this thesis is that investors are protected the best when they are empowered to make informed investment choices and when risk-taking abilities of fund managers are restricted by exposure to the public scrutiny.

The two-pronged approach to investor protection in money market funds – objective investment standards and disclosure – in my view amalgamates micro-prudential measures that are aimed at containing the fund's idiosyncratic risks with steps enabling a macro-prudential perspective through detailed transparency requirements. A clear macro view of the capital markets is important because stability of the global financial system has been cited after the crisis as one of the overarching objectives of financial regulation alongside investor protection.⁵² The massive run on money market funds in the wake of the Reserve Primary Fund 'breaking the buck' in September 2008 has been widely cited as a poster example of an event leading to the financial system failure.⁵³ A previously quiet corner of the financial markets has attracted significant public scrutiny from a standpoint of financial stability and as a result of just this one

⁴⁹ See chapter 5 *infra* for a comparative analysis of the money market fund regulatory models in the US and the EU.

⁵⁰ See sections 3.3 and 4.3 *infra* for a detailed analysis of money market fund regulation in the US and the EU, respectively.

⁵¹ See sections 3.3.3.4 and 4.3 *infra* for a review of disclosure requirements concerning money market funds in the US and the EU, respectively.

⁵² IOSCO Objectives *supra* note 45 at *i*.

⁵³ See section 2.4 *infra* describing the role of money market funds in the financial crisis.

episode, money market funds have been widely cited as prone to producing destabilising effects.⁵⁴

Another very recent example of a systemic shock, reviewed later in this thesis, relates to the US money market fund investments in European banks, which rely on these funds for their US dollar funding.⁵⁵ An increased integration and interdependence of the global capital markets contributed to a greater focus on money market funds as an apparent transmittal link of market instability.⁵⁶ Thus, the contemporary regulatory debate is progressively shifting its focus from micro-prudential to macro-prudential issues, *i.e.*, from regulating risk of individual fund to market interconnectedness and an ability of the money market fund industry to propagate systemic shocks.⁵⁷ With regard to the objective of protecting the financial system against such shocks induced by homogenous investment practices – exhibited, specifically, by the US money market funds – this thesis maintains a view that product diversification shall be promoted whilst the widespread calls for harmonisation of investment standards shall be resisted.⁵⁸

It was telling in effect that the relatively small size of European money market funds and their diverse investment strategies have protected them from the accumulation of systemic risk and allowed these funds to fly under the regulatory systemic risk radar. Consistent with my theoretical view, this thesis argues that the diversity of European money market funds should be preserved precisely on the grounds of systemic stability concerns. Such diversified and relatively

⁵⁴ RENÉ M. STULZ, Testimony before the Subcommittee on Capital Markets and Government Sponsored Enterprises United States House of Representatives on "Oversight of the Mutual Fund Industry: Ensuring Market Stability and Investor Confidence" (24 June 2011) at 4. Available at <http://financialservices.house.gov/UploadedFiles/062411stulz.pdf>.

⁵⁵ Section 2.3.2.2 *infra*. See also NAOHIKO BABA, et al., *US Dollar Money Market Funds and Non-US Banks* BIS Quarterly Review, March 2009. ROBERT J. GROSSMAN, et al., U.S. Money Fund Exposure to European Banks: Recent Developments (Fitch Ratings 30 March 2011). ROBERT J. GROSSMAN, et al., U.S. Money Fund Exposure to European Banks Remains Significant (Fitch Ratings 21 June 2011).

⁵⁶ STULZ, *supra* note 54 at 4. The testimony reviews channels through which money market funds created systemic risk during the crisis, namely a forced liquidation of assets by money market funds disrupts the provision of short-term funding in the financial system. The testimony argues that regulating money market funds is not enough, but further regulatory steps are needed to change the industry structure.

⁵⁷ See PWG's Report *supra* note 7 at 5. The overarching goal of the report is to propose fundamental changes to the US money market fund industry structure that would address systemic risk and to reduce the susceptibility of money market funds to runs.

⁵⁸ Section 2.4 *infra*.

low risk funds denominated in different currencies would simply lack significance in their respective markets to be *too big to fail* and warrant government intervention. My normative proposals in chapter 6 account for the noted distinction in systemic significance between money market funds operating in the US and the EU.

In sum, the theoretical framework underlying my proposals for the new regulatory architecture covering money market funds on both sides of the Atlantic rests upon the dual regulatory goal of investor protection and systemic stability. The view expressed in this thesis is that these two goals fully capture considerations of micro and macro-prudential protections, which, in turn, lead to a regulatory architecture conducive to the market efficiency, economic progress as well as an improvement in societal welfare.⁵⁹ This thesis maintains that the phenomenon of the market equilibrium achieved through *good disclosure* eliminates the need for a separate consideration of market efficiency even though market efficiency could be *per se* considered a worthy regulatory goal.⁶⁰ Indeed the reduction in efficiency due to increased costs of regulation post-crisis has come into the focus of the industry debates⁶¹ given an effect of such costs on the productive sectors of the economy.⁶² Nonetheless, it will be shown later in this thesis, past developments in the financial industry prompted by the focus strictly on market

⁵⁹ See generally GEORGE A. AKERLOF, *The Market for Lemons: Quality Uncertainty and the Market Mechanism* 84 (3) *The Quarterly Journal of Economics* 488 (August 1970). See section 1.2 *infra* for a further discussion of these outcomes.

⁶⁰ An efficient capital allocation is currently considered a significant contributing factor in wealth creation and improving availability of credit globally. See Securities Act of 1933 amend. 15 U.S.C. § 77a et seq. at Section 2(b) “Consideration of Promotion of Efficiency, Competition, and Capital Formation”. The US Securities and Exchange Commission is required to consider in its rulemaking initiatives, “...in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation”.

⁶¹ See, e.g., *ISDA and SIFMA File Lawsuits Challenging CFTC’s Rule on Position Limits* The Securities Industry and Financial Markets Association at <http://www.sifma.org/news/news.aspx?id=8589936638>. The Associations have filed suit in federal court in the District of Columbia, alleging that the US Commodity Futures Trading Commissions has failed *inter alia* to conduct an adequate cost-benefit analysis as required by law.

⁶² While the necessity of regulatory reform is not contested, unintended consequences of both, Basel III and the Dodd-Frank Act, have already been recognized. As one of the examples, implementation of higher bank capital requirements under Basel III could significantly affect funding costs for banks and their clients and ultimately decrease availability of credit. See, e.g., PAVEL SLOVIK & BORIS COURNÈDE, *Macroeconomic Impact of Basel III* § 844(OECD Publishing / OECD Economics Department Working Papers 2011) at 5. The authors estimated that medium-term impact of Basel III implementation on GDP growth is in the range of –0.05 to –0.15 percentage point per annum. This is due to banks passing an increase in bank funding costs onto their customers, thus resulting in higher production costs for other economic agents.

efficiency and regulatory attempts to limit such developments are prone to various unintended consequences.

For this reason I side-stepped the market efficiency consideration and formulate an original approach that does not make an economic argument. Instead, my normative proposals establish the principal conditions for the market creation that are fully aligned with my theory of the dual regulatory goals of investor protection and systemic stability.⁶³ This approach crosses over the boundaries of the conventional theories traditionally used in the financial regulation design, which are critically reviewed in section 1.2 *infra*. As shown in section 1.2, none of the theories underlying the existing regulatory approach to money market funds in the US and the EU fully explains their current regulatory practices. Not surprisingly, inconsistencies of regulatory actions have resulted in patchwork regulation incapable of providing investor protection and systemic stability.

This conclusion prompted my focus on the micro processes that underlie the market and economic development in addition to considerations of political and ethical dimensions in money market fund regulation. To that end, based on examining investors' historical preferences and cultural motivations for money market fund investments I envisage a new regulatory architecture that better protects investors through education and by preserving the natural diversity of investment options. Thus, my approach creates the conditions not only for market development, but also for market diversity and, while focusing on the dual regulatory goal – investor protection and systemic stability – could be applied consistently across the US and the EU.

1.1.4 Methodology

The methodology comprises: a broad examination of the literature concerning the subject of this thesis; an empirical study and comparative analysis of money market funds domiciled in the US and the EU; legal analysis of money market fund regulation; an elaboration of a theory underlying money market fund regulation; and normative recommendations. With regard to the literature concerning money market funds, I have researched financial and economic sources, industry studies and technical reports. Sources of such material have been books and articles in academic journals, databases of regulatory filings, public web-sites of fund management

⁶³ AKERLOF, *supra* note 59.

companies, credit rating agencies, consulting organisations and financial media. This thesis has benefited greatly from the availability of large amounts of data regarding various types of asset flows collected by regulatory agencies and professional trade association, frequently updated, and offered in public domain. Information regarding portfolio holdings of the US money market funds has been collected from the funds' public web-sites and the electronic filing database maintained by the US Securities and Exchange Commission. Other quantitative aspects of my thesis are developed from studies provided by economists, asset managers and risk management experts.

In relation to the empirical research and comparative analysis, I start by uncovering the origin and development of money market funds in the US and the EU from the early 1970s through to the present. The comparative analysis of money market funds presented in this thesis is unique; to my knowledge there have been no detailed studies of micro-processes affecting the money markets. The history of money market funds is explained by country-specific patterns of investors' investment objectives, taxation, legal, enforcement and accounting standards.

Regulation is understood in this thesis as "organised attempts to influence behaviour, using any combination of rules, monitoring, incentives, and sanctions, which may or may not have legal status".⁶⁴ Therefore, despite a significant focus on the US securities law and applicable norms of the EU in the analysis of money market fund regulatory models, I nonetheless incorporate other standards that affect investment behaviour of fund managers. Examples of these standards include credit rating agency criteria and the best practices developed and voluntarily adopted by the money market funds themselves. Laws and other regulatory standards are stated as of December 2011 with pending developments noted.

With respect to the theoretical enquiry, I have elaborated a theoretical framework which identifies two main goals for the regulation of money market funds: investor protection and systemic stability. The theory distils from traditional justifications for financial regulation (reviewed in section 1.2), and particularly from the neoclassical and behavioural economic theories, which somewhat clumsily underpin the current regulatory construct of money market fund regulation.

⁶⁴ JULIA BLACK, *Empirical Legal Studies in Financial Markets: What Have We Learned?*, 4 LSE Law, Society and Economy Working Papers (2010) at 3.

As noted earlier, my research is firmly rooted in my own extensive practical experience in money market fund analysis. I consider as empirical experience and another source of study the countless conferences, meetings, and debates that I have attended for over ten years during my employment as a rating agency analyst. These events bringing together money market fund managers, practicing attorneys, government officials and academics allowed me to build an extensive network of people who are the thought leaders in the sector. As an analyst covering money market funds, I have contributed to industry research and investor education activities by publishing innumerable rating actions commentaries and industry reports widely read and quoted by financial media.⁶⁵

Lastly, however ironic it may sound, I would like to point to the financial crisis in the US and the European sovereign crisis unfolding before our eyes as this thesis is being written is the single most important contributor of ideas and data. Prior to the financial crisis there has been very little academic attention to money market funds, which were then regarded as the quietest corner of the capital markets. The global liquidity squeeze induced by the failure of the third largest US money market fund placed these funds prominently in the centre of regulatory debate both in the US and Europe amidst calls for the wholesale change in the industry structure. Active political debates, rapid lawmaking developments, increased flow of data, and strong academic focus have offered invaluable input in development of my research.

1.1.5 Contributions to knowledge

My thesis aims to provide four major contributions to knowledge. The first contribution relates to cataloguing various types of money market funds, which are analysed from multiple angles including their essential functions, operational structures, investor base, and portfolio contents. As explained in section 2.3, money market funds are a major provider of short-term wholesale funding to financial institutions globally; thus my additional contribution relates to describing the role of these funds in the financial system and during the financial crisis. This

⁶⁵ See, e.g., THAO HUA, *Money market funds hold firm; more hurdles loom* Pension & Investments at <http://www.pionline.com/article/20110822/PRINTSUB/308229942>. VINCENT RYAN, *How Europe's Volatility Could Reach Corporate Portfolios* CFO.com at <http://www3.cfo.com/Print/PrintArticle?pageId=c1339f33-4447-4f73-88b2-33b9798fc0b8>. See also www.fitchratings.com for information about Fitch's rating and research coverage of the money market fund industry.

contribution is unique in the literature. My exploration of available academic sources presented in section 1.3 found few detailed studies related to money market fund types and functions in the US and the EU. Existing studies are mostly focused on the US money market funds and are largely limited to justifications of a particular regulatory scheme.

The second contribution concerns the regulatory framework of money market funds and includes a descriptive enquiry of regulatory schemes applied to these funds on both sides of the Atlantic. Money market funds have been an under-researched corner of the capital market especially with respect to those funds operating outside the US. Indeed, as recently as October 2011 the Financial Stability Board recommended the International Organisation of Securities Commissions “to analyse the different categories, characteristics and systemic risks of MMFs in various jurisdictions as well as the particular regulatory arrangements which have influenced their role and risks”.⁶⁶ Thus, delivering precisely on this request, my first and second contributions are expected to fill this research gap and inform policy actions.

The third contribution consists of a comparative analysis of money market fund regulatory models in the US and the EU. The comparative part is structured to underscore any differences or similarity of the regulatory regimes *vis-à-vis* my theoretical framework of a dual regulatory goal – investor protection and systemic stability. This original approach brings out *inter alia* a fundamental flaw in regulation of European money market funds, which relates to lack of mandatory fund information transparency regime. The overarching drive for harmonisation of money market fund regulatory approaches globally reiterated by the Financial Stability Board is also critically analysed from the standpoint of the systemic stability argument.⁶⁷

The fourth contribution is the answer to the research questions: *how should money market funds be regulated?* I conclude this assessment of my contributions to knowledge by reiterating a strong interest of policymakers to details that are of practical use for an informed debate about the money market fund industry and its regulation in the US and the EU. Given the reach of money market funds far beyond these two markets, I also anticipate interest from international regulatory bodies and other investment communities not directly addressed within my thesis.

⁶⁶ FSB Report *supra* note 32 at 20 – 21.

⁶⁷ *Id.* at 20.

1.1.6 Outline

This thesis comprises seven chapters. Chapter 1 is the introduction and presents the research question, the subject of my research, the theoretical framework, the anticipated contributions to knowledge and the methodology for attaining them. Chapter 1 also examines the question “*why should we regulate*” in connection with money market funds. To that end, I review the conventional rationales for financial markets regulation and their applicability to the subject of my research. Chapter 1 concludes with a review of the sources essential for the development of my thesis – although from time to time I placed subject-specific fragments of the literature review directly in the respective chapters.

Chapter 2 draws the profile of the money market fund industry covering both the US and European practices. The main aspects of the industry profile depicted in this chapter include the market share of money market funds in the global flow of capital, their relevance to the past, present and the future of the capital markets, and their role in the global financial crisis as well as their contribution in the European sovereign debt crisis. Given the money market funds’ socio-economic beneficial objectives of being a safe haven for cash and global liquidity providers, the need to protect investors and systemic stability offers compelling arguments for the normative intervention. The role of money market funds in the financial crisis as transmitters of systemic shocks added more weight to those voices calling for the review of money market fund regulation on the grounds of systemic stability concerns.⁶⁸

Chapter 3 and 4 analyse money market fund definitions and regulation reviewing, respectively, the US securities law and the EU legal norms. They also analyse the ‘soft law’ produced by non-governmental actors. In particular, chapter 3 presents the past, present and possible future of the US money market funds against the backdrop of the industry’s regulatory arrangements and ongoing debates related to furthering the US money market fund reforms. Chapter 4 reports on European money market funds and investigates issues related to their treatment under the legal norms administered by the EU and national regulators. The descriptive enquiry undertaken in chapter 4 suggests that the structure of national capital markets and the

⁶⁸ See, e.g., ERIC S. ROSENGREN, Towards Greater Financial Stability in Short-Term Credit Markets (Federal Reserve Bank of Boston / President & Chief Executive Officer Remarks at the Global Interdependence Center’s Conference on Capital Markets in the Post Crisis Environment 29 September 2011) at 7. The speech advocates a more proactive approach to regulation of money market funds.

local investment culture have led to cross-jurisdictional disparities affecting European money market funds. Chapter 4 examines the ongoing regulatory changes in the EU and harmonisation initiatives as it relates to European money market funds. Chapter 4 offers a critical view of these initiatives on the grounds of their limited benefits to the local investment communities and concerns related to aggregation of systemic risk.

Chapter 5 presents a comparison of the US and European money market fund regulatory models highlighting the lack of isomorphism on the international scale. The purpose of chapter 5 is therefore to ascertain to what degree legal norms administered by the EU regulate money market funds ‘by default’ under the UCITS regime and to what degree the harmonised, money market fund-specific rules are necessary and desirable *vis-à-vis* the regulatory goals assumed under my theoretical framework. Chapter 6 offers normative proposals that are consistent with the theory of the dual regulatory goal presented in section 1.1.3. It also reconciles the appeal of a common regulatory approach against the need for diversity in investment product offerings by weighting in unintended consequences of harmonised regulation often leading to the aggregation of systemic risk and ‘too big to fail’ concerns. Chapter 6 concludes with a call for establishing a uniform transparency regime and for enhancing co-operation amongst national regulators in information-sharing and supervisory arrangements. Chapter 7 reports about the contributions to knowledge developed in this thesis.

1.2 Traditional justifications for financial market regulation and their relevance to money market funds

Recalling my research question – *how should money market funds be regulated?* – I next review some traditional justifications for the regulation of financial markets and in particular money market funds. These theories often insightful but cannot be taken at face value. Too often they underpin in an incoherent, superficial way the prevalent proposals for money market fund regulation. It is instead suggested that these insights should be critically and lucidly evaluated with a view to upholding investor protection and systemic stability. The examination of the regulatory environment for money market funds presented in this thesis has greatly benefited from the extensive ongoing debates on the goals and objectives of financial regulation in the

post-mortem of the financial crisis.⁶⁹ Indeed, financial regulation is traditionally justified with reference to the instances of market failure and their high social costs.⁷⁰ Moreover, the financial crisis stroke a severe blow to the theory of the self-correcting nature of the capital markets – which was until then a most widely accepted one – and reinforced the central argument for financial market regulation, which is to correct the market failures.⁷¹ Section 2.4 *infra* illustrates how the uncontrolled risks of money market fund activities contributed to the crisis and how the risks were transmitted amongst seemingly unrelated economic agents as well as geographically remote markets.

While money market funds did not cause the financial crisis, their ability to expose borrowers to funding shocks has been cited as one of the chief concerns related to systemic stability.⁷² As explained in section 1.1.3 presenting my theoretical framework, it was not until recently that the systemic stability argument was placed on the top of a regulatory agenda in connection with collective investment schemes, where investor protection and market integrity have traditionally been in focus.⁷³ All these objectives are critically reviewed later in this section as parts of traditional justifications for financial regulation and their relevance to money market funds.

⁶⁹ *Supra* note 2.

⁷⁰ Because long-term social outcomes of regulatory intervention on different groups is difficult to foresee and almost impossible to account for, the cost-benefit analysis is normally conducted on the basis of cost of compliance and short-term changes to the business structure, *i.e.*, loss of additional income due to prohibition on certain investments, cost of divestitures, etc.

⁷¹ *See, e.g.*, STEPHEN BREYER, *Regulation and its Reform* (1982 ed. 1938). ANTHONY I. OGUS, *Regulation: Legal Form and Economic Theory* (Clarendon Press. 1994). ROBERT BALDWIN & MARTIN CAVE, *Understanding Regulation: Theory, Strategy, and Practice* (Oxford University Press. 2011).

⁷² *See, e.g.*, Annex European Systemic Risk Board Recommendations on US Dollar-denominated Funding of Union Credit Institutions (European Systemic Risk Board 22 December 2011) [ESRB Recommendations on USD Funding].

⁷³ *See, e.g.*, *The Laws That Govern the Securities Industry*, US Securities and Exchange Commission (15 February 2012), at <http://www.sec.gov/about/laws.shtml#invcoact1940>. In the US collective investment schemes, also referred to as investment companies, are regulated under the Investment Company Act of 1940s, as amended. The law is designed to minimize conflicts of interest and requires disclosure of financial condition and investment policies of these companies on a regular basis. The act generally does not permit the US Securities and Exchange Commission to directly supervise the investment decisions of investment companies or judge the merits of their investments. Rule 2a-7 governing activities of the US money market funds provides an exception from this premise. *See* section 3.3 *infra*.

With regard to the regulatory body, it is often assumed that *the state* is the chief engine promulgating regulation and maintaining enforcement mechanisms, although other regulatory schemes are conceivable. Baldwin *et al.* offers three definitions of regulation: (1) the promulgation of rules by the government supported by mechanisms for monitoring regulated entities and enforcement; (2) any form of direct state intervention in the economy; and (3) any mechanisms of social control affecting all aspects of behaviour from any source.⁷⁴ Governmental agencies and academia are not particularly clear on developing and applying a common definition of regulation and users of regulations often assume the first one of three offered by Baldwin as *true* regulation.⁷⁵ The analysis of the causes of the financial crisis has challenged this assumption pointing to a massive failure of *state* regulation and thereby prompted my investigation as to whether other types of regulation could be superior in achieving the dual regulatory goal of investor protection and systemic stability.

The findings of the Financial Crisis Inquiry Commission place responsibility on regulatory agencies that were unable or unwilling to employ tools they already had.⁷⁶ Thus, there could be a case for re-conceptualising regulation as a function exercised primarily by the state but best accompanied by a process of coordination amongst the industry actors that enables them to better organise themselves.⁷⁷ A theory that de-centred approach could be superior to that of state intervention is based on the assumption that “government cannot know about the industry as the industry knows about itself”.⁷⁸ To test this theory in application to money market funds, chapters 3 and 4 provide examples of credit rating agencies as of non-governmental actors developing quasi-regulatory standards and serving as sources of regulation for the money market industry in the US and the EU. Given considerations to both governmental and non-

⁷⁴ ROBERT BALDWIN, et al., *A Reader on Regulation* (Oxford University Press. 1998).

⁷⁵ JULIA BLACK, *Critical Reflections on Regulation*, 27 *Australian Journal of Legal Philosophy* 1, (2002) at 9.

⁷⁶ FCIC Report *supra* note 27 at xvii. The report concludes that widespread failures in financial regulation and supervision proved devastating to the stability of the US financial markets.

⁷⁷ BLACK, (2002), *supra* note 75 at 6 and note 4. Points to lack of ‘de-centred’ regulation definition, but cites a number of sources touched upon the analysis of ‘centred’ regulation.

⁷⁸ *Id.* at 3.

governmental bodies administering money market fund regulation, I interpret it as an organised attempt to influence funds investment behaviour, which may or may not have legal status.⁷⁹

I start my review of the conventional considerations for financial regulation with a discussion of the law and economics movement, which has been one of the most influential schools of thought in American jurisprudence for the last two decades.⁸⁰ Indeed, securities law and regulation in the US are closely associated with the neoclassical economic theory.⁸¹ This theory assumes that rational individuals and firms make their economic choices, or transact in the markets, on the basis of their utility or profit maximization.⁸² A significant underlying assumption of this theory is that in order for economic agents to transact there should be an appropriate level of information available to enable the agents' decision making. If sufficient information is unavailable, then the market failure is inevitable.⁸³ Under this view, information symmetry, which is often referred as information transparency, is a precondition of a competitive market and the purpose of securities regulation.⁸⁴

George Akerlof, an American economist and a Nobel Prize winner, using an example of the market for used cars, established that when prospective purchasers are persistently lacking information about the car quality, or faced with information asymmetry disfavours the buyers, the sellers and the buyers are unable to achieve the pricing point that would be accepted by both sides.⁸⁵ This is because the buyers without knowledge of a particular car offered for sale assume the quality of any car to be average and are only willing to pay the price that reflects the average quality. Given that good quality is not rewarded by a better price, sellers of good cars withdraw from the market leaving only cars of below average quality available for sale. The buyers, in turn, would revise their quality expectations and the price they are willing to pay downward.

⁷⁹ BLACK, (2010) *supra* note 64 at 3.

⁸⁰ See generally JAMES R. HACKNEY JR., *Under Cover of Science: American Legal-Economic Theory and the Quest for Objectivity* (Duke University Press 2007).

⁸¹ JAMES R. HACKNEY JR., *The Enlightenment and Financial Crisis of 2008: An Intellectual History of Corporate Finance Theory*, 54(4) *Saint Louis University Law Journal* 1257, (2010) at 1264 – 5.

⁸² *Id.* at 1265.

⁸³ AKERLOF, *supra* note 59 at 490 – 491.

⁸⁴ BREYER. *supra* note 71 at 161 – 164. For the history of disclosure rules under US securities regulations, see J. ROBERT BROWN JR., *Corporate Governance, the Securities and Exchange Commission, and the Limits of Disclosure*, 57 (45) *Cath. U. L. Rev.* 45-92, (2007) at 48 *et passim*.

⁸⁵ AKERLOF, *supra* note 59 at 491.

Eventually, fewer good quality cars are offered and demand for cars diminishes as the quality of the cars declines. At the end of this process, no cars are offered at the price the buyers still willing to pay making the market for cars illiquid.⁸⁶

If the information asymmetry is reversed and the buyers are better informed of the cars' quality, the price equilibrium that satisfies both the buyers and the sellers could always be achieved.⁸⁷ This finding of the Akerlof's model justifies the popular idiom of an informed consumer being a better customer. Consistent with this theory, the US securities regulation, which governs money market funds, has developed a comprehensive disclosure regime aimed at facilitating information flow between investors and fund managers.⁸⁸ My theory of a dual regulatory goal expressed in section 1.1.3 draws on the Akerlof model in its postulate that functioning of money market funds could be improved through reversing information asymmetry in favour of fund investors. Thus, a part of my normative answer to, in particular, European money market fund regulation reflects the market need for information symmetry and calls for a new type of disclosure regime, which I refer to as *good disclosure*.

It is recognised, however, that emphasis on information symmetry does not necessarily assure the rationality of investors' response to the market events. As evidenced by the financial crisis, the money market fund investors' judgment was irrational.⁸⁹ While asset-level information was available to the public, investors' rapid withdrawals from money market funds amounted to a full-blown panic.⁹⁰ Confused by perceived riskiness and complexity of money market fund operations, investors triggered a *flight to quality*, which is a shift in investment behaviour when investors sell assets perceived to be risky and purchase assets perceived to be safe.⁹¹ *Flight to*

⁸⁶ *Id.* at 491.

⁸⁷ *Id.* at 492.

⁸⁸ MARY SCHAPIRO, Speech by SEC Chairman: Statement on Money Market Funds Before the Open Commission Meeting (US Securities and Exchange Commission 27 January 2010). The US Securities and Exchange Commission stated that the new disclosure rules for money market funds "will enable investors to better judge the risk profile of their money market funds." It was also believed that the "new disclosure also will impose a discipline on fund managers to avoid taking undue risks."

⁸⁹ Section 2.4 *infra* discusses the role of money market funds in the financial crisis.

⁹⁰ *See, e.g.*, ICI Report *supra* note 21 at 47 – 69. The report provides a detailed description of the failure of the third largest US money market fund in September 2008 and its contingency effect on the capital markets and productive sectors of economy.

⁹¹ There are multiple evidences of *flight to quality* during the periods of sudden shocks such as Russian debt default in 1998, the US terrorist attack on 11 September 2001, the subprime mortgage crisis of 2007-2008. *See, e.g.*, RICARDO J. CABALLERO & ARVIND KRISHNAMURTHY, *Collective Risk*

quality episodes illustrate the limits of risk disclosures. Details of complex financial transactions and the contingency effect in case of a transaction failure through market interconnectedness, both horizontal and vertical, are often beyond the reach of even the most sophisticated institutional investors and securities analysts.⁹²

To adequately protect fund investors, considerations must be given to the effects of cognitive and emotional factors on investment decisions.⁹³ This leaves room for other theoretical influences in the current regulatory construct such as behavioural economics, which rests on findings that investors often respond to risks irrationally and entails factoring these psychological aspects into economic models of rational behaviour.⁹⁴ Under the US securities law, mutual funds that are normally sold to retail investors operate under an array of prescriptive rules and are subjected to extensive disclosure requirements, while investment vehicles geared towards institutional investors and high net worth individuals are free to employ a greater array of investment strategies and avoid majority of reporting and disclosure requirements. This generally leads to permitting sophisticated investors⁹⁵ to choose from a broader array of investments while limiting investment choices of retail investors to safe, less complex alternatives.⁹⁶

Management in a Flight to Quality Episode, 63(5) *Journal of Finance* 2195, (2008) at 2196. ADITYA KAUL & BLAKE PHILLIPS, *Economic Conditions, Flight to Quality and Mutual Fund Flows* (21st Australasian Finance and Banking Conference, Sydney, Australia 2008) at 19. The authors studied Canadian mutual fund cash flow during the collapse of the Long-Term Capital Management hedge fund and found that investors move \$1,850 million into money market funds and \$627 million out of equity funds.

⁹² See, e.g., STEVEN L. SCHWARCZ, *Rethinking the Disclosure Paradigm in a World of Complexity*, 1 U. Ill. L. Rev., (2004) The article examines the problems of complexity of financial instruments vis-à-vis disclosures usefulness to investors.

⁹³ See generally JEFF SCHWARTZ, *Reconceptualizing Investment Management Regulation*, 16 *Geo. Mason L. Rev.* 521, (2009). The article describes a two-tier approach to investment management regulation in the US. Specifically, the current regulatory framework implies that investors with limited resources such as retail clients are often unable to properly analyse their investment options and bounded to make poor choices based on available heuristics.

⁹⁴ See generally AMOS TVERSKY & DANIEL KAHNEMAN, *Judgment under Uncertainty: Heuristics and Biases* 185/4157 *Science* 1124, (1974). See also JILL E. FISCH, *Regulatory Responses to Investor Irrationality: the Case of the Research Analyst* 10 *Lewis & Clark L. Rev.* 57, (2006). The article questions validity of the assumption that greater disclosures improve investor decision making and caution against costs imposed by additional disclosures that provides only marginal usefulness.

⁹⁵ 17 CFR §230.501 Definitions and Terms Used in Regulation D Sophisticated investors in the US federal securities laws are defined by the term “accredited investors”. See also *Accredited Investors*, US Securities and Exchange Commission (17 October 2011), at <http://www.sec.gov/answers/accred.htm>.

⁹⁶ SCHWARTZ, *supra* note 93 at 532 – 536.

The US and European money market funds are sold to both retail and institutional investors although, as shown in this thesis, the breakdown of retail and institutional ownership may vary depending on a particular market infrastructure.⁹⁷ Money market funds, and especially those domiciled in the US, have evolved into a commoditised product sourcing investments through distribution channels that generally remove retail investors from the decision-making. The majority of retail assets are invested in money market funds through other commingled investment vehicles such as omnibus accounts of banks' personal trust departments or pension plans administered by an employer.⁹⁸ The boundaries between retail and institutional investors in money market funds are blurred suggesting that simplistic regulatory approach based on level of investor sophistication may not yield desired benefits. Furthermore, the recent court cases have exposed institutional investors as lacking sophistication and necessary knowledge of financial markets and as failing to conduct proper due diligence despite their fiduciary role and available resources.⁹⁹

Nonetheless, despite this critique, the continuing success of money market funds could be explained by the findings of behavioural economists such as investors' aversion to loss.¹⁰⁰ The investor preference for avoiding losses over acquiring gain is supported by numerous empirical observations including *a flight to quality*. In application to money market funds, the loss aversion

⁹⁷ An analysis of regulatory models applied to money market funds is offered in Chapters 3 and 4 *infra*, which look into the US and European money market funds, respectively. The analysis concludes that, although there might be differences in fund management depending on the prevailing type of shareholders, money market fund regulation treats retail and institutional investors equally. A round of consultation with various stakeholders in the US money market fund industry conducted by the US Securities and Exchange Commission prior to enacting the money market fund reform in May 2010 revealed that differentiating types of shareholder could be impractical. SEC Rel. No. IC-29132 at n. 186 and accompanying text.

⁹⁸ While information regarding the nature and composition of money market fund investor base is not generally publicly available, my practical experience in the money market fund industry and anecdotal evidences suggest that over 50 per cent of money market funds' assets under management comprised of omnibus accounts pooling small individual contributions.

⁹⁹ See, e.g., SEC v. Goldman, Sachs & Co. and Fabrice Tourre, 10 CV 3229, (S.D.N.Y. filed April 16, 2010). IKE Deutsche Industriebank AG, an institutional investor, failed to properly assess risks of its CDO investments. See also SEC v. Bernard L. Madoff and Bernard L. Madoff Investment Securities LLC, 08 CV 1079, (S.D.N.Y. filed December 11, 2008). Multiple institutional investors such as endowments, funds of funds and registered investment advisors have failed to conduct basic due diligence.

¹⁰⁰ See, e.g., AMOS TVERSKY & DANIEL KAHNEMAN, *Loss Aversion in Riskless Choice: A Reference-Dependent Model* 106 *The Quarterly Journal of Economics* 1039, (1991). The article presents a reference-dependent theory of consumer choice, which is based on the central assumption that losses and disadvantages have greater impact on consumer preferences than gains and advantages.

theory explains a positive relationship of money market funds' assets under management and market volatility, *i.e.*, money market funds tend to gain assets during the periods of increased market volatility, or when probability of market losses is the highest.¹⁰¹ The most apparent normative implications of this theory call for establishing detailed risk-limiting rules, sometimes referred to as prudential standards, to stir the fund managers towards the most conservative practices.¹⁰²

The prudential approach is the most prominent in banking regulation¹⁰³ and is also notable in the securities law in relation to money market funds.¹⁰⁴ From the standpoint of implementation and maintenance prudential measure are practical and, as such, are beneficial for the supervised entities. However, the pitfalls are plentiful and are often rooted in the fallibility of regulation itself.¹⁰⁵ Furthermore, being the least flexible, the prudential approach attracts the major criticism as constraining financial innovation, on the one hand, and falling behind market developments, on the other.¹⁰⁶ Therefore, this thesis undertakes a substantial study enquiring

¹⁰¹ See Annex A *infra*. Volatility S&P 500 Index is used to measure market volatility. *Source*: <http://finance.yahoo.com/q/hp?s=%5EVIX+Historical+Prices>

¹⁰² BRUNNERMEIER, et al., *supra* note 36 at 1-2. The article provides rationale for financial regulation and basic principles of prudential approach. It explains the prudential approach through a comparison to common law that builds on the accumulated experience and the best practices. Rules of prudential regulators are doable and practical; and the general approach is usually incremental.

¹⁰³ See, e.g., The Bank of England, Prudential Regulation Authority -- Our approach to banking supervision (The Bank of England / the Financial Services Authority May 2011). The publication sets out operating principles for the Prudential Regulation Authority that is expected to be created by the end of 2012. The Authority is expected *inter alia* to establish and enforce policies and rules on financial firms' resilience covering such areas as capital, liquidity and leverage. In the US, see The Banking Act of 1933 Pub. L. 73-66, 48 Stat. 162. The law known as the Glass-Steagall Act established *inter alia* the Federal Deposit Insurance Corporation, which provides insurance for bank deposits and establishes capital and liquidity requirements for supervised banks.

¹⁰⁴ See generally 17 CFR § 270.2a-7 Rule 2a-7 establishes risk limiting conditions, including a set of specific quantitative criteria, for those mutual funds marketing themselves as MMFs. See also JOAN OHLBAUM SWIRSKY, *The Guide to Rule 2a-7: A Map Through the Maze for the Money Market Professional with Practical Applications* (Stradley Ronon Stevens & Young, LLP 2nd ed. 2011). The in-depth guide provides a detailed explanation of the practical implementation of Rule 2a-7 and serves as a handbook for money market fund compliance officers.

¹⁰⁵ See generally FCIC Report *supra* note 27. The report analyses multiple examples of regulatory failure leading to the financial crisis.

¹⁰⁶ *Id.*

whether harmonised micro-prudential standards applied to individual money market funds cross-border are conducive to realising the goals of investor protection and systemic stability.¹⁰⁷

The analysis of money market funds established in different jurisdiction explores both the prevalent quest for financial product homogeneity and the benefits of cultural diversity. The evolution of money market fund industry can be viewed as a reflection of globalisation, as a process of “de-territorialisation of socio-economic and political space”.¹⁰⁸ Money market funds traverse national borders providing the flow of capital to those markets and institutions that offer the most attractive financial terms at any given moment. Recalling the earlier discussion, from the point of view of the neoclassical economics, the efficiency in deployment of capital *per se* constitutes a worthy regulatory goal.¹⁰⁹ However, it can be retorted that fluidity of capital provided by money market funds may also inflict severe shortage of capital and become a major destabilizing force should investment preferences of these funds change.¹¹⁰ Furthermore, there are also legal traditions and financial systems that do not subscribe to the efficiency narrative so prevailing in the Western economic culture.¹¹¹ While financial developments outside the Western capital markets are beyond the scope of my thesis, I bring this point to highlight once again the limited scope of the post-crisis regulatory debate surrounding cross-border issues of money

¹⁰⁷ Chapters 3 and 4 offer a detailed analysis of *micro-prudential* standards applied to money market funds in the US and Europe, respectively. In addition, *macro-prudential* measures in money market fund regulation that seek to limit the spillover effect of a money market fund failure are discussed. See, e.g., BRUNNERMEIER, et al., *supra* note 36 at 23 – 29. The article reviews applicability of macro-prudential measures to financial firms based on their size, leverage and interconnectedness.

¹⁰⁸ ANTHONY MCGREW & DAVID HELD, *Governing Globalization: Power, Authority and Global Governance* (Polity First ed. 2002).

¹⁰⁹ An efficient capital allocation is a significant contributing factor in wealth creation and improving availability of credit globally. See 15 U.S.C. § 77a et seq. at Section 2(b) “Consideration of Promotion of Efficiency, Competition, and Capital Formation”. The US Securities and Exchange Commission is required to consider in its rulemaking initiatives, “...in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation”. See also section 1.2 *infra* providing an analysis of the traditional justifications for financial regulation and their applicability to money market funds.

¹¹⁰ See, e.g., BABA, et al. *supra* note 55. See also a series of reports published by Fitch Ratings in 2010 and 2011 analysing funding relationship of the US money market funds and European banks, e.g., ROBERT GROSSMAN, et al., U.S. Money Market Funds: Recent Trends in Exposure to European Banks (Fitch Ratings 10 December 2010). GROSSMAN, et al., (2011a) *supra* note 55. GROSSMAN, et al., (2011b) *supra* note 55. ROBERT GROSSMAN, et al., U.S. Money Funds and European Banks: Exposures Down, Maturities Shorter (Fitch Ratings 22 August 2011). All reports are available at www.fitchratings.com.

¹¹¹ See, e.g., ALEXEY ARAKCHEEV, et al., *Islamic Money Management: a Western View*, 6 (2) Capital Markets Law Journal 238, (2011). The article examines applicability of the western asset management tradition to Islamic finance and discusses related philosophical and cultural differences.

market regulation, which zeros in predominantly on harmonisation of investment standards utilised in the US and the EU.

As pointed out earlier in section 1.1.3, the controversy of the prevailing drive for harmonisation becomes apparent when the existing regulatory model is critically analysed *vis-à-vis* my theory of the dual regulatory goal – investor protection and systemic stability. For example, an introduction of the CESR’s Guidelines on a common definition of European money market funds in May 2010 was presented by regulators as a step to a greater investor protection understood as ensuring “a level playing in Europe” for various collective investment schemes marketing themselves as money market funds.¹¹² Therein investor protection is sought to be achieved through the conversion of diverse investment strategies pursued by money market funds in various European countries into two regulatory delineated options.¹¹³ I argue in section 6.2.1 *infra* that an attempt to protect money market fund investors by a means of a reduction in a number of their options does not necessarily lead to a greater protection. On the contrary, such a regulation-induced coordination of investment strategies may, in fact, have unintended consequences of an increase in systemic risk.¹¹⁴

An essential step in rationalising money market fund regulation is to agree on what are socially-desirable ends of the fund investment behaviour. My theory of the dual regulatory goal for money market funds regulation expressed in section 1.1.3 has sought this end. However, oversupply of regulation is a danger of its own as, on its extreme, it may negate the basic economic rationale for money market funds to exist.¹¹⁵ Under the economic efficiency doctrine only those regulatory measures are justified that could help to achieve the efficiency

¹¹² See Feedback Statement: CESR’s guidelines on a common definition of European money market funds (Committee of European Securities Regulators 19 May 2010) [Feedback Statement] at 2.

¹¹³ CESR’s Guidelines *supra* note 9.

¹¹⁴ See, e.g., ROBERTA ROMANO, Against Financial Regulation Harmonization: A Comment (Yale Law & Economics Research Paper No. 414 2010) at 16.

¹¹⁵ DAVID T. LLEWELLYN, The Economic Rationale for Financial Regulation (FSA Occasional Paper 1 April 1999) at 6. Points to “an evident danger of regulation being over-demanded by consumers and over-supplied by regulators”. See also VICTORIA MCGRANE, *GAO: Implementing Dodd-Frank Could Cost \$2.9 Billion*, WSJ 28 March 2011. The US Government Accountability Office estimates that the first year of the Dodd-Frank Act implementation will cost the 11 US government agencies a total of about \$974 million; using this annual estimate, the Dodd-Frank Act implementation will cost about \$2.9 billion over five years.

improvement.¹¹⁶ Yet, because the social cost of the crisis is enormous, the post-crisis governmental production of new regulatory and supervisory services amidst calls for tougher, more restrictive regulation seems to obtain a blank check for its activities. In money market fund regulation costs should be carefully controlled.¹¹⁷ Every new rule would take away a few basis points of return from investors in already low yield/low risk investment alternative.¹¹⁸ It is money market fund investors who pay for fund regulation and this should be kept in focus of those involved into production of regulation. As Justice Brandeis warned back in 1933, “Remember, the inevitable ineffectiveness of regulation”.¹¹⁹ This warning underscores a discussion of a dual regulatory goal – investor protection and systemic stability – earlier in this chapter that stresses a lack of an economic argument. Indeed, as shown earlier, *good disclosure* that promotes risk-limiting behaviour of asset managers and fosters the public scrutiny is the most cost-effective mechanism for building an active market.

1.3 Literature review

As mentioned in section 1.1.3, prior to the financial crisis there was surprisingly little systematic research on money market funds. No established schools or research traditions existed on the subject. Instead, there were a relatively small number of unrelated empirical studies conducted by finance scholars and professionals with an almost exclusive focus on the US market. The main objective of these studies was to test market efficiency and the rational

¹¹⁶ The outcome is deemed to be ‘Pareto optimal’ if there is no other resource allocation that makes everyone at least as well off and at least one party better off. *See generally* RONALD H. COASE, *The Problem of Social Cost*, 3 *Journal of Law and Economics* 1, (1960) and RICHARD A. POSNER, *Economic Analysis of Law* (7th ed. 2007).

¹¹⁷ *See, e.g.*, Money Market Fund Reform. Remarks by: Senator Pat Toomey (R-PA) (US Chamber of Commerce 8 February 2012). The member of the US Senate urged to carefully consider the cost of additional money market fund reforms and whether these costs justify potential benefits. Available at http://www.preservemoneymarketfunds.org/wp-content/uploads/2011/04/Toomey_Remarks_2_8_12_13291521511.pdf.

¹¹⁸ SCOTT C. GOEBEL, Comment Letter to Money Market Fund Reform File Number S7-11-09, Release No. IC-28807 (Fidelity Investments 24 August 2009) at 21. Fidelity Investments estimated that the cost of money market fund reform as is was proposed by the US Securities in Exchange Commissions in 2009 would range from 19 to 42 basis points of annual return for institutional investors and from 14 to 31 basis points for retail investors. The money market fund reform has been implemented making it less attractive for investors to invest in money market funds and more costly for investment managers to run the money market business.

¹¹⁹ MATTHEW P. FINK, *How Regulators Failed to Prevent the Financial Crisis*, Money Management Executive 10 January 2011.

expectations hypothesis as it applied to money markets. In addition, there were several descriptive articles on legislative debates and money market regulation produced by practicing attorney and ex-regulators. All this did not amount to any established legal theory or hypotheses that would have been tested by different methods and in different markets. Nevertheless, these fragmentary sources rationalized the money market fund industry and served as a good overview of its structure.

Post-crisis financial and econometric studies identified money market funds as a part of the ‘shadow banking’ system, established the money market funds’ role in its operations, and called for tighter regulation of these funds on the basis of prudential approach adopted by banks.¹²⁰ My review of this literature captures the divergence of opinions regarding the true nature of money market fund operations and their social benefits. I also noted the lack of consistency regarding money market funds amongst various national regulatory bodies. Nonetheless some material is valuable and chapter 2 draws from these sources while profiling money market funds as global liquidity providers and cash management vehicles outside the traditional banking system. I conclude reiterating that although the volume of research in money market funds is constantly growing, there has not been a systematic approach to money market funds through the prism of a coherent theory. It is my hope that this thesis would fill this gap.

1.3.1 Money market funds in financial studies

Earlier literature on money market funds was mainly produced by financial scholars concerned with various aspects of portfolio management and corporate governance.¹²¹ These studies have proven to be valuable to my thesis as background research explaining the

¹²⁰ The term *shadow banking system* is attributed to Paul McCulley, Managing Director of a global investment management firm PIMCO, who coined it at the 2007 conference of the Kansas City Federal Reserve Bank. He defined it as “the whole alphabet soup of levered up non-bank investment conduits, vehicles, and structures”. See PAUL MCCULLEY, *Teton Reflections* (PIMCO Global Central Bank Focus 2007). See also section 1.3.4 *infra* for literature review related to ‘shadow banking’.

¹²¹ See, e.g., ANDREW B. LYON, *Money Market Funds and Shareholder Dilution*, 39 *Journal of Finance* 1011, 1020, (1984). The paper analyses the effects of amortised cost valuation on institutional money market funds and found the possibility of arbitrage between securities priced at market value and amortised cost, which resulted in dilution of value for money market fund investors.

commoditisation of money market funds.¹²² I also present studies arguing that while homogeneity tendencies in money market fund management are not contested, there is still room to add value to investors, but mostly via ancillary services. Academic studies found no strong correlation between the ability of the manager in forecasting interest rates and the economic success of the fund – which means that money market fund managers add little extra return, if any, through their portfolio management strategies.¹²³

Similarly, an analysis of changes in money market fund duration *vis-à-vis* changes in the general level of interest rates concluded that fund duration is a lagging, not a leading indicator of future interest rate changes.¹²⁴ Thus fund managers have limited ability to add value through active duration management. In addition, it was inferred that the benefits of active money market fund portfolio management are not detectable in the fund return data.¹²⁵ Managers of these funds are generally unable to add value by adjusting the duration of a fund portfolio in order to capitalize on anticipated changes in interest rates.

Over the years, a small army of finance scholars was engaged in finding a Holy Grail of excess return in mutual funds. Domian *et al.* found, on a representative sample of money market funds operating in 1990 through 1994, that return of these funds is highly correlated with fees they charge on investors.¹²⁶ It was found that money market funds in the sample produced similar *gross* returns.¹²⁷ The differences in *net* returns were largely driven by differences in

¹²² Commoditisation is normally understood as a lack of product differentiation. *See, e.g.,* JOHN QUELCH, *When Your Product Becomes a Commodity* Harvard Business School at <http://hbswk.hbs.edu/item/5830.html>.

¹²³ ALEX KANE & YOUNGKI LEE, *The Forecasting Ability of Money Market Fund Managers and its Economic Value* (1983) NBER Working Paper Series available at <http://ssrn.com/abstract=321298>. The study of relationship between the interest rate forecasting ability of a portfolio management team and the economic success of money market funds found little correlation.

¹²⁴ DALE L. DOMIAN, *Money Market Mutual Fund Maturity and Interest Rates* 24 (4) *Journal of Money, Credit and Banking*, (1992) at 9.

¹²⁵ RAMON P. DEGENNARO & DALE L. DOMIAN, *Market Efficiency and Money Market Fund Portfolio Managers: Beliefs Versus Reality*, 31 *The Financial Review* 453, 474, (1996) at 19.

¹²⁶ DALE L. DOMIAN & WILLIAM REICHENSTEIN, *Performance and Persistence in Money Market Fund Returns*, 6(3) *Financial Services Review*, (1998) at 182.

¹²⁷ Gross return refers to the aggregate performance of the holdings of a portfolio. *See Concept Release: Request for Comments on Measures to Improve Disclosure of Mutual Fund Transaction Costs* [Release Nos. 33-8349; 34-48952; IC-26313; File No. S7-29-03] RIN 3235-A194 US Securities and Exchange Commission at http://www.sec.gov/rules/concept/33-8349.htm#P222_60222 at footnote 53.

charged fees¹²⁸ and the funds' objective to investment in risky securities such as commercial paper.¹²⁹ The study divided money market funds in two groups: those funds investing exclusively in government securities, called 'government funds,' and those funds investing in other assets, called 'prime funds.'¹³⁰ Within both groups money market funds had a limited ability to differentiate themselves amongst their peers. Over time, lack of individual fund differentiation leads to a high degree of concentration currently evidenced in the money market fund industry.¹³¹

The findings of the four studies by Lyon, Kane & Lee, Domian and Domian *et al.* explain the money market fund tendency for commoditisation, or inability to offer value through unique fund-specific attributes as there are almost none.¹³² In light of these findings it is worth examining a study conducted by Christoffersen *et al.* that explains how money market funds compete with each other in the efficient market.¹³³ The study researched why investors do not sell those share classes carrying larger expense charges in favour of lower expense share classes.¹³⁴ The authors concluded that as long as the fund adds value through ancillary services

¹²⁸ Operations of a mutual fund incur certain costs. These are regular fund operating costs, such as investment advisory fees, marketing and distribution expenses, brokerage, custodial, transfer agency, legal, and accountants' fees. In addition, costs might be incurred in connection with particular investor transactions, such as investor purchases, exchanges, and redemptions. Total sum of those costs paid by a fund investor is referred to as "fund's expenses" or "fund's expense ratio". Explanation of mutual fund expenses is available on the US Securities and Exchange Commission's web-site at <http://www.sec.gov/answers/mffees.htm#management>. Net return refers to gross return net of mutual fund's costs. *See Id.*

¹²⁹ The glossary of statistical terms maintained by the Organisation for Economic Cooperation and Development contains the following definition of commercial paper: commercial paper is an unsecured promise to pay a certain amount on a stated maturity date, issued in bearer form. Commercial paper enables corporations to raise short-term funds directly from end investors through their own in-house commercial paper sales team or via arranged placing through bank dealers. Available at <http://stats.oecd.org/glossary/detail.asp?ID=6054>.

¹³⁰ DOMIAN & REICHENSTEIN, (1998) *supra* note 126 at 169. *See also* section 2.2 *infra* for a detailed classification of money market funds.

¹³¹ According to the Investment Company Institute, as of 30 September 2009, the US money market mutual funds had \$3.4 billion in total assets under management. *See* www.ici.org. CraneData's 'Money Fund Intelligence' reported in its October 2009 issue that approximately 95 per cent of those assets was managed by only 25 mutual fund advisors. *See* <http://www.cranedata.us/products/money-fund-intelligence/>.

¹³² *Supra* notes 121, 123, 124 and 126.

¹³³ *See generally* SUSAN E.K. CHRISTOFFERSEN & DAVID K. MUSTO, *Demand Curves and the Pricing of Money Management*, 15 *Review of Financial Studies* 1499, 1524, (2002).

¹³⁴ The US Securities and Exchange Commission web-site contains the following explanation of mutual fund share classes:

such as individual customer care, there could be investors less sensitive to expense charges.¹³⁵ Therefore, fund managers were able to charge higher expenses without losing all existing investors.¹³⁶ In another study, Christoffersen noted that about half of money market fund managers “voluntarily waive fees they have a contractual right to claim”.¹³⁷ The author found that the variation in fee waivers is a significant and differentiating factor in funds’ relative performance. Fund managers use fee waivers to strategically adjust net performance, which promotes cash inflow and facilitates growth of assets under management.

Lastly, I note that the studies discussed in this section were all based on a sample of the US money market funds. To sum up the findings, money market fund industry’s concentration in the US and a high level of fund commoditisation are explained by the fund managers’ inability to add value through active portfolio management and interest rate forecasting. The net return to investors is highly dependent on the level of fund fees and expenses. However, notwithstanding these findings, there could be other factors, mainly a high level of customer service, promoting investors’ loyalty regardless of the charged fees.

1.3.2 Rationale for money market fund development

As explained in chapter 3, the origin of the US money market fund industry in early 1970s was inspired by restrictive banking regulation prohibiting bank from paying market rates on savings account.¹³⁸ Thus, despite the restrictions on rates being lifted over 30 years ago, academic sources still often rationalize money market funds through the prism of their

Known as ‘multi-class funds,’ some mutual funds offer investors different types of shares, known as ‘classes’. Each class will invest in the same ‘pool’ (or investment portfolio) of securities and will have the same investment objectives and policies. But each class will have different shareholder services and/or distribution arrangements with different fees and expenses and, therefore, different performance results.

Available at: <http://www.sec.gov/answers/mfclass.htm>.

¹³⁵ CHRISTOFFERSEN & MUSTO, *supra* note 133 at 19.

¹³⁶ *Id.*

¹³⁷ SUSAN E.K. CHRISTOFFERSEN, *Why Do Money Fund Managers Voluntarily Waive Their Fees?*, 56 *Journal of Finance* 1117, 1140, (2001) at 2.

¹³⁸ Chapter 3 *infra* offers an extensive historical narrative in the origin and development of the US money market industry including consideration of their competitive position vis-à-vis banks.

competitive position *vis-à-vis* banks.¹³⁹ In 1983 Rosen *et al.* was amongst the first researchers to advance a hypothesis explaining the money market funds' popularity by the rational consumer response to the inability of regulated financial institutions to offer the market rate of return on retail deposits.¹⁴⁰ The theory predicted that "full deregulation of financial institutions will, in all likelihood, in turn, lead to the end of the money market mutual fund experiment in ad hoc deregulation."¹⁴¹ The current size of the US money market fund industry has proved this theory wrong.¹⁴²

The real drivers behind commercial success of the US money market funds could be attributed to unique elements of money market fund operations as documented by industry insiders and finance journalists.¹⁴³ For example, Nocera attributes the emergence of the US money market funds and their early popularity to the existence of Regulation Q,¹⁴⁴ which

¹³⁹ See, e.g., WILLIAM A. BIRDTHISTLE, *Breaking Bucks in Money Market Funds*, 5 Wis. L. Rev. 1155, (2010) at 1193. The author attempts to explain the growth of assets under management in the US money market funds by arbitrage between banking and securities regulations. While banks have to carry costs of deposit insurance and capital reserves, money market funds, free of such costs, are able to offer higher return on a similar investment option. In his opinion, such a regulatory subsidy creates moral hazard and promotes unsound business practices thus increasing a likelihood of systemic failure. The regulatory proposals offered in the article call for one of two solutions: (1) prohibiting money market funds from offering an investment product resembling bank deposits, or (2) subjecting money market funds to bank-like regulation including deposit insurance.

¹⁴⁰ KENNETH T. ROSEN & LARRY KATZ, *Money Market Mutual Funds: An Experiment in Ad Hoc Deregulation: A Note*, 38 (6) *Journal of Finance*, (1983) at 1015.

¹⁴¹ *Id.* at 1017. The portfolio theory model leads to a conclusion that the household's allocation of net worth is based on risk-return considerations, subject to a wealth constraint, *i.e.*, consumer flows will leave low-yielding bank deposits for comparably low risk MMF shares.

¹⁴² The success of the US money market funds after the ceiling on deposits' interest rates was finally lifted in 1986 is illustrated by the growth of assets under management in these funds from \$292 billion at the end of 1986 to the all-times high of \$3.8 billion at the end of 2009, according to the ICI data. This constitutes approximately 12.5 per cent annual asset growth rate over the 23-year period.

¹⁴³ See, e.g., Joseph Nocera, *A Piece of the Action: How the Middle Class Joined the Money Class* (Simon & Schuster. 1994). at 74. The author describes the fundamental market conditions such as a sharp increase in the Consumer Price Index (CPI) in late 1960s and early 1970s and interest rate ceiling restrictions placed on banks' savings account known as Regulation Q that led to emergence of the US money market funds. See also Matthew P. Fink, *The Rise of Mutual Funds: An Insider's View* (Oxford University Press. 2008). at 80. The author explains that higher-yielding financial instruments such as Treasury bills and jumbo certificates of deposit in excess of \$100,000 were largely unavailable to an average American. Money market funds pooled assets of small investors to offer them a higher rate of return that was previously only available to institutional investors.

¹⁴⁴ Section 11 of the Banking Act of 1933 (12 USC. 371a), which is implemented by Regulation Q (12 CFR part 217), regulates interest paid to bank depositors. The ceilings on savings accounts were for the most part lifted by the Depository Institutions Deregulation and Monetary Control Act of 1980 (12 USC. 226 note).

limited, among other requirements, interest that US banks were allowed to pay on savings accounts.¹⁴⁵ However, he also noted that by the time the restrictions of Regulation Q were fully phased out in 1986, money market funds gained momentum offering both the yield and the convenience of a checking account to retail investors.¹⁴⁶

In the economic review issued by the Federal Bank for Richmond in 1979, Cook *et al.* sought to determine whether money market funds are a lasting financial innovation or merely a reaction to restrictive banking regulation. Two explanations for the explosive growth of money market funds in the US were offered: higher yield relative to banks' savings accounts and service in managing short-term assets and liabilities.¹⁴⁷ The latter interpretation has illustrated a permanent change in the way many market participants managed their liquid assets. Thus, money market funds' continuing strong position is explained by their important role in the global liquidity markets.¹⁴⁸

My analysis of the US money market fund growth in chapter 3 offers an additional critique of the regulatory arbitrage-based hypothesis. Restrictive banking regulation that limited interest paid on savings accounts was fully phased out by 1986 eliminating money market fund yield advantage introduced by regulatory arbitrage.¹⁴⁹ Yet, the US money market funds' assets

¹⁴⁵ See, e.g., JOHN F. MCDONALD & DANIEL P. MCMILLEN, *Urban Economics and Real Estate: Theory and Policy* (Blackwell Publishing, 2007), at 255. The authors note that when nominal interest rates in the US drove up in the mid-1960s, the US Congress had responded by enacting the Interest Rate Control Act of 1966, which authorized the Federal Reserve Board under the Regulation Q to impose an interest rate ceiling on deposit accounts held at savings and loan associations, or thrifts and banks. See also Jerry W. Markham, *A Financial History of the United States. Volume III: From the Age of Derivatives into the New Millennium (1970 - 2001)* (M.E. Sharpe, Inc. 2002), at 4. The author notes that the passage of the Interest Rate Control Act of 1966 was aimed at curbing the competition among thrifts for the same deposit dollars.

¹⁴⁶ Title 11 of the Depository Institutions Deregulation Act of 1980 provided for an orderly phase-out and ultimate elimination of interest rate in 6 years. The title expired on 31 March 1986. According to the Investment Company Institute, at the end of 1986, the US money market funds had \$292 billion in assets under management compared to \$4 billion at the end of 1976. This constituted an average annual growth rate of 53.6 per cent.

¹⁴⁷ See TIMOTHY Q. COOK & JEREMY G. DUFFIELD, *Money Market Mutual Funds: a Reaction to Government Regulations or a Lasting Financial Innovation?*, 65 *Federal Reserve Bank of Richmond: Economic Review*, (1979) at 17. The authors noted that the yield differential between interest rates paid on banks' savings accounts and banks' three-month certificates of deposits offered in \$100,000 denominations reached 5.5 per cent per annum in 1978.

¹⁴⁸ *Id.* at 18.

¹⁴⁹ VIKTORIA BAKLANOVA, *Money Market Funds: An Introduction to the Literature* (2010) at 8. R. ALTON GILBERT, *Requiem for Regulation Q: What It Did and Why It Passed Away* (Federal Reserve

under management continued to grow over years reaching their all time high in January 2009.¹⁵⁰ Furthermore, these funds have retained the relatively stable asset level through a prolonged period of ultra-low interest rates in 2007 through the present.¹⁵¹ The post-crisis analysis of money market funds' cash flows illustrates that investors are willing to pay a high price for the safety of their money.¹⁵² For example, Fidelity Investments, the largest US manager of money market funds, confirmed through surveying its money market fund investors that both retail and institutional client value safety and daily access to funds the most, while the level of return is regarded as being the distant third investment objective.¹⁵³

Pozsar explained the institutional preference for managing cash pools outside the traditional banking systems largely by the poor track record of bank management, which became evident in the post-crisis environment.¹⁵⁴ Only in the US there were 388 instances of bank failures since 2000 with 336 banks failed in three years from 2008 through 2011.¹⁵⁵ These statistics look rather alarming especially against the backdrop of the track record of the US money market funds that have only passed losses onto investors twice since their origin in the early 1970s.¹⁵⁶ The limited bank deposit coverage up to a legally established amount is one of

Bank of St. Louis February 1986) at 31. The article offers the rationale behind Regulation Q, analyses its effectiveness and provides a schedules of phase-out steps.

¹⁵⁰ Investment Company Fact Book: A Review of Trends and Activities in the Investment Company Industry (Investment Company Institute 50th ed. 2010). [ICI Factbook 2010] at section 4.

¹⁵¹ JANE J. KIM, *Money-Market Funds: How Low Can They Go?*, WSJ 9 April 2011. The average US money market fund yield reached all time low at the level of 0.06 per cent per annum.

¹⁵² See, e.g., Corporate Cash Management Survey Report (SunGard 8 February 2012) at 8. Available at <http://sungard.com/pressreleases/2012/sgn020812.aspx>. The survey found that "security and liquidity remain key considerations" for corporate cash management.

¹⁵³ SCOTT C. GOEBEL, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (Fidelity Investments 3 February 2012) [Fidelity Survey] at 2. Available at <http://www.sec.gov/comments/4-619/4619-116.pdf>.

¹⁵⁴ See, e.g., ZOLTAN POZSAR, Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System (International Monetary Fund August 2011).

¹⁵⁵ *Failed Bank List*, Federal Deposit Insurance Corporation (6 May 2011), at <http://www.fdic.gov/bank/individual/failed/banklist.html>.

¹⁵⁶ In the history of the US money market funds, there were two cases of such funds not being able to hold their share price at \$1.00. In September 1994, the Community Bankers US Government Fund sustained principal losses due to a large exposure to government adjustable rate securities. As interest rates increased, these floating rate securities lost value. The fund was liquidated paying investors 96 cents per share. This was the first failure in the then 23 year history of money funds and there were no further failures for 14 years.

On 16 September 2008 The Reserve Primary Fund, which was at the time the third largest US MMF with roughly \$63 billion in assets under management, found itself holding defaulted Lehman

the two basic reasons explaining why money market funds continue to be a safe haven for cash even in the ultra-low yield environment.¹⁵⁷

The second reason relates to the money market fund function as providers of a low cost outsourcing solution for a highly resource intense area of corporate liquidity management.¹⁵⁸ Lastly, the popularity of US and European money market funds could be explained by their role as funding sources for various economic actors from consumers to corporations to state and local governments.¹⁵⁹ So far academic researchers largely seem to miss these evidences of investor preferences perhaps due to lack of publicly available data on money market fund shareholder base. This thesis *inter alia* seeks to close this gap.

1.3.3 Legal issues pertaining to money market funds

Being direct competitors to bank deposits and resembling bank accounts in terms of check writing capabilities, money market funds have presented unique issues under banking laws. Money market funds compete with banks for the same money. This business competition propagated never ending regulatory debates of security markets and banking authorities over the

Brothers' commercial paper in the total amount of \$785 million. The Reserve's Board of Directors made a decision to write the value of these holdings down to zero, which caused the fund's net asset value to decline below \$1.00 to \$0.97. The event of the fund's NAV decline below \$1.00 is known in the industry as 'breaking the buck'. *See also* SEC Rel. No. IC-28807 *Money Market Fund Reform* (Proposing Release) (74 FR 32688 8 July 2009) at nn.30, 44, 45, and accompanying text. *See also* HENRY SHILLING, *Sponsor Support Key to Money Market Funds* (Moody's Investors Service August 2010) [MMF Support Report]. The author noted that while there were only two US money market funds that passed losses on shareholders, a large number of the US money market funds only avoided such losses due to financial support provided by the fund sponsors.

¹⁵⁷ The maximum deposit size covered under the federal deposit insurance has been \$100,000 per an account per a financial institution since 1970s until 2008, when the insured account cap was raised to \$250,000. *See also* JONATHAN R. MACEY, *Reducing Systemic Risk: The Role of Money Market Mutual Funds as Substitutes for Federally Insured Bank Deposits* (Yale Law & Economics Research Paper No. 422 2011) at 38.

¹⁵⁸ *See, e.g.*, Comment Letter on the President's Working Group Report on Money Market Fund Reform (Release No. IC-29497; File No. 4-619) signed by Agilent Technologies, Inc. and fifteen other U.S. corporations (Jan. 10, 2011) at 2. The letter states that elimination of money market funds in their current form would make short-term financing for American businesses far more costly. *See also* The contribution of IMMFA funds to the Money Markets (PricewaterhouseCoopers 2011) [PwC Report] at 5.

¹⁵⁹ *See, e.g.*, ICI Report *supra* note 21 at 1. The report lists economic actors relying on money market funds as sources of funding. *See also* PwC Report *supra* note 158 at 4. The report lists European money market fund contributions in various economic regions and financial markets.

fate of the money market fund industry.¹⁶⁰ Kalogeras observed that the growth of assets under management of money market funds coincides with the periods of high interest rates.¹⁶¹ Asset decline would normally coincide with the periods of low interest rates when investors re-allocate their cash from safe, but low-yielding money market funds to riskier investment options.

Consumer preference for investing in money market funds instead of bank deposits during the periods of high interest rates has always been a subject of lobbying efforts by the banking industry. Greenberg analysed advantages and disadvantages of money market fund investments alongside an insightful review of their risk-return trade off.¹⁶² By the early 1980s, the money market fund benefits to consumers were so well publicized that the Fed had to side with the mutual funds industry and against banks. The main social benefit of money market funds was found in enabling small investors to access higher yielding financial products earlier only available to institutional investors and larger businesses.

In his statements to Congress, J. Charles Partee, a member of the Board of Governors of the Federal Reserve System, noted:

¹⁶⁰ On January 24, 1980 in his statement before the Subcommittee on Financial Institutions of the Committee on Banking, Housing, and Urban Affairs, J. Charles Partee, a member of the Board of Governors of the Federal Reserve System noted the substitutability of money market fund shares for transaction and savings balances at depositary institutions and questioned whether 'reserve requirements need to be applied to money market funds in order to enhance monetary control'. At that time, the absence of such reserve requirements did not appear to be a problem as, according to the same statement, 'the transaction uses of balances in money market mutual funds are very limited'.

¹⁶¹ G. KALOGERAS, *Examining the Money Market Funds*, 164 *Banker's Magazine*, (1981)

¹⁶² CHARLES M. GREENBERG, *Money Market Fund Industry: History and Related Developments*, 4 (1) *Journal of Financial Planning*, (1983) at 43:

Some of the advantages of investing in a money market mutual fund as opposed to a savings account are: (1) higher yields than those offered at banks and other financial institutions, (2) professional and full-time fund portfolio management, (3) the opportunity to invest in a diversified portfolio of large denomination short-term investments, and (4) checkwriting privileges. The major disadvantage associated with money market mutual funds is that they are not insured against loss, unlike savings accounts that are insured by the Federal Deposit Insurance Corporation [up to a certain amount].

The author also compared the return of Capital Preservation Fund, Inc. invested exclusively in government securities with maturities of one year or less with return one would have received by investing in 3-month US Treasury bills. Direct purchases of the US Treasury bills would have outperformed the fund's return in a period of rising interest rates and underperformed in a period of falling interest rates.

To limit yields on money market funds not only would be anticonsumer--and inconsistent with the nation's need to encourage saving--but would also fail to recognize the inherent distinctions between deposits and money market fund shares.¹⁶³

Nonetheless, despite the compelling arguments against bank-like regulation of money market fund, the idea of imposing capital reserve requirements on these funds has surfaced periodically several times over the next three decades and still continue being debated.

Dwyer *et al.* investigated the issue of money market fund monetary liabilities and found that initially money market funds were not legally required to redeem their liabilities at the initial value of investments.¹⁶⁴ However, the US securities regulators and money market funds themselves made substantial efforts to avoid fund share price deviations from its par value of a dollar.¹⁶⁵ Thus, money market funds are perceived as a medium of exchange characterized by promised redemption at par value on demand.¹⁶⁶ This assumption made money market fund shares seem equal to the banks' demand deposits in the minds of some investors adding weight to those proponents of bank-like capital reserve requirements for money market funds.¹⁶⁷

The demand for safe, high quality financial instruments fuelled growth on the US money market funds amongst other high quality assets.¹⁶⁸ The legal structure of these funds and

¹⁶³ J. CHARLES PARTEE, *Statement by J. Charles Partee, Member, Board of Governors of the Federal Reserve System, before the Subcommittee on Financial Institutions of the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, January 24, 1980* Federal Reserve Bulletin (1980) at 130 – 132. Partee implied that the major distinction between banks' deposits and shares of money market funds is the lack of federal insurance for fund investments.

¹⁶⁴ GERALD P. DWYER & MARGARITA SAMARTIN, *Why Do Banks Promise to Pay Par on Demand?*, 5 *Journal of Financial Stability* 147-169, (2009).

¹⁶⁵ The US Securities and Exchange Commission offers the following description of money market funds at its web-site www.sec.gov:

Money market funds typically invest in government securities, certificates of deposit, commercial paper of companies, or other highly liquid and low-risk securities. They attempt to keep their net asset value (NAV) at a constant \$1.00 per share – only the yield goes up and down. But a money market's per share NAV may fall below \$1.00 if the investments perform poorly. While investor losses in money markets have been rare, they are possible.

¹⁶⁶ DWYER & SAMARTIN, *supra* note 164 at 166 – 167.

¹⁶⁷ *See, e.g.*, GOEBEL, *Fidelity Survey supra* note 153 at 3. The survey found 75 per cent of retail investors in money market funds managed by Fidelity Investors understood that investments in these funds are not covered by any types of government guarantees, while only ten per cent of investors believed that the government would step in if a money market fund fails.

¹⁶⁸ *See, e.g.*, BEN S. BERNANKE, *International Capital Flows and the Returns to Safe Assets in the United States*, 15 *Banque de France Financial Stability Review* (2011).

oversight by the US Securities and Exchange Commission provided a rationale for these funds to function outside banking regulation.¹⁶⁹ The most recent academic studies, conducted after the post-crisis amendments to the US money market fund regulation were implemented in May 2010, concluded that further money market fund reforms involving a wholesale change of the structure of these funds may place broader capital markets in “substantial and unnecessary danger”.¹⁷⁰ Furthermore, the industry research pointed to a danger that dismantling the convenient and efficient structure of money market funds may chase cash management and related risks in other unregulated financial products.¹⁷¹ Chapter 3 analyses possible future options for the US money market fund industry arising from these debates.

1.3.4 ‘Shadow banks’ and systemic risk

The post-mortem of the recent credit crisis has produced a vast literature on financial innovations collectively referred to as a ‘shadow banking’ system.¹⁷² In these sources money market funds are described as major funding venues for ‘shadow banks’ that exert a high level of influence on credit availability for both financial institutions and real economy. The credit crisis has exposed a high level of interconnectedness of the modern capital market through financial innovations and placed its actors, including money market funds, squarely in the centre of regulatory debate.

¹⁶⁹ MACEY, *supra* note 157.

¹⁷⁰ *Id.* at 62.

¹⁷¹ ALEX ROEVER, et al., Short-Term Fixed Income (JP Morgan Securities LLC 30 September 2011). The authors argue that adding capital reserve requirements is “unlikely to substantially reduce credit or liquidity risks... It’s a fig leaf for regulators that will let them claim that they reduced systemic risk and without actually doing so. [In the low interest rate environment], the cost is onerous and ultimately may only chase money and risk into less regulated corners of the money markets”. *See also* Submission by the Investment Company Institute Working Group on Money Market Fund Reform Standing Committee on Investment Management International Organization of Securities Commissions (US Securities and Exchange Commission 7 February 2012) [ICI Submission to IOSCO]. Available at <http://www.sec.gov/comments/4-619/4619-119.pdf>.

¹⁷² *See generally* POZSAR, et al., Shadow Banking *supra* note 24. The article defines ‘shadow banks’ as “financial intermediaries that conduct maturity, credit, and liquidity transformation without access to central bank liquidity or public sector credit guarantees” and conducted a comprehensive inventory of financial innovations deemed to fit the definition of ‘shadow banks’. *See also* TUCKER, *supra* note 2. The speech pointed to weaknesses in various types of ‘off-balance sheet’ financing arrangements and argued for imposing prudential regulatory standards on those entities providing maturity and liquidity transformation. *See also* RICKS, Shadow Banking and Financial Regulation *supra* note 41. The author proposed functional criteria for policy interventions in activities of ‘shadow banks’.

These debates are mainly concerned with the emergence and propagation of systemic risks that the current regulatory architecture is ill suited to capture. Schwarcz argued that with the growth of intermediation greater regulatory focus should be placed on relationship *between* markets and institutions.¹⁷³ He defined risks *to* financial system arising from lack of sufficient incentives for an individual institution to internalize its costs of failure as systemic risk and ascribed law a role in reducing systemic risk.¹⁷⁴ I draw on these sources in section 1.2 that analyses the traditional justifications for financial regulation and their applicability to money market funds.

My review of relevant literature is concluded with studies that analyse market failures due to complexity and financial contagion. For example, Schwarcz purports that “complexity not only makes it impossible to predict how future financial crises will arise but also makes it more likely that regulation can lead to unintended, and often adverse, consequences”.¹⁷⁵ Establishing a stand-by market liquidity facility that would support investments in the failing market was suggested as a solution averting irrationality of the market panic.¹⁷⁶ Another strand of academic literature, however, maintains that during times of severe stress “the price of the assets may fall below their fundamental value and be determined by the available liquidity in the market”.¹⁷⁷ Therefore, because private market actors are unable to maintain an optimal level of liquidity, such a liquidity provider of the last resort must inevitably come from public sources.¹⁷⁸ Indeed, one of the proposed solutions to a potential liquidity squeeze in the money markets in a form of a private liquidity facility was rejected on these grounds as explained in section 3.5 *infra*.

The noted lack of secondary market liquidity for complex financial instruments was researched by Brunnermeier *et al.* who noted a challenge in developing a workable definition of complexity in financial markets. The authors offered three different ways we can cope with

¹⁷³ STEVEN L. SCHWARCZ, *Systemic Risk*, 97 Geo. L.J. 193, (2008)

¹⁷⁴ *Id.* at 205.

¹⁷⁵ STEVEN L. SCHWARCZ, *Regulating Complexity in Financial Markets*, 87 Wash. U. L. Rev. 211, (2009) at 265.

¹⁷⁶ *Id.* at 265-266.

¹⁷⁷ See DOUGLAS GALE & TANJU YORULMAZER, *Liquidity Hoarding*, no. 488 Federal Reserve Bank of New York Staff Reports, (March 2011) at 6.

¹⁷⁸ See, e.g., VIRAL V. ACHARYA, et al., *Crisis Resolution and Bank Liquidity*, Rev. Financ. Stud., (2010).

complexity.¹⁷⁹ One of them, standardisation and commoditisation of financial products, is currently embraced by money market fund regulators. I argue in section 4.5 that a quest for standardisation of investment parameters in money market funds is likely to result in unintended consequences of industry concentration which, in turn, leads to increase, rather than decrease, of systemic risk.¹⁸⁰ This is because harmonised regulation is likely to create incentives for regulated organisations to engage homogenous business practices thus heightening the risk of contagion and a coordinated failure should such regulation err.¹⁸¹ I draw on these findings in chapter 6 presenting my normative proposals.

1.3.5 Conclusion

The body of literature on various aspects of money market funds has been growing rapidly post-crisis fuelled by an increased public and regulatory scrutiny of the money market sector. My overview of financial studies, historical essays, legal and regulatory documents provides just the first glimpse into my research subject. The discussion of the most recent academic research with its vastly divergent policy recommendations reflects the complexity of the issues surrounding money market funds and the high societal impact of any regulatory changes.¹⁸² While regulators call for sweeping changes in the structure of the money markets, practitioners argue that any more changes are likely to be counterproductive chasing cash management into less transparent corners of the market.¹⁸³

The obvious conclusion drawn from the literature reviewed here is that in 3.5 years after the dramatic failure of Lehman Brothers, that inflicted a severe stress on the money market fund industry, academic sources have failed to offer an acceptable solution to the public policy debate

¹⁷⁹ MARKUS K. BRUNNERMEIER & MARTIN OEHMKE, *Complexity in Financial Markets* (Princeton University Research Papers 2009). The authors argued that market agents can effectively deal with complexity: (i) by breaking difficult problems into smaller ones, (ii) by using models, while keeping in mind model assumptions, (iii) through standardisation and commoditisation of financial products.

¹⁸⁰ See also ROMANO, *supra* note 114 at 19. Romano argues that regulating market participants into a particular investment strategy may not be a socially desirable goal.

¹⁸¹ *Id.* at 18.

¹⁸² See, e.g., MACEY, *supra* note 157. Macey argues that over-regulation of money market funds is likely to lead to significant negative consequences for those borrowers reliant on money market funds for short-term funding. See also BIRDTHISTLE, *supra* note 139. Birdthistle believes that money market fund regulation should be significantly tightened.

¹⁸³ See, e.g., ICI Submission to IOSCO *supra* note 171.

related to money market funds.¹⁸⁴ Given the divergent perspectives expressed in the literature, the ultimate contribution of this thesis is to offer a normative view on money market fund regulations that supports and promotes two overarching regulatory objectives – investor protection and systemic stability – on the international level. The following chapter 2 analyses wide social benefits of money market funds and discussed the risks these funds can introduce to the global capital markets. The discussion underscores the need for internationally coordinated financial regulation of the money market fund industry.

¹⁸⁴ See section 2.4 *infra* discussing the events of the financial crisis and its consequences for money market funds.

CHAPTER 2: MONEY MARKET FUND INDUSTRY PROFILE

2.1 Introduction

This chapter analyses the essential characteristics of money market funds in the US and the EU (the current regulation of money market funds in the US and the EU will be subject to legal analysis in chapters 3 and 4). It also discusses their benefits to the global capital markets and their weaknesses as exposed by the financial crisis. To begin with, section 2.2 provides the historical background and the classification of the money market fund industry. Section 2.3 outlines the essential function of these funds as financial intermediaries and a major provider of short-term capital to various economic actors, while section 2.4 specifies their role in the financial crisis.

To be noted, an essential challenge to an account of the money market fund industry profile is that money market funds are not uniformly defined at national levels. In effect, the available academic sources often do not provide differentiation of fund types, but rather focus on the US prime money market funds by default. The basis for painting all money market funds with the same brush is the size of the assets under management of the US prime money market funds, which is the biggest segment of the industry.¹⁸⁵ All other types of money market funds in the US and EU are assumed to be sufficiently homogeneous with respect to their investment policies, structure, domicile, and investor base.¹⁸⁶ In fact this assumption does not hold true. Money market funds domiciled in the EU may have vastly different characteristics – although

¹⁸⁵ See section 2.2 *infra* for a definition of a “prime” money market fund. Assets under management of the US money market funds represent approximately 60 per cent of assets under management of all money market funds, according to the Investment Company Institute’s global mutual fund quarterly statistics; available at http://www.ici.org/research/stats/worldwide/ww_12_10. See also exhibit 2 in section 2.2 *infra* for the size of the assets under management of each money market fund sector.

¹⁸⁶ TUCKER, *supra* note 2 at 2. The speech, stripping through the details, focuses on certain essential characteristics of money market funds as those are US money market funds. ICI Report *supra* note 21 at 95. The report discusses dangers of a generic use of a *money market fund* designation as misleading for investors. See JP Morgan Comment to CESR *supra* note 13. The letter expresses concerns regarding allowing various types of money market funds to operate in the European markets.

some of them may have a strong resemblance with those funds in the US.¹⁸⁷ However, a significant number of European money market funds have little in common with their US peers.

A detailed classification of money market funds is especially important in light of the ongoing regulatory discussions that portrait money market fund industry as a whole as a major propagator of systemic shocks.¹⁸⁸ Recalling the research question – *how should money market funds be regulated?* – I would like to start with a detailed analysis of what kinds of money market funds exist today, why and where. This chapter lays a foundation on the normative proposals in chapter 6 by, first, determining whether greater risks are harboured by any particular types of money market funds, which, therefore, may entail specifically targeted policy actions. Second, it demonstrates a wide range of societal benefits that money market funds provide to various economic actors underscoring contributions of these funds to economic progress, societal welfare and promotion of individual capabilities thus reiterating the need for an effective regulation focused on investor protection and systemic stability. Lastly, this chapter uncovers money market funds’ vulnerability to systemic events that manifested themselves during the financial crises and reviews policy actions taken by various regulators to contain risk of a run on these funds.

2.2 Classification of money market funds

To my knowledge, no widely accepted classification of money market funds domiciled in the US and EU has been compiled; as such this classification system is original. A necessity for developing a classification system encompassing money market funds arises from two sources. First, different types of fund entail varying degrees of risk and tend to offer different levels of return as shown later in this section. Thus, an effective normative proposal ought to incorporate considerations of money market fund types in order to better achieve its goals. Second, this

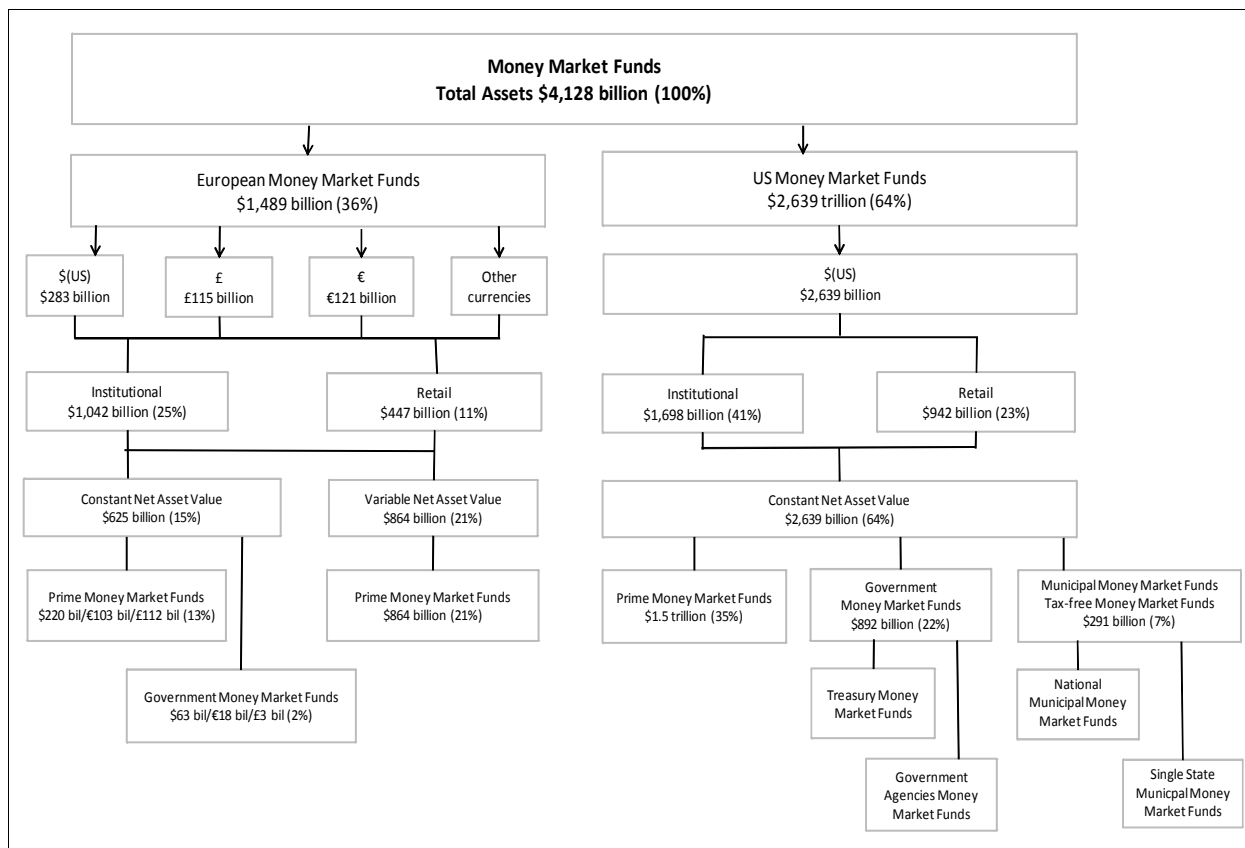
¹⁸⁷ CESR sets out harmonised definition of European money market funds (Committee of European Securities Regulators / Press release 19 May 2010). Lamberto Cardia, Chair of the Italian Commissione Nazionale per la Società e la Borsa and Chair of CESR’s Investment Management Standing Committee noted that “the term *money market fund* cover[s] a very broad range of investment funds”.

¹⁸⁸ GARY B. GORTON & ANDREW METRICK, *Regulating the Shadow Banking System*, Brookings Papers on Economic Activity 261, (Fall 2010). The paper contains a regulatory proposal for entities considered shadow banks which include “non-bank financial institutions such as finance companies, structured investment vehicles, securities lenders, *money market mutual funds*, hedge funds and US housing government sponsored entities...”

section is aimed to inform the on-going regulatory efforts to take an inventory of money market funds as requested by the Financial Stability Board.¹⁸⁹ This task is currently undertaken by the International Organisation of Securities Commissions and it is my hope that this thesis could contribute to the Organisation's effort.

I start my review of fund types with a diagram in exhibit 3 that lays out a classification system for money market funds alongside their respective assets under management as of autumn 2011.¹⁹⁰ The size of the assets under management helps to gauge investor acceptance and a relative importance of each type for the capital markets.

Exhibit 2: Classification of money market funds



¹⁸⁹ FSB Report *supra* note 32.

¹⁹⁰ Source for the assets under management: www.ici.org as of 5 October 2011, www.immfa.org as of 2 September 2011. Source for the foreign currency rates: *Foreign Exchange Rates -- H.10 Weekly*, Board of Governors of the Federal Reserve System. (30 September 2011), at <http://www.federalreserve.gov/releases/h10/current/>.

2.2.1 Domicile

Money market funds are a relatively recent development for the global capital markets. The very first money market fund was established in 1968 in Brazil. John Oswin Schroy, the founder of a large Brazilian broker-dealer firm S-N Investimentos S.A., created *Conta Garantia* a collective investment vehicle that served one specific purpose: it pooled small investments into a large portfolio order to facilitate sales of *letras de cambio*, Brazilian low denomination commercial paper certificates.¹⁹¹ This fund had all essential attributes of a contemporary money market fund, namely invested in a portfolio of short-term high quality fixed income obligations with a goal of providing safety of principal and on-demand liquidity.¹⁹² Indeed, *Conta Garantia's* portfolio was invested in short-term commercial paper and Brazilian treasury bills; and it issued and repurchased its own shares continually at a stable unit price.¹⁹³

The US money market funds can be traced to the autumn of 1972, when the Reserve Fund, the very first US money market fund was opened to investors.¹⁹⁴ While today there are hundreds of money market funds in Brazil, they could not rival the size of the US money market fund industry. European money market funds arrived in late 1980s mainly in France and have quickly become a popular low risk investment option for retail investors and pension schemes.¹⁹⁵ Other European countries developed their own localised version of money market funds, but could never reach the size of either the US or French money market fund industries. Ireland and Luxembourg, the major European fund administration centres, played a pivotal role in the facilitating the growth of the European money market fund industry. Funds domiciled in these countries were mainly distributed cross-border to institutional investors and grew rapidly due to increasing demand for professional liquidity management from multi-national corporations expanding their business globally.

Exhibit 2 depicts the current size of assets under management of money market funds by countries.

¹⁹¹ JOHN OSWIN SCHROY, *CRESCINCO and Conta Garantia*. (2006), at http://www.capital-flow-analysis.info/investment-tutorial/case_1k.html.

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ NOCERA. *supra* note 143 at 81.

¹⁹⁵ Chapter 4 *infra* contains a detailed account of French money market fund origin and development.

Exhibit 3: Assets under Management of Money Market Funds¹⁹⁶

Money Market Fund Domicile	Assets (USD billion)	% of World Total
United States	2,639	54.9%
Europe Total	1,489	32.2%
--France	530	11.5%
--Ireland	482	10.4%
--Luxembourg	387	8.4%
--Italy	46	1.0%
--Switzerland	25	0.5%
--Others (Europe)	20	0.4%
Rest of the World	500	10.8%
World Total	4,628	

This thesis focuses exclusively on the US and European money market funds and, therefore, money market funds domiciled elsewhere in the world are omitted from any further discussions. In this thesis European money market funds mean mainly those funds domiciled in the EU countries also distinctions are blurred between money market funds in the EU and those funds domiciled in other developed European countries. As explained in chapter 3 *infra*, the US money market funds are defined under the federal securities law and it is unlawful in the US for other investment funds to market themselves as *money market funds* unless they meet regulatory rules governing these funds.¹⁹⁷

European money market funds are defined by the Committee of European Securities Regulators' ('CESR') Guidelines on a common definition of European money market funds that came into effect in May 2011 and are currently administered by the European Securities and Markets Authorities.¹⁹⁸ These funds, domiciled in the different EU countries, are governed by national laws of the respective country of domicile, whose interpretation of the common definition guidelines could vary. Furthermore, national regulators may introduce additional

¹⁹⁶ Data presented as of the end of the second quarter of 2011 according to *Worldwide Mutual Fund Assets And Flows First Quarter 2011*, Investment Company Institute (4 August 2011), at http://www.ici.org/research/stats/worldwide/ww_03_11. See also BERNARD DELBECQUE, Trends in the European Investment Fund Industry in the Second Quarter of 2011 and Results for the First Half of 2011 (European Fund and Asset Management Association / Quarterly Statistical Release No. 46 August 2011).

¹⁹⁷ 17 CFR § 270.2a-7

¹⁹⁸ CESR's Guidelines *supra* note 9. See also section 4.3.4 *infra* for a detailed analysis of these guidelines.

money market fund-targeted laws, if warranted. Thus, European money market funds have historically had varying risk characteristics, which in turn, resulted in lack of cross-border comparability.

Being a collective investment scheme, European money market funds may choose to be authorised under the Undertakings for Collective Investments in Transferable Securities ('UCITS Directive').¹⁹⁹ Such UCITS authorised money market funds must follow risk-spreading rules laid out in the UCITS Directive as transposed into the respective national laws. Finally, European money market funds are subject to other relevant notices and guidelines, which provide recommendations with respect to operational, accounting and risk management issues.²⁰⁰

2.2.2 Portfolio currency

Second, money market funds can be differentiated on the basis of portfolio currency. The US money market funds only invest in securities denominated in US dollars and are not allowed by regulation to incur currency risk.²⁰¹ European money market funds may operate in different currencies and can also invest in securities denominated in other than portfolio-base currency provided that exposure to foreign currency is fully hedged. Thus, investors in European money market funds deemed to be protected from any significant exposure to currency risk.²⁰² To provide investment opportunities in various portfolio currencies, European money market funds are often organised in a form of umbrella funds with multiple sub-funds being managed in different currencies.²⁰³ For example, an umbrella fund may comprise sub-funds managed in US dollars, pounds sterling, euro and other currencies.²⁰⁴

¹⁹⁹ Directive 2009/65, [2009] OJ L302/32

²⁰⁰ See chapter 4 *infra* for a detailed analysis of the regulatory framework applied to European money market funds.

²⁰¹ 17 CFR § 270.2a-7 (c)(3)(i)

²⁰² CESR's Guidelines *supra* note 9 at Box 2, paragraph 11 and Box 3, paragraph 1.

²⁰³ CATHERINE TURNER, *International funds: a practical guide to their establishment and operation* (Elsevier Finance 2004), at 50. An umbrella fund is not a legal form, but rather a form of a capital structure of an open-ended collective investment scheme, which may, in most jurisdictions, be adopted in any legal form that open-ended schemes are allowed to adopt. An umbrella structure is usually implemented to lower the fund's overheads.

²⁰⁴ See, e.g., DWS (CH) – Money Market Umbrella Fund Simplified Prospectus (DWS Investments, Deutsche Bank Group September 2011). This umbrella fund comprises two sub-funds,

2.2.3 Shareholder base

Third, I analyse money market funds from the standpoint of their shareholder base. There are two types of money market funds shareholders: retail and institutional. In the US money market funds are held by approximately 65 per cent of households, which indicates a high level of acceptance of these funds by retail investors.²⁰⁵ Institutional investors employ money market funds as a cost-effective cash management service with approximately 85 per cent of the US companies utilising money market funds for this purpose.²⁰⁶ On aggregate, institutional investors account for two-thirds of total assets under management in the US money market funds.²⁰⁷

Institutional ownership of money market funds is even more pronounced in the EU with multinational corporations, financial institutions, wholesale distributors of financial products and asset managers themselves are counted amongst the largest investors.²⁰⁸ While the exact amount of institutional ownership across all European money market funds is not reported by available sources, I estimate it at approximately 70 per cent of the total asset under management.²⁰⁹ A consideration of the shareholder type holds a great deal of significance in money market fund portfolio management mainly due to differences in shareholder behaviour.²¹⁰ Academic studies

DWS (CH) – Money Market (Euro) and DWS (CH) – Money Market (CHF), managed in euro and Swiss francs, respectively.

²⁰⁵ Research Fundamentals: Characteristics of Mutual Fund Investors Vol. 19, No. 7 (Investment Company Institute 2010).

²⁰⁶ ICI Report *supra* note 21 at 27 – 29, Figs. 3.6 - 3.7.

²⁰⁷ Data with respect to the nature of shareholder base in the US money market funds can be found at the Investment Company Institute's website: *Money Market Mutual Fund Assets*, Investment Company Institute. (7 July 2011), at http://www.ici.org/research/stats/mmf/mm_07_07_11. For data on investors in European investment funds see *Asset Management in Europe: Facts and Figures*. 4th Annual Review (European Fund and Asset Management Association May 2011) at 29.

²⁰⁸ See, e.g., *Investors in our funds* (Institutional Money Market Fund Association December 2010). Available at <http://www.immfa.org/IMMFA/summarydata2010.pdf>.

²⁰⁹ This estimation is based on the total asset under management of the IMMFA's funds, which are 100 per cent institutional, and total assets under management of French money market funds, which are approximately 90 per cent institutionally owned. See AYMERIC POIZOT, et al., *French Money Market Funds* (Fitch Ratings May 2006). Source for the IMMFA's funds: www.immfa.org; source for other money market funds in the EU: www.efama.org.

²¹⁰ PATRICK E. MCCABE, *The Cross Section of Money Market Fund Risks and Financial Crises* (Federal Reserve Board, Finance and Economics Discussion Series 2010) at 9. The study highlighted the striking distinction between institutional and retail investors' behavior during the crisis. Money market funds with credit exposures marketed to institutional investors experienced significant outflows, with net redemptions of \$410 billion (30 per cent of assets under management) in the four weeks beginning 10 September 2008. The same type of funds marketed to retail investors saw outflows of just \$40 billion (5 per cent of assets) over the same period.

have found that retail and institutional shareholders subject money market funds to vastly different degrees of liquidity risk.²¹¹ Retail shareholders are presumed as being passive investors, who tend to react slow to changing risk characteristics of the fund portfolios as opposed to institutional investors, who normally possess greater resources and sophistication to monitor portfolio risks and redeem shares pre-emptively.

Furthermore, the differences in shareholder base expose money market funds to varying degrees of concentration risk. Institutional investor-oriented money market funds typically have a larger percentage of their assets owned by fewer large shareholders. These shareholders are sophisticated investors who tend to act in a coordinated fashion in response to the same market development.²¹² To protect itself from a possible coordinated run by institutional shareholders, a money market fund would have to maintain a high level of available liquidity.²¹³ Coordinated cash outflows could be incurred for various reasons, not necessarily in response to challenging market events. For example, cash outflows are generally higher around corporate tax dates or other important dates on the calendar of institutional investors. ‘Yield hunting’ institutional investors tend to move cash out of underperforming funds quickly.²¹⁴ On the other hand, money market funds targeted at retail investors generally experience less disruptive cash fluctuation.²¹⁵ Thus, institutional investors-oriented money market funds are considered as carrying a greater risk of investor run and, therefore, inspire greater systemic stability concerns.²¹⁶

²¹¹ *Id.* at 15 – 16.

²¹² HEIDI STAM, Written Testimony On Oversight of the Mutual Fund Industry: Ensuring Market Stability and Investor Confidence Before the U.S. House Financial Services Subcommittee on Capital Markets (24 June 2011) at 12.

²¹³ SEC Rel. No. IC-28807 at 32703. The discussion points to generally volatile cash flows of those money market funds having large size institutional accounts.

²¹⁴ *Id.* at 32703.

²¹⁵ *Id.* at 32703, footnote 178. In the week of 17 September 2008, the most volatile week in the history of money market funds following the failure of the third largest US money market funds, institutional funds experience outflow of \$119 billion, while retail funds’ withdrawals were only \$1.1 billion.

²¹⁶ JEFFERY GORDON, Comment Letter Re: File No. S7-11-09 Release No. IC-28807 Money Market Reform (9 September 2009) at 8. The letter argues that the US money market fund rules masking net asset value volatility behind the amortised cost accounting exacerbate the fragility of the financial system. This could be tolerated for the sake of a consumer protection argument applicable to retail funds, but a free ride of ‘risk-free’ funds should not be available to institutional investors.

2.2.4 Asset type

Fourth, money market funds could be classified on the basis of their portfolio investments. The portfolios of these funds typically comprise short-term securities issued by a wide range of issuers from state and local governments to governmental and supranational agencies to financial institutions and non-financial corporations. Money market funds can also invest in short-term asset backed securities and a range of privately negotiated transactions. The key requirements for securities to be eligible for money market funds are credit quality and maturity. Normally, eligible securities must be of high credit quality and short maturities, although specific objective standards concerning credit quality and maturity do vary depending on the jurisdiction.²¹⁷ Market data offer extensive evidence of money market funds being a significant source of funding for issuers of short-term securities.²¹⁸

Money market funds hold a significant share of the commercial paper market that provides short-term funding for corporate borrowers and a large portion of state and local government debt markets.²¹⁹ The US Treasury and government housing agencies also substantially rely on money market fund investments.²²⁰ Money market funds, especially those managed in US dollars, have been one of the major providers of US dollar funding for European banks through investments in certificate of deposits and commercial paper issued by these banks. For example, the Bank of International Settlements estimated that in 2008 European banks relied on the US dollar money market funds for about one eighth of their \$8 trillion in US dollar

²¹⁷ Chapters 3 and 4 examine regulatory requirements for money market funds operating in the US and the EU, respectively

²¹⁸ Section 2.3 *infra* analyses money market fund contributions in funding sources for various economic actors.

²¹⁹ For the US money market funds' contribution, see ICI Report *supra* note 21 at 1. As of December 2008, the US money market funds held nearly 40 per cent of all outstanding commercial paper and 65 per cent of state and local government debt. For the contribution of money market funds to the Eurozone economy see PwC Report *supra* note 158 at 10 – 22. As of the end of the second quarter 2010, the contribution of global money market funds to Eurozone economy is estimated at 13.5 per cent.

²²⁰ ICI Report *supra* note 21 at 1. The US money market funds held approximately 24 per cent of short-term US Treasury securities and 44 per cent of the US government housing agency securities as of December 2008.

funding.²²¹ This brief description of typical asset types purchased by money market funds provides a basis for further classification of funds based in their investment policies.

Money market funds investing in securities issued or guaranteed by sovereign state governments or substantially similar securities are known as *government* money market funds.²²² These money market funds are not subject to credit risk associated with corporate borrowers due to their investment focus exclusively on government securities and, therefore, serve as investors' safe haven in times of market turmoil.²²³ Money market funds that invest in securities issued by corporate entities are referred to as *prime* money market funds.²²⁴ *Prime* money market funds typically invest in high quality commercial paper, including asset-backed commercial paper programmes, short-term corporate notes, banks' certificates of deposit, time deposits and repurchase agreements.²²⁵ With respect to geographical distribution, *prime* and *government* money market funds can be found in both the US and Europe although European money market fund landscape is dominated by *prime* money market funds mostly due to lack of significant supply of short-term high quality government securities issued by European governments.²²⁶

²²¹ BABA, et al. *supra* note 55 at 67. See also ROBERT MCCAULEY, *The Evolving Instrument Composition of Official Holdings of US Dollars*, BIS Quarterly Review, (December 2007) at 27-8. The research found that funding to European banks provided by the UD dollar-denominated money market funds dwarfs \$500 billion in US dollar funding that central banks of European countries provided to their local banks at the peak of their funding needs in the third quarter of 2007.

²²² In the US government money market funds could be further categorised as *Treasury* money market funds investing exclusively in the US Treasury securities and *government agency* money market funds investing in securities issued by the US governmental agencies, mainly housing agencies such as Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac). See also chapter 3 *infra*.

²²³ For example, within two weeks following the bankruptcy filing of Lehman Brothers on 15 September 2008 asset under management of the US *government* money market funds have increased by almost 30% to \$1,164.4 billion on 24 September 2008 from \$905.5 billion on 10 September 2008. Source: www.ici.org.

²²⁴ The roots of the designation of such money market funds as *prime* can be attributed to the credit quality of securities purchased by these funds. Eligible securities were presumed to be of *prime quality*, or generally rated in the investment grade rating category by credit rating agencies. See CHARLES J. JOHNSON & JOSEPH MCLAUGHLIN, *Corporate Finance and the Securities Laws* (Aspen Publishers 4th ed. 2010). at 10-8 – 10-12.

²²⁵ For more details on each type of money market securities see generally MARCIA STIGUM & ANTHONY CRESCENZI, *Stigum's Money Market* (McGraw-Hills 4 ed. 2007).

²²⁶ Approximately 34 per cent of the total assets under management of the US money market funds is managed by *government* money market funds and approximately 55 per cent is managed by *prime* money market funds. The remainder 11 per cent of total assets is invested in *tax-exempt* money market funds. Source: www.ici.org (as of 6 October 2011).

The last category *tax-exempt* money market funds can only be found in the US. These funds invest mainly in securities issued by the US local governments and municipal entities that distribute income generally exempt from the federal income tax. A sub-set of this category, *single-state tax-exempt* money market funds, invests mainly in securities issued by local governments and municipalities located in the same state. The ultimate goal of such a narrow investment mandate is to provide investors with income generally exempt from federal and local income taxes. This type of funds is mainly targeted to retail investors seeking a tax shelter for their income and represents the smallest money market fund category in terms of asset under management.²²⁷

2.2.5 Asset valuation methodology

Fifth, money market funds are differentiated on the basis of their asset valuation practices. Based on the valuation aspect, two types of money market funds are distinguished: *constant (or stable) net asset value* money market funds and *variable net asset value* money market funds, sometimes also referred to as *fluctuating net asset value* money market funds.²²⁸ The US money market funds are managed as *constant net asset value* money market funds.²²⁹ The *constant net asset value* per share is achieved through the use of amortised cost accounting in valuation of portfolio securities and further round of resulting per share value to the nearest cent.²³⁰ European money market funds, however, could feature either *constant* or *variable net asset value*.²³¹ A sub-set of European money market funds that mimics their US peers is

²²⁷ *Id.*

²²⁸ *Constant net asset value* money market funds are purchased and sold by investors at a constant share price, such as \$1.00, £1.00, €1.00, depending on the portfolio base currency. Specific accounting practices are used to maintain the share price constant. *See, e.g.,* OHLBAUM SWIRSKY. *supra* note 104 at 16 – 19. *Variable net asset value* money market funds do not maintain a constant share price.

²²⁹ Although regulation of the US money market funds permits use of other methods, the absolute majority of the US money market funds managed to a *constant net asset value* per share. Chapter 3 *infra* provides exhaustive details of the US money market funds asset valuation practices. Historically, the majority of the US money market funds operate at the *constant net asset value* per share of \$1.00 although regulation allows a money market fund to set any value at which to stabilise its share price. *See Id.* at 16.

²³⁰ *Id.* at 16 – 19. In addition to the amortised cost accounting and rounding, in the US the *constant net asset value* per share is maintained by accruing portfolio income separately from capital gain/loss. Portfolio income is accrued daily and paid out monthly.

²³¹ CESR's Guidelines *supra* note 9 at 5. The guidelines define *variable net asset value* money market funds as funds that do not offer *constant net asset value* per share.

managed as *constant net asset value* money market funds. These European funds are sometimes referred to as the *US-style* money market funds.²³² Money market funds domiciled in Continental European countries mainly feature *variable net asset value* per share.²³³

Chapter 3 and 4 *infra* provide generous historical details and discuss the national arrangements underlying the discussed particularities of the money market fund accounting practices. Ultimately a choice of an accounting method is largely driven by investor preferences and their risk tolerance level within the scope of a particular regulatory regime. The *constant net asset value* per share structure adopted by the US money market funds is overwhelmingly preferred by institutional investors who use these funds as a cost-effective way to manage daily liquidity needs.²³⁴ The same type of an investment vehicle offers retail investors an alternative to bank savings accounts.²³⁵ On the other hand, my study of the money market fund history in Europe found that retail investors may also view money market funds as a low risk investment alternative and could tolerate a limited level of share price fluctuation as long as it remains consistent with their perception of low risk.²³⁶

This section showed that the current structure of the money market funds industry is geared towards meeting the needs of investors with different types of fund products designed according to their operational and tax requirements as well as risk and return preferences. Understandably, the industry structure that was so fine tuned to meet multiple investors'

²³² Chapter 4 *infra* provides historical background explaining an adoption of a particular accounting practice by money market funds located in different countries.

²³³ DONALD AIKEN, IMMFA Money Market Funds Have Come of Age (Institutional Money Market Fund Association 2007). The report explains that *variable net asset value* money market funds operate in Continental Europe and resemble short-dated bond funds. Their price accrues capital gain/loss plus interest; hence variability in the share price of such money market funds.

²³⁴ *See generally* letters from corporate treasurers and public finance managers submitted in response to the US Securities and Exchange Commission request for comments to PWG's Report available at <http://www.sec.gov/comments/4-619/4-619.shtml>, e.g., Commet Letter Re: File No. 4-619, President's Working Group Report on Money Market Fund Reform (The Financial Services Roundtable 30 June 2011) at 2 – 3. The letter states that many institutional investors are prohibited from investing in a variable net asset value fund by the virtue of corporate investment policies.

²³⁵ ICI Report *supra* note 21 at 25. The report explains that at the retail level, money market funds compete with bank products offered to retail customers such as deposits, savings accounts and money market deposit accounts.

²³⁶ *See, e.g.*, POIZOT, et al., (2006) *supra* note 209 at 5. The report explains that due to income accumulation by French money market funds and not paying it out regularly like the US money market funds do, investors perceive that the net asset value of French money market funds is steadily improving, implying a high degree of stability.

demands has led to a wide acceptance of money market funds internationally and in the US, in particular. Indeed, global assets under management of money market funds reached their all-time high in January 2009 at approximately \$5.8 trillion with the US money market funds accounting for over two thirds of that amount.²³⁷ Although approximately \$1.7 trillion have flown out of money market funds between 2009 and 2011, the size of assets that money market funds still manage evidence an importance of these funds for the global capital markets. The next section is focused on the benefits of money market funds for issuers and investors and explains relationship of these funds with various economic actors.

2.3 Benefits to protect

The emphasis of the public policy debate surrounding money market funds so far has mostly been placed on their perceived risks, whether in terms of consumer protection or financial stability, and on the ways in which these can be minimised.²³⁸ Largely missing from this debate are the wide socio-economic gains resulting from money market fund activities. This section examines the benefits of money market fund activities: the private ones accruing to money market fund investors through improvement in their personal wealth as well as the public benefits to the financial system accruing by the virtue of diversifying funding sources and improving liquidity.²³⁹ Risks and perceived fragilities of the money market fund industry are addressed in section 2.4 *infra*.

2.3.1 Benefits to investors: creation of wealth and capital formation

Money market funds are uniquely positioned as suppliers of credit and liquidity to the financial system. Given a high level of penetration of these funds into household finances and

²³⁷ Assets under management of the US money market funds reached an all-time high of \$3.9 trillion in the week of 14 January 2009. These assets were managed by 784 funds. In Europe, assets under management amounted to \$1.3 trillion and were invested in 1,600 funds. The rest of the world accounted for approximately \$0.6 billion of money market funds' assets under management. Source: www.ici.org, www.efama.org.

²³⁸ See generally PWG's Report *supra* note 7. The report outlines seven public policy options aimed at minimising perceived risks to consumers and the overall financial stability.

²³⁹ See, e.g., ICI Submission to IOSCO *supra* note 171 at 4 – 6. It should be noted that private benefits for institutional investors can also be considered as wealth improvement available to society through appreciation of assets under management in pension funds, public finance funds, endowments of educational institutions and other funds managed for public benefits.

corporate cash management, social gains of money market fund activities do not accrue solely to the industry participants, but benefit nearly all strata of the society. The most tangible and observable benefit is accrued to fund shareholders in a form of excess return earned by money market funds versus other comparable investment options such as an interest-bearing bank account. For example, an investment of \$1000 in the average money market fund at the beginning of 1999 would have earned excess income of \$200 over the average bank account by the end of 2008.²⁴⁰ Even though the absolute amount looks inconsequential in the context of the ten-year time frame, it translates into 20 per cent of relative investments benefit. Over the last 25 years, due to the yield differential between bank deposits and the US money market funds, money market fund investors have increased their returns by over \$450 billion.²⁴¹

Second, money market funds have earned reputation for safety. In the 40-year history of the US money market funds, only two money market funds have failed to return the full principal value.²⁴² This is an exceptionally strong track record, which encourages investor participation especially at the time of stress.²⁴³ The US Treasury's Temporary Guarantee that was established in September 2008 to support the US money market fund industry was terminated in 2009 resulting in \$1.2 billion in revenue for the federal government. No money market funds drew on this programme.²⁴⁴ European money market funds likewise serve as a safe investment alternative to equity and longer-dated fixed income investments especially at the time of stress.²⁴⁵

²⁴⁰ Proposed Money Fund Reform: Meetings with the Securities and Exchange Commission (Federated Investors January 2010). Available at <http://www.sec.gov/comments/s7-11-09/s71109-169.pdf>.

²⁴¹ *Id.* at 6.

²⁴² See, e.g., ICI Report *supra* note 21 at Appendix G at 175 – 180.

²⁴³ MERCER E. BULLARD, Testimony before the Subcommittee on Capital Markets and Government Sponsored Enterprises Committee on Financial Services United States House of Representatives on Oversight of the Mutual Fund Industry: Ensuring Market Stability and Investor Confidence (24 June 2011) at 6. The testimony argues that two instances of money market fund failures over the course of 40 years fall under 'any reasonable definition of *safe*'. Available at <http://financialservices.house.gov/UploadedFiles/062411bullard.pdf>.

²⁴⁴ SCOTT C. GOEBEL, Testimony of Scott C. Goebel Senior Vice President and General Counsel Fidelity Management & Research Company Before the Financial Services Subcommittee on Capital Markets and Government Sponsored Entities (24 June 2011) at 7. Available at <http://financialservices.house.gov/UploadedFiles/062411goebel.pdf>.

²⁴⁵ See, e.g., NICOLAS BÉNÉTON, et al., French Asset Management Industry: Dynamics and Challenges (Fitch Ratings December 2008) at 12 – 13. French *dynamic* money market funds experienced cash outflows during 2007 and 2008 due to their investments in underperforming asset-backed securities.

On the other side of the equation are the borrowers – governments, corporation and even consumers, albeit indirectly – relying on money market funds for funding options. An access to deep and liquid public markets provides significant cost benefits for the borrowers and diversifies their funding options.²⁴⁶ The next section describes money market fund relationship with various economic actors who rely on these funds for a short-term funding.

2.3.2 Benefits to the capital markets: diversification of funding and cost saving

Money market funds provide a valuable funding diversification option for debt issuers. A deep and liquid public market offers a choice to tap either long-term or short-term funding options while considering the optimal capital structure. While it is often preferable to issue longer duration securities to reduce the mismatch of the duration of assets and liabilities and avoid uncertainty related to the need for frequent refinancing, borrowers recognize that access to the money market as beneficial for lowering their costs of funding. Depending on their types of business and capital structures, they may choose from commercial paper, discount notes, variable or floating rate notes, certificate of deposits, repurchase agreements and others.²⁴⁷

2.3.2.1 Benefits to non-financial corporations: access to capital markets and funding flexibility

Non-financial corporations refer to brick and mortar businesses and other producers of goods and services in contrast to financial entities. These corporations typically access the money market to meet short-term liquidity needs such as timing mismatch between payroll payments and collection of revenues. Corporations also use the money market as a source of bridge financing for mergers or acquisitions or to borrow against forthcoming bond proceeds until they can arrange or complete longer-term funding.²⁴⁸

²⁴⁶ See, e.g., STIGUM & CRESCENZI. *supra* note 225 at 9-20. See also PAUL SCHOTT STEVENS, Testimony before the Subcommittee on Capital Markets and Government Sponsored Enterprises Committee on Financial Services United States House of Representatives on "Oversight of the Mutual Fund Industry: Ensuring Market Stability and Investor Confidence" (24 June 2011) at 18, footnote 8. Noting that under the post-crisis bank regulation known as Basel III cost of bank credit lines may increase even further. Available at <http://financialservices.house.gov/UploadedFiles/062411stevens.pdf>.

²⁴⁷ See generally STIGUM & CRESCENZI. *supra* note 225.

²⁴⁸ ICI Report *supra* note 21 at 13 – 14.

High quality non-financial corporations normally access the money markets by issuing commercial paper or medium-term notes.²⁴⁹ Commercial paper is issued to fund day-to-day operations at interest rates that typically less than bank loans.²⁵⁰ Funding in the commercial paper market is also more flexible. If corporate funding needs decrease, commercial paper quickly matures and is not re-issued as opposed to a bank loan facility for which a borrower would have to pay an additional non-usage fee.

Interest rate data for seasoned industrial corporate bonds and commercial paper presented in Annex B demonstrate that cost saving of commercial paper issuance is significant. Annual yield differential between commercial paper and corporate bonds over the last five years averages to 3.4 per cent, *i.e.*, a corporation borrowing \$100 million in commercial paper would, on average, save \$3.4 million a year in interest payments.²⁵¹ A non-tangible benefit of the use of the commercial paper market related to diversification of corporate funding sources by accessing various types of short-term institutional investors, including money market funds.

2.3.2.2 Benefits to bank: funding in foreign currencies and reduction of trade imbalance

Notwithstanding a fierce competition for investors between banks and money market funds, money market funds serve as an important source of funding for banks and finance companies. Banks borrow in the money market to finance their short-term assets including credit card receivables, auto loans, or other consumer loans.²⁵² In addition, US dollar-denominated money market funds serve as a major source of dollar funding needs for non-US banks and

²⁴⁹ Commercial paper, which is an unsecured promissory note, is typically issued with maturities ranging from 1 to 270 days; medium-term notes may have maturing from one to three years and bear fixed or variable rate of interest. To be eligible for money market fund investments, these securities must be of high quality and generally rated within two highest short-term rating categories by credit rating agencies. *See generally*, OHLBAUM SWIRSKY. *supra* note 104.

²⁵⁰ *See, e.g.*, ICI Submission to IOSCO *supra* note 171 at 5, n. 15 and accompanying text.

²⁵¹ *Source*: Federal Reserve, available at <http://www.federalreserve.gov/releases/h15/data.htm>.

²⁵² STEVENS, *supra* note 246 at 21. As of February 2011 the US money market funds held 24 per cent of large certificates of deposit and 7 per cent of Eurodollar deposits. *See also* PwC Report *supra* note 158. Reports European money market funds' holdings of certificates of deposit.

European banks.²⁵³ The international trade imbalances have caused the transatlantic asymmetry of funding in which US dollar-denominated assets of European banks are currently almost ten times higher than assets of US banks denominated in various European currencies.²⁵⁴ The US dollar-denominated assets of European banks have grown rapidly over the past decade from approximately \$2 trillion in 1999 to more than \$8 trillion in 2008.²⁵⁵ This dynamic presents the major challenge for non-US banks in financing their US-dollar denominated assets and their US-dollar operations.

Commercial banks traditionally finance themselves by attracting retail deposits.²⁵⁶ While retail deposits are the most desirable and stable type of funding for banks, many banks have to turn to the wholesale funding to meet their funding in other currencies.²⁵⁷ US-dollar denominated money market funds have long been natural providers of short-term dollar financing for non-US banks in the wholesale funding market.²⁵⁸ US dollar denominated money market funds invest a large part of their assets in certificate of deposits, time deposits and commercial paper issued by non-US banks.²⁵⁹ Non-US banks also have an option to enter repurchase agreement transactions with money market funds and obtain short-term, normally overnight, US-dollar funding in exchange for collateral consisting of banks' assets.²⁶⁰

The funding relationship between money market funds and non-US banks is non-trivial resulting in non-US banks dwarfing US banks as money market funds' counterparties: over 40

²⁵³ ERIC S. ROSENGREN, *Defining Financial Stability, and Some Policy Implications of Applying the Definition* (Keynote Remarks at the Stanford Finance Forum Graduate School of Business Stanford University 3 June 2011) at 10.

²⁵⁴ BABA, et al. *supra* note 55 at 2, Graph 1.

²⁵⁵ *Id.* at 2.

²⁵⁶ STIGUM & CRESCENZI. *supra* note 225 at 57 – 61.

²⁵⁷ *See generally* ESRB Recommendations on USD Funding *supra* note 72.

²⁵⁸ VIKTORIA BAKLANOVA & HENRY SHILLING, *Moody's Survey of the Portfolio Management Activities of Large Prime Institutional Money Market Funds* (Moody's Investors Service Global Credit Research March 2004) at 10, Fig. 12. The report illustrates that since 2000, the US certificates of deposit have not exceeded 3 per cent of the US prime money market funds' assets, while foreign banks' certificates of deposit accounted for 12 per cent to 25 per cent during the same period. *Available at* http://v3.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_81749.

²⁵⁹ *See generally* GROSSMAN, et al., (2011a) *supra* note 55.

²⁶⁰ VIKTORIA BAKLANOVA, *U.S. Money Market Funds: Repurchase Agreement Practices* (Fitch Ratings 4 October 2010) *See also* STIGUM & CRESCENZI. *supra* note 225 at Chapter 13. Repurchase agreements, or repos are transactions involving sale of an asset and a simultaneous purchase of that asset at an agreed upon price on an agreed day. Repos are economically identical to secured loans although the legal underpinning of repo transactions differs from that of secured loans.

per cent of the US money market funds' assets are invested in securities issued by European banks only.²⁶¹ Canadian, Asian and Australian banks are also having substantial presence in the US money market.²⁶² These statistics illustrate an importance of money market funds as providers of wholesale funding for banks internationally.

2.3.2.3 Benefits to securities firms: inventory funding and market liquidity

Money market funds are even more critical for the securities firms such as broker/dealers as investors in commercial paper, short-term notes and repurchase agreements issued by securities firms.²⁶³ For example, in the repo market, which is used by securities firms to finance their inventories and is estimated to be of approximately \$1.7 trillion in the first quarter 2010, the US money market funds are responsible for nearly a quarter of all transactions.²⁶⁴

It should be noted that a high level of money market fund participation in the repo market is a function of regulatory requirements.²⁶⁵ Under the US regulation and the Code of Practice adopted by a large number of European *US-style* money market funds, these funds have to allocate ten and five per cent of their assets, respectively, to daily liquid securities.²⁶⁶ Repo transactions fit the regulatory definition of a daily liquid asset making it a desirable investment option for these money market funds. Hence a symbiotic relationship between securities firms

²⁶¹ GROSSMAN, et al., (2011a) *supra* note 55 at 1.

²⁶² VIKTORIA BAKLANOVA, U.S. Money Market Funds Sector Update (Fitch Ratings 14 April 2011) at 9 – 10. Canadian, Australian and Japanese financial entities comprise over 18 per cent of US money market fund portfolios.

²⁶³ STIGUM & CRESCENZI. *supra* note 225 at 534. See also FCIC Report *supra* note 27 at 31. In a repurchase agreement transaction, often referred to as *repo*, a borrower sells its financial assets to an investor, such as a money market fund and uses the proceeds to reinvest in riskier securities paying higher rate of return. The borrower is obligated to repurchase its securities —often within a day—at a slightly higher price. Thus the repo market is inexpensive and convenient for Wall Street firms to borrow daily depending on daily funding needs.

²⁶⁴ BAKLANOVA, (2010c) *supra* note 260 at 2. See also Task Force on Tri-Party Repo Infrastructure Report (The Federal Reserve Bank of New York, Payments Risk Committee 17 May 2010).

²⁶⁵ 17 CFR § 270.2a-7 at (c)(5)(ii). The US taxable money market funds have to invest at least 10 per cent of their assets in daily liquid assets, which are mostly repos investments; INSTITUTIONAL MONEY MARKET FUNDS ASSOCIATION, Code of Practice (2009) at Article 33. European short-term money market funds seek to meet a non-binding guideline of carrying at least five per cent of their assets in daily liquid securities.) See also BAKLANOVA, (2011b) *supra* note 262 at 1-3. An average allocation to repos in Fitch-rated US money market funds stood at 15 per cent of their total assets at the end of March 2011.

²⁶⁶ Chapter 3 and 4 *infra* provide a detailed examination of US and European money market funds regulatory requirements.

and money market funds in which securities firms seek inexpensive and flexible ways of financing their trading books and money market funds seek liquid investments.²⁶⁷

2.3.2.4 Benefits to local governments and municipalities: lowered borrowing cost

Money market funds are the major investors in securities issued by local governments and municipalities.²⁶⁸ Public issuers turn to the money market to bridge the timing gap between expenditures and tax receipts by issuing short-term notes.²⁶⁹ Municipalities and other entities performing essential public services also come to the market to fund their projects such as building and maintaining roads, bridges, airports, water and sewage treatment facilities, hospitals, and low-income housing. Appetite for municipal securities from retail investors is quite significant due to tax-exempt nature of the US municipal debt. Because public issuers such as schools and hospitals normally borrow smaller amounts relative to banks or large corporations, the municipal market is more fragmented, less transparent and generally illiquid. Thus, the intermediating role of money market funds in this market is particularly important.²⁷⁰

Moreover, public issuers have historically been issuing long-term bonds with tenors of ten to 30 years to match the bond payment schedule with the long life of public projects.²⁷¹ With the emergence of money market funds as a source of short-term funding, municipalities accrue significant savings in interest payments. To meet money market fund demand for short-term securities municipalities' debt of a long tenor is shortened by including a tender provision. The tender option enables the investor to sell back the long-dated municipal bond on a short notice, typically seven days.²⁷² Such 'shortened' municipal securities are called *variable rate demand obligations*. Variable rate demand obligations enable local governments and public entities to

²⁶⁷ BAKLANOVA, (2010c) *supra* note 260 at 5. Global largest securities firms, mostly wholly owned subsidiaries of global banks are major money market funds' counterparties in the repo market.

²⁶⁸ This section relates to the US money market funds and mainly to the US municipal and tax-exempt money market funds that seek to invest in securities exempt from federal and local taxes. European money market funds do not typically invest in securities discussed in this section.

²⁶⁹ ICI Report *supra* note 21 at 13.

²⁷⁰ STIGUM & CRESCENZI. *supra* note 225 at 1111-3.

²⁷¹ *Id.* The longer tenor provides timing flexibility in arranging sources of repayment for which an issuer has to pay with the higher cost of borrowing.

²⁷² *See, e.g.*, FRANK LUO, Variable Rate Demand Obligations - A Primer (Standard & Poor's 1 November 2009).

borrow long-term, yet paying lower interest rate.²⁷³ The market for variable rate demand obligations has developed in 1980s; by 2010 money market funds held over 56 per cent of all outstanding short-term US municipal debt.²⁷⁴

2.3.2.5 Benefits to state governments: a major source of funding

Securities issued by state governments, their agencies and supranational organisations account for a substantial part of money market fund portfolios. As explained in section 2.2, *government* money market funds are obligated by the terms of their offering documents to invest substantially all their assets in government securities. These assets under management of the US *government* money market funds spiked from \$900 billion in August 2008 to almost \$1.5 trillion in December 2008 after default of Lehman Brothers, when investors sought safety of the US government securities.²⁷⁵ The US money market funds currently hold close to 37 per cent of all outstanding short-term debt of the US government agencies including two major US housing agencies, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation, often referred to as Fannie Mae and Freddie Mac.²⁷⁶ Money market funds hold 12 per cent of all outstanding US Treasury securities.²⁷⁷

Investors' risk aversion, which increased post-crisis, also led a number of European asset managers to offer money market funds investing exclusively in securities issued by European sovereign governments.²⁷⁸ Even though the contribution of European money market funds in the

²⁷³ *Id.* at 4. Yield on variable rate demand notes closely follows yield on one-month US Treasury bills.

²⁷⁴ STEVENS, *supra* note 246 at 21. *See also* SEC Rel. No. IC-28807 at B and accompanying notes

²⁷⁵ The cause for this dynamic is commonly referred to as 'a flight to quality,' which is a shift in investment behaviour from risky assets to those assets perceived to be safe. There are multiple evidences of 'flight to quality' during the periods of sudden shocks such as Russian debt default in 1998, the US terrorist attack on 11 September 2001, subprime mortgage crisis of 2007-2008. *See e.g.*, KAUL & PHILLIPS, *supra* note 91. The authors studied Canadian mutual fund cash flow during the collapse of the Long-Term Capital Management hedge fund and found that investors move \$1,850 million into money market funds and \$627 million out of equity funds.

²⁷⁶ STEVENS, *supra* note 246 at 21.

²⁷⁷ *Id.* at 21.

²⁷⁸ PwC Report *supra* note 158 at 20. For example, JP Morgan Euro Government Liquidity Fund with an objective to invest exclusively in securities of European governments was launched at the end of 2007. The fund had EUR 6.5 billion in assets under management as of June 2011 according to Fitch

government securities market in Europe is currently relatively modest, these funds do have a role in offering an option to those investors seeking safety of government securities.²⁷⁹

2.3.2.6 Benefits to structured finance issuers: source of capital and liquidity

Starting in 1970s, in parallel with growth of money market funds, other new financial products rapidly developed. The general direction of this trend was to achieve an optimal employment of capital through managing some of the banks' assets off-balance sheet and, thus, avoiding certain costs and capital reserve requirements.²⁸⁰ For example, as a result of this trend, by 2007 more credit card debt was financed outside the banking system through the issuance of asset-backed securities.²⁸¹ Segregating banks' assets into legally separated entities called *special purpose vehicles* allowed banks to finance their assets with securities issued in the public market instead of banks' own liabilities.²⁸² Such special purpose vehicles are often referred as *shadow banks*. Despite the negative connotation associated with the word *shadow*, there are tangible social benefits of such as alternative providers of credit and liquidity.²⁸³

Asset-backed commercial paper programmes, one of such off-balance sheet vehicles, are particularly important in the context of the money market fund study.²⁸⁴ Since mid-1980s, asset-

Ratings' surveillance data available at <http://www.fitchratings.com/jsp/creditdesk/smart/fam/SmartDetail.faces?dealId=86463511&marketSectorId=08010100>.

²⁷⁹ Exhibit 4 in section 2.2 *supra* estimates the contribution of European money market funds to the government securities market at over \$91 billion.

²⁸⁰ See, e.g., BARRY EICHENGREEN, Ten Questions About the Subprime Crisis (Banque de France Financial Stability Review - Special Issue on Liquidity 11 February 2008). The study found that "by applying minimum capital requirements to bank balance sheets and requiring more capital protection of riskier assets, the 1998 Basel Accord encouraged banks to shift risky assets off balance sheet". The post-crisis version, Basel III is designed to correct these deficiencies.

²⁸¹ GARY GORTON, Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007 (May 2009) at 23-29. See also, TUCKER, *supra* note 2 at 2.

²⁸² Securities issued by special purpose vehicles to finance their portfolios of assets normally referred as asset-backed securities. For the definition of asset-backed securities, see JOSEPH TANEGA, Securitisation Law: EU and US Disclosure Regulations (LexisNexis 2009). at chapters 1-2.

²⁸³ FCIC Report *supra* note 27 at 455. The report noted that it is a mistake to group all the issues and problems of *shadow banks* together and that "...each should be considered on its merits, rather than painting a poorly defined swath of the financial sector with a common brush of "too little regulation".

²⁸⁴ For the description of various types of ABCP and their contractual features see DANIEL M. COVITZ, et al., The Evolution of a Financial Crisis: Panic in the Asset-Backed Commercial Paper Market (Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board 2009). Available at <http://www.federalreserve.gov/pubs/feds/2009/200936/200936pap.pdf>. Changes in banking regulation

backed commercial paper programmes, which were generally established by major international banks, served as efficient funding vehicles for the large volumes of bank assets such as receivables, loans and securities.²⁸⁵ There were three major reasons for development of asset-backed commercial paper programmes. The first and the most compelling factor was the cost-effective, off-balance sheet nature of funding enabling low-cost flow of credit to banks' customers.²⁸⁶ The second factor relates to risk dispersion when neither party of the transaction was directly exposed to each other, but through a diversified portfolio of assets.²⁸⁷ The third factor was funding flexibility as the size of borrowings could be reduced or increased quickly depending on the funding needs.²⁸⁸

For all these key features – short maturities, liquidity support from a high quality bank and a backing of a diversified portfolio of assets – asset-backed commercial paper has been an attractive investment alternative for money market funds.²⁸⁹ The most recent changes to banking and accounting rules negated benefits of asset-backed commercial paper to sponsoring banks causing a steady decline in outstanding amounts. Specifically, an off-balance sheet treatment of asset-backed commercial paper conduits has largely been ended by changes to Basel III and requirements of the US Federal Deposit Insurance Corporation. Annex C plots asset-backed commercial paper outstanding against the US money market funds' assets under management

and accounting standards post-crisis have brought asset-backed commercial paper programmes on banks' balance sheets.

²⁸⁵ *Id.* at 9. In its most traditional form, an asset-backed commercial paper facility purchased receivables and other financial assets from multiple firms and financed these purchases with issuances of commercial paper. Asset-backed commercial programmes sourcing assets from multiple firms, or sellers were called *multi-sellers*. At the end of July 2007, there were 98 *multi-seller* programmes with \$545 billion in outstanding asset-backed commercial paper, or 45 per cent of all outstanding asset-backed commercial paper.

²⁸⁶ SWASI BATE, et al., *The Fundamentals of Asset-Backed Commercial Paper* (Moody's Investors Service 3 February 2003) at 15.

²⁸⁷ *Id.* at 15.

²⁸⁸ *Id.* at 15. *See also* COVITZ, et al., *supra* note 284 at 8. Asset-backed commercial paper could be issued with maturities anywhere from one day to as long as 270 days. Yet, the majority of this paper is issued with matures from one to four days. The risk of maturity mismatch between longer-term assets and short-term liabilities in asset-backed commercial paper programmes was mitigated with a liquidity line from a bank often acting as the programme's sponsor, although a third party liquidity provider could also be utilized.

²⁸⁹ *See generally* KAREN COOK & VIKTORIA BAKLANOVA, *ABCP and Money Market Funds - Happy Together* (Moody's Investors Service June 2003).

illustrating a strong positive correlation between the size of the asset-backed commercial paper markets and money market fund assets.

To summarise, section 2.3 highlighted the socio-economic gains and multiple benefits of the money market funds to a variety of stakeholders, investors and issuers in the global capital markets. The size and structure of the money market affects availability of credit and diversification of funding sources for many other economic actors. All these benefits provide an obvious rationale to *why* money market funds should be protected by appropriate market regulation, which is outlined in my normative recommendations in Chapter 6. Notwithstanding these benefits, the next section turns to the dark side of money market funds, namely their ability to withdraw funding quickly and, therefore, to transmit liquidity shocks from one market participant to another, from country to country.

2.4 Risks to control

The character of money market funds as powerful investors and their ability to act in a coordinated manner can exacerbate the instability of fragile markets. This section examines the risk conveyed by money market funds as highlighted by the financial crisis and the European sovereign debt crisis. The cascade of events that led to the financial crisis started with the failures of a few asset backed commercial paper programmes in August 2007.²⁹⁰ Reliance on sub-prime mortgage-backed securities in structuring asset-backed commercial paper programmes by IKB Deutsche Industriebank AG caused this programme to fail on 7 August 2007.²⁹¹ However, because the bank had absorbed the loss, the event was largely overlooked by both the broad market and regulators.²⁹² In October 2007, when this obscure market had started to freeze, the Dow Jones Industrial Average, the stock market index whose movement are associated with investors' confidence and the level of economic activities, was still making new highs.²⁹³

²⁹⁰ FCIC Report *supra* note 27 at 246.

²⁹¹ *Id.* at 247.

²⁹² KEVIN CARMICHAEL & PETER COOK, *Paulson Says Subprime Rout Doesn't Threaten Economy*, Bloomberg 26 July 2007. Available at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=arhcov9ThQM8>.

²⁹³ The DJIA, introduced in 1896 by Charles H. Dow, is the mostly widely followed measurement of the stock market. It is comprised of 30 stocks that represent leading companies in major industries,

In fact, some even welcomed the ‘creative destruction’ of Wall Street under the assumption that capitalism works the best when it ruins “the foolish levered momentum player, sending him to the poor house while his assets are sold at a deep discount to the less-levered (or even cash!) player”.²⁹⁴ Indeed, the initial stages of turmoil in the asset-backed commercial paper market exposed to sub-prime mortgages did not affect the non-financial sector. However, the cost of funding of corporate receivables for banks increased when money market funds ceased their investments in the asset-backed commercial paper.²⁹⁵ An instantaneous shortage of investors for various programmes had a direct negative effect on the cost of capital for corporations.

Proactive actions of money market funds have been viewed as catalysts of looming funding problems and formed a view of money market funds as a leading indicator of credit risk.²⁹⁶ This view has inspired a regulatory conundrum with respect to money market funds: on the one hand, money market funds are under obligation to avoid unwarranted risks; on the other hand, ceasing investments in a particular issuer, money market funds may, and often do, exacerbate any emerging credit concerns. The short-term nature of money market funding does not afford much time to cure problems. The US Financial Crisis Inquiry Committee found that money market funds’ termination of funding to banks and securities firms would cause them to fail shortly thereafter due to lack of market access.²⁹⁷

For example, Countrywide Bank, the largest US mortgage lender pre-crisis, not only relied heavily on the asset-backed commercial paper market, but also financed its mortgage

which are widely held by both individual and institutional investors. DJIA reached all time, record – high of 14,164,35 on 9 October 2007. Available at www.nyse.tv.

²⁹⁴ PAUL MCCULEY, *Teton Reflections*. (September 2007), at <http://www.pimco.com/Pages/GCBF%20August-%20September%202007.aspx>.

²⁹⁵ FCIC Report *supra* note 27 at 248. See also, COVITZ, et al., *supra* note 284 at 7. The report noted that asset-backed commercial paper is held largely by money market funds, who are ultra-sensitive to any delay in payment. From its peak at \$1.2 trillion in August 2007 it shrank threefold to \$400 billion by the end of that year because asset-backed commercial paper’s main investors – money market funds – withdrew from these assets in fear of potential exposures to mortgages. Frequent periodic credit risk re-assessments are at the core of money market funds’ investment activities due to low tolerance to asset price volatility and high liquidity requirements. These credit risk reviews must be made in addition to any credit ratings assigned by credit rating agencies and based on factors other than those used by credit rating agencies. See 17 CFR § 270.2a-7 (c)(3)(i).

²⁹⁶ FCIC Report *supra* note 27 at 248 – 250.

²⁹⁷ See generally FCIC Report *supra* note 27.

portfolio in the repo market. After money market funds cut their investments in mortgage-backed programmes sponsored by the Countrywide Bank and, among other counterparties, ceased trading repos with the bank, liquidity pressures led to the Countrywide's insolvency.²⁹⁸ It has also been suggested that money market funds had caused a failure of Bear Stearns, one of the largest and oldest US broker/dealers, by curtailing investments in securities issued by Bear Stearns and not lending to it in the repo market.²⁹⁹

Structured investment vehicles known as SIVs, another asset class that caused significant damage to the global financial market, had been highly popular with money market funds prior to August 2007.³⁰⁰ SIVs were highly leveraged entities that earned their profit from the interest rate arbitrage between their longer-dated assets and shorter-dated liabilities. SIVs assets generally consisted of highly rated asset-backed and mortgage-backed securities, while their liabilities comprised commercial paper and medium-term notes with duration much shorter than that of the assets. SIVs' commercial paper and notes were mainly purchased by money market funds and other short-term investors. A market for SIVs came about in early 1980s and functioned smoothly until August 2007, when money market funds have grown increasingly concerned with SIVs' exposures to mortgages even though SIVs generally invested in high quality mortgages and other assets.³⁰¹

Proliferation of SIVs themselves may, in part, be attributed to unintended consequences of regulation: holding of AAA-rated securities issued by SIVs had an advantageous capital charge structure under Basel II, which explains an active involvement of European banks in the SIV market.³⁰² When in September 2007 money market funds stopped investing in SIVs, SIVs

²⁹⁸ FCIC Report *supra* note 27 at 248 – 250. In October 2007, the Bank of America purchased a 16 per cent stake in the Countrywide Bank thus enabling it going concern. The Bank of America completed the acquisition of the Countrywide Bank in January 2008.

²⁹⁹ ICI Report *supra* note 21 at 51.

³⁰⁰ See, e.g., VIKTORIA BAKLANOVA & HENRY SHILLING, 2004 Review: Portfolio Management Activities of Large Prime Institutional Money Market Funds (Moody's Investors Service Global Credit Research March 2005) at 9. The report indicates that at the end of 2004 the US prime institutional money market funds invested approximately \$16.9 billion, or 9.5% of their assets in notes issued by SIVs.

³⁰¹ FCIC Report *supra* note 27 at 252. The report recognised that structured investment vehicles had little sub-prime mortgage exposures.

³⁰² See, e.g., PATRICK VAN ROY, *Credit Ratings and the Standardised Approach to Credit Risk in Basel II*, 517 European Central Bank Working Paper Series, (August 2005) at 37. The report explains that assets carrying AAA and AA ratings from credit rating agencies receive the lowest charge for capital reserve purposes under the Basel II standards.

were unable to raise cash from new investors and had to liquidate their underlying portfolios in order to repay the maturing securities.³⁰³ The market became quickly flooded with asset-backed and mortgage-backed securities up for the fire-sale liquidation. An excessive supply of securities triggered further price decline. Due to the domino effect – lower was the asset price, more assets had to be sold – SIVs’ losses were substantial.³⁰⁴ By 2010 all SIVs were either restructured or liquidated.³⁰⁵ However, even though a large number of money market funds incurred losses due to SIV investments, these losses were not transferred to money market fund shareholders, but were largely absorbed by the funds’ sponsors due to reputational considerations.³⁰⁶

After the fall of the SIV market at the end of 2007, the financial crisis has continued to build up affecting the mortgage insurance industry, US government housing agencies, UK building societies and financial institutions in many countries. On 15 September 2008 the fourth largest US investment bank Lehman Brothers Holdings Inc. declared bankruptcy in the largest in the US history bankruptcy filing.³⁰⁷ Three years later, government investigations in the Lehman Brothers’ practices leading to bankruptcy revealed, amongst the reason for its failure, excessive reliance on the money markets, including commercial paper and repo markets.³⁰⁸ Relevant to the subject of my study, one of the biggest lessons from the Lehman Brothers bankruptcy was the lesson of market interconnectedness through money market funds.

Lehman Brothers Holdings Inc. has been a large issuer of commercial paper, which was held by money market funds.³⁰⁹ When one of these funds, the Reserve Primary Fund, failed due

³⁰³ See, e.g., MARK GILBERT, *Unsafe at Any Rating, CDO Speeds to CCC From AAA* Bloomberg at <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aSEguZCZ9ZpY>.

³⁰⁴ FCIC Report *supra* note 27 at 253. The report found that losses on an individual structured investment vehicle portfolio ranged from 45 per cent to 95 per cent.

³⁰⁵ *Id.* at 253. SIVs had \$400 billion in assets under management at the peak of their volume in July 2007. See GLENN MOORE, *Fitch: SIV Market Has Disposed of 95% of Assets Since July 2007* Fitch Ratings at http://www.fitchratings.com/creditdesk/press_releases/detail.cfm?pr_id=500156.

³⁰⁶ ICI Report *supra* note 21 at 50.

³⁰⁷ Voluntary Petition (Chapter 11), Docket No. 1, *Lehman Brothers Holdings Inc.*, No. 08-13555, (Bankr. S.D.N.Y. Sept. 15, 2008). At the time of bankruptcy filing the firm had over \$600 billion in assets.

³⁰⁸ FCIC Report *supra* note 27 at 326. The report cites the chief concerns in the Lehman Brother’s operations were its real estate-related investments and its reliance on short-term funding sources, including \$7.8 billion of commercial paper and \$197 billion of repos in March 2008.

³⁰⁹ THE RESERVE, *September 16, 2008 Press Release*. at http://ther.com/pdfs/Press%20Release%202008_0916.pdf. The Primary Fund held \$785 million in

to losses caused by Lehman's commercial paper, investors withdrew from money market funds, even those without investments in Lehman. Money market funds ceased investing as they needed cash to meet redemptions; thus other borrowers in the commercial paper market such as General Electric, "the mainstay of corporate America", found no investors.³¹⁰ This episode illustrates that money market funds represent a strong, but not always apparent and fully appreciated link between the productive sectors of economy and its financial sector.

Harvey Miller, the bankruptcy attorney for the Lehman Brothers' estate noted, "When the commercial paper market died, the biggest corporations in America thought they were finished".³¹¹ The cost of commercial paper borrowing has increased dramatically in the week following the Lehman's bankruptcy making it prohibitively expensive even for the largest international corporations to finance their payroll and daily operational needs.³¹² The panic threatened to disrupt global payment systems.³¹³ A significant number of money market funds were under unprecedented redemption pressures as investors rushed out *prime* money market funds holding commercial paper and into *government* money market funds.³¹⁴ *Prime* money market funds *en masse* turned to the secondary market in attempts to sell their assets and raise cash to meet redemption. The secondary market was instantly flooded with securities for sale, but only few buyers. Those funds unable to raise cash from sale of the securities had to seek financial support from their sponsors.³¹⁵

When sponsor support was not provided, funds restricted redemption or even got closed and subsequently liquidated notwithstanding quality holdings.³¹⁶ *Government* money market funds, on the other hand, were flooded with new money, which instantly created substantial

Lehman Brothers Holdings' commercial paper, which was valued at zero upon Lehman Brothers defaulting and declaring bankruptcy on 15 September 2008.

³¹⁰ FCIC Report *supra* note 27 at 339.

³¹¹ *Id.* at 355.

³¹² Annex D *infra* illustrates a spike in borrowing rates for non-financial firms that increased four time overnight upon the Lehman Brothers bankruptcy.

³¹³ FCIC Report *supra* note 27 at 358.

³¹⁴ ICI Report *supra* note 21 at 3. The ICI estimates that money market fund shareholders withdrew approximately \$210 billion from the US prime money market funds over the next two days following Lehman Brothers bankruptcy.

³¹⁵ See generally SHILLING, *supra* note 156.

³¹⁶ MOODY'S INVESTORS SERVICE, *Moody's Proposes New Money Market Fund Rating Methodology and Symbols* (September 2010) at 5. Post-Lehman Brothers bankruptcy filing, redemption restrictions were imposed on 31 money market funds in the US and Europe.

demand for US government securities and pressured funds' yields lower. The yield on four-week US Treasury securities fell to zero.³¹⁷ To stop the run on *prime* money market funds, threatening to the viability of the money markets, the US Treasury department introduced a guarantee programme for money market fund shareholders.³¹⁸ Even though participation in the Treasury guarantee programme was optional and entailed a fee, majority of funds chose to participate.³¹⁹ An unprecedented step of the US Treasury to provide a guarantee to private investment vehicles proved to be extremely effective in containing the panic and quelling shareholder redemptions.³²⁰ By January 2009, assets under management of the US money market funds reached all time high of \$3.9 trillion.³²¹

The guarantee programme was intelligently designed to address the risk of a future run on the fund by providing government guarantee to only those shareholders on record as of 19 September 2008 and staying invested in the same money market fund.³²² Thus shareholders were discouraged to redeem their shares because doing so they would have forfeited any future coverage under the guarantee programme. Furthermore, in contrast with the federal deposit insurance for bank accounts capped at \$250,000 per account, the Treasury guarantee programme covered the entire invested amount regardless of the size.³²³

³¹⁷ FCIC Report *supra* note 27 at 357.

³¹⁸ *Frequently Asked Questions About Treasury's Temporary Guarantee Program for Money Market Funds*, U.S. Department of the Treasury (29 September 2008), at <http://www.treasury.gov/press-center/press-releases/Pages/hp1163.aspx>. The guarantee covered those money market fund shareholders on record as of 19 September 2008 and in the amount invested on that day until 30 April 2009. The programme was subsequently extended until 19 September 2009.

³¹⁹ *Id.* Charged fees were spelled out in Section 4(a) of the 'Guarantee Agreement.' A blank form of a 'Guarantee Agreement' between the US Treasury and the fund's investment company is *available* at http://www.treasury.gov/about/organisational-structure/offices/Domestic-Finance/Documents/Guarantee-Agreement_form.pdf. Participating funds were charged a non-refundable fee of 10 to 15 basis points of their total assets as of 19 September 2008 depending on the level of their market-based net asset values measured on that day.

³²⁰ *See, e.g.*, BAIRD WEBEL & MARC LABONTE, *Government Interventions in Response to Financial Turmoil* (Congressional Research Service 1 February 2010) at 27. Over the life of the program, Treasury reported that no guaranteed funds had failed, and \$1.2 billion in fees had been collected. Over \$3 trillion of deposits were guaranteed and, according to the Bank of International Settlements, 98% of money market mutual funds were covered by the guarantee, with most exceptions being funds that invested only in Treasury securities.

³²¹ *Source:* www.ici.org.

³²² *Supra* note 318 at 1.

³²³ *Id.*

Immediately after restoring one of the fundamental functions of money market funds – safety – albeit through the US Treasury guarantee, the US government turned to the issue of market liquidity. The Federal Reserve Bank of Boston announced it would provide loans to those banks purchasing high quality asset-backed commercial paper from money market funds.³²⁴ The programme enabled the US money market funds to liquefy their high quality holdings that were rendered essentially illiquid in the market panic followed the Lehman Brothers bankruptcy. In the first ten days of the programme operations, money market funds sold over \$150 billion of asset-backed commercial paper and its usage declined in the ensuing months.³²⁵ No asset-backed commercial paper purchased from money market funds under the programme defaulted or otherwise incurred any losses to the Federal Reserve.³²⁶

The US government actions aimed at restoring viability of money market funds during the peak of liquidity crisis highlighted their importance for the financial system as a liquidity vehicle. Over the last 40 years money market funds have grown to represent a significant part of the funding markets. When the mortgage market collapsed and money market funds together with other short-term investors abandoned the commercial paper and repo lending markets to avoid the risky exposure, a number of institutions depending on these markets failed or had to be rescued. Even healthy companies unrelated to the financial sector experienced an unprecedented drop in the market access and resulted spike in borrowing cost due to lack of demand from money market funds. Thus money market funds served to propagate turmoil in the financial sector to other economic sectors. Yet, money market funds' functions as providers of credit and liquidity were compelling reasons for the US government to step in.³²⁷

³²⁴ *Asset Backed Commercial Paper (ABCP) Money Market Mutual Fund (MMMF) Liquidity Facility (AMLF or "the Facility")*, The Federal Reserve (22 September 2008), at <http://www.frbdiscountwindow.org/mmmf.cfm?hdrID=14#f1>. The programme was initiated on 22 September 2008.

³²⁵ See generally BURCU DUYGAN-BUMP, et al., *How Effective Were the Federal Reserve Emergency Liquidity Facilities? Evidence from the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility* (Federal Reserve Bank of Boston, QAU Working Paper No. QAU10-3 April, 2010).

³²⁶ FCIC Report *supra* note 27 at 359. The programme expired on 1 February 2010 with no losses to the Federal Reserve and taxpayers.

³²⁷ Even though the European Community and national regulators did not provide any direct support to European money market funds, their actions aimed at restoring the overall market stability benefited money market funds, albeit indirectly. See Chapter 4 *infra*.

The crisis not only had devastating consequences for the US economy, but also produced a profound ripple effect on the rest of the world. The US Congress Financial Crisis Inquiry Commission tasked with the crisis tally found 26 million Americans without jobs, four million families losing their homes in foreclosures and \$11 trillion in retirement and life savings vanishing.³²⁸ A number of European economies suffered similar hardships once the crisis reached their shores. Iceland, one of the first and hardest hit countries, had to nationalise its banking system after seeing the collapse of its three major banks in 2008. Its currency, the Icelandic króna had declined more than 35 per cent against the euro in the first nine months of 2008 and inflation of consumer prices was running at 14 per cent per annum.³²⁹ Internal finance and banking systems of Greece, Ireland, Italy, Portugal and Spain, collectively dubbed as GIIPS, have been under unprecedented pressure during 2009 through the present time.³³⁰

Austerity measures instituted by the governments of these countries to contain ballooning public debt, have caused national unrests.³³¹ Unhealthy national finances of GIIPS contaminated banking system of the 'core' European countries through holdings of GIIPS's sovereign debt by

³²⁸ FCIC Report *supra* note 27 at xv.

³²⁹ See PAUL RAWKINS, et al., Iceland: A Difficult Road Ahead (Fitch Ratings 11 December 2008) ICELAND, *Cracks in the crust*, The Economist 11 December 2008. PAUL RAWKINS & DAVID RILEY, Credit Analysis: Iceland (Fitch Ratings 3 September 2009). The report estimated the direct fiscal costs of recapitalising the Icelandic financial system at 40 per cent of the gross domestic product, similar to some Asian countries during the Asian financial crises of the late 1990s.

³³⁰ See JOHN DETRIXHE & BETTY LIU, *Greece Resolution Efforts Risk Wider Contamination, Pimco's El-Erian Says*, Bloomberg 23 June 2011. PAUL RAWKINS, et al., Greece: Diminishing Path to Solvency Triggers Downgrade (Fitch Ratings 27 May 2011) ALEXANDER KOCKERBECK & BART OOSTERVELD, Moody's places Italy's Aa2 ratings on review for possible downgrade (Moody's Investors Service 17 June 2011) LISA HINTZ & DAVID W. MUNVES, Portuguese Government Yields Rise: A "Crisis" with a Different Source (Moody's Analytics 3 March 2011) ANTHONY THOMAS & BART OOSTERVELD, Moody's downgrades Portugal's bond ratings to Baa1 from A3, still under review down (Moody's Investors Service 5 April 2011) DIETMAR HORNUNG & BART OOSTERVELD, Moody's downgrades Ireland to Baa3 from Baa1; outlook remains negative (Moody's Investors Service 15 April 2011) KATHRIN MUEHLBRONNER & BART OOSTERVELD, Moody's downgrades Spain's rating to Aa2 with a negative outlook (Moody's Investors Service 10 March 2011)

³³¹ See ANITA BROOKS, *Spain faces unrest as new austerity plan is announced*, The Independent 13 May 2010. ANTHONY FAIOLA, *In Greece, austerity kindles deep discontent*, The Washington Post 13 May 2011. In Greece, thousands protesters have joined an 'I Won't Pay' movement, refusing to cover highway tolls, bus fares, even fees at public hospitals.

the largest European banks.³³² James Carville, the US President Bill Clinton's campaign strategist was stunned at the power of the bond market over governments:

I used to think if there was reincarnation, I wanted to come back as the President or the Pope or a 0.400 baseball hitter. But now I want to come back as the bond market. You can intimidate everyone.³³³

Mr. Carville's famous quote captures the essence of our inquiry into the rationale for financial market regulation: because financial markets indirectly control our everyday life, they may cause national uprising or put governments out of power. The widespread market failures that began in the second part of 2007 in the asset-backed commercial paper sector and negatively affected virtually every economy in the developed world is currently threatening viability of the European Union.

As the European sovereign debt crisis developed in the spring of 2011, the thread of the financial contagion from the cross-border capital flow were placed in the focus of the public policy debate.³³⁴ The US Federal Reserve has grown increasingly concerned regarding a potential disruptive effect of the European crisis on the US financial system via money market funds' exposure to European banks.³³⁵ As discussed earlier in this section, money market funds, specifically those funds denominated in the US dollar, invest in highest quality companies with extensive global business franchises thus enabling non-US companies to finance their US operations.³³⁶ This latest example of debates surrounding money market funds highlights a high level of interconnectedness of the contemporary financial system vertically at many levels of participation and horizontally across national border.

³³² JAMES LONGSDON, et al., *European Bank Exposure to GIPs: Second Order Risks More of a Concern Than Direct Holdings of Sovereign Debt or Bank Exposures* (Fitch Ratings 21 June 2011).

³³³ WSJ 25 February 1993, p. A1.

³³⁴ ROSENGREN, (2011a) *supra* note 253 at 9.

³³⁵ *Id.* at 10.

³³⁶ BRIAN REID, *Dispelling Misinformation on Money Market Funds* (Investment Company Institute July 2011). Many European banks have substantial US operations. For example, eight of the 20 US primary dealers on which the US Treasury and the Federal Reserve rely for the US Treasury auctions and open market operations are headquartered in Europe.

2.5 Conclusion

In the space of forty years, from the early 1970s through the present, money market funds transformed into important market intermediaries serving crucial socio-economic goals of capital formation and market efficiency. Chapter 2 presented the essential characteristics of money market funds and provided their detailed categorisation illustrating the variability of the international money market funds landscape. It was established in this chapter that the geographic location of a fund is the key determinant of its operational and accounting practices as well as its investment preferences. I found that the nature of the funds' shareholder base has a significant impact on the fund risk profile; thus money market funds offered to retail investors are shown to be less susceptible to a run.³³⁷

Most importantly, an analysis of money market fund investments illustrated that money market funds incur in a different degree of risks depending on the type of assets. Prime money market funds investing in short-term securities issued by corporate entities deemed to be the riskiest amongst their peers, while funds investing in government or municipal securities are less likely to face credit-related losses. Finally, this chapter categorised money market funds on the basis of their asset valuation practices, distinguishing constant net asset value funds and variable net asset value funds, a characteristic important for institutional investors concerned with money market fund utility as a cash management tool.

This chapter portrayed money market as important actors in the short-term capital markets, who expanded a choice of funding opportunities for various issuers. An important beneficial function of money market funds is to improve market efficiency by channelling cash flows directly from cash-rich households to cash-strapped businesses and governmental entities passing traditional intermediaries such as banks. The dark side, however, is the risk that if money market funds cease to function because of cash withdrawals by investors, the borrowers could be left without sources of funding. Thus, this chapter demonstrated the importance of the money market fund industry which is exercised through both vertical interconnectedness amongst other market participants, and horizontal interconnectedness, across national borders.

³³⁷ *Supra* nn. 210 and 213.

Given such importance, I retort that a normative intervention in money market fund activities is entirely justifiable. The following chapter 3 focuses on the US money market funds, their history of development and current regulation. In effect, chapter 3 sets the stage for an introduction of the new international regulatory architecture for money market funds by presenting the largest segment of this industry globally.

CHAPTER 3: US MONEY MARKET FUNDS

3.1 Introduction

Chapter 2 examined the profile of the money market fund industry with respect to its economic functions and its relationship with other economic actors. It also showed that money market funds served as a risk transmittal link in the financial crisis. Chapter 3 focuses on the money market funds established and operating in the US, which account for the largest share of assets under management of money market funds worldwide.³³⁸ The chapter opens with an analysis of the origin and early development of these money market funds. It illustrates how these funds were originally a product of an arbitrage created by restrictive banking regulation and how, subsequently, performing well over time and advocating sound investment practices, they won investors' trust and became one of the most important liquidity management tools for retail and institutional investors.

Next this chapter analyses the current regulatory structure of the US money market funds. It will be shown, in particular, that the US money market funds are already covered under a comprehensive framework of federal securities laws, the best industry practices and rules established by credit rating agencies. This chapter illustrates that the source of specific legal practices that are enshrined under the federal securities law in a form of government mandated prudential rules are the money market funds themselves. Furthermore, these practices can also influence foreign cases when similar questions related to money market fund regulation are to be resolved in other jurisdictions.³³⁹ Such a migration of the legal practices with respect to these funds is abundantly examined later in chapter 4 when addressing regulatory developments in the European money market fund industry.

The method of this chapter is legal analysis. The study is nonetheless undertaken with a critical attitude, highlighting the uncertainty embedded in the contemporary regulatory landscape. With regard to the structure, this chapter is divided into four main sections. Section 3.2 reviews the historical background of the US money market funds and profiles the

³³⁸ Source: www.ici.org. In the first quarter of 2011, assets under management of the US money market funds account for approximately 55 per cent of these assets worldwide.

³³⁹ Chapters 4 and 5 *infra*.

contemporary state of the industry. Section 3.3 presents the legal framework governing investment and operational activities of the US money market funds. Section 3.4 introduces credit rating agencies and details credit rating considerations related to these funds. In specific connection to the research question – *how should money market funds be regulated?* – section 3.5 discusses unresolved issues in the US money market fund regulations, explores the proposed solutions and analyses the possible consequences of their implementation. This section also reports on the advantages and limitations of the US money market fund regulation and its broader effect on the global capital markets. The achievements derive from the size and strengths the US money market funds and their multiple benefits to other economic actors both domestically and cross-border. With regard to the limitations it is pointed out, in particular, to the legal uncertainties surrounding the future of the US money market funds that are plaguing their development. A conclusion is finally provided in section 3.6.

3.2 History and the current state of the US money market fund industry

3.2.1 US money market funds from the 1970s to the early 1990s

The origin of the US money market funds in the early 1970s is commonly attributed to the existence of Regulation Q which, among other requirements, limited the interest that US banks were allowed to pay on passbook saving accounts.³⁴⁰ In January 1970 banks were offering only 4.5 per cent interest on depositor's passbook saving accounts, while 3-month US Treasury bills earned eight per cent and the yield on 3-month banks' certificates of deposit was hovering close to nine per cent.³⁴¹ The catch was that certificates of deposit were only sold in \$100,000

³⁴⁰ The Banking Act of 1933 Pub. L. 73-66, 48 Stat. 162 at Section 11. Section 11 of the Banking Act of 1933 (12 USC § 371a), which is implemented by Regulation Q (12 CFR § 217), regulates interest paid to bank depositors. The ceilings on savings accounts were for the most part lifted by the Depository Institutions Deregulation and Monetary Control Act of 1980 (12 USC § 226 note). *See also* MCDONALD & MCMILLEN. *supra* note 145 at 255. Explains that when the nominal interest rates in the US went up in the mid-1960s, the US Congress had responded by enacting the Interest Rate Control Act of 1966, which gave the Federal Reserve Board under the Regulation Q the authority to impose an interest rate ceiling on deposit accounts held at savings and loan associations, thrifts and banks; MARKHAM. *supra* note 145 at 4. The article points out that the passage of the Interest Rate Control Act of 1966 was aimed to curb the competition among thrifts for the same deposit dollars.

³⁴¹ The Federal Reserve Board's Statistics & Historical Data, *available at* <http://www.federalreserve.gov/datadownload/Choose.aspx?rel=H.15> accessed on 4 March 2010. *See also*

denominations and, therefore, were largely unavailable to investors with smaller cash balances. Henry B.R. Brown and Bruce R. Bent – both are now credited as inventors of money market mutual funds – came up with the idea of how to help small investors to access the market rates only available to wealthier depositors.³⁴² Brown and Bent decided to pool small cash balances into a larger portfolio, or a mutual fund, to achieve the required investment scale. A prospectus of the Reserve Fund, the first US money market fund, was approved by the US Securities and Exchange Commission in the fall of 1972.³⁴³ The fund’s objectives were to offer a market rate of return and relative stability of principal. At the opening the fund had only \$300,000 under management.³⁴⁴

At the same time in California a stockbroker James Benham set up an investment vehicle that offered small investors an opportunity to share income benefits of the US Treasury bills.³⁴⁵ The US Treasury bills, sold with denominations of \$10,000, were also largely unavailable to small investors.³⁴⁶ James Benham’s Capital Preservation Fund was launched in the fall of 1972 and invested solely in the US Treasury bills.³⁴⁷ The Capital Preservation Fund had four major advantages for investors relative to purchases of bills directly from the US Treasury. First, the size: clients with any small balances could invest in the fund and, thus, in the US Treasury market, albeit indirectly. Second, liquidity: investors did not have to wait until US Treasury bills mature, but could withdraw their investments at any time and receive invested principal and due interest. Third, investors could withdraw any fraction of their invested balances and did not have to cash out the entire amount. Fourth, investors could rollover their investments and accrued interest continuously without having to reinvest the proceeds and interest from maturing bills.

In the 1970s and the early 1980s due to obvious yield advantage, the US money market funds gained popularity with multiple types of investors. To appeal to a greater number of

FINK, (2008) *supra* note 143 at 80. Banks’ passbook saving accounts interest rate was later increased to 5.25 per cent.

³⁴² *See, e.g.,* NOCERA. *supra* note 143 at 76.

³⁴³ *Id.* at 81.

³⁴⁴ VIKTORIA BAKLANOVA, A Common Definition of European Money Market Funds: More Clarity or More Confusion? (eSSRN 10 March 2010) at 3. Available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1568393.

³⁴⁵ NOCERA. *supra* note 143 at 79.

³⁴⁶ *Id.* at 80. The US Department of Treasury facing hundreds of people lining up to buy Treasury bills during its weekly auctions increased the minimum purchase from \$1,000 to \$10,000.

³⁴⁷ *Id.* at 81.

investors various cash management features were added to money market funds. It was Fidelity Daily Income Trust that first explored assets' "redeemability through check writing" in 1974.³⁴⁸ In 1978 Merrill Lynch, a large US financial services company, currently defunct, unveiled a comprehensive cash management vehicle that combined check writing, credit or debit cards and paid money market rate of return on the balance.³⁴⁹ Federated Investors, another large US asset management company, introduced money market funds to bank trustees and personal wealth managers. By the time the restrictions of Regulation Q were fully phased out in 1986, money market funds have gained popularity offering both the market yield and cash management services.³⁵⁰ At the end of 1986, money market funds had \$292 billion in assets under management compared to \$4 billion at the end of 1976 showing an exuberant average annual growth rate of 53.6 per cent.³⁵¹

Banks' trust departments played a pivotal role in development of the US money market funds. In their early days, money market fund shares were priced at \$10 at the issuance, but fluctuated thereafter around the initial price of \$10 reflecting market conditions.³⁵² However, there were many shareholders who wanted to invest in a fund whose share price would not change.³⁵³ For example, bank trust departments were precluded by their charters from investing in mutual funds with changing net asset value.³⁵⁴ In 1978 the US Securities and Exchange Commission held a hearing at which institutional investors explained their objections for placing cash in funds with fluctuating net asset value.³⁵⁵ Ease of use, accounting and tax considerations

³⁴⁸ FINK, (2008) *supra* note 143 at 81.

³⁴⁹ NOCERA. *supra* note 143 at 155-160.

³⁵⁰ Paragraph 11 of the Depository Institutions Deregulation Act of 1980 provided for an orderly phase-out and ultimate elimination of interest rate in 6 years. The title expired on March 31, 1986.

³⁵¹ I would like to thank Peter Crane, the founder and the principal of CraneData (www.cranedata.us) for providing historical series of data related to the US money market funds' assets under management. The annual growth calculations are my own.

³⁵² A share price of a contemporary US money market fund is pinned at \$1.00 and does not change over the life of the funds. Accrued interest reflects changing market conditions.

³⁵³ Federated Investors, one of the largest US asset management firms, working with bank trust departments that invested their clients' money in US Treasury bills, recognised the demand for money market funds with stable net asset value.

³⁵⁴ See Federated presentation slides for the meeting with the SEC on January 20, 2010 available at <http://www.sec.gov/comments/s7-11-09/s71109-169.pdf> accessed on March 3, 2010.

³⁵⁵ LYON, *supra* note 121 at 1013, n. 6.

were generally cited as the main attraction of a constant net asset value fund for institutional investors.³⁵⁶

These investors often operate under specific operational rules that require capital gains and losses to be separated from interest payments for accounting and tax purposes.³⁵⁷ Furthermore, investors in money market funds are extremely risk-averse and are primarily focused on safety of their capital and availability of cash on daily basis rather than an incremental return. Consistent with the findings of behavioural economists discussed in Chapter 1, investors in money market funds exhibited a stronger preference for avoiding losses rather than acquiring gain.³⁵⁸ This type of behaviour with respect to money market fund investments is explained by a rational choice theory given an asymmetry between expected reward and probable losses.³⁵⁹ To meet investor demand for safety and structural simplicity the great majority of the US money market funds have their shares priced at \$1.00 although other types of the US mutual funds are usually priced at \$10.00. A price of \$1.00 has caused some parties including scholars to view money market funds as a cash equivalent.³⁶⁰

In order to prevent share price fluctuation following daily changes in the fund portfolio market value, the US money market funds were permitted to use special accounting

³⁵⁶ FINK, (2008) *supra* note 143 at 84.

³⁵⁷ A large number of institutional investors represented to the US regulators that a constant net asset value is one of the most important features of money market funds. *See generally, President's Working Group Report on Money Market Fund Reform (Request for Comment) [Release No. IC-29497; File No. 4-619]*, US Securities and Exchange Commission. (3 November 2010), [at http://www.sec.gov/comments/4-619/4-619.shtml](http://www.sec.gov/comments/4-619/4-619.shtml). *See e.g., Comment Letter Re: Money Market Fund Reform Options (File No. 4-619) (Treasury Strategies, Inc. 10 January 2011) at 4.* The letter stated that the accounting simplicity is highly valued by corporate treasurers as it reduces potential for accounting errors and improves overall operational efficiency. Available at <http://www.sec.gov/comments/4-619/4619-44.pdf> accessed on 12 March 2011; ROBERT L. MORAN, Comment Letter in Re: Request for Comment on the President's Working Group Report on Money Market Fund Reform [File #4-619] (American Association of State Colleges and Universities 21 January 2010). The letter stated that removal of a stable net asset value feature “would have significant [negative] ramifications on a funding mechanism used by institutions of higher education as a stable, low-risk investment tool”.

³⁵⁸ *See also* MEIR STATMAN & KENNETH L. FISHER, *Mental Liquidity* (eSSRN May 2006) at 8.

³⁵⁹ In the modern portfolio theory, risk aversion is measured as the additional marginal reward an investor requires to accept additional risk. Recalling that money market fund investments are conservative low yielding alternatives, any incremental increase in risk corresponds to asymmetric increase in volatility jeopardising stability of invested principal.

³⁶⁰ BIRDTHISTLE, *supra* note 139 at 1160 – 61. The author maintains that the US Securities and Exchange Commission “has collaborated in the creation of an appearance that these investments are as safe as bank deposits”.

techniques.³⁶¹ In addition, to prevent share prices from moving up and down following dividend distribution, these funds declare dividends daily and accrue and pay out dividends monthly.³⁶² Typically, money market funds compute their share price using the amortised cost method, but also round the share price to the nearest cent.³⁶³ The overarching rationale behind introduction of these share price computation techniques was the historical observation that the daily market price volatility of typical money market securities is low. This means that high quality short maturity securities comprising money market fund portfolio do not change much in value on day-to-day basis. Therefore, if a money market fund is invested in such low volatility securities, its share price calculated with help of these methods is likely to be very close to that calculated using the securities' market prices. Persuaded by this analysis, in 1977 the US Securities and Exchange Commission approved use of both an *amortised cost* method and a *penny-rounding* method for a few funds.³⁶⁴ Within two years, the Commission allowed these two accounting methods for use in money market funds on a permanent basis.³⁶⁵

The US money market fund industry has significantly contributed to the development of the law governing these funds. Certainly, as highlighted in the literature reviewed in section 1.3.2, the grounds for the origin of the US money market funds can be traced in the response of the investment industry to the restrictive banking regulation. However, asset managers had a proactive role as they not only created an investment product – money market funds – that would best meet their clients' needs; they also developed the pertinent fund management practices. Furthermore, the investment industry successfully petitioned to its regulator for legalising these practices. Historically, the US money market fund industry and the Investment Company

³⁶¹ See generally SEC Rel. No. IC-13380 Valuation of Debt Instruments and Computation of Current Price Per Share by Certain Open-End Investment Companies (48 F.R. 32555 18 July 1983). The US Securities and Exchange release that permitted money market funds to move utilize amortised cost accounting method (straight line) and penny-rounding technique to keep share price at a stable value. See generally, FINK, (2008) *supra* note 143 at 84. See also LYON, *supra* note 121 at 1012. Under the amortised cost method the principal value of a security increases or decreases daily, depending on whether the security was initially purchased at a discount or premium to its par value, or at a fixed rate and is unaffected by changes in market interest rates.

³⁶² OHLBAUM SWIRSKY. *supra* note 104 at 18, n. 15 and accompanying text.

³⁶³ *Id.* at 18.

³⁶⁴ SEC Rel. No. IC-10027 (28 November 1977). The release approved use of an amortised cost method in seven money market funds and use of a penny-rounding method by a money market fund managed by Merrill Lynch.

³⁶⁵ SEC Rel. No. IC-10824 (8 August 1979).

Institute, its lobbying organisation have been closely involved with regulators on both federal and state levels educating, proposing, commenting and, at the end, achieving the end workable for all industry constituencies.³⁶⁶

An introduction of a specific version of money market funds, those featuring *constant net asset value* that later became a prevailing global model and the only type of money market funds operating in the US, is fully attributable to the investment management lobby activities. Thus, the US mutual fund industry not only found an innovative way to employ its investment potential, but also facilitated the rulemaking process codifying its management practices into law. To note, the money market fund industry was not unanimous with respect to the advantages of the amortised cost accounting enabling constant net asset value. On the other side of the barricades for the valuation battle were those asset managers who foresaw a possibility of gaming constant net asset value funds.³⁶⁷

An arbitrageur could, in theory, move into a money market fund when the fund's yield exceeded available market yield and then rapidly withdraw her cash when the fund's yield lagged the market yield. An arbitrageur would incur no capital loss because money market fund shares were always priced at \$1.00, but would receive above the market yield. Furthermore, cash flows moving in and out of a money market fund would have diluted return for those core shareholders committed to the fund. This yield arbitrage theory prompted some of the industry participants to voice their concerns that the amortised cost 'presents the illusion of higher returns in times of declining rate and makes money market funds appear to have overcome the risk' of fluctuating interest rates.³⁶⁸ It was indeed a valid concern that without the discipline of having to mark-to-market, money market funds could be incentivised to acquire a significant amount of longer term obligations.³⁶⁹ This concern was addressed in money market fund regulation by

³⁶⁶ See, e.g., FINK, (2008) *supra* note 143 at 80 – 98. The author describes the Investment Company Institute's heavy lobbying process to protect the money market fund industry from imposing damaging bank regulation in early 1980s.

³⁶⁷ Section 1.2.2 *supra* refers to one of the first studies produced by finance scholars analysing a possibility of arbitraging constant net asset value money market funds.

³⁶⁸ In February 1978 Bruce Bent, a money market fund inventor and the founder of Reserve Management, submitted a letter to the US Securities and Exchange Commission on the subject of the amortised cost valuation in money market funds.

³⁶⁹ LYON, *supra* note 121 at n. 9 and accompanying text.

limiting final maturities of eligible securities and restricting the overall weighted-average maturity of the fund.³⁷⁰

As discussed in section 3.3 concerning the federal securities law framework applicable to the US mutual funds generally, legitimising the amortised cost accounting contradicted the basic premise of mutual fund investing set forth in the Investment Company Act of 1940.³⁷¹ By law, mutual funds arrive at their net asset values by marking the fund's assets to market and dividing the total value by the number of shares outstanding after taking into account the fund's other assets and liabilities.³⁷² Nevertheless, persuaded by the argument of generally low volatility of short-term securities, the US Securities and Exchange Commission allowed money market funds to price their assets differently from other mutual funds, provided they adhere to specified risk limiting provisions.³⁷³

To limit the risk of mispricing, money market funds were obligated to keep the deviation of the fund's amortised cost value from its true market value within the range of 0.5 per cent. If the deviation exceeded 0.5 per cent, a money market fund had to take steps to reduce the deviation, or adopt the *market-based* pricing.³⁷⁴ These arguments formed the basis for Rule 2a-7 under the Investment Company Act governing operations of the US money market funds adopted in 1983. Thus, in 11 years after registering the first US money market fund prospectus, the US Securities and Exchange Commission codified their investment management and operational practices. The announcement of the adoption of Rule 2a-7 stated that money market funds are permitted, subject to certain risk-limiting conditions, to use an *amortised cost* method and/or a *penny-rounding* method for valuing portfolio assets when compute their current share price.³⁷⁵

By the end of 1979, the Consumer Price Index in the US reached 13.3 per cent and interest rates approached 12 per cent.³⁷⁶ With interest rates on saving accounts remaining under the ceiling of Regulation Q, by the early 1980s, assets under management of money market

³⁷⁰ OHLBAUM SWIRSKY. *supra* note 104 at 19.

³⁷¹ Investment Company Act of 1940 amend. 15 U.S.C. § 80a-1 et seq. at Section 2(a)(41).

³⁷² *Id.*

³⁷³ Money market funds were initially restricted to a dollar-weighted average maturity of portfolio at 120 days or less and invested only in securities with remaining maturities of no greater than one year.

³⁷⁴ SEC Rel. No. IC-13380

³⁷⁵ *Id.*

³⁷⁶ NOCERA. *supra* note 143 at 175.

funds exceeded \$200 billion. The speed with which these funds were gathering assets had long alarmed the banking community. Being direct competitors to bank deposits and resembling bank accounts in terms of cheque writing abilities, money market funds presented unique issues under banking laws leading to regulatory debates with federal banking authorities.³⁷⁷ Section 1.3.4 of this thesis sampled academic sources investigating legal issues pertaining to money market funds and reflecting the regulatory conundrum of early 1980s related to these funds. Appealing to the US Congress, bankers claimed that money market funds are under-regulated and excessively risky. However, instead of restricting money market funds, the Congress focused on improving bank competition by getting rid of interest rate limits on saving accounts imposed by Regulation Q.

In 1981 another line of attack on money market funds developed at the state administration level. Regional banks and savings and loans (S&L) in a number of US states made attempts to lobby the respective state legislatures prohibiting sale of money market funds or, at least, limiting the interest paid by these funds to investors. The proposed regulations had good chances of being adopted because of coordinated actions of local banking communities. Usually, local bankers were members of states' lawmaking bodies. By contrast, mutual fund firms managing money market funds had only limited presence in the states. The Investment Company Institute represented interests of the funds in more than 20 states when matters regarding money market funds were debated and won in every instance.³⁷⁸ The successful repeal of banker's efforts to outlaw money market funds on the state levels argues for the high utility of money market funds for their shareholders who were also state voters.

The utility of the US money market funds for retail investors was further enhanced by development of tax-exempt money market funds. In their original form the US money market funds invested solely in US government securities and securities issued by corporate entities. In early 1980 money market funds started looking into obligations issued by US states and municipalities that pay income generally exempt from federal income tax.³⁷⁹ Therefore, money market funds investing exclusively in securities issued by states and municipalities were

³⁷⁷ Section 1.3.4 *supra*.

³⁷⁸ FINK, (2008) *supra* note 143 at 87-94.

³⁷⁹ *Id.* at 98. Fidelity Investments, one of the largest US asset management firms, pioneered the development of tax-exempt money market funds.

classified as *tax-exempt*.³⁸⁰ Annex D illustrates the high level of interest rates in the US in late 1970s – early 1980s, which made an income tax exemption an appealing feature and added to the money market fund utility particularly for the high net worth investors.

A serious testing moment for money market funds came in September 1994, when the Colorado-based Community Bankers US Government Money Market Fund incurred substantial losses as a result of a drop in value in certain floating rate securities.³⁸¹ The fund promptly announced that it would liquidate and distribute the assets to its shareholders. Upon liquidation, investors received \$0.961 per share losing approximately 4 per cent of their investments in the fund. The fund losses were caused by improper use of floating rate securities issued by the US housing agencies such as Federal Home Loan Bank, Federal Farm Credit Bank, Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, and Student Loan Marketing Association.³⁸²

These entities were of high credit quality and enjoyed status of the US government agencies with implicit guarantee from the US Treasury. However, some of the securities carry an adjustable interest rate and were structured as collateralised mortgage obligation benchmarked to an index that generally lagged the movement of interest rate.³⁸³ When in 1994 the Federal Reserve rapidly increased interest rates as shown in Annex D, adjustable rate securities lagged the rate hike and lost value. Investors did not fully appreciate that even high quality, virtually credit risk-free securities could still lose value due to risk of interest rate change and following

³⁸⁰ See section 2.2 and exhibit 3 *supra* explaining money market fund categories.

³⁸¹ NICHOLAS BETZOLD & RICHARD BERG, *Arsenic Is Low-Fat Too: Lessons from the Demise of Community Bankers U.S. Government Money Market Fund*, Vol. 86 ABA Banking Journal, (1994).

³⁸² SEC Rel. No. ICA 23638 ORDER INSTITUTING PUBLIC ADMINISTRATIVE AND CEASE-AND-DESIST PROCEEDINGS, MAKING FINDINGS, AND IMPOSING REMEDIAL SANCTIONS AND CEASE-AND-DESIST ORDERS In the Matter of CRAIG S. VANUCCI AND BRIAN K. ANDREW, Respondents. (11 January 1999). The fund failed to maintain a \$1.00 net asset value per share as a result of having a substantial percentage (27.5 per cent) of its assets invested in adjustable rate derivative securities.

³⁸³ The cost of funds index (COFI) was used as a benchmark index for adjustable rate securities purchased by the Community Bankers US Government Fund. The fund also incurred losses on various securities with interest rate caps. When interest rates increased rapidly, price of these securities declined.

price decline. Government securities would have been paid in full if held to maturity. However, an interim decline in price caused fund losses.³⁸⁴

The Community Bankers US Government Money Market Fund was not the only money market fund holding adjustable rate securities that lagged the interest rate moves. Asset managers of 42 money market funds faced the same scenario, but chose to purchase the depreciated adjustable rate securities from their funds.³⁸⁵ Since the problem was so widespread among money market funds, questions were raised by both the investment public and regulators whether such volatile securities are appropriate for funds designed to maintain a constant net asset value per share.³⁸⁶ Ironically, shares in the Community Bankers US Government Money Market Fund were principally sold to small community banks as an option for an overnight investment.³⁸⁷ The fund offered a rate that was higher than the rate a bank could obtain depositing its free cash overnight at the Federal Reserve and thus attracted small banks seeking return maximisation.

The Community Bankers was a relatively small fund with approximately \$150 million of assets under management at its peak fund thus the losses and the fund closure did not have any significant effect on other market participants beyond those directly involved with the fund.³⁸⁸ Nonetheless, the Community Bankers fund losses prompted bank regulators once again to call for examining the risks in money market funds.³⁸⁹ In the same year, the default of the Orange county in California affected the US tax-exempt money market funds investing in the Orange county's bonds. The Orange county itself sustained losses from investments in adjustable rate government securities and was unable to pay its bondholders. Once again, no investors sustained

³⁸⁴ SEC Rel. No. ICA 23638 The total loss to shareholders upon the fund liquidation was approximately \$2.5 million. In addition, some money was recovered in the settlement of a private lawsuit brought by fund investors.

³⁸⁵ SHILLING, *supra* note 156 at 4, Fig. 2. Assets managers of 37 tax-exempt money market funds purchased defaulted bonds from their funds. *See also* JOHN W. MCGONIGLE, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (Federated Investors 25 March 2011) at 4.

³⁸⁶ OLAF DE SENERPONT DOMIS, *Gonzalez asks Fed to study money market fund risks (House Banking Committee Chairman Henry B. Gonzalez; Federal Reserve Board)*, *American Banker* 5 October 1994.

³⁸⁷ SEC Rel. No. ICA 23638

³⁸⁸ *Id.*

³⁸⁹ DE SENERPONT DOMIS. *supra* note 386.

losses in money market funds because asset managers of tax-exempt money market funds with exposure to the Orange county bonds had purchased defaulted bonds from their funds.³⁹⁰

Given a series of negative developments in the US money market fund industry caused by a sharp increase in interest rates in 1994, one would envision an investor exodus from these funds. Yet, this did not happen. The US money market funds ended the year with more assets under management than when they began.³⁹¹ Based on the painful experience of 1994, the US Securities and Exchange Commission took steps to rein in money market fund risks. These steps and other subsequent developments in money market fund regulations are reviewed in section 3.3.2.

3.2.2 US money market fund industry from the 1990s to today

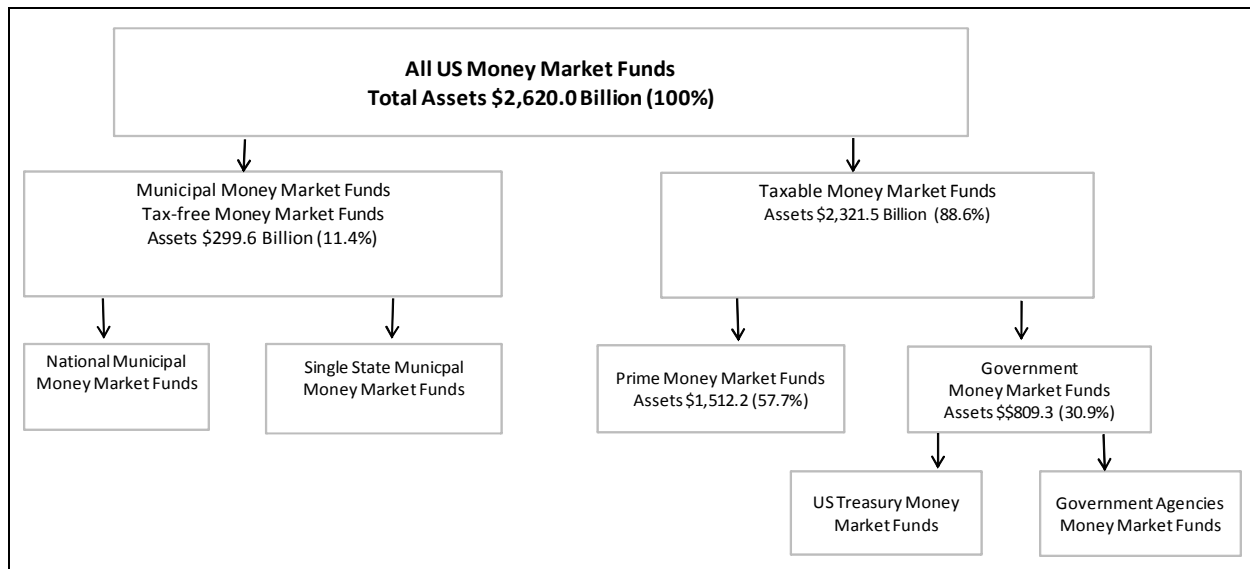
From later 1990s through 2007, the dawn of the financial crisis, the US money market funds established themselves as a significant market player and an important funding source for the borrowers in all major economic sectors.³⁹² Exhibit 4 illustrates the structure of the US money market fund industry and its assets under management today.

³⁹⁰ SHILLING, *supra* note 156 at 4, Fig. 2. *See also* MCGONIGLE, *supra* note 385 at 4.

³⁹¹ According to the Investment Company Institute data, the US money market funds started 1994 with \$565 billion under management and ended it with \$611 billion, or gained 8.1 per cent of total assets.

³⁹² Section 2.3.2 *supra*.

Exhibit 4: Classification of the US money market funds³⁹³



Given the size of the assets under management in money market funds, by 2007 these funds became victims of their own success. While money market funds served as a source of liquidity for other sectors, when the secondary market dried up in the fall of 2008 no other buyers were able to purchase all the securities that money market funds tried to sell. The dislocation in asset-backed commercial paper market in 2007 and bankruptcy of Lehman Brothers discussed in chapter 2 revealed the unstable nature of the short-term markets and money market funds' vulnerability to a complete shutdown.³⁹⁴ Those US money market funds affiliated with banks had an advantage of obtaining liquidity through their parent bank even though this type of support could cause negative accounting consequences to banks themselves.³⁹⁵ Finally, those asset managers unaffiliated with banks had nowhere to turn to in search for liquidity.

³⁹³ Source: the Investment Company Institute. Available at www.ici.org accessed on 10 August 2011.

³⁹⁴ HENRY SHILLING, Money Market Funds and Liquidity (Moody's Investors Service, NYSSA Investment Strategy Committee 25 May 2010). In the week of 15 September 2008 24 US money market funds suspended or defer redemption including 21 funds managed by the Reserve and the Putnam Institutional Prime Money Market Fund. Redemption suspensions caused 18 per cent of total US money market fund assets at that time being locked up. Asset managers of 36 US money market funds had to provide financial support to their funds at estimated \$12.1 billion. Financial support to individual funds ranged between \$27 million and \$2.9 billion. See also MEGAN MCARDLE, *Putnam closes a money market fund: how worried should you be?*, The Atlantic 18 September 2008.

³⁹⁵ See, e.g., BEN S. BERNANKE, Letter to Anthony Carfang, Partner, Treasury Strategies, Inc. (Board of the Governors of the Federal Reserve System 9 December 2010). Mr. Bernanke, the Chairman of the Board of the Governors, noted that reliance of money market funds on a discretionary support from

The US government interventions played a crucial role in stabilising the money market fund industry during the crisis. The US monetary authorities established five support programmes directly targeting money market funds and their investors.³⁹⁶ Annex E lists the various programmes implemented by US monetary authorities in the fall of 2008. The need for the government interventions during the crisis challenged the main assumptions underlying the money market fund investment activities – a belief in highly liquid nature of the short-term market. Historically, these funds relied on the vibrant secondary market densely populated with willing buyers to raise cash when needed. This assumption was shattered when the market liquidity evaporated. Simultaneously, corporations that had relied on the US money market funds as a funding source suddenly found themselves unable to refinance maturing securities as these funds were no longer investing.³⁹⁷

Once again, on the heels of another crisis, money market fund regulation was reviewed to establish the new rules that would remedy those vulnerabilities exposure during the liquidity squeeze. At the heart of these new rules were new liquidity requirements directing the funds to maintain a pre-specified level of assets maturing daily and weekly.³⁹⁸ Other US regulatory agencies have also reviewed their assumptions post-crisis and drafted new rules seeking to address both firm-specific and systemic risks in the financial system. For example, the US Federal Deposit Insurance Corporation changed the way the bank insurance premium is calculated making it more expensive for the large US banks to seek funding in the short-term markets.³⁹⁹ New capital ratio and liquidity requirements under Basel III have also affected the

banks raises a number of policy issues. In particular, concerns were raised that the availability of discretionary support during the crisis may have contributed into destabilising behaviour of fund shareholders.

³⁹⁶ MICHAEL CHA & JONAS KOLK, *Liquidity and Money Markets Against a Changing Regulatory Landscape*, 1(2) Investment Management Journal 55, (2011) at 57. At the peak of their utilisation the US government programmers lent \$496 billion to money market funds and their investors. These programmes also incurred \$835 billion of credit exposure to guarantee corporate issuance in order to encourage money market fund to invest in such government-guaranteed securities.

³⁹⁷ Section 2.4 *supra* described the role of money market funds in the global financial crisis of 2008/2010.

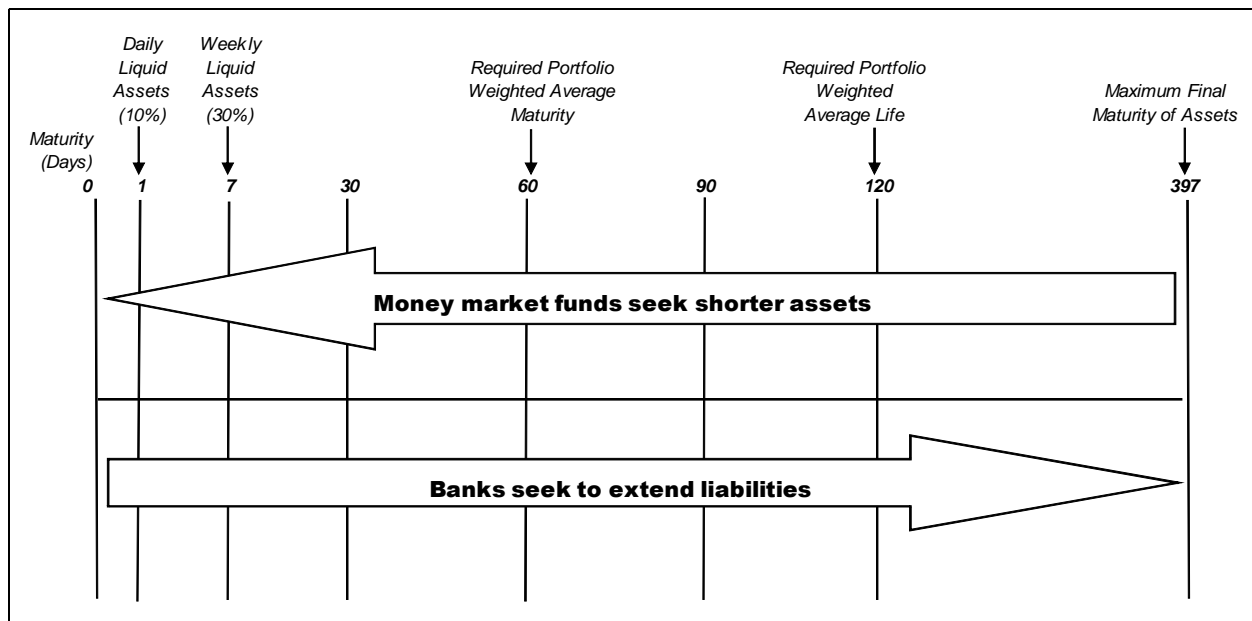
³⁹⁸ SEC Rel. No. IC-29132 *See also* section 3.3 *infra* for the detailed discussion of these rules.

³⁹⁹ Changes are mandated under the Dodd-Frank Act. *See* The Dodd-Frank Act Pub.L. 111-203, H.R. 4173 ;*Title III: Enhancing Financial Institution Safety and Soundness.* at http://www.aba.com/RegReform/RR3_overview.htm.

international funding markets.⁴⁰⁰ Under the new regime banks should be better capitalised and be less reliant on the short-term funding.

Nonetheless, unintended consequences of achieving these policy goals have resulted in a dramatic reduction in short-term issuance due to more expensive access to the short-term market for banks. While bank regulators encourage the longer-term borrowing, the US money market funds are obliged to maintain shorter duration and invest more assets in securities maturing daily and weekly. Given the divergent actions of bank and securities market regulators, the contemporary landscape of the US money market fund industry is shaped by a regulatory conundrum illustrated by exhibit 5.

Exhibit 5: Impact of regulatory reforms on the short-term markets⁴⁰¹



In light of the regulatory conundrum, bank liquidity facilities and credit lines are expected to become more expensive going forward. The commercial paper market is likely to be negatively impacted by the punitive cost of the back-up liquidity arrangements, a must have for the commercial paper issuance.⁴⁰² Many corporate issuers have already replaced short-term debt

⁴⁰⁰ See Basel III Global Regulatory Framework and Basel III Liquidity Framework *supra* note 30.

⁴⁰¹ Adopted from CHA & KOLK, *supra* note 396 at 60, Display 5.

⁴⁰² This trend is already apparent in the statistics for the US commercial paper outstanding. Since its peak in August 2007 at \$2.2 trillion, the commercial paper outstandings declined to \$1.1 trillion in July

with long-term borrowings making it more challenging for the US money market funds to find high quality investments and diversification opportunities.⁴⁰³ A strong demand for money market fund-eligible assets keeps yields earned by these funds at depressed levels.⁴⁰⁴ The global liquidity standards are still developing and this process is expected to take a few years, while market experience and data are accumulated.⁴⁰⁵

For the US money market fund manager, the new regulatory regime has already resulted in scarcity of eligible investment options and disequilibrium of supply and demand.⁴⁰⁶ Too many assets under management of the US money market funds are chasing too few investment options. The US money market fund average yield is at its historically lowest level prompting investors to seek alternative ways to manage their cash.⁴⁰⁷ The US money market fund industry today, in the post-crisis environment, has found itself in the centre of the regulatory storm and nearly torn apart by divergent regulatory actions. The next section scrutinises the US money market fund regulation in light of the most current amendments against the backdrop of the US federal securities law governing mutual fund activities.

3.3 US regulatory framework for money market funds

It is an important point in scholarship to reflect on the existing regulatory framework. As shown in section 3.3.1 that outlines a comprehensive regulatory scheme under the US federal securities law governing activities of the US investment companies and asset managers, money market funds are simply not a case of “unregulated banks” as some academic stated.⁴⁰⁸ Section

2011 *Source:* The Federal Reserve Economic Research and Data. Available at: <http://www.federalreserve.gov/releases/cp/outstanding.htm>

⁴⁰³ CHA & KOLK, *supra* note 396 at 61.

⁴⁰⁴ At the time of this writing in July 2011 the average yields of the US money market funds were at 0.01 per cent *Source:* www.imoney.net.com accessed on 19 July 2011.

⁴⁰⁵ See Basel III Liquidity Framework *supra* note 30. The Basel Committee on Banking Supervision stated that “the standards will be phased in gradually so that the banking sector can move to the higher capital and liquidity standards while supporting lending to the economy”.

⁴⁰⁶ CHA & KOLK, *supra* note 396 at 61.

⁴⁰⁷ An average seven-day annualised yield for taxable money market funds stood at only 0.03 per cent on 27 March 2012, according to iMoneyNet. Available at <http://www.imoney.net.com/>.

⁴⁰⁸ BIRDTHISTLE, *supra* note 139 at 1197. See also PAUL A. VOLCKER, Comment Letter to the PWG's Report on Money Market Fund Reform Rel. No. IC-29497 (11 February 2011). The former Chairman of the Federal Reserve Board of Governors makes an argument for bank regulation to be applied to money market funds.

3.3.2 focuses on Rule 2a-7, which provides a legal definition of the US money market funds and sets forth investment and operational standards governing these funds. Section 3.3.3 relates the effect of the post-crisis changes to the financial regulation on the US money market fund industry.

3.3.1 US money market funds under the federal securities laws

As an illustration of an argument advanced in section 1.3.3, the US money market funds are already tightly regulated under the overarching legal framework of the federal securities laws that comprise four principal statutes: the Securities Act of 1933, the Securities Exchange Act of 1934, the Investment Advisers Act of 1940 and the Investment Company Act of 1940.⁴⁰⁹ The US mutual funds, including money market funds are furthermore subject to most of the requirements that apply to corporate issuers under the Sarbanes-Oxley Act of 2002.⁴¹⁰ These laws are administered by the US Securities and Exchange Commission, the primary regulator of the US money market funds. The Dodd-Frank Wall Street Reform and the Consumer Protection Act of 2010 – although this does not specifically target mutual funds – could also affect the US money market funds in a significant way.⁴¹¹ Section 3.3.2 relies upon the current versions of the US money market funds regulation, which still contains reference to credit rating agency ratings. Section 3.3.3 includes a discussion of the possible implications of the Dodd-Frank Act for the US money market funds.

The Investment Company Act of 1940 regulates the structure and operations of investment companies and, therefore, is essential to the US money market funds.⁴¹² The Investment Company Act addresses their capital structure, investment activities, operational

⁴⁰⁹ 15 U.S.C. § 77a et seq. Securities Exchange Act of 1934 amend. 15 USC §§ 78a-78kk ;Investment Advisers Act of 1940 amend. 15 USC §§ 80b-1 - 80b-21 15 U.S.C. § 80a-1 et seq.

⁴¹⁰ Sarbanes–Oxley Act of 2002 amend. 15 USC 7201 et seq.

⁴¹¹ The Dodd-Frank Act Pub.L. 111-203, H.R. 4173 For example, Section 939A of the Dodd-Frank Act directs the US governmental agencies to excise references to rating agency ratings from their rules. At the time of this writing, the discussed section has not yet been implemented. *See* Report on Review of Reliance on Credit Ratings As Required by Section 939A(c) of the Dodd-Frank Wall Street Reform and Consumer Protection Act (US Securities and Exchange Commission July 2011) [SEC Reliance on Credit Ratings Study]. The study outlined proposed changes to the US Securities and Exchange Commission’s rules and regulation eliminating references to and reliance on rating agency ratings. The comment period for the study ended on 13 September 2011.

⁴¹² Rule 2a-7 that codifies the compliance requirements for the US money market funds is promulgated under the Investment Company Act of 1940, as amended. *See* 17 CFR § 270.2a-7

practices and the duties of fund boards. The Securities Act of 1933, often referred to as the *Truth in Securities Act*, regulates public offerings of securities. Mutual funds, which are open-ended investment companies, continuously issue their shares and, therefore, are subject to disclosure requirement set forth by the Securities Act. Specifically related to the US money market funds and other mutual funds, the Securities Act provides that fund investors should be furnished financial and other material information such as fund prospectuses. It also prohibits dissemination of deceptive information, misrepresentation and other fraud in the sale of securities.⁴¹³ The Securities Exchange Act regulates trading, purchase and sale of securities, including money market fund shares.⁴¹⁴ It also governs corporate reporting and disclosure in proxy materials.⁴¹⁵ The Investment Advisers Act, among its other aims, requires asset managers of the US money market funds to register with the Securities and Exchange Commission.⁴¹⁶

The US money market funds must be registered with the US Securities and Exchange Commission by filing a form that spells out the fund's investment objectives, policies and pertinent risks.⁴¹⁷ The US money market funds are organised under individual US state law either as a corporation or a business trust with a specified minimum level of capital.⁴¹⁸ The fund shares cannot be publicly offered unless minimum capital requirements are satisfied.⁴¹⁹ In addition, the Sarbanes-Oxley Act seeks to improve investor protection by assuring accuracy and reliability of corporate disclosures.⁴²⁰

As one can see from the panoply of rules covering practically every practical aspect of investment, operations and even terminology, money market funds are already abundantly

⁴¹³ 15 U.S.C. § 77a et seq. Sections 10 and 12. *See also*, U.S. SECURITIES AND EXCHANGE COMMISSION, *The Laws That Govern the Securities Industry*. (May 3, 2010), at <http://www.sec.gov/about/whatwedo.shtml#laws>.

⁴¹⁴ Securities Exchange Act of 1934 at Section 9.

⁴¹⁵ *Id.* at Section 14.

⁴¹⁶ 15 USC §§ 80b-1 et seq. Section 203. Prior to the enactment of the Dodd-Frank Act of 2010 those advisers with relatively low assets under management were exempt from the registration requirement. Hedge fund managers relied on this exemption to avoid the registration. The Dodd-Frank Act of 2010 has virtually eliminated registration exemptions. Registration exemptions still exist for private equity and venture capital fund managers, foreign private advisors and other entities.

⁴¹⁷ 15 U.S.C. § 80a-1 et seq. Rule 8b-5.

⁴¹⁸ *See generally* ROBERT A. ROBERTSON, *Fund Governance: Legal Duties of Investment Company Directors* (Law Journal Press 6 ed. 2005).

⁴¹⁹ 15 U.S.C. § 80a-1 et seq. Section 14(a). An investment management company must have a net worth of at least \$100,000.

⁴²⁰ 15 U.S.C. 7201 et seq.

regulated. The following six sections offer an in-depth discussion of six core principles that provide a strong foundation of the regulatory framework for the US money market funds. These principles are fund governance, disclosure requirements, protection of funds' assets, restriction of leverage, prohibition of affiliated transactions and asset valuation.

3.3.1.1 Governance: board oversight and manager accountability

The US money market funds are subject to a system of oversight from both internal and external sources. Internal oversight includes boards of directors or trustees, depending on the fund organisational structure, and a compulsory compliance programme. External checks are provided by the US Securities and Exchange Commission with periodic examinations of asset managers, the Financial Industry Regulatory Association, an independent regulator of the US securities firms, state securities regulators and independent public accounting firms.⁴²¹ The great majority of the oversight measures are a part of a broad framework encompassing the US money market funds together with types of investment companies.⁴²² However, boards' duties with respect to money market funds specifically entail certain additional responsibilities.⁴²³

The first layer of a mutual fund internal oversight is a high level of fund board independence. As opposed to boards of operating companies, at least 40 per cent of members on a mutual fund board must be independent, or not have any significant business relationship with the fund asset manager or its underwriter.⁴²⁴ As a matter of the best practice, the majority mutual funds currently have a much higher level of independence.⁴²⁵ This structure with an emphasis on independence empowers fund boards to achieve their core objectives of mitigating the conflict of interest between the fund asset manager and shareholders. The Investment Company Act imposes additional responsibilities on independent directors, which include approving fund fees,

⁴²¹ The Financial Industry Regulatory Association is focused on oversight of securities firms and registered securities representatives. In that role it is involved in overseeing sales practices of mutual funds shares and examining related sales literature. More information is available at <http://www.finra.org/>.

⁴²² See generally ROBERTSON, *supra* note 418.

⁴²³ See Section 3.3.2 *infra*.

⁴²⁴ 15 U.S.C. § 80a-1 et seq. Section 10(a).

⁴²⁵ ICI Factbook 2010 *supra* note 150 at Appendix A. At the end of 2009, almost 90 per cent of fund families had independent members comprising at least 75 per cent of boards.

overseeing fund performance and its compliance programme.⁴²⁶ Written policies and procedures aimed at preventing violations of the federal securities laws encompass the second layer of an internal oversight.

A mutual fund is required to designate a chief compliance officer in charge for designing and administering these policies. Compliance policies must be reviewed by the fund board at least annually for their adequacy and effectiveness.⁴²⁷ The chief compliance officer reports directly to the board.⁴²⁸ External oversight checks include periodic examinations and enforcement actions as warranted and administered by the US Securities and Exchange Commission as a primary regulator and inspections of the state securities regulators.⁴²⁹ Bank-affiliated funds could be subject to banking regulators. An additional external check comes from an independent public accounting firm auditing fund's annual financial statements.⁴³⁰ Fund officers must certify accuracy of financial statements as required by the Sarbanes-Oxley Act.⁴³¹

3.3.1.2 Disclosure

Section 1.2 highlighted a close association of the US securities law and regulation with the neoclassical economic theory emphasising sufficiency of information as a prerequisite of the market activities, *i.e.*, information asymmetry constrains market activities.⁴³² Consistent with this theory, the US mutual funds are subject to extensive information disclosure requirements. The overarching goal of the disclosure regime is to afford a mutual fund investor a fair opportunity to determine the expected risk of her investments. Therefore, a fund prospectus, the main disclosure document, is required to be delivered to each fund shareholder upon the sale of the fund

⁴²⁶ See generally ROBERTSON, *supra* note 418. See also *Frequently Asked Questions About Mutual Fund Directors*, Investment Company Institute. (2011), at http://www.ici.org/idc/policy/governance/faq_fund_gov_idc.

⁴²⁷ ROBERTSON, *supra* note 418 at 9-81.

⁴²⁸ 17 CFR § 270.38a-1 Compliance Procedures and Practices of Certain Investment Companies (2003).

⁴²⁹ ICI Report *supra* note 21 at 32.

⁴³⁰ 15 U.S.C. § 80a-1 et seq. Section 30(g).

⁴³¹ 15 U.S.C. 7201 et seq.

⁴³² AKERLOF, *supra* note 59.

shares.⁴³³ According to the industry survey, US mutual fund investors consider, on average, nine discrete pieces of information about a fund before investing.⁴³⁴ Information related to fund charges is known to be on the forefront of investors' inquiries.⁴³⁵

The US mutual funds, including money market funds, maintain their prospectuses current by re-filing them annually.⁴³⁶ An annual update includes *inter alia* any changes to fund's investment goals and objectives, fees, discounts, portfolio turnover rate, principal investment strategies, risks and performance data.⁴³⁷ To facilitate investor focus on key investment parameters, mutual funds may provide investors with a "summary prospectus", while making other pertinent information available on the Internet or by post upon request and without charge. Moreover, mutual fund investors benefit from the centralised electronic data gathering system administered by the US Securities and Exchange Commission.⁴³⁸ Fund registration statements, prospectuses, updated statements of additional information, audited annual financial statements and many more information are available to investors through this data system free of charge.⁴³⁹

In effect, the US money market funds are subject to even more extensive disclosure regime than any other mutual fund. The 2010 amendments to the rules governing money market fund activities included requirements for monthly reporting of holdings on fund websites and for

⁴³³ 15 U.S.C. § 77a et seq. Section 5(b)(2). This requirement covers sales of any registered securities. Mutual fund shares are mentioned as the focus of this requirement only due to the research focus on money market funds.

⁴³⁴ Understanding Investor Preferences for Mutual Fund Information: Summary of Research Findings (Investment Company Institute 2006) at 2. Available at http://www.ici.org/pdf/rpt_06_inv_prefs_summary.pdf accessed on 20 March 2011.

⁴³⁵ *Id.* at 3.

⁴³⁶ 15 U.S.C. § 77a-10 Information Required in Prospectus Mutual funds amend their registration statements within four months after the end of their fiscal year due to restriction on use of financial information that is more than 16 months old.

⁴³⁷ *Id.*

⁴³⁸ See SEC Rel. Nos. 33-8998; IC-28584 *Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies* 74 FR 4546 (26 January 2009). See also *Important Information About EDGAR* US Securities and Exchange Commission (16 February 2010), at <http://www.sec.gov/edgar/aboutedgar.htm>.

⁴³⁹ ICI Factbook 2010 *supra* note 150 at Appendix A. The US mutual funds also publicly file their quarterly reports disclosing portfolio holdings and selected financial statements and disclose how they voted on specific proxy issues.

monthly reporting to the US Securities and Exchange Commission.⁴⁴⁰ Such disclosure regime goes a long way in enhancing investor protection by not only empowering individual investors to make better investment decisions, but only enabling public scrutiny of investment behaviour of fund managers. It can therefore be considered as *good disclosure* (as mentioned in section 1.2; see also *infra* sections 5.2 and 6.2).

3.3.1.3 Safekeeping of fund assets

The US mutual funds maintain their assets in custody segregated from assets of their management firms. Rules on asset segregation and reconciliation play a vital role in protecting mutual fund investors and comprise a mechanism aimed at prevention of fraud-based losses. The US Securities and Exchange Commission regularly prosecute Ponzi schemes and other frauds involving misappropriation of clients' assets in less regulated investment products.⁴⁴¹ The US money market funds, subject to the strict custody rules, normally keep their assets with a US bank custodian.⁴⁴² Today the US largest custodians are full-service banks and provide a full range of services from safekeeping of fund assets to tax withholding and transfer agency support to securities lending.⁴⁴³ Custodians settle fund transactions, price assets, calculate the fund's net asset value, receive dividends and pay fund expenses. The US money market fund boards are charged with oversight responsibilities for approving and monitoring custodial arrangements.⁴⁴⁴

⁴⁴⁰ SEC Rel. No. IC-29132, *Money Market Fund Reform*, 75 FR 10060 (Mar. 4, 2010) at 10088. See also 17 CFR § 270.30b1-7 Monthly report for money market funds (75 FR 10060, 10117 4 March 2010).

⁴⁴¹ There is no shortage of recent examples of the US Securities and Exchange Commission charges against organisations and individuals misusing investors' funds in less regulated investment products. In the infamous case of Bernard Madoff's Ponzi scheme, Bernard Madoff's own brokerage firm kept custody of clients' assets and processed all stock trades inside the firm thus allowing the fraud. See, e.g., ALEX BERENSON & DIANA B. HENRIQUES, *Wall Street Magic Morphs to Fraud*, New York Times 14 December 2008. Available at <http://www.commercialappeal.com/news/2008/dec/14/wall-st-magic-morphs-to-fraud/> accessed on 22 March 2011.

⁴⁴² 15 U.S.C. § 80a-17(f)

⁴⁴³ The largest US custodial banks used by money market funds include, but not limited to, the State Street Bank and Trust Company, JP Morgan Chase, Bank of New York Mellon and Wells Fargo Bank.

⁴⁴⁴ ROBERTSON, *supra* note 418 at 9-42.

3.3.1.4 Restriction of leverage

The basic tenet of the Investment Company Act is to foster simplicity of a fund structure, which could be easily understood by its investors. The US mutual funds are prohibited from issuing senior securities that take a priority over the fund's common stock.⁴⁴⁵ Thus the US money market funds incur no leverage and maintain a straightforward capital structure – their securities are owned *pro rata* by investors. Simple and transparent capital structure helped the US money market funds to weather a storm of financial de-leveraging that started in 2007, when certain types of investment vehicles incurred catastrophic losses due to leverage.⁴⁴⁶ Money market funds may, however, borrow from a bank provided that the amount of borrowings does not exceed one-third of the fund's total assets.⁴⁴⁷

Nevertheless, many US money market funds voluntarily go beyond the regulatory limits on borrowings by adopting policies that further restrict their ability to use borrowed capital. For example, funds often adopt a policy that they will borrow only as a temporary measure for extraordinary or emergency purposes and not for investment in securities.⁴⁴⁸ Once a fund has adopted these policies, they cannot be changed without the approval of fund shareholders.⁴⁴⁹ By virtue of these regulatory limitations and adopting voluntary measures the US money market funds maintain a simple all-equity capital structure with no permanent leverage.

3.3.1.5 Prohibition of affiliated transactions

Enacted on the heels of the stock market crash of 1929, the Investment Company Act contains a number of provisions prohibiting transactions between a mutual fund and fund

⁴⁴⁵ 15 U.S.C. § 80a-18 Capital structure of investment companies

⁴⁴⁶ FCIC Report *supra* note 27 at 252-3. For example, SIVs, a highly leveraged investment vehicles experienced catastrophic losses and had to be liquidated. By 2011, SIVs have no longer existed.

⁴⁴⁷ 15 U.S.C. § 80a-18

⁴⁴⁸ *See, e.g.*, Federated Prime Obligations Fund Annual Shareholder Report (Federated Investors 31 July 2010) at 25. A money market fund annual report states that an available credit line is intended for emergency purposes only, primarily to meet redemption payments.

⁴⁴⁹ 15 U.S.C. § 80a-13 Changes in Investment Policy Section 13(a) of the Investment Company Act, a fund's policies on borrowing money and issuing senior securities cannot be changed without the approval of fund shareholders.

insiders or affiliated organisations.⁴⁵⁰ The US Securities and Exchange Commission's study of the investment management industry, conducted in 1939, uncovered various 'abuses and deficiencies' in the fund business.⁴⁵¹ The shape of investment management regulation was largely formed by the finding of that study. For example, provisions related to affiliated transaction are designed to eliminate the 'securities dumping' problem and other abuses of the 1920s, which eventually led to the stock market collapse.⁴⁵²

In a contrast to the general thrust of the Investment Company Act, the 2010 amendments to the rules governing money market fund activities introduced an exemption for affiliates.⁴⁵³ Sponsors of the US money market funds are permitted, under specific conditions, purchase securities from their affiliated funds.⁴⁵⁴ This provision serves to facilitate financial support of the US money market funds by their strategically motivated sponsors if the stability of the fund net asset value is threatened.⁴⁵⁵

3.3.1.6 Daily valuation and liquidity

Mutual fund regulatory regime assigns a particular importance to portfolio asset pricing and portfolio valuation.⁴⁵⁶ Shareholders expect mutual funds to provide liquidity and an

⁴⁵⁰ 15 U.S.C. § 80a-2 Definitions Section 2(a) provides a definition of affiliates. For example, a corporate parent of the fund's asset manager would be considered an affiliated organisation.

⁴⁵¹ ROBERTSON, *supra* note 418 at 1-42.

⁴⁵² 15 U.S.C. § 80a-17 Transactions of Certain Affiliated Persons and Underwriters *See also* FINK, (2008) *supra* note 143 at 44 – 45. Section 17(a) prohibits fund advisors from selling securities to or buying securities from the fund they manage to prevent fund advisors from 'dumping,' or selling unwanted securities to the fund. For the same reasons, funds may not purchase securities from an underwriting syndicate if the fund advisor is a member of the syndicate.

⁴⁵³ SEC Rel. No. IC-29132, *Money Market Fund Reform*, 75 FR 10060

⁴⁵⁴ 17 CFR § 270.17a-9 Purchase of Certain Securities From a Money Market Fund by an Affiliate, or an Affiliate of an Affiliate Rule 17a-9 exempts certain purchases of securities from a money market fund from Section 17(a), if the purchase price is equal to the greater of either the security's amortised cost or market value, including accrued interest in both cases.

⁴⁵⁵ *See, e.g.,* SHILLING, MMF Support Report *supra* note 156. Since early 1980s, there were multiple instances of financial support to the US money market funds. Normally, the fund's corporate parent would purchase impaired securities from the fund or inject cash in the fund portfolio in order to prevent the fund's net asset value decline below \$1.00. *See also* section 3.3.2 *infra* reporting on the details of support arrangements.

⁴⁵⁶ *See generally* *Valuation of Portfolio Securities and other Assets Held by Registered Investment Companies — Select Bibliography of the Division of Investment Management*, US Securities and Exchange Commission. (8 July 2011), at <http://www.sec.gov/divisions/investment/icvaluation.htm>. Accessed on 29 July 2011.

objective valuation based on the current market price of the fund assets. As required by regulation, mutual funds mark their asset to market and calculate net assets value of frequent basis, most often daily.⁴⁵⁷ The daily pricing process is a critically important aspect of fund operation as it ensures fair and equitable treatment of fund shareholders and enables them to purchase, redeem or exchange fund shares on daily basis. Moreover, fund shareholders are expected to be paid promptly upon redemption – mutual funds may not suspend redemptions or delay payments for more than seven days.⁴⁵⁸ To ensure that the requirement of timely redemption is met, the US Securities and Exchange Commission guides mutual funds to have at least 85 per cent of their assets in liquid securities.⁴⁵⁹

Notwithstanding this general framework, the US money market funds are set apart from other mutual funds with respect to both asset valuation and liquidity requirements. Rule 2a-7 under the Investment Company Act permits a money market fund to maintain a stable price per share using other accounting methods besides pricing portfolio assets according to market prices.⁴⁶⁰ Liquidity requirements applied to the US money market funds are significantly more stringent relative to other mutual funds.⁴⁶¹ Section 3.3.2 below delves into specific regulated elements of money market fund investment and operational practices set forth by Rule 2a-7.

The six pillars of collective investments regulation discussed in this section are often cited as its major success factor promoting investor protection, market integrity and financial innovation:

⁴⁵⁷ 15 U.S.C. § 80a-22 Distribution, Redemption, and Repurchase of Securities; Regulations by Securities Associations and 17 CFR § 270.22c-1 Pricing of redeemable securities for distribution, redemption and repurchase and 17 CFR § 270.2a-4 Definition of "Current Net Asset Value" for Use in Computing Periodically the Current Price of Redeemable Security Net asset value of a mutual fund is arrived at by dividing the total market value of the fund assets net of liabilities by the number of shares outstanding.

⁴⁵⁸ 15 U.S.C. § 80a-22 Section 22(e) prohibits funds from suspending the right of redemption, or delaying payments for more than seven days except in limited circumstances.

⁴⁵⁹ SEC Rel. No. IC-18612 (57 FR 9828 20 March 1992). A security is generally deemed to be liquid if it can be sold or disposed of in the ordinary course of business within seven days at approximately the price at which the mutual fund has valued it.

⁴⁶⁰ 17 CFR § 270.2a-7

⁴⁶¹ SEC Rel. No. IC-29132 at II.C. The US money market funds may not invest more than five per cent of their assets in securities considered illiquid. Moreover, money market funds must invest at least 10 per cent of their assets in securities defined as daily liquid and at least 30 per cent of their assets in securities defined as weekly liquid.

The securities laws seek to protect investors, not fund managers. Thus, the securities laws are centred on full and fair disclosure, prohibitions on conflicts of interest and public enforcement proceedings in the case of violations. The securities laws do not seek to limit entry into the fund business, or to protect fund managers from competition, or failure.⁴⁶²

Even though the scope of the quote referring to the US securities law is broader than my research subject, the overarching legal framework governing money market funds reflects the strength of the regulatory regime through a causal link to the wide acceptance of these funds by investors and the size of the assets under management.⁴⁶³ The next section examines the specific details of the US money market fund regulation.

3.3.2 Legislative history of Rule 2a-7

Rule 2a-7 was adopted in 1983 and served to codify the US Securities and Exchange Commission's previous orders permitting certain funds to deviate from the rule of daily asset pricing provided certain conditions are met.⁴⁶⁴ Thus the main purpose of Rule 2a-7 is to establish investment and operational parameters for the US money market funds under which they may use two alternative pricing methods in lieu of pricing their assets according to market prices.⁴⁶⁵ An earlier discussion of the origin and development of the US money market funds in section 3.2.1 has presented these two valuation methods used by the US money market funds – *amortised cost* and *penny-rounding* methods.⁴⁶⁶ Importantly, any fund that markets itself as a money market fund in the US must comply with the provisions of Rule 2a-7.⁴⁶⁷

The hallmark of Rule 2a-7 is its risk-limiting provisions that are designed to restrict fund exposures to various investment risks by establishing specific objective and subjective criteria

⁴⁶² MATTHEW P. FINK, *The Price of Subjecting Mutual Funds to Bank Regulation*, Institutional Investors, (April 2010).

⁴⁶³ Section 3.2.2 *supra* illustrates the type of money market funds and assets under management of these funds.

⁴⁶⁴ SEC Rel. No. IC-10451 (26 October 1978). These initial conditions included a limit on final maturities of portfolio securities – within one year; ratification of appropriate liquidity policies and a regular review of valuation methods by the fund's board. *See also* COOK & DUFFIELD, (1979), *supra* note 147 at 21.

⁴⁶⁵ 17 CFR § 270.2a-7

⁴⁶⁶ *Supra* note 364 and accompanying text.

⁴⁶⁷ 17 CFR § 270.2a-7 at (b). No fund can hold itself out as a *money market fund* unless it complies with the risk-limiting provisions set forth by the rule. Use of such terms as *cash*, *liquid*, *money*, *ready assets* or similar terms in the fund's title suggesting that the fund is a money market fund also behoves the fund to comply with the rule.

with respect to quality, diversification, maturity and liquidity of the fund assets.⁴⁶⁸ The risk-limiting provisions seek to minimise the likelihood of a money market fund failing to maintain a stable price per share. Although since its adoption in 1983 Rule 2a-7 had been meaningfully amended four times, the broad risk-limiting provisions and the oversight by the Board of Directors or Trustees have always been its hallmarks.⁴⁶⁹

The majority of revisions to Rule 2a-7 were prompted by market events that from time to time exposed shortcomings and weaknesses in the US money market fund regulation. Some other amendments were needed to accommodate financial innovations affecting money market fund portfolio management. The rule was first amended in 1986 to permit money market fund investments in long-term adjustable rate securities with structured features limiting their interest rate risk.⁴⁷⁰ Structural features included a put option or a demand feature that would allow a money market fund to tender the security back to the issuer at a short notice.⁴⁷¹ This change somewhat liberalised the original restriction of money market fund portfolio investments to only those securities maturing within one year and fostered the development of the short-term municipal market.⁴⁷²

The US credit market in the mid-to-late 1980s saw a number of negative credit developments for commercial paper issuers.⁴⁷³ The US money market funds found themselves

⁴⁶⁸ OHLBAUM SWIRSKY, *supra* note 104 at 48 – 49. Rule 2a-7 establishes two types of criteria with respect to its risk-limiting provisions – and objective minimum standards and a principle-based standard, which is subjective in nature. This approach ensures that the rule does not allow a portfolio manager to hide behind the minimum acceptable criteria, but requires a determination whether a more stringent self-imposed standard is more appropriate given a particular portfolio.

⁴⁶⁹ *Id.* at 198 – 200. See also MAJORIE S. RIEGEL, *Special Duties of Money Market Fund Directors*, in *Fund Governance: Legal Duties of Investment Company Directors*, (Robert A. Roberson ed., 2005), at 11-4.

⁴⁷⁰ SEC Rel. No. IC-14983 (12 March 1986).

⁴⁷¹ LUO, *supra* note 272. The most typical notice period is seven day, but could be as short as one day or as long as one year. Money market funds treat a demand feature or a put option like any other portfolio security for their credit quality and diversification tests.

⁴⁷² See section 2.3.2.4 *supra* for a discussion of money market fund benefits to local government and municipal borrowers.

⁴⁷³ SHILLING, MMF Support Report *supra* note 156 at 4, Figure 2. Commercial paper issuers including Integrated Resources, Inc., Mortgage Realty Trust and Drexel Burnham defaulted on its financial obligations. The MNC Financial Corp. faced credit deteriorations.

holding securities issued by those borrowers whose credit quality was significantly impaired.⁴⁷⁴ These events prompted the US Securities and Exchange Commission to revise Rule 2a-7 imposing an objective minimum credit quality and diversification standards for money market funds.⁴⁷⁵ The US money market funds now could only invest in securities that were rated in one of the highest two short-term rating categories by Nationally Recognised Statistical Rating Organisations, normally referred to as credit rating agencies.⁴⁷⁶ Those funds investing in commercial paper were also required to diversify their investments allocating no more than five per cent of portfolio assets in securities of any one issuer except for securities issued by the US government.⁴⁷⁷

Even more stringent diversification requirements were established with respect to *second tier* securities, or those securities rated in the second short-term rating category by credit rating agencies.⁴⁷⁸ From this point on, the US money market funds regulator adopted credit ratings seeking to provide an objective criterion of minimum credit standard for these funds. The next Section 3.3.3 will discuss currently proposed amendments to Rule 2a-7 required under Section 939A of the Dodd-Frank Act that seek to remove references to and reliance on credit rating in the US Securities and Exchange Commission's rules and regulations.⁴⁷⁹ In addition to credit and diversification standards, amendments introduced in 1991 codified the use of the term *money market fund* making it "unlawful for any investment company to hold itself out as a money market fund unless it meets the risk-limiting conditions of the rule".⁴⁸⁰ This amendment

⁴⁷⁴ *Id.* at 4, Figure 2. A number of money market fund sponsors bailed out their funds holding commercial paper issued by those entities whose credit quality significantly deteriorated. No money market fund shareholders suffered losses due to these adverse credit developments.

⁴⁷⁵ SEC Rel. No. IC-18005 (20 February 1991).

⁴⁷⁶ 17 CFR § 270.2a-7 at (a)(12). The rule generally defines an *eligible security* as a rated security with a remaining maturity of 397 days or less that has received a rating from certain nationally recognised statistical rating organisations in one of the two highest short-term rating categories.

⁴⁷⁷ *Id.* at (c)(4)(i)(A) and (B). The section provides detailed portfolio diversification criteria for various types of money market funds. Generally, money market funds are allowed to hold up to five per cent of their assets in securities issued by an individual *first tier* issuer.

⁴⁷⁸ *Id.* at (c)(4)(i)(C). Money market funds can hold no more than one half of one per cent in securities issued by an individual *second tier* issuer.

⁴⁷⁹ SEC Reliance on Credit Ratings Study *supra* note 411. Section 939A under the Dodd-Frank Act directed the US Securities and Exchange Commission and other regulatory agencies to reduce reliance on credit ratings in its rules and regulations.

⁴⁸⁰ SEC Rel. No. IC-18005

restricting the use of the *money market fund* designation established a legal definition of these funds in the US.

In 1996 the US Securities and Exchange Commission modified Rule 2a-7 to address weaknesses in money market fund operations that became apparent upon the Orange County bankruptcy.⁴⁸¹ Securities issued by Orange County were mostly held by tax-exempt money market funds. Thus, the 1996 Rule 2a-7 revisions are focused primarily on the risk-limiting provisions applicable this type of funds.⁴⁸² There was also a new rule adopted that facilitated purchases of impaired securities out of money market fund portfolios by their affiliates.⁴⁸³ Changes to Rule 2a-7 adopted in 1996 turned out to be so confusing for industry participants that the Commission had to suspend the compliance date while developing technical corrections.⁴⁸⁴

During the following ten years until 2008, Rule 2a-7 has remained largely unchanged with only few technical amendments related to specific definitions.⁴⁸⁵ It was a period of steady growth for the US money market funds as investors better recognised their utility. Then in 2008 the floodgates opened. Section 2.4 described the circumstances that culminated in a run on the US money market funds in September 2008. In the wake of the turmoil, regulators have called for a broad reform of the US money market fund industry. The reform was envisioned as a two-step process that included improvements to prudential rules administered by the US Securities and Exchange Commission and, potentially, a wholesale change to the structure of the money market fund industry.

3.3.3 Post-crisis US money market fund reform

This section reports on the changes to Rule 2a-7 implemented in May 2010, which comprised the immediate policy response to the market turmoil. This response was mainly focused on enhancing the existing risk limiting conditions and fund oversight with no changes to

⁴⁸¹ See ICI Report *supra* note 21 at E-161.

⁴⁸² SEC Rel. No. IC-21837 (21 March 1996)

⁴⁸³ 17 CFR § 270.17a-9 Purchase of Certain Securities From a Money Market Fund by an Affiliate, or an Affiliate of an Affiliate

⁴⁸⁴ SEC Rel. No. IC-22921 (2 December 1997). The US Securities and Exchange Commission adopted technical amendments to Rule 2a-7 mostly related to the treatment of structured and synthetic securities. It also clarified how money market funds calculate and present short-term total return in their marketing materials.

⁴⁸⁵ OHLBAUM SWIRSKY. *supra* note 104 at 199 – 200.

the industry structure. The Investment Company Institute led the industry response with its Report of the Money Market Working Group issued on 17 March 2009.⁴⁸⁶ The report recommended tightening existing investment standards including maturity requirements and credit quality criteria. It also recommended new standards for managing portfolio liquidity, stress testing and disclosure. The ICI Report recommended that money market fund boards were given an authority to suspend redemption temporarily to prevent fire-sale of fund assets and ensure equal treatment of shareholders.

In June 2009 the President Obama administration released its “A New Foundation” blueprint for rebuilding financial supervision and regulation. The blueprint directed the US Securities and Exchange Commission to “move forward with its plans to strengthen the regulatory framework around money market funds”.⁴⁸⁷ The first step in this plan was “to reduce the credit and liquidity risk profile of individual money market funds”.⁴⁸⁸ The blueprint also advised the President’s Working Group on Financial Markets to prepare a “report assessing whether more fundamental changes are necessary to further reduce the money market fund industry’s susceptibility to runs”, such as eliminating the ability of money market funds to use a constant net asset value or requiring these funds “to obtain access to reliable emergency liquidity facilities from private sources”.⁴⁸⁹

The President’s Working Group on Financial Markets released its report outlining options for fundamental reforms of the US money market funds industry in October 2010. At the time of writing, no radical changes to the industry structure have taken place. However, any of the proposed options would undoubtedly change the way money market funds have been operating for the last 40 years. Section 3.4 discusses the future of the industry in light of the currently debated regulatory proposals outlined in the President’s Working Group on Financial Markets.

⁴⁸⁶ See generally ICI Report *supra* note 21.

⁴⁸⁷ "A New Foundation" Report *supra* note 2 at 12.

⁴⁸⁸ *Id.* at 12.

⁴⁸⁹ *Id.* at 12.

3.3.3.1 Portfolio management: quality, diversification, maturity and liquidity

The money market fund industry response to the market turmoil presented in the Investment Company Institute’s report served as a starting point for the US Securities and Exchange Commission’s amendments to Rule 2a-7. The 2010 amendments were “designed to make money market funds more resilient to certain short-term market risks, and to provide greater protections for investors”.⁴⁹⁰ These policy goals were achieved through a number of enhancements discussed in this section. First, Rule 2a-7 imposed risk-limiting standards on money market fund management practices. These standards presented in Exhibit 6 relate to quality, diversification, maturity and liquidity and include both subjective and objective criteria.⁴⁹¹

Exhibit 6: Risk-limiting provisions of the US money market funds⁴⁹²

Elements	Provisions
Quality	<u>Subjective standard:</u> Limits investments to securities that present <i>minimal credit risks</i> ⁴⁹³
	<u>Objective standard:</u> At the time of acquisition, each security must be <i>an eligible security</i> ⁴⁹⁴

⁴⁹⁰ SEC Rel. No. IC-29132 75 FR 10060 at 10060.

⁴⁹¹ SEC Rel. No. IC-14607 (1 July 1985) at n. 25. “There are basically two types of risk which cause fluctuations in the value of money market fund portfolio instruments: market risk, which primarily results from fluctuations in the prevailing interest rate, and credit risk. In general, instruments with shorter periods remaining until maturity have reduced market risk...Similarly, instruments which are of higher credit quality have lower credit risks and tend to fluctuate less in value over time than instruments which are of lower quality”. See also *supra* note 468 for an explanation of the objective and subjective criteria in Rule 2a-7.

⁴⁹² Adopted from OHLBAUM SWIRSKY. *supra* note 104 at 48 – 49.

⁴⁹³ 17 CFR § 270.2a-7 at (c)(3)(i). Although Rule 2a-7 does not provide an exact definition of *minimal credit risk*, money market funds are required to invest only in those securities presenting *minimal credit risk*. See also OHLBAUM SWIRSKY. *supra* note 104 at 50 – 53. In 1989 and 1990 the US Securities and Exchange Commission provided guidance related to factors that could be taken into account in making a minimum credit risk determination.

⁴⁹⁴ 17 CFR § 270.2a-7 at (a)(12). An *eligible security* is determined by a reference to its maturity and credit quality. Money market funds must invest at least 97 per cent of their assets in *first tier* securities. A *first tier* security is a security that is rated by a credit rating agency in the highest short-term rating category for debt obligations or unrated security that is of comparable quality. Up to 3 per cent of fund’s assets could be invested in *second tier* securities. A *second tier* security is a security that is rated by a credit rating agency in the second highest short-term rating category for debt obligations.

Maturity	<u>Subjective standard:</u> Maintain portfolio maturity consistent with a stable net asset value
	<u>Objective standard:</u> Each <i>first tier security</i> must mature within 397 days; each <i>second tier security</i> must mature within 45 days ⁴⁹⁵ <i>Weighted average maturity</i> may not exceed 60 days ⁴⁹⁶ <i>Weighted average life</i> may not exceed 120 days ⁴⁹⁷
Liquidity	<u>Subjective standard:</u> Sufficiently liquid assets to meet reasonable foreseeable redemptions
	<u>Objective standard:</u> Invest no more than 5 per cent of total assets in illiquid securities ⁴⁹⁸ Invest at least 10 per cent of total assets in <i>daily liquid assets</i> ⁴⁹⁹ Invest at least 30 per cent of total assets in <i>weekly liquid assets</i> ⁵⁰⁰

As shown in exhibit 6, the objective standard of the credit quality criteria relies on a determination of eligibility which, in turn, rests on credit ratings assigned by rating agencies. Establishing this process, the US Securities and Exchange Commission sought to use credit ratings as an objective benchmark of credit quality. This approach is expected to be reformed in the near future to meet the requirement of the Dodd-Frank Act to “remove any reference to or

⁴⁹⁵ *Id.* at (c)(2)(i) and (3)(ii). US government adjustable rate securities may have longer maturities as long as the variable rate of interest is readjusted at least every 397 days. *See* 17 CFR § 270.2a-7 at (d)(1).

⁴⁹⁶ 17 CFR § 270.2a-7 at (c)(2)(ii). A money market fund’s weighted average portfolio maturity is calculated by multiplying a number of days to maturity of each holding, or a number of days to the next reset date for floating rate securities, by dollar weights of each holding. Exceptions are made for certain adjustable rate securities.

⁴⁹⁷ *Id.* at (c)(2)(iii). A money market fund’s weighted average portfolio life is calculated by multiplying a number of days to maturity of each holding by dollar weights of each holding.

⁴⁹⁸ *Id.* at (c)(5)(i).

⁴⁹⁹ *Id.* at (c)(5)(ii). *Daily liquid assets* include cash, direct obligations of the US government and securities that will mature or are subject to a call within one business day. *See* 17 CFR § 270.2a-7 at (a)(8).

⁵⁰⁰ 17 CFR § 270.2a-7 (c)(5)(iii). *Weekly liquid assets* include cash, direct obligations of the US government, securities issued by US government agencies if issued at discount and have a remaining maturity within 60 days and securities that will mature or are subject to a call within five business day. *See* 17 CFR § 270.2a-7 at (a)(32).

requirement of reliance on credit ratings”.⁵⁰¹ Credit ratings are expected to be substituted for an alternative standard of credit-worthiness that is yet to be determined.⁵⁰² In addition to the main subjective and objective criteria with respect to money market funds’ asset credit quality, Rule 2a-7 contains a number of special provisions related to securities’ call features or guarantees.⁵⁰³ Rule 2a-7 also restricts money market funds to investments in US dollar-denominated securities only thus eliminating foreign currency risk.⁵⁰⁴

Rule 2a-7 seeks to minimise credit risk of a money market fund portfolio as a whole by imposing strict diversification standards. Funds are generally limited to five per cent of total assets invested in a single issuer.⁵⁰⁵ However, investments in *second tier* issuers are limited to 0.5 per cent of total assets in a single issuer.⁵⁰⁶ With these two major diversification tests, Rule 2a-7 affords a number of exceptions to special types of securities including US government securities, shares of other US money market funds, repurchase agreements, asset-backed securities and securities whose credit quality is enhanced by a third party obligor.⁵⁰⁷ In practice, money market fund portfolios are generally well diversified across a number of individual issuers yet highly concentrated in the financial sector.⁵⁰⁸ It is the nature of the short-term market dominated by financial issuers that caused a high level of sector concentration for money market funds.

For example, non-financial issuers comprised only 14.5 per cent of all outstanding commercial paper in July 2011, according to statistics collected by the Federal Reserve.⁵⁰⁹ The other 85.5 per cent was issued by financial entities and asset-backed programmes.⁵¹⁰ Furthermore, money market funds invest in banks’ certificate of deposits and enter repurchase

⁵⁰¹ The Dodd-Frank Act Pub.L. 111-203, H.R. 4173 Section 939A.

⁵⁰² SEC Reliance on Credit Ratings Study *supra* note 411.

⁵⁰³ OHLBAUM SWIRSKY. *supra* note 104 at 31 – 32.

⁵⁰⁴ 17 CFR § 270.2a-7 at (c)(3)(i).

⁵⁰⁵ *Id.* at (c)(4)(i)(A) and (B).

⁵⁰⁶ *Id.* at (c)(4)(i)(C).

⁵⁰⁷ OHLBAUM SWIRSKY. *supra* note 104 at 32 – 34.

⁵⁰⁸ BAKLANOVA & SHILLING, (2004) *supra* note 258 at 4, Fig. 4. In December 2003, the 10 largest US prime institutional money market funds invested close to 98% of their total assets in the financial sector.

⁵⁰⁹ Available at <http://www.federalreserve.gov/releases/cp/>, accessed on 2 August 2011.

⁵¹⁰ *Id.*

agreements with securities firms thus taking more exposures to entities in the financial sector.⁵¹¹ While Rule 2a-7 does not limit concentration of money market fund concentration in any particular industry sector, overexposure to financials could be interpreted as a significant risk factor. This risk is difficult to mitigate due to limited availability of money market fund eligible securities issued by non-financial entities as evidenced by the Federal Reserve data.⁵¹²

The US money market funds manage their exposure to interest rate and market risk by limiting portfolio maturity. Exhibit 6 points to four tests related to maturity. The subjective test of asset “maturity consistent with a stable net asset value” is intended to provide a principle-based guidance on the market risk management. Generally, during periods of higher market volatility maturity of fund assets and the overall average portfolio maturity should be shorter. Moreover, because lower quality securities tend to be more volatile, it is generally appropriate to further limit maturities of *second tier* securities. Hence, the first objective standard limits maturities of individual securities based on securities credit worthiness. The US money market funds may acquire a *first tier* security with a remaining maturity up to 397 days and a *second tier* security with a remaining maturity up to 45 days.

The other two objective standards for money market portfolio maturity are designed to limit interest rate, spread and liquidity risks.⁵¹³ Money market funds must limit their dollar-weighted average portfolio maturity to 60 days.⁵¹⁴ This metric encompasses the portfolio exposure to interest rate risk. For example, if interest rates move up one per cent, a money market fund portfolio would sustain a loss of 0.16 per cent all else being equal.⁵¹⁵ Lastly, money market funds must limit dollar-weighted average life of portfolio securities to 120 days.⁵¹⁶ This metric is intended to capture any spread widening on portfolio securities “due to changing

⁵¹¹ Sections 2.3.2.2 and 2.3.2.3 *supra*.

⁵¹² *Supra* note 509.

⁵¹³ Interest rate risk refers to fluctuations in the value of a debt security resulting from changes in the general level of interest rates. Credit spread risk refers to fluctuations in the value of a debt security resulting from changes in credit spread. Liquidity risk refers to risk that a security cannot be traded quickly enough in the market to prevent a loss.

⁵¹⁴ 17 CFR § 270.2a-7 (c)(2)(ii).

⁵¹⁵ Money market funds are generally managed to withstand share price volatility within 0.5 per cent. Money market fund boards are required to consider taking actions if the deviation between the fund portfolio amortised cost and its market value exceeds 0.5 per cent. *See Id.* at (c)(8)(ii)(B).

⁵¹⁶ *Id.* at (c)(2)(iii).

market perceptions of credit risk and liquidity”.⁵¹⁷ In addition to the main subjective and objective criteria with respect to maturities, Rule 2a-7 contains a number of special provisions related to variable and floating rate securities and securities with call features.⁵¹⁸

Liquidity provisions were added to Rule 2a-7 in 2010 for the first time.⁵¹⁹ Although the Investment Company Act requires that any investment company pays out the redemption proceeds within 7 days, most money market funds operate under a more restrictive self-imposed liquidity mandate and generally promise investors to redeem their shares on the same day. Prior to the 2010 amendments to Rule 2a-7 money market funds generally relied on the secondary market to raise cash to meet unexpected redemptions. However, as explained in section 2.4, during the market turmoil of September 2008, buyers fled the market and money market funds were unable to raise cash through securities sale.

The newly established liquidity provisions sought “to enhance investor confidence by assuring that money market funds stand ready to meet significant redemptions without incurring losses [that could arise from selling securities in the secondary market]”.⁵²⁰ These liquidity standards include a subjective determination whether portfolio securities are sufficiently liquid to meet *reasonably foreseeable* redemptions and three objective criteria, which may also vary depending on the type of the fund.⁵²¹ First, money market funds can not invest more than five per cent of their assets in illiquid securities.⁵²² Second, the taxable money market funds are required to hold at least ten per cent of their assets in daily liquid securities.⁵²³ Third, money market funds must also invest at least 30 per cent of their total assets in weekly liquid securities.⁵²⁴

To summarise, the essential function of Rule 2a-7 is to provide objective risk-limiting standards for the US money market funds that are, in the view of regulators, consistent with the

⁵¹⁷ SEC Rel. No. IC-29132 at 10072, n. 156.

⁵¹⁸ OHLBAUM SWIRSKY. *supra* note 104 at 105 – 113.

⁵¹⁹ SEC Rel. No. IC-29132 at 10076.

⁵²⁰ ICI Report *supra* note 21 at 74.

⁵²¹ 17 CFR § 270.38a-1 Compliance Procedures and Practices of Certain Investment Companies Money market funds are required to develop so-called *know your customer* procedures to identify investors whose redemptions could cause unforeseen liquidity needs for the fund. *See also* OHLBAUM SWIRSKY. *supra* note 104 at 115 – 123.

⁵²² 17 CFR § 270.2a-7 (c)(5)(i).

⁵²³ *Id.* at (c)(5)(ii).

⁵²⁴ *Id.* at (c)(5)(iii).

low risk profile of these funds. Importantly, the rule is designed to be a sufficiently flexible to address idiosyncratic risks of individual funds through imposing subjective standards alongside the specific quantitative criteria. I contend that these subjective standards described in Exhibit 6 are essential for a successful implementation of the money market fund objective to be a safe and liquid cash management tool. As shown in section 2.2, different types of money market fund entail various degrees of riskiness; besides, as history suggests, fluidity of the capital market and its changing nature cannot be captured at the onset. A degree of asset manager discretion to tailor its investment strategy to specific circumstances above and beyond the minimum objective criteria, implemented under the board's oversight, has contributed to the overall success of Rule 2a-7 as a regulatory tool.⁵²⁵

3.3.3.2 Stress testing

To add to the ability of the fund manager to address emerging investment risks to the fund portfolio on the forward-looking basis, the US Securities and Exchange Commission incorporated a stress testing requirement in its post-crisis amendments to Rule 2a-7.⁵²⁶ Stress testing is expected to provide “some context within which to evaluate the assessment of the magnitude of each hypothetical event that would cause the fund to break the buck”.⁵²⁷ Examples of such events would include “a change in short-term interest rates, an increase in shareholder redemptions, a downgrade of or a default on portfolio securities”.⁵²⁸ Comment letters submitted to the US Securities and Exchange Commission in response to the stress testing proposal welcomed this introduction.⁵²⁹ It was noted that stress testing had been a part of robust risk management practices voluntarily adopted by the largest asset management companies long

⁵²⁵ *Statement of ICI Executive Committee on Money Market Fund Regulation*, Investment Company Institute (14 March 2012), at http://www.ici.org/pressroom/news/12_new_mmf_ec. The statement highlighted that provisions of Rule 2a-7 “were in keeping with the SEC’s long record of crafting ever-stronger rules for money market funds.”

⁵²⁶ 17 CFR § 270.2a-7 (c)(10)(v)(A).

⁵²⁷ SEC Rel. No. IC-29132 at n. 268.

⁵²⁸ *Supra* note 526.

⁵²⁹ *See, e.g.*, Comment Letter to Money Market Fund Reform (File No. S7-11-09) (JP Morgan Asset Management 8 September 2009) at 2 – 6. JP Morgan Asset Management, one of the largest US asset managers, strongly supported the stress testing proposal as a cost-effective tool evaluating potential risks in money market fund portfolios and addressing such risks.

before it became compulsory.⁵³⁰ A non-binding Institutional Money Market Fund Association’s guidance on generic stress testing for European money market funds was also cited as an example of good regulation.⁵³¹

Guided by the need for customisation in establishing risk management practices, Rule 2a-7 does not provide stress test-related objective compliance standards, but offers considerable flexibility for the fund boards to determine a framework that is “appropriate and reasonable in light of current market conditions”.⁵³² For example, the US Securities and Exchange Commission advised money market fund managers do adopt contingent stress testing policies that would cause them to conduct tests on a more frequent basis should the fund net asset value decline below a predetermine threshold.⁵³³ In sum, the stress testing framework seeks to facilitate the fund directors’ understanding of what it takes for a money market fund to *break the buck* and take timely risk-mitigating steps, if warranted.

3.3.3.3 Maintenance of a stable net asset value

This section analyses two of the most important micro-control features in money market fund operations – maintenance of a stable net asset value per share and an ability of the fund boards to suspend redemptions. The study of micro-process like this one is expected to enrich legal scholarship with respect to the influence of a particular legal rule on the efficiency of the

⁵³⁰ ICI Report *supra* note 21 at 75. The Investment Company Institute’s report recommended codifying the industry’s best practices in risk management as a legal standard. In practice, asset managers normally develop a stress testing process as a part of a broader in-house risk management framework not limited exclusively to money market funds. Risk management processes, among their other functions, limit exposures to a single entity or to a family of interrelated entities across different type of funds depending on in-house view of credit spreads, but also incorporate various historical and hypothetical stresses. Asset managers usually dial down exposure limits to a particular issuer should credit concerns arise although risk management practices, in general, depend on the firm’s risk appetite, investment expertise and various other aspects.

⁵³¹ *Id.* at 75 and 185. Specifically, Ireland-domiciled money market funds are expected to conduct monthly portfolio stress tests under various market scenarios. These scenarios should be designed to evaluate the magnitude of portfolio losses at certain levels of credit risk, interest rate risk and market risk exposure as well as increase in redemptions. The results of the stress tests must be made available to the Irish Financial Regulator upon request)

⁵³² 17 CFR § 270.2a-7 (c)(10)(v).

⁵³³ SEC Rel. No. IC-29132 at n.262. In addition, the US Securities and Exchange Commission staff provided further clarifications and guidance related to stress test implementation. *See Staff Responses to Questions About Money Market Fund Reform*, US Securities and Exchange Commission. (25 May 2010), at <http://www.sec.gov/divisions/investment/guidance/mmfreform-imqa.htm>.

market and the behaviour of market participants.⁵³⁴ As we shall see, the effect of the legal mechanisms that supports stable net asset value per share in money market funds is essential for the product in its current form; it is also essential for providing benefits to various industry stakeholders as illustrated by section 2.3. Notwithstanding its benefits, however, the very same mechanism has come under the regulatory scrutiny for its perceived contribution to money market fund susceptibility to a run.⁵³⁵ I address this concern in my normative proposals in chapter 6 in a manner that is consistent with my theory of the dual regulatory goal through a regulatory requirement of asset price transparency irrespective of an underlying valuation control mechanism.

The 2010 updates to Rule 2a-7 did not affect the valuation methodology historically applied to the US money market funds – a combination of *amortised cost* and *penny-rounding* methods as explained in section 3.2. These two methods allow money market fund to smooth daily fluctuations of asset values and operate at a constant share price. Rule 2a-7 also requires a periodic comparison of the stabilised value of a share to the market-based value of a share, which is known as the *shadow pricing* process.⁵³⁶ The *shadow pricing* process refers to a mark-to-market valuation of all securities in money market fund portfolios in addition to valuing each security at an amortised cost.⁵³⁷ The goal of the *shadow pricing* process is to ensure that fund shareholders are treated fairly and equally when they purchase and redeem fund shares and that no shareholder is disadvantaged due to asset mispricing.

In the event that a money market fund’s stable price per share deviates from its marked-to-market value more than half per cent, the rule requires the fund board to determine whether any action is necessary to reduce such deviation.⁵³⁸ A money market fund board of directors has special duties to “determine, in good faith, that it is in the best interest of shareholders to maintain a constant net asset value per share” and to establish written procedures by which such stable value is computed.⁵³⁹ If the board believes that the fund’s constant net asset value per

⁵³⁴ BLACK, (2010) *supra* note 64 at 4.

⁵³⁵ See, e.g., PWG's Report *supra* note 7 at 8.

⁵³⁶ 17 CFR § 270.2a-7 (c)(8)(ii)(A).

⁵³⁷ *Id.*

⁵³⁸ 17 CFR § 270.2a-7 (c)(8)(ii)(B).

⁵³⁹ *Id.* at (c)(1) and (c)(8)(i).

share no longer reflects its market value and may cause unfair treatment of the fund shareholders, it may suspend redemptions and liquidate the fund.⁵⁴⁰

The second control feature – an ability of a fund board to suspend redemptions – is a new proviso to the US money market fund regulatory framework introduced after the tumultuous events of September 2008. Prior to the 2010 money market fund reform, a fund was required to obtain an order from the US Securities and Exchange Commission to suspend the redemptions.⁵⁴¹ An experience of managing money market funds during the crisis has shown that a run on a fund can develop rather quickly. Thus, a fund board may not have sufficient time to go through the legal steps of requesting such permission. Rule 22e-3 introduced in March 2010 empowered money market fund boards to suspend redemptions if the fund is facing a run.⁵⁴² It was intended “to reduce the vulnerability of investors to the harmful effects of a run on the fund, and minimize the potential for disruption to the securities markets”.⁵⁴³ Thus, the regulatory goal of protecting systemic stability was indeed achieved with an introduction of the discussed rule.

As discussed in section 3.3.1, the federal securities law framework makes it generally illegal for the US mutual funds not to honour redemptions or delay payments for redeemed shares for more than seven days. When introducing Rule 22e-3, the US Securities and Exchange Commission noted that the rule is designed only to facilitate the permanent termination of a fund in an orderly manner, but should not be used for suspending redemptions temporarily.⁵⁴⁴ Other actions that a money market fund sponsor could undertake in order to stabilise its net asset value involve various forms of financial support. Specifically, Rule 17a-9 permits money market fund

⁵⁴⁰ 17 CFR § 270.22e-3 Exemption for Liquidation of Money Market Funds (75 FR 10117, 4 March 2010).

⁵⁴¹ 15 U.S.C. § 80a-22

⁵⁴² 17 CFR § 270.22e-3 To invoke the rule, certain conditions must be satisfied: (1) the fund’s board, including a majority of directors who are not interested persons of the fund, determines that the extent of the deviation between the fund’s amortized cost price per share and its current marked-to-market net asset value per may result in unfair treatment of shareholders; (2) the fund’s board of directors, including a majority of directors who are not interested persons of the fund, irrevocably has approved the liquidation of the fund; and (3) The fund, prior to suspending redemptions, notifies the Commission of its decision to liquidate and suspend redemptions.

⁵⁴³ SEC Rel. No. IC-29132 at 10088. The US Securities and Exchange Commission also noted that “because the suspension of redemptions may impose hardships on investors who rely on their ability to redeem shares, the conditions of the rule limit the fund’s ability to suspend redemptions to circumstances that present a significant risk of a run on the fund and potential harm to shareholders”.

⁵⁴⁴ *Id.* at n.380.

affiliates to purchase an impaired security from a money market fund portfolio.⁵⁴⁵ To avoid a financial loss to the fund shareholders, the purchase price must be equal or greater than the amortised cost of the security or its market price.⁵⁴⁶

Positive from the standpoint of my theory of the dual regulatory goal and, specifically, from the standpoint of investor protection, the rule operationalises the fund sponsor's willingness to absorb the loss voluntarily. A capital contribution from a fund sponsor may also help to bring the fund's net asset value closer to its stable value should a dangerous deviation of the fund's share price from its stable value occurs. Other affiliated funds or the fund sponsor could lend cash to a money market fund in case of emergency liquidity needs.⁵⁴⁷ Even though fund sponsors have no legal obligations to provide financial support, the history suggests that strategically motivated organisations tend to protect their fund shareholders to avoid negative implications for their asset management franchises.⁵⁴⁸

3.3.3.4 Recordkeeping, reporting and public disclosure

Rule 2a-7 imposes the whole panoply of requirements seeking to ensure that money market funds are run in a responsible manner and under a high level of oversight. First, as discussed earlier, money market fund boards must establish and periodically review written guidelines for determining whether securities present minimum credit risk. In practice, these guidelines are followed by the fund's asset manager with the fund board not being involved in the day-to-day fund management.⁵⁴⁹ However, if credit quality of a portfolio security

⁵⁴⁵ 17 CFR § 270.17a-9 Purchase of Certain Securities From a Money Market Fund by an Affiliate, or an Affiliate of an Affiliate Absent this rule, Section 17(a)(2) of the Investment Company Act prohibits any affiliated person from purchasing securities from the fund.

⁵⁴⁶ *Id.* at (a)(2). The rule also allows an affiliate to proactively purchase any other security from a money market fund provided that if the security is thereafter sold for a higher price, the fund must be promptly reimbursed for the difference.

⁵⁴⁷ OHLBAUM SWIRSKY. *supra* note 104 at 39 – 40. The US Securities and Exchange Commission exemptive relief would be needed for fund borrowings from affiliated entities.

⁵⁴⁸ *See generally* SHILLING, MMF Support Report *supra* note 156 at Fig. 2. The study notes that between 2007 and 2009, over 60 money market funds received financial support from their sponsors. Money market fund sponsors purchased impaired securities of failed asset-backed commercial paper programmes and structured investment vehicles. Sponsors also purchased defaulted securities issued by Lehman Brothers from their affiliated money market funds at prices that allowed the funds to maintain a stable net asset value.

⁵⁴⁹ OHLBAUM SWIRSKY. *supra* note 104 at 26 – 30. A number of the fund board's functions can be delegated to the asset manager or the officers of the fund, provided certain conditions are satisfied.

deteriorates, the board must make a determination whether continuing holding of such security is in the best interests of shareholders.⁵⁵⁰ Second, money market fund boards require asset managers to provide periodic reports that facilitate the boards fulfilling their oversight duties.⁵⁵¹ Examples of required reports would include comparisons of the amortised cost price and market-based values per share, the *shadow price* methodology and stress testing.⁵⁵² Third, money market funds are required to keep written records of credit risk analysis performed for each portfolio security and the status of the security being determined as an eligible security, *i.e.*, whether it is a first or second tier security.⁵⁵³ Written records of evaluations of various other security features are also required to be maintained and kept in an accessible place for a number of years.⁵⁵⁴

Section 3.3.1.2 described a comprehensive disclosure regime applicable to all US mutual funds.⁵⁵⁵ Mutual fund reports are available at no charge to any investor through a public filing database, called the Electronic Data Gathering, Analysis, and Retrieval system (EDGAR) maintained by the US Securities and Exchange Commission.⁵⁵⁶ However, following amendments to Rule 2a-7 introduced in 2010, in addition to the general disclosure requirements, money market funds are held to a much higher level of transparency relative to other mutual funds and are required to place the list of portfolio holdings on public web-sites on a monthly basis.⁵⁵⁷ The

⁵⁵⁰ 17 CFR § 270.2a-7 (c)(7).

⁵⁵¹ *Id.* at (e).

⁵⁵² *Id.* at (c)(8)(ii)(A)(2) for *shadow price* calculations and (c)(10)(v) for stress testing. A money market fund board may request from the fund manager additional reports that could be helpful including, for example, a list of portfolio maturities, a list of *second tier* and non-compliance securities and a report related to the fund shareholders. *See also* OHLBAUM SWIRSKY. *supra* note 104 at 135 – 136.

⁵⁵³ 17 CFR § 270.2a-7 (c)(11)(iii).

⁵⁵⁴ *Id.* at (c)(11)(iv) – (viii). Security features subject to additional evaluations include adjustable rate securities, asset-backed securities and securities subject to calls.

⁵⁵⁵ 17 CFR § 274.128 Form N-CSR, certified shareholder report (68 FR 5368 3 February 2003). This form is used by registered management investment companies to file shareholder reports; 17 CFR § 274.130 Form N-Q, quarterly schedule of portfolio holdings of registered management investment company (69 FR 11271 9 March 2004). This form is used by registered management investment companies to file quarterly reports of portfolio holdings after the first and third quarters. Just like any other mutual fund, money market funds must provide a full schedule of their portfolio holdings in quarterly filings to the US Securities and Exchange Commission, within 60 days after the end of the quarter.

⁵⁵⁶ EDGAR *supra* note 438.

⁵⁵⁷ 17 CFR § 270.2a-7 (c)(12). The US money market funds are mandated to disclose their portfolio holding information on their public websites on monthly basis within five business days after the end of each month, which is a more frequent and timely schedule than that required for other mutual funds. Other mutual funds furnish their portfolios to the US Securities and Exchange Commission on a

policy reason for frequent disclosure of portfolio holdings is to better educate investors regarding the current investment risks thereby strengthening their ability to exert influence on risk-taking by the fund managers.⁵⁵⁸ I reiterate that, as pointed out in section 1.1.3, only such *good disclosure* as opposed to *bad disclosure* would achieve the policy goal of investor protection by subjecting the fund managers to the on-going public scrutiny.⁵⁵⁹

The ultimate goal of public filings of portfolio holdings is to accumulate a central database that could be used to enhance fund oversight, monitor market interconnectedness and enhance regulatory ability to respond to market events.⁵⁶⁰ Even though such detailed information could be viewed as overwhelming for individual investors, regulators anticipated that many institutional investors, academic researchers and economic research firms would make use of portfolio holding information to study money market fund holdings and evaluate their risk.⁵⁶¹ Urged by some market participants, the US Securities and Exchange Commission considered a competitive effect of frequent disclosures on funds or fund managers as some information could be viewed as proprietary, sensitive, or confidential in nature. Other concerns related to frequent disclosures of investment information included *free riding* and profitable arbitrage when sophisticated investors could take advantage of available portfolio holding information and trade ahead of money market funds locking in free profit.⁵⁶²

The US Securities and Exchange Commission concluded, however, that the risks of trading ahead of money market funds are “severely curtailed, because of the short-term nature of

quarterly basis. *See* 69 FR 49805 Shareholder Reports and Quarterly Portfolio Disclosure of Registered Management Investment Companies (12 August 2004).

⁵⁵⁸ SEC Rel. No. IC-29132 at 10081.

⁵⁵⁹ 17 CFR § 270.30b1-7 Rule 30b1-7 requires money market funds to file Form N-MFP within five business days after the end of each month. Form N-MFP must be filed electronically through the US Securities and Exchange Commission’s EDGAR system in an eXtensible Markup Language (XML) tagged data format.

⁵⁶⁰ SCHAPIRO, (2010) *supra* note 88.

⁵⁶¹ SEC Rel. No. IC-29132 at 10084.

⁵⁶² *See, e.g.,* LYON, *supra* note 121. A study related conducted in 1984 revealed the possible danger from arbitrage in money market fund shares. Money market fund shareholders could risk having their capital gains diluted by efficient arbitrageurs, who could increase their holdings of the MMF when it was undervalued and sell their shares when the MMF was overvalued. The research also showed that risk of dilution to an individual investor is immaterial. However, arbitrage could be more profitable for an arbitrageur or more damaging for money market fund shareholders during a prolonged period of rising or falling interest rates.

money market fund investments and the restricted universe of eligible portfolio securities”.⁵⁶³ Also, because shares of money market funds are purchased and redeemed at \$1.00, a profitable arbitrage strategy is difficult to implement in practice.⁵⁶⁴ Thus, an incremental competitive disadvantage and theoretical possibilities of free riding and arbitrage are counterbalanced by the disciplining effect that public disclosures have on portfolio management practices. In his interview given in July 2011, Andrew ‘Buddy’ Donohue, the former director of the Division of Investment Management of the US Securities and Exchange Commission noted:

Money market funds have become the focus of attention in the press, particularly as money market fund exposures to the risks of potential downgrades or defaults in Europe from sovereign debt have been highlighted, and more recently with regard to our own [US] Government securities. As an aside, it is the high level of transparency around their portfolio holdings provided by money market funds on a monthly basis in regulatory filings and on their websites which enables this healthy discussion.⁵⁶⁵

Opposite views with respect to benefits of public disclosure were voiced by a few money market industry actors during the commentary period preceding the May 2010 implementation of the money market fund reform. For example, the Dreyfus Corporation, one of the largest US asset management firms raised a concern related to the US Securities and Exchange Commission’s encouragement of third-party research firms to rely of such public disclosures for their commercial studies:

Disclosure for the principal benefit of third-party research firms, and not individual investors, is excessive and beyond the appropriate scope of transparency. Also, the expectation that third-parties will draw fair and accurate characterizations from raw statistical data provided without any context or controls is no higher than it would be for individual investors. This could result in the dissemination of inaccurate and negative characterizations of fund market value changes, with detrimental effects to funds and their shareholders.⁵⁶⁶

⁵⁶³ SEC Rel. No. IC-29132 at 10084.

⁵⁶⁴ *Id.* at 10084.

⁵⁶⁵ PETER CRANE, *Morgan Lewis’ Donohue: Changes Coming Soon*, Money Fund Intelligence August 2011.

⁵⁶⁶ Comment Letter to Money Market Fund Reform Proposals File No. S7-11-09; Rel. No. IC-28807 (The Dreyfus Corporation 8 September 2009). Available at <http://www.sec.gov/comments/s7-11-09/s71109-111.pdf>.

In addition, asset management firms objected to the disclosure of the *market-based* values of portfolio securities and of fund net asset value per share.⁵⁶⁷ There were concerns that even a slight negative deviation of the market price from a stable value of \$1.00 could result in an investor confusion and redemption requests that would exacerbate pricing deviations. Thus, transparency in *market-based* pricing could have an opposite effect and, instead of achieving information symmetry and improving fund manager discipline in operating their funds, lead to destabilising effects on the money markets.⁵⁶⁸ Notwithstanding these concerns, the US Securities and Exchange Commission’s fundamental position is that greater transparency forms the foundation of functional and efficient markets.⁵⁶⁹

This assumption by the Commission is, in effect, fully consistent with the discussion of the Akerlof model of the efficient market offered in section 1.2 and also is supportive of my assertion that *good disclosure* would provide a strong basis for greater investor protection. The Commission believed that the most significant positive effect of the improved money market fund reporting was in “discouraging a fund’s portfolio manager from taking risks that might reduce the fund’s *market-based* net asset value”.⁵⁷⁰ Regulators anticipated that robust disclosures would lead to greater cash flows into those funds exhibiting less historical volatility in *market-*

⁵⁶⁷ See, e.g., Comment Letter to Money Market Fund Reform Proposals File No. S7-11-09; Rel. No. IC-28807 (State Street Global Advisors 8 September 2009) at 2. The comment letter maintained that public disclosure of money market fund portfolio market values should not be required “since such disclosure could cause investor confusion.” Available at <http://www.sec.gov/comments/s7-11-09/s71109-108.pdf>.

⁵⁶⁸ SEC Rel. No. IC-29132 at 10084.

⁵⁶⁹ 15 U.S.C. § 80a-1 Findings and Declaration of Policy Section 1(b)(1) of the Investment Company Act states that “[N]ational public interest and the interests of investors are adversely affected ... when investors purchase, pay for, exchange, ... sell, or surrender securities issued by investment companies without adequate, accurate, and explicit information”. See also ELISSE B. WALTER, Speech by SEC Commissioner: Opening Statement at SEC Open Meeting on Money Market Fund Reform (Final Rule) (US Securities and Exchange Commission 27 January 2010). Commissioner Walter urged the US Securities and Exchange Commission to “empower money market fund investors by facilitating more robust public disclosure”. She believed that the new money market fund disclosure regime would “... ensure that investors understand that money market funds, like all investments, involve risk and differ from ... insured bank products. And the information may help facilitate a productive dialog between a fund and its current and prospective investors concerning, among other things, investment decisions, corporate governance, and risk management”.

⁵⁷⁰ SEC Rel. No. IC-29132 at 10085.

based share values thus encouraging a conservative approach to money market fund management.⁵⁷¹

To summarise, regulation of the US money market fund built upon the legal framework described in this section could be viewed as both successful and controversial. Its success is evident in the size of the assets under management and the broad benefits these funds provided to the various economic actors. Its controversial nature arises from a number of deviations in regulatory approach to the US money market funds from other mutual funds. The next section introduces an entire new dimension to the US money market fund analysis – credit rating considerations.

3.4 Credit rating of the US money market funds

Another dimension of my research question – *how should money market fund be regulated?* – is the service provided by credit rating agencies in the form of credit ratings for these funds. As we shall see from this section, the criteria of credit rating agencies have a material impact on the fund manager behaviour and as such credit rating agencies could be considered as having a regulatory effect. In order to establish whether credit rating agencies have a place in the regulatory architecture proposed in this thesis, their effect should be critically analysed *vis-à-vis* my theory of a dual regulatory goal – investor protection and systemic stability.

As seen in section 3.2.1, the historical developments of money market funds and their exposure to risky assets led to a demand for an independent third party risk analysis in these funds. Credit rating agencies, whose core function is to analyse credit risk, found a role in this sector with Standard & Poor's first offering a money market fund rating in 1984.⁵⁷² In a few years, Moody's Investors Service and Fitch Ratings had also started publishing money market

⁵⁷¹ *Id.* The final version of the 2010 money market fund reform related to money market fund reporting contained a provision that delayed the public availability of portfolio information and *market-based* value per share for 60 days. The 60-day lag sought to alleviate concerns that the immediate investor reaction to unfamiliar data could result in redemption requests that exacerbate pricing deviations.

⁵⁷² *A History of Standard & Poor's.* (2009), at <http://www.standardandpoors.com/about-sp/timeline/en/us/>.

fund ratings.⁵⁷³ Today, only these three internationally recognised rating agencies offer rating opinions on the US and European money market funds.

In the context of money market funds, credit rating agencies are focused on the ability of these funds to achieve their stated investment objectives of preserving principal and providing timely liquidity. Credit views of rating agencies are guided by their proprietary rating methodologies, which set forth an analytical framework for measuring money market fund risks. Credit ratings for money market funds are based on evaluation of several factors such as credit quality of portfolio assets, diversification and duration of individual securities, overall portfolio duration, liquidity management, operational practices, governance and oversight as well as the level of resources dedicated to the money market fund operations.⁵⁷⁴ Furthermore, a credit rating approach to the US money market funds assumes fund compliance with all applicable laws and regulations.

Notwithstanding the credit rating agencies' methodologies, the baseline limitations on investment and operational risks in money market funds are set by virtue of the existing regulatory framework. In addition to the regulatory risk-limiting standards, credit rating agencies strive to provide further differentiation among money market funds on the basis of their relative riskiness and ability to achieve their stated investment objectives. All three rating agencies use separate and distinct rating symbols and scales designed specifically for money market funds. Unique rating symbols, presented in Exhibit 7, seek to differentiate money market fund ratings from corporate issuer or issue credit ratings, which usually indicate a borrower's ability to repay

⁵⁷³ See Global Money Market Fund Rating Criteria (Fitch Ratings 4 April 2011) Available at http://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=614345. Moody's Revised Money Market Funds Rating Methodology and Symbols (Moody's Investors Service 10 March 2011) Available at http://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_131303. Principal Stability Fund Ratings (Standard & Poor's 8 June 2011) Available at <http://www.standardandpoors.com/prot/ratings/articles/en/us/?assetID=1245314271927>. While there are ten organisations currently registered with the US Securities and Exchange Commission as 'Nationally Recognised Statistical Rating Organisations,' the status that makes ratings acceptable for regulatory purposes, only the largest three rating agencies issue ratings on the US money market funds. For the purposes of this research, references to credit rating agencies are limited to Fitch Ratings, Moody's Investors Service and Standard & Poor's.

⁵⁷⁴ *Id.*

principal and interest on a timely basis. Ratings on money market funds may not be comparable with corporate credit ratings on debt securities.⁵⁷⁵

Exhibit 7: Money market fund rating symbols and scales

Rating			Generic Definition ⁵⁷⁶
Fitch	Moody's	Standard & Poor's	
AAAmmf	Aaa-mf	AAAm	A money market fund has extremely strong ability to achieve its investment objectives of preserving principal and providing liquidity
AAmmf	Aa-mf	AAm	A money market fund has very strong ability to achieve its investment objectives of preserving principal and providing liquidity
Ammf	A-mf	Am	A money market fund has strong ability to achieve its investment objectives of preserving principal and providing liquidity
BBBmmf	Baa-mf	BBBm	A money market fund has adequate ability to achieve its investment objectives of preserving principal and providing liquidity
BBmmf	Ba-mf	BBm	A money market fund has marginal or uncertain ability to achieve its investment objectives of preserving principal and providing liquidity
	B-mf		A money market failed to provide liquidity. Its ability to preserve principal is uncertain.
Bmmf	C-mf	Dm	A money market fund failed to meet either objective of providing liquidity or preserving principal.

Credit rating agencies evaluate credit quality of a money market fund by assessing individual holdings, counterparties and overall diversification.⁵⁷⁷ The analytical method pursued by all three rating agencies comprises a combination of a bottom-up quantitative approach to investment risks overlaid with top-down qualitative considerations related to operational

⁵⁷⁵ See, e.g., Fitch MMF Rating Criteria *supra* note 573 at 3.

⁵⁷⁶ Specific language used by credit rating agencies in defining rating levels may vary. Generic definitions seek to capture a relative gradation of risks in lower rated money market funds.

⁵⁷⁷ Normally, the credit quality assessment is driven by credit ratings already assigned to individual holdings and counterparties by the same rating agency. For the funds seeking the highest money market fund ratings, each holding must be rated in the highest short-term rating category. A highly rated money market fund should also be adequately diversified across individual issuers: generally no more than five per cent of total fund assets could be invested in securities of the same issuer although there might be allowances for special types of investments. See Credit rating agencies' money market fund rating methodologies *supra* note 573.

practices and oversight. A quantitative approach to investment risk recognises its two-dimensional nature – the risk of investing in high quality short maturity securities is lower than risk of investing in lower quality longer maturity instrument.⁵⁷⁸ The risk in money market funds could be managed dynamically by limiting an investment horizon for the lower quality securities and by extending duration in the higher quality assets.

Credit rating agencies expect money market fund to adequately manage the interest rate risk exposure consistent with the funds' objective of principal stability. Depending on the credit rating agency, specific quantitative criteria for AAmmf/AAA-mf/AAAm rated money market funds generally mirror the US regulatory requirements set forth in Rule 2a-7, but may also be more stringent, less stringent or not include certain factors at all.⁵⁷⁹ In addition, highly rated money market funds are expected to conservatively manage their liquidity profiles *vis-à-vis* their portfolio composition and shareholder base.⁵⁸⁰

Another important factor in the risk assessment of money market funds is the volatility of the fund's *market-based* net asset value per share, which indicates how close the fund is to *breaking the buck*.⁵⁸¹ The effect of this risk assessment is a change in the behaviour of the fund manager evidencing a quasi-regulatory status of credit rating agencies. Specifically, Standard &

⁵⁷⁸ Both Fitch and Moody's developed proprietary metrics intended to assess credit risk assessment in money market funds. These tools are Portfolio Credit Factor (Fitch) and a Moody's Credit Matrix. Standard & Poor's requires money market funds to maintain a specific ratio of the highest quality short-term securities. *See* Credit rating agencies' money market fund rating methodologies *supra* note 573.

⁵⁷⁹ Credit rating agencies generally expect the highly rated US money market funds to limit their dollar-weighted average maturity to 60 days in line with Rule 2a-7 requirement. Other rating criteria vary. For example, Fitch expects the highest quality money market funds to maintain a dollar-weighted average life of no more than to 120 days. Standard and Poor's would like to see this limit to be below 90 days. Moody's rating approach does not include a weighted-average life factor. *See supra* note 573.

⁵⁸⁰ Specific rating agency criteria vary with respect to liquidity management in money market funds. For example, Fitch provides specific guidelines related to portfolio allocations to daily and weekly liquid assets at different rating levels. *See* Fitch MMF Rating Criteria *supra* note 573 at 2 and 7. Neither Moody's nor Standard & Poor's offer portfolio allocation guidelines but rather expect highly-rated money market funds to maintain adequate portfolio liquidity relative to the fund size and its shareholder composition and limit investments in illiquid securities with no secondary market. *See* Moody's MMF Rating Methodology *supra* note 573 at 6 – 7. S&P MMF Rating Methodology *supra* note 573 at D.

⁵⁸¹ *Breaking the buck* refers to the discrepancy of 50 basis points or more between the fund's *amortised cost-based* net asset value per share, or \$1.00, and its *market value-based* net asset value per share. *Supra* note 156. Normally, the deviation of money market fund's *market value-based* net asset value per share from \$1.00 is well within 50 basis points. *See* Pricing of U.S. Money Market Funds (Investment Company Institute January 2011) at 26.

Poor's provides volatility limits for money market funds at each rating level.⁵⁸² Moody's requires to stress test the fund's *marker-based* net asset value and incorporates the result of the stress test in its rating scoring system.⁵⁸³ Fitch offers no qualitative criteria related to this factor, but reviews *market-based* net asset values as a part of its regular rating surveillance.⁵⁸⁴

Lastly, drawing from the history of financial support of money market funds by their sponsors, both Fitch and Moody's included ability and willingness of the fund sponsors to back up their funds as a part of their rating analysis.⁵⁸⁵ According to a study conducted by Moody's, even well-managed money market funds investing in high quality short-term securities may experience a material decline in their *market-based* values and shortage of liquidity.⁵⁸⁶ Thus, in Fitch and Moody's view, the quantitative assessment of a money market fund profile could not in and of itself determine the fund rating, but it is a qualitative assessment of the fund sponsor ability to provide support that grants a money market fund rating its predictive ability.⁵⁸⁷ By contrast, Standard & Poor's does not consider sponsor's financial support in its rating analysis, but forms its opinion solely on "a fund's independent ability to maintain principal stability and limit exposure to losses resulting from credit risk".⁵⁸⁸

The discussed divergence of the rating methodologies among three major rating agencies illustrates multiple analytical approaches that can be employed in rating analysis. None of them *per se* is right or wrong, but each method simply assigns different weights to the factors driving risks in money market funds. I view such diversity of analytical opinions based on diversity of rating approaches as a positive factor contributing to availability of information for fund investors. Investors are given a choice to consider one or another, or all of them in combination for a more complete picture of money market fund risks. This is an undeniably positive factor

⁵⁸² S&P MMF Rating Methodology *supra* note 573 at Table 2.

⁵⁸³ Moody's MMF Rating Methodology *supra* note 573 at 7.

⁵⁸⁴ Fitch MMF Rating Criteria *supra* note 573 at 12.

⁵⁸⁵ *Id.* at 10 – 12. Fitch notes that the fund sponsor's role takes on several dimensions from providing oversight, operational support and an infrastructure to acting as a potential source of financial support during periods of market stress. Moody's MMF Rating Methodology *supra* note 573 at 9.

⁵⁸⁶ SHILLING, MMF Support Report *supra* note 156 at 1.

⁵⁸⁷ *Supra* note 585. It is expected, by Fitch and Moody's that AAmmf/AAA-mf rated funds are sponsored by investment-grade quality institutions and demonstrated an appropriate level of resources and commitment to the cash management business.

⁵⁸⁸ S&P MMF Rating Methodology *supra* note 573 at Section 5.

from the standpoint of my theory of the dual regulatory goal as improving investor protection be a means of empowering investor with a greater array of fund data.

All three credit rating agencies normally assign ratings to money market funds following a request for a rating from the fund or its asset manager and are paid by the fund or its agent for the rating. One of the strong advantages of the *issuer-paid* business model is a direct access to the fund data, management and other related actors.⁵⁸⁹ Rating opinions and related research are disseminated to financial media and are available on rating agencies websites thus further reducing information asymmetry between money market funds and investors. Assigned ratings are monitored and updated at least annually.⁵⁹⁰ Notwithstanding positive rating attributes, which include a timely portfolio risk assessment at no cost to investors, only approximately 35 per cent of the US money market funds are rated with investor's interest in these rating being driven largely by their institutionalisation.⁵⁹¹

I attribute lack of retail investor interest in money market fund ratings to two factors. First, the US securities market regulation generally prohibits use of credit ratings in fund advertisement; therefore, retail investors may not be aware of the assigned rating.⁵⁹² Second, a perceived complexity of the rating analysis has been deterring retail investors from incorporating rating opinions as a part of their investment decision making process. Nonetheless, institutional investors such as corporate treasurers and public fund managers use money market fund ratings as a part of their investment strategies, or even require these ratings as one of the investment

⁵⁸⁹ It is often pointed out that an inherited conflict of the *issuer-paid rating* business model could discourage rating agencies from exercising a proper investigation of facts and in-depth analysis of risks. See, e.g., FRANK PARTNOY, *How and Why Credit Rating Agencies are Not Like Other Gatekeepers in Financial Gatekeepers: Can They Protect Investors?*, (Yasuyuki Fuchita & Robert E. Litan eds., 2006). at 69. I argue, however, that a perceived conflict of interest is greatly mitigated in the area of my focus by fund management and board of directors' fiduciary responsibilities to the fund shareholders. In this case both fund agents and credit rating agencies pursue a similar goal of protecting investor interests.

⁵⁹⁰ REGULATION (EU) No 513/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 May 2011 amending Regulation (EC) No 1060/2009 on credit rating agencies (OJ L 145/30 31.5.2011) at Annex III, Paragraph 46. Credit rating agencies are subject to a fine if ratings and rating methodologies are not reviewed on on-going basis and at least annually.

⁵⁹¹ As of 30 September 2011, 193 US money market funds were rated by one or more credit rating agencies. As of the same date, there were in total 546 money market funds operating in the US managed by 97 asset managers. *Source*: iMoneyNet.

⁵⁹² 17 CFR § 230.482 Advertising by an Investment Company as Satisfying Requirements of Section 10

eligibility criteria.⁵⁹³ Therefore, those money market funds targeted to institutional clientele obtain ratings from one or more credit ratings agencies to facilitate distribution.⁵⁹⁴ This explains why nearly all institutional money market funds carry one or more credit ratings and why retail funds are seldom rated.⁵⁹⁵

The negative aspects of being subject to rating for a money market fund relate to incremental costs of rating compliance costs and managerial time devoted to the rating management. These costs, however, are dwarfed by a probability of rating change even for the reasons outside the fund management control. Since a rating opinion remains a property of the credit rating agency, a money market fund rating could be changed or withdrawn at the discretion of the agency regardless whether there were any adverse changes in the fund's risk profile.⁵⁹⁶ Thus fund managers would rather opt for not having a rating in order to avoid probable loss of investors should credit rating change.

Therefore the power that credit rating agencies wield over the market is once again evidences their quasi-regulatory role. Nevertheless, I point out a counterproductive effect of this

⁵⁹³ See, e.g., Treasurer's Statement of Investment Policy (Office of the Auditor-Controller/Treasurer/Tax Collector County of San Bernardino 28 June 2011) at 7. The investment policy limits investment in money market funds to only those funds rated AAA by at least two credit rating agencies. Available at <https://www.mytaxcollector.com/content/TZ/tzInvestmentPolicy.pdf>. City of Los Angeles Statement of Investment Policy (Office of the Treasurer 10 February 2010) at 9 – 10. A mutual fund must receive the highest rating from at least 2 credit rating agencies to qualify as an eligible investment under the City of Los Angeles Treasurer's investment policies.

⁵⁹⁴ See, e.g., VIKTORIA BAKLANOVA, *Regulatory Use of Credit Ratings: How It Impacts the Behavior of Market Constituents*, 10 International Finance Review 65, (2009) at 22 – 25. The survey of responses to the US Securities and Exchange Commission proposal to remove references to credit ratings from its rules and regulations revealed that 92 per cent of institutional investors would like to keep ratings as a common benchmark of credit quality. FRANK PARTNOY, *Rethinking Regulation of Credit Rating Agencies: An Institutional Investor Perspective* (Council of Institutional Investors April 2009) at 16. The white paper points out that institutional investors rely, in part, on credit ratings for their investment process.

⁵⁹⁵ See, e.g., PETER CRANE, *Money Fund Intelligence XLS Vol 6 No 8* (CraneData 1 August 2011). Among 15 largest portfolios managing 32 per cent of total assets under management of the US money market funds 12 funds are institutional funds, all carry the highest money market fund rating from at least one rating agency. The remaining 3 funds, which do not carry ratings, are those funds mainly sold to retail investors. Available at: <http://www.cranedata.com/products/money-fund-intelligence-xls/>.

⁵⁹⁶ See, e.g., PETER CRANE, *Moody's New Methodology Goes Live; Lots of Dropped AAA Ratings*, CraneData 20 May 2011. The article reports that when Moody's revised its money market fund rating methodology to include a newly developed stability score, a number of funds to dropped Moody's rating out of concerns that the new rating approach would cause a downgrade. There were no changes in the risk profiles of these funds, but rather Moody's view on how the funds should be managed has changed. Available at <http://www.cranedata.us/archives/all-articles/3448/>.

power from the standpoint of systemic stability. As discussed above, negative rating changes are likely to precipitate cash outflow from the funds and introduce additional liquidity pressure, which is likely exacerbate any looming credit concerns. Thus credit ratings have pro-cyclical characteristics as rating changes tend to follow credit developments, but not to forestall them.⁵⁹⁷ An important implication of this analysis for my research question is that credit ratings may not be a helpful tool to use in the regulatory architecture proposed in my thesis given the objective of preserving systemic stability.

This section described credit rating agencies' contribution to the money market fund industry. It also explained who uses money market fund ratings and why, and what are the advantages and disadvantages of money market fund ratings. To summarise, credit ratings for the US money market funds serve as a differentiating factor and a marketing tool for the funds and an additional risk checkpoint for investors above and beyond regulatory requirements. This section also asserted that credit ratings, despite their quasi-regulatory effect could not be accepted as a proper regulatory tool due to their inherited pro-cyclical characteristics. The next section comments on the future direction of the US money market fund industry against the backdrop of its continuing reforms.

3.5 US money market fund reform proposals

This section examines certain regulatory proposals for the continuing reform of the US money market funds, which are currently extensively debated by various industry stakeholders (my own proposals for the new regulatory architecture is instead outlined in chapter 6). As explained in section 3.3, the amendments to Rule 2a-7 introduced in May 2010 were just the first step of a two-step process of a comprehensive regulatory reform of the US money market funds.⁵⁹⁸ The President's Working Group on Financial Markets "Money Market Fund Reform Options" released in October 2010 discussed many of the concerns regulators still have and some

⁵⁹⁷ Pro-cyclicality is a tendency of credit indicators, including credit ratings, to vary positively with economic cycles. See JOCHEN ANDRITZKY, et al., *Policies to Mitigate Procyclicalities*, IMF Staff Position Note (7 May 2009) at 4. See also JEFFERY D. AMATO & CRAIG H. FURFINE, *Are credit ratings procyclical?*, 129 BIS Working Papers (February 2003) at 12 – 13.

⁵⁹⁸ SCHAPIRO, (2010) *supra* note 88. The statement proposes more "fundamental changes to the structure of money market funds to further protect them from the risk of runs" in addition to Rule 2a-7 amendments introduced in May 2010.

of the alternative means of addressing those concerns.⁵⁹⁹ Following the release of the President's Working Group report, the US Securities and Exchange Commission sought the industry comments and encouraged various alternatives ideas. The Commission ultimately received significant feedback: money market fund investors, issuers and asset managers filed well over 100 comment letters. There also have been over 20 meetings conducted by the Commission's officials with the industry stakeholders. In addition, the Commission held a roundtable to discuss benefits and possible unintended consequences of a broader money market fund reform.⁶⁰⁰ All these activities underscored the importance of the US money market fund industry and lack of ready answers.⁶⁰¹

Clearly, there has been a large amount of work done by regulators and the money market fund industry towards achieving a workable solution. However, at the time of writing, the final regulatory proposal is yet to emerge. The events of the fall of 2008 challenged the main premise underlying the structure of the US money market industry. The US Securities and Exchange Commission exempted money market funds from the general rule directing mutual funds to transact on the basis of the *market-based* value of their shares relying on the assumption that high-quality, short-term debt securities held until maturity will eventually return to the amortised cost value.⁶⁰² Any temporary disparity between the amortized cost value and market value could be viewed as *market noise* that could be ignored. Therefore, Rule 2a-7 permits money market funds to use the *amortized cost* accounting method, but only if the deviation between the *amortized cost* and the *market-based* value remains minimal, generally within 0.5 per cent, which can also be rounded to the next cent.⁶⁰³

⁵⁹⁹ PWG's Report *supra* note 7.

⁶⁰⁰ Comments letters to the Report of the President's Working Group on Financial Markets 'Money Market Fund Reform Options' are available at <http://www.sec.gov/comments/4-619/4-619.shtml#meetings>

⁶⁰¹ See also Annual Report (Financial Stability Oversight Council 2011) [FSOC 2011 Annual Report] at 13. The newly formed Federal Stability Oversight Council in its first annual report to the US Congress recommended the following reform options with respect to the US money market funds: a conversion to a floating net asset value format, an implementation of a loss-absorbing capital buffer and deterrent of redemptions as specific means to mitigate investor runs.

⁶⁰² SEC Rel. No. IC-28807 at 32690.

⁶⁰³ Section 3.3 *supra* provided a detailed review of the processes and procedures that money market funds must follow to ensure that the stable share price fairly represents the current *market-based* value per share.

The credit events of 2007 and the extreme market volatility of 2008 illustrated that the amortised cost valuation could, at times, hide meaningful asset price fluctuations. Furthermore, in the eyes of regulators such hidden volatility may disproportionately disadvantage certain types of investors less aware of the money market fund structure. For example, large investors better informed of asset price fluctuations could take advantage of the fund and its other shareholders.⁶⁰⁴ Another important regulatory concern relates to the US money market funds using “the stable, rounded \$1.00 net asset value [that fosters] the expectation that ... share prices will not fluctuate”.⁶⁰⁵ However, when shareholders accelerate redemptions, the change in net asset value may disproportionately affect the remaining shareholders. For this reason, the current structure of the US money market funds – a stable share price of \$1.00 – is believed to be prone to investor runs and, therefore, create systemic risk.⁶⁰⁶

As noted earlier, the President’s Working Group report on money market fund reform options released in October 2010 provided a review of the alternative ideas related to the money market fund structure and commented on benefits and shortcomings of these ideas.⁶⁰⁷ These options included: converging funds to the floating net asset value model; establishing a private emergency liquidity facility available to troubled money market funds; requiring redemptions in kind for large asset withdrawals; assessing a money market fund insurance; establishing a two-tier system of the money market fund industry with enhanced protection for the *constant net asset value* funds; establishing a two-tier system with the *constant net asset value* money market funds reserved for retail investors; regulating *constant net asset value* money market funds as special purpose banks; and enhancing constraints on unregulated money market fund substitutes.

⁶⁰⁴ See, e.g., ANDREW J. "BUDDY" DONOHUE, Keynote Address at the Practising Law Institute's Investment Management Institute (2 April 2009). Consider a money market fund that has a loss of 0.4 per cent of its assets, so value of its assets per share now $\$1.0000 - \$0.0040 = \$0.9960$. Using a *penny-rounding* method, this net asset value could still be rounded to \$1.00. Let us suppose a large investor, who owns 25 per cent of the fund, has become uncomfortable with the loss and redeemed her shares at \$1.00. Now the entire loss has to be absorbed by the remaining shareholders. After the large investor leaves, the net asset value becomes \$0.9947 or \$0.99, if rounded to the nearest cent. Thus, the remaining shareholders would not get their \$1.00 back, but are subject to capital loss. This example illustrates that the stable, rounded to \$1.00 net asset value is insensitive to small losses and gains in a money market fund portfolio if fluctuations remain within 0.5 per cent. Available at <http://www.sec.gov/news/speech/2009/spch040209ajd.htm>

⁶⁰⁵ FSOC 2011 Annual Report *supra* note 601 at 50.

⁶⁰⁶ *Id.* at 13. FSOC annual report noted that a number of features still make the US money market funds susceptible to runs and should be addressed to mitigate vulnerabilities in this market.

⁶⁰⁷ PWG's Report *supra* note 7.

Advancing the mandatory conversion to the floating net asset value operational model as the very first option, the report noted that *constant net asset value* funds “have fostered investor’s expectations that money market funds shares are risk-free cash equivalents”.⁶⁰⁸ The report also asserted that the current structure of the US money market funds is inherently unstable, while “a floating net asset value may eliminate *some* of the incentives to redeem when a money market fund had experienced a loss”.⁶⁰⁹ I would like to note that in contrast to the view expressed in the report, the historical track record of money market funds does not support the assertion of these funds being susceptible to runs more than any other investment scheme.⁶¹⁰ Prior to the crisis several asset management firms introduced low duration alternatives to money market funds featuring floating net asset values per share and not using a stabilising technique of the amortised cost valuation. These low duration funds “never achieved significant scale, performed poorly in the financial crisis, and were subject to redemption runs”.⁶¹¹

Furthermore, no academic evidence was found to support the claim of money market funds being susceptible to runs.⁶¹² Nevertheless, one of the existing regulatory proposals for a further money market fund reform is focused on banning the funds from using the *amortised cost* valuation method and only permitting money market fund share transactions at a *market-based* price.⁶¹³ Industry feedback regarding the other seven options outlined in the President’s Working Group report besides converting money market funds to a *market-based* pricing voiced negative views with respect to all but one option: the proposal to establish a private emergency liquidity

⁶⁰⁸ *Id.* at 19.

⁶⁰⁹ *Id.* at 20.

⁶¹⁰ *See, e.g.*, GAIL LE COZ, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (Institutional Money Market Fund Association 10 January 2011) MCGONIGLE, *supra* note 385 at 3 – 7.

⁶¹¹ *See, e.g.*, SIMON MENDELSON & RICHARD HOERNER, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (BlackRock 10 January 2011) at 4.

⁶¹² *See, e.g.*, BULLARD, *supra* note 243 at 3 – 5. The testimony to the US Congress states that characterisation of money market funds as being *prone* or *susceptible* to runs directly contradicts the historical record. The empirical evidence demonstrates unequivocally that money market funds are not *prone* or *susceptible* to runs.

⁶¹³ FSOC 2011 Annual Report *supra* note 601 at 13. To increase stability, market discipline and investor confidence, the Financial Stability Oversight Council recommend the US Securities and Exchange Commission to examine further reform alternatives to reduce money market funds’ susceptibility to runs with a particular emphasis on a mandatory floating net asset value, among other reform options.

facility gained approvals from 67 per cent of responders.⁶¹⁴ Furthermore, in response to this option the Investment Company Institute working together with some of the largest US asset managers developed a detailed plan for establishing a Liquidity Exchange Facility in a form of a bank that would provide liquidity for all US prime money market funds during times of unusual market stress.⁶¹⁵

However, given that the fee for participation in the facility was not aligned with an individual fund liquidity risk, the Liquidity Exchange Facility could be an overpriced option for some funds. For this reason, some of the largest US managers of retail money market funds opposed this solution.⁶¹⁶ All other options discussed in the President's Working Group report were likewise voted out by the industry stakeholders as being unworkable, impractical or prohibitively expensive.⁶¹⁷ Other reform options were proposed in addition to the eight provided in the President's Working Group report. In particular, a group of 14 economists known as an academic "Squam Lake Group" suggested an alternative solution where money market funds

⁶¹⁴ ALEX ROEVER & TERESA HO, Short-Term Fixed Income (J.P. Morgan Securities LLC 21 January 2011) at 1 (on file with the author).

⁶¹⁵ PAUL SCHOTT STEVENS, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (Private Emergency Liquidity Facility for Money Market Funds) (Investment Company Institute 10 January 2011). Such an industry-sponsored bank would be capitalised with initial capital contributions from fund sponsors and annual commitment fees from participating money market funds. As a bank, it would be able to finance itself through issuance of time deposits and would have access to the Federal Reserve discount window. In the event of a liquidity crisis, the *Liquidity Exchange Facility* would purchase high quality securities from money market fund portfolios at amortised cost should the funds exhaust all other means of raising cash to meet redemptions. Disadvantages of the proposal were its small size and the time it would take to grow to \$50-55 billion – approximately ten years. Furthermore, all prime money market funds will have to contribute an annual commitment fee even if they never access it. This would ultimately lower returns for prime money market fund shareholders. Under this construct, retail money market funds could be disproportionately disadvantaged. Generally, retail money market funds tend to have lower liquidity needs relative those funds with high concentration of institutional accounts.

⁶¹⁶ See, e.g., SCOTT C. GOEBEL, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (Fidelity Investments 10 January 2011) at 8. Fidelity Investments, the largest US asset manager to retail money market funds, voiced its concerns that the costs, infrastructure and complications associated with private liquidity facilities are not worth the minimal liquidity that would be provided.

⁶¹⁷ *Supra* note 7. Other options ruled out: (1) mandatory redemptions in kind as being impractical; (2) money market fund insurance as being too expensive and introducing moral hazard; (3) a two-tier system of the money market fund industry with enhanced protection for stable net asset value funds as being impractical and confusing for investors; (4) a two-tier system with stable net asset value money market funds reserved for retail investors as being impractical due to challenges in classifying investor type; (5) regulating stable net asset value money market funds as special purpose banks due to lack of isomorphism between banking model and money market funds.

would maintain a loss-absorbing capital buffer of ‘X’ per cent of the fund’s assets.⁶¹⁸ The buffer would represent additional resources to be drawn upon as needed to support fund redemptions.⁶¹⁹ The proposal asserted that a buffer of at least three per cent would have been necessary to prevent the Reserve Primary Fund from breaking the buck.

Other industry participants offered other versions of a loss-absorbing capital buffer for prime money market funds.⁶²⁰ In one of the proposals the buffer would belong to shareholders of each money market mutual fund, but not the asset management company, like the Squam Lake Group envisioned.⁶²¹ Arguably, a capital buffer funded with a portion of income withheld from the fund shareholders greatly reduces shareholder incentives to leave the fund, which would mean abandoning their own protective buffer. A shortcoming of this scheme, however, is that a capital buffer would take a substantial time to build especially in the current low interest rate environment. Nevertheless, an introduction of a capital buffer to a structure of the US money market fund is one of the likely outcomes of the on-going regulatory reform debate.

Arguably, a capital buffer addresses many of the concerns raised about the *constant net asset value* prime money market funds. First, it increases pricing transparency and enables money market fund investors to know how much support the fund has. Second, it reduces likelihood of a fund *breaking the buck*. Third, an implicit expectation of support from the fund sponsor is replaced with an explicit contract. Fourth, a capital buffer, especially if built with an undistributed income, lessens the incentive for shareholders to leave the fund. Fifth, it also

⁶¹⁸ RENÉ M. STULZ, Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (The Squam Lake Group 14 January 2011) [The Squam Lake Group's Proposal] at 4. Available at <http://www.sec.gov/comments/4-619/4619-57.pdf>.

⁶¹⁹ *Id.* at 4. To ensure that the buffer is available, at the end of each business day, the combined resources available to fund investors represented by the sum of the buffer and the previous day's marked-to-market per-share value of the fund's assets must exceed 1+'X' per share held as of the end of the current day. If the buffer is exhausted the fund must convert to the floating net asset value mode. The cost of the buffer was extrapolated from the loss of \$0.03 per share sustained by the Reserve Primary Fund in September 2008 caused by its holding of defaulted commercial paper issued by Lehman Brothers.

⁶²⁰ See, e.g., SCOTT C. GOEBEL, et al., Comment Letter to the PWG's Report on Money Market Fund Reform Options SEC Rel. No. IC-29497 (Fidelity Management & Research Company/The Charles Schwab Corporation/Wells Fargo Funds Management, LLC 3 May 2011). The letter advocated a capital buffer “funded over time by withholding a small portion of the income paid to shareholders”. See also GOEBEL, (2011a) *supra* note 616 at 10 – 12 and MENDELSON & HOERNER, *supra* note 611 at 6 – 8.

⁶²¹ STULZ, The Squam Lake Group's Proposal *supra* note 618 at 6.

discourages the fund manager from attracting *hot money*.⁶²² Nonetheless, these positive factors should be considered *vis-à-vis* the size of the capital buffer and a means of obtaining it. If the buffer is too large it is likely to be economically unfeasible. Furthermore, a buffer funded by an asset management company would place small and medium size firms in a disadvantaged position or even force them out of money market fund management business. This would result in further industry consolidation and, possibly, a version of a *too big to fail* problem in the money management sector.

The pros and cons of the proposed reform options considered in this section underscore the complexity of the issues. After Rule 2a-7 amendments implemented in 2010, the money market fund resiliency to financial shocks has already improved. Given other changes affecting the capital markets it is especially challenging to gauge potential unintended consequences of any further reforms in this area. Nonetheless, as shown in this section, the majority of the reform options laid out in the President's Working Group report were not friendly to the industry stakeholders and could result in significant assets outflows from the US money market funds causing disruption to the short-term capital markets. This outcome alone entails significant implications with respect to systemic stability concerns. In addition, some of the options result in significant costs to asset managers who may reconsider the economic fundamental of managing money market funds triggering further industry consolidation, which, in turn would weaken investor protection by the industry monopolisation and reduction in investment options.

3.6 Conclusion

The analysis of the US money market fund industry offered in this chapter found that these funds emerged in the early 1970s as a response to restrictive banking regulation. Money market funds gained popularity among small investors by providing access to safe investments paying high market interest rates, which were previously only available to investors with large cash balances. Asset managers to the first money market fund developed investment practices that enabled them to achieve a dual goal of safety of principal and daily liquidity. These practices

⁶²² *Hot money* refers to those cash flows that are moved from one fund to another frequently, often on a daily basis, by those large shareholders looking for extra yield. *Hot money* is likely to increase liquidity and reinvestment risk of the fund and dilute yield of the core shareholders.

served as a source of emerging regulatory standards and formed a basis for developing legal rules governing activities of money market funds.

My inquiry into the broad regulatory framework of the US mutual funds confirmed the existence of a comprehensive regime covering the funds' investment activities, operations, corporate governance and oversight. Given the unique function of money market funds as important financial intermediaries in the short-term capital markets, these funds are also subject to risk-limiting prudential rules codified under Rule 2a-7 of the Investment Company Act. Rule 2a-7 have recently been revised to address weaknesses and shortcomings in money market fund investment and operational practices that became apparent during the height of the financial crisis in the fall of 2008, which significantly enhanced investor protection in these funds.

Above and beyond normative rules imposed and enforced by the US Securities and Exchange Commission, a subset of the US money market funds targeted to institutional investors voluntarily adhere to credit standards developed by credit rating agencies, which through their acceptance by the market participants have a quasi-regulatory impact. Positive from the investor protection standpoint, these standards seek to quantify abilities of money market funds to achieve their investment objectives and meet investors' demand for custom-made credit rating opinions that address idiosyncratic risks in money market fund. Notwithstanding the value of credit ratings for investors, pro-cyclical characteristics of credit ratings make them a weak regulatory tool due to negative implication for systemic stability.

The purpose of the inquiry undertaken in the last section has been to identify what the future of the US money market fund industry may look like given the whirlpool of the recent regulatory reform debates. The incremental way in which financial stability measures have been introduced in the course of the last two years and the fragmentation of prudential supervisory arrangements considered by various regulatory agencies explain the legal uncertainties surrounding the future of the US money market fund industry. The following chapter takes us across the Atlantic and focuses on money market funds in the EU.

CHAPTER 4: MONEY MARKET FUNDS IN THE EU

4.1 Introduction

Chapter 3 described the US money market funds. The scope of this chapter is European money market funds. It will be shown that money market funds in Europe are governed by the EU legal rules and are also subject to their national regulation. The chapter illustrates that the specific practices embraced by the EU and national regulators have often been inspired by the money market industry itself or sometimes imported from those jurisdictions featuring more developed regulatory regimes with respect to money market funds. With regard to the method, this chapter presents a historical narrative and utilises critical analysis as well as elements of legal analysis of the practices of money market funds in Europe. In effect, it offers an insight into the development of the law through the diffusion of particular legal practices across the borders.

To my knowledge, this is the first study that systematically analyses the European Union's regulatory framework applied to money market funds as well as details of national regulation relevant to this sector. Existing sources related to money market funds outside the US are extremely limited and are mostly focused on dissecting the funds' performance. This study is instead unique in considering all aspects of European money market fund practices and operations be they developed locally, imported from other markets or introduced by credit rating agencies. Furthermore, the effect of the financial crisis and the European sovereign debt crisis on the funds' practices is incorporated, thereby making this thesis especially relevant to the ongoing regulatory debate in terms of clarifying the significant issues relating to the development of sustainable market practices and setting appropriate and robust regulatory practices at the European and national levels.

With regard to the structure, this chapter is divided into four main sections. Section 4.2 describes the origin and evolution of European money market funds and profiles the contemporary state of the industry. Section 4.3 presents the Community legal rules underlying activities of European money market funds. Section 4.4 reports on the credit rating agencies' contribution into the development of the European money market fund industry and governing regulatory practices. Section 4.5 examines the future of European money market funds focusing

on challenges and opportunities prompted by the recent attempts to harmonise the diverse European practices. Section 4.6 concludes supporting the view that the product diversification that characterises the current state of European money market fund industry is the outcome of the diversity of the European capital markets at the national levels. Therefore, this chapter contends that the industry future rests on finding the right balance between the pan-European harmonisation trend and the need for diversification.

4.2 History and current state of the money market fund industry in the EU

This section is divided into two parts: the first describes the origins of money market funds in selected European countries starting from the 1980s, and the second discusses the state of the European money market fund industry from early the 2000s through the present. The selection of countries for the historical narrative featured in the first part was influenced mainly by the size of the assets under management of the local money market fund industry and its importance to the national capital markets. These selected countries are France, Ireland, Luxembourg, Germany, Spain and the United Kingdom.

4.2.1 European money market funds from the 1980s to the early 2000s

4.2.1.1 France

The historical narrative starts with France because France led the development of European money market funds in the early 1980s.⁶²³ The reason for the emergence of money market funds in France was similar to that in the US, namely the restrictive banking regime.⁶²⁴ French bank regulation capped interest rate that banks could pay their clients on savings accounts and, therefore, French money market funds were able to offer their investors a return consistent with the market rates, when banks could not.⁶²⁵ Coincidentally, in order to accelerate the post-recession economic recovery in the early 1980s the French government increased issuance of short-term government obligations and encouraged retail investor participation by offering a tax

⁶²³ See, e.g., ELIZABETH DE LARAUZE, *Money Market Funds in the US and Europe: Converging Markets*, GTnews 29 August 2006

⁶²⁴ See section 3.2.1 *supra* for the history of the US money market fund industry.

⁶²⁵ See GAIL LE COZ, *The Importance of Definition*, Finance Director Europe 17 Aug 2009.

credit.⁶²⁶ Due to both a relatively high yield and a tax credit, government securities have quickly become an attractive investment option for retail investors providing a strong impetus for development of *SICAV Monétaire*, French collective investment schemes that facilitated investor participation in this market.⁶²⁷

SICAV Monétaire invested in government and corporate obligations of relatively short duration and tracking short-term interest rates were marketed as money market funds. Unlike the US money market funds, which developed to a considerable product standardisation, the French money market funds have always featured varied risk profiles. Generally, three broad types of French money market funds were recognized: *regular* money market funds, *dynamic* money market funds and *dynamic plus* money market funds, although a classification of these funds has always presented a challenge owing it to the diversity of investment strategies and the lack of a commonly accepted definition at that time.⁶²⁸ The most conservative *regular* French money market funds were managed to track short-term market indices, while *dynamic* and *dynamic plus* money market funds sought to obtain additional yield by investing a part of their portfolios in riskier assets.⁶²⁹

Because French money market funds were aimed at tracking short-term market indices, share prices of these funds could increase or decrease depending on the behaviour of the selected index. Therefore, French money market funds have been referred to as *variable net assets value*

⁶²⁶ The story of French money market funds was related to me by David Vriesenga, the first head of the European money market fund business at Moody's Investors Service in 1990s. *See also*, POIZOT, et al., (2006) *supra* note 209 at 2. Initially, capital gain of up to FRF300,000 per year was not subject to personal tax. Starting in mid-1990s the limit on capital gain not subject to personal tax was lowered to FRF150,000.

⁶²⁷ SICAV is an open-ended collective investment scheme common in Western Europe, which is analogous to open-ended mutual funds in the US. SICAV is an acronym for French *société d'investissement à capital variable*, Spanish *sociedad de inversión de capital variable* or Italian *società d'investimento a capitale variabile*, among other languages. Thus, a majority of European money market funds are SICAVs, but not all of them.

⁶²⁸ The use of a *money market fund* designation was standardised only in July 2011 under the guidelines on a common definition of European money market funds administered by the European Securities and Markets Authority. *See* CESR's Guidelines *supra* note 9. Section 4.3.4 *infra* provides a detailed analysis of the CESR's Guidelines on a common definition of European money market funds.

⁶²⁹ Short-term market indices include Euribor® or Eonia®. Euribor® is a rate at which interbank term deposits denominated in Euro currency are offered by one bank to another bank within the European Monetary Union. Eonia® is an effective overnight reference rate for the euro. It is computed as a weighted average of all overnight unsecured lending transactions undertaken in the interbank market, initiated within the euro area by the contributing banks

money market funds.⁶³⁰ In practice, share prices of French money market funds generally exhibited a steady growth owing it to a continuing reinvestment of capital gains and dividends.⁶³¹ A comforting perception of a steady increase in share price was facilitated by a lack of *market-based* pricing in French money market funds.⁶³² Until early 2000s, French money market funds have fully relied on amortised cost accounting ‘smoothing’ share price fluctuations.⁶³³ Distinctive attributes of French money market funds – an attractive yield relative bank deposits, a tax advantage and an impression of a steady positive performance – explain why French money market funds quickly gained investors’ acceptance and commanded the largest share of the European money market fund industry in the early 2000s.⁶³⁴

4.2.1.2 Ireland

In the early 1990s, approximately ten years after money market funds emerged in France, Ireland attracted international asset managers as a platform for further development of money market funds in Europe. The demand for money market funds established in European fund administration centres came from the US asset managers, who observed growing demand for cash management services from corporations with business franchises spread around the world. Fidelity Investments was amongst the first US asset managers who pioneered import of the *US-*

⁶³⁰ This is in contrast to the US money market funds known as *stable* or *constant net asset value* money market funds. See chapter 3 *supra* at section 3.2.1. It is worth noting that certain European money market funds are managed as *stable* or *constant net asset value* money market funds. These funds, often registered in the main Europe’s fund administration centres such as Ireland and Luxembourg, are usually marketed as the *US-style* money market funds.

⁶³¹ COZ, (2009) *supra* note 625. French money market funds operate with a variable net asset value, although they are broadly managed with the objective of providing a constantly increasing net asset value.

⁶³² See, e.g., Constant and Variable Net Asset Value Money Market Funds (Institutional Money Market Fund Association / Position paper 2011) [IMMFA on CNAV and VNAV MMFs] at 6.

⁶³³ See, e.g., POIZOT, et al., (2006) *supra* note 209 at 2. In 2002 Autorité des Marchés Financiers, the French financial market regulator, imposed a mark-to-market accounting to replace an amortized-cost asset valuation for money market funds with the exception of assets maturing within three months that are still valued at amortized-cost. The accounting changes came into effect on 31 December 2003.

⁶³⁴ The State of the European Investment Fund Industry at End-March 2003 (European Federation of Investment Funds and Companies March 2003) at 9. The data illustrated that over 50 per cent of European money market fund assets were allocated to French money market funds. See also BERNARD DELBECQUE, Trends in the European Investment Fund Industry in the First Quarter of 2003 (European Fund and Asset Management Association June 2003) [EFAMA Q1 2003] at 3. As of March 2003, French money market funds managed \$363.9 billion of \$725.6 billion in asset under management of total European money market funds.

style money market fund, when it moved its Bermuda-domiciled money market funds to Europe in the early 1990s.⁶³⁵ Fidelity's funds in Europe were managed just like the US money market funds, but were denominated in various European currencies. This development explains why the *US-style* money market funds in Europe have mainly been managed by the US asset managers for the benefits of their institutional clients operating multi-nationally.⁶³⁶

Arriving to Ireland, the *US-style* money market funds exported the US cash culture, its investment and operational practices.⁶³⁷ With the exception of France, the majority of European fund accounting systems did not support amortized cost asset valuation employed by the US money market funds. The Irish fund administration system had to develop and implement the US-style operation practices to meet growing demand for this service.⁶³⁸ The Irish Financial Regulator facilitated this process by issuing a guidance related to acceptable asset valuation methods, including the amortised cost method.⁶³⁹ Allied Irish Bank was amongst the first to offer services in amortised cost asset valuation accompanied by market-based asset valuation known as the *shadow pricing* process, just like US money market funds would do at home.⁶⁴⁰ Thus, Ireland was able to harvest benefits of development in international trade and cross border cash

⁶³⁵ I wish to express my sincere thanks for this story to David Hynes, one of the 'founding fathers' of the International Money Market Fund Association and to David Vriesenga, the first head of European money market fund business at Moody's Investors Service.

⁶³⁶ After Fidelity Investments entered the European money markets, other US asset managers including AIM Investment, Goldman Sachs Asset Management and JP Morgan Asset Management established US-style money market funds in Europe.

⁶³⁷ See chapter 3 *supra* a detailed discussion of investment and operational practices employed by the US money market funds.

⁶³⁸ UCITS-authorized European money market funds could, in theory, use either amortized cost method or market-based valuation or a combination of these methods, as permitted by the applicable national laws and the fund's incorporation charters. See Directive 2009/65, [2009] OJ L302/32 at Article 85. The UCITS Directive relies on national laws, the fund rules and fund incorporation documents for assets valuation processes and methods of share/unit price calculation.

⁶³⁹ Irish Financial Regulator Guidance Note 1/00 allowed the amortised cost method to be applied to value money market instruments in a UCITS collective investment schemes where the individual instruments have a "residual maturity of less than three months and have no specific sensitivity to market parameters, including credit risk". See European News & Views (Citi Third ed. 2008) at 15.

⁶⁴⁰ According to my conversations with the European money market industry veterans, initially the *US-style* money market fund administration and accounting were almost exclusively outsourced to the Ireland-domiciled Allied Irish Bank.

flows that prompted expansion of the US money market funds overseas owing to flexible regulatory regime and responsive fund service industry.⁶⁴¹

4.2.1.3 Luxembourg

Luxembourg, another major European fund administration centre, likewise benefited from acceleration of cross-border cash flows. However, due to the proximity to France, the early versions of Luxembourg money market funds originated in the 1980s strongly resembled their French peers. The main reason for French money market funds migration to Luxembourg was taxation. As mentioned early, French money market funds provided investors with tax-advantageous income, but only if the funds invested majority of their assets, or at least 90 per cent, domestically.⁶⁴² Thus, while providing income tax-advantage for investors, these funds also limited investors in terms of diversification options. Money market funds could enlarge their investment universe by allocating more assets to foreign securities, but they wanted to do it in a tax-efficient way.⁶⁴³ These funds found Luxembourg a welcoming destination.

The aspect of taxation explains the initial structure of Luxembourg money market funds featuring *floating net assets value* per share, which was widely accepted by investors in other European countries studied, *e.g.*, in Germany and Spain, analysed later in this section, in addition to France.⁶⁴⁴ Moreover, following the development of the *US-style* money market funds initially hosted mainly by Ireland, Luxembourg fund services quickly embraced the *US-style* funds' offering *constant net asset value*⁶⁴⁵ per share.⁶⁴⁶ Both Ireland and Luxembourg transposed the

⁶⁴¹ See, *e.g.*, Right place right time. Ireland - the domicile of choice for regulated funds (PriceWaterhouseCooper January 2012) at 6. Ireland commands over 30 per cent of assets under management of European money market funds, offers the highest quality fund administration services and an advantageous tax regime. Available at http://download.pwc.com/ie/pubs/2012_right_place_right_time_ireland_the_domicile_of_choice_for_regulated_funds.pdf.

⁶⁴² I would like to thank David Vriesenga, the first head of the European money market fund business at Moody's Investors Service in 1990s, who shared with me his knowledge of the history of money market funds in Luxembourg.

⁶⁴³ See, *e.g.*, KPMG Executive Briefing - UCITS in Luxembourg (KPMG June 2009) at 56. Luxembourg UCITS are exempt from tax on income or capital gain. UCITS that are institutional money market funds are also exempt from subscription tax that nonetheless is applied to other UCITS. Available at http://www.kpmg.lu/Download/Brochures/2009/ExecutiveBriefing_UCITS_Web.pdf.

⁶⁴⁴ See section 2.2 *supra* describing types of money market funds by their accepted accounting practices.

⁶⁴⁵ *Id.*

UCITS Directive into their national laws by the late 1980s thus enabling their funds to pursue business freely across the EU on the basis of a single authorisation issued by the host country authorities.⁶⁴⁷ Even though the UCITS Directive does not specifically target money market funds, this thesis shows that the regulatory framework set forth under the UCITS Directive serves as a primary source of the investments and operational standards applicable to these funds.⁶⁴⁸

The presence of the UCITS framework for marketing collective investment schemes throughout Europe have proven to be the most important factor enabling distribution growth of the *US-style* money market funds. These funds were offered mainly to institutional investors who sought professional cash management services generated only nominal sales in the host country.⁶⁴⁹ The *US-style* money market funds whether domiciled in Ireland or Luxembourg were almost exclusively sold cross-border as opposed to French money market funds mainly sold to French investors.⁶⁵⁰

4.2.1.4 Germany

In 1994 money market funds were introduced to Germany after a considerable resistance from the Bundesbank.⁶⁵¹ Similar to the US banking industry, German banks were fully aware of

⁶⁴⁶ A number of the US asset managers, seeking flexibility, established Luxembourg-based money market funds in addition to similar strategy funds located in Ireland or other off-shore destinations. For example, Fidelity Investments and Morgan Stanley Asset Management have established US-style money market funds domiciled in both Ireland and Luxembourg.

⁶⁴⁷ Council Directive (EEC) 85/611, [1985] OJ L375/3. Adopted in 1985, the UCITS Directive refers to a series of European Union directives establishing a common regulatory framework for marketing collective investment schemes throughout Europe. See section 4.3.2.1 *infra* describing European money market funds and the UCITS framework.

⁶⁴⁸ See section 4.3.1 *infra* for a detailed review of the UCITS Directive in its aspects relevant to money market funds.

⁶⁴⁹ The cross-border nature of Irish money market funds is reflected in statistical methodologies for collecting data related to collective investments. To avoid double-counting of Irish funds' assets in the combine per-country statistics these assets are normally excluded from available European investment fund statistics.

⁶⁵⁰ POIZOT, et al., (2006) *supra* note 209 at 1. The report points to the fact that French investors tend to place their cash with managers based in France and, therefore, the shareholder base of French asset managers to money market funds have remained largely domestic.

⁶⁵¹ German money market funds were introduced as part of the II. Financial Promotion Act (Finanzmarktförderungsgesetz) enacted in July 1994. The first money market funds were launched in September 1994.

a competitive threat of money market funds to the banking community.⁶⁵² Another reason for the Bundesbank's resistance was a likely distortion to its control of the monetary base.⁶⁵³ Similar to those money market funds operating in France, German money market funds' core objective was a performance that is broadly in line money market benchmarks.⁶⁵⁴ Given the opportunity for risk taking under the broad performance objective, German regulators limited final maturities of money market fund-eligible holdings to one year.⁶⁵⁵ This regulation brought German money market funds in line with a money market fund definition adopted by the European Central Bank in 1998.⁶⁵⁶

From the standpoint of asset valuation, German money market funds have always relied on *market-based* asset values allowing their shares to float up and down reflecting the movement of the short-term market.⁶⁵⁷ That said German money market funds were managed with an implicit assumption that a share price of a conservatively managed fund would not decline significantly on any single day. This assumption boded well with retail clients, who were the main investors in German money market funds.⁶⁵⁸ Retail investors normally are not particularly

⁶⁵² As a response to the competition, German banks introduced new innovative short term savings accounts. Regarding the US banking community response to the introduction of the US money market funds, *see* section 3.2.1 *supra*.

⁶⁵³ *See* RICHARD G. ANDERSON, *Monetary Base*, 2006-049A Federal Reserve Bank of St. Louis Working Paper (August 2006) at 2. The author provides a definition of the monetary base, which includes bank deposits. The definition does not include shares of money market funds although such shares have been view by some authors as a close substitute for bank deposits. This issue of monetary base have been resolved by the European Central Bank collecting statistics on assets under management of the 'qualified' money market funds. *See* section 4.3.3 *infra* for the European central Bank's definition of the 'qualified' money market funds.

⁶⁵⁴ *Supra* note 629. *See also* COZ, (2009) *supra* note 625 at 1.

⁶⁵⁵ STEPHAN JANK & MICHAEL WEDOW, *Sturm und Drang in Money Market Funds: When Money Market Funds Cease to be Narrow* Deutsche Bundesbank: Discussion Paper Series 2: Banking and Financial Studies (2008) at 6 – 7.

⁶⁵⁶ Regulation (EC) No 2819/98 of The European Central Bank of 1 December 1998 concerning the consolidated balance sheet of the monetary financial institutions sector (OJ L 356/7 30 December 1998) at 11. In this documents Money market funds are defined as those collective investment units that can be viewed as close substitutes for deposits in terms of liquidity and “which primarily invest in money market instruments and/or in other transferable debt instruments with a residual maturity up to one year, and/or in bank deposits, and/or which pursue a rate of return that approaches the interest rates of money market instruments”. The bank also stated that the criteria identifying money market funds should be derived from the collective investment schemes’ “public prospectuses, fund rules, instruments of incorporation, established statutes or by-laws, subscription documents or investment contracts, marketing documents, or any other statement with similar effect”.

⁶⁵⁷ For that reason, German money market funds are referred to as *floating net asset value* funds.

⁶⁵⁸ *See* COZ, (2009) *supra* note 625 at 1.

sensitive to share price fluctuation as long as the fluctuations are minimal and consistent with a perception of *low risk* investments.⁶⁵⁹ Share price volatility of German money market funds was further ‘smoothed’ by adding income to the share price instead of paying it out. Culturally and historically European asset managers felt more comfortable with floating fund share prices and income accumulation naturally boosting share price. Income accumulation helped to off-set capital loss promoting an illusion of a consistent growth.⁶⁶⁰

The concept of a constant share price, so favoured by the US money market fund investors, never took hold in Germany and their money market funds were not treated any differently for the purpose of asset pricing than any other collective investment scheme. Furthermore, it was too costly and operationally burdensome for asset managers to establish separate asset valuation practices and fund accounting systems designed specifically for money market funds, given their limited size of assets under management.⁶⁶¹ A slow growth of assets under management in German money market funds could be explained by a low level of institutional investor participation. German business culture with its traditional reliance on banks for all cash management needs by corporate entities rendered money market funds predominantly retail.⁶⁶² In addition, from the standpoint of a treasury of a multi-national

⁶⁵⁹ According to Rudolf Siebel, ex-Moody’s Investors Services’ analyst, who is currently Managing Director/Head of Market and Service of BVI Bundesverband Investment und Asset Management e.V., in 1998 two German money market funds experienced portfolio losses in the magnitude of 3.5 per cent to 4 per cent of the funds’ total assets due to investments in notes linked to performance of Russia’s and Thailand’s markets.

⁶⁶⁰ A story of German money market fund development was shared with me by Rudolf Siebel, ex-Moody’s Investors Services’ analyst, who is currently Managing Director/Head of Market and Service of BVI Bundesverband Investment und Asset Management e.V.

⁶⁶¹ I would like to note a special challenge of obtaining precise statistics regarding the size of the *domestic* money market fund industry in Germany. The great majority of money market funds sold to German investors are UCITS funds domiciled elsewhere but mainly in neighbouring Luxembourg. Available statistics aggregates home country assets in both domestic UCITS and those sold cross-border. See European Investment Fund Industry in Q1 2003 *supra* note 634 at 9. The report shows that the total size of the German UCITS money market fund assets was €42.5 billion, or \$43.3 billion. This data includes both types of UCITS, those domestic funds and fund sold cross-border.

⁶⁶² For example, German corporate treasurers prefer keeping operating funds in a bank’s deposit account. Cash in a bank can be accessed immediately, as opposed to money market fund investments, which entail a somewhat more operationally burdensome process of analyzing a money market fund and authorizing share purchases and redemptions.

corporation operating in Germany, local money market funds with floating share prices would not be an appropriate instrument for operating cash, which translates into a lack of demand.⁶⁶³

As mentioned earlier in this section, taxation played an important role in shaping the landscape of European money market funds. It was the issue of taxation that placed German money market funds in an unfair competition with other UCITS-authorized money market funds established elsewhere in Europe and ultimately inhibited the growth of *domestic* money market funds.⁶⁶⁴ As much as money market fund investors loath uncertainty, certainty of taxes is something they would rather avoid.⁶⁶⁵ While income derived from investments in German-based money market funds could be taxed at the same rate as that income from cross-border money market funds, investors in *domestic* funds were disadvantaged in terms of the timing of tax payments.

Tax on investment income from *domestic* funds was deducted at the time when an investor received such income, therefore an investor would receive a lower *after* tax income. This was in contrast with money market funds sold cross-border paying out income *before* taxes, which was taxed only in the following year after such income was received. Thus, German money market funds have never become a significant factor in the German financial system as the taxation issue and the strong banking culture have overall pre-empted widespread investor acceptance

⁶⁶³ Corporate treasurers are generally extremely averse to even minimal volatility of invested principal in their cash investments. *See* multiple letters from corporate treasurers to the US Securities and Exchange Commission rationalising their aversion to *floating net asset value* money market funds; available at <http://www.sec.gov/comments/4-619/4-619.shtml>.

⁶⁶⁴ *Supra* note 661. While precise data is difficult to obtain, anecdotal evidences suggest that a significant part of money market fund assets in Germany is managed by Luxembourg-based funds. German asset managers have long established subsidiaries in neighbouring Luxembourg to take advantage of responsive and flexible Luxembourg financial authorities that promptly authorized new products and had less restrictive investment regulation.

⁶⁶⁵ ‘The only two certainties in life are death and taxes’ is a quote attributed to Benjamin Franklin from a letter to Jean-Baptiste Leroy (13 November 1789).

4.2.1.5 Spain

The Spanish money market developed in the mid-1980s facilitated by the introduction of Letras de Tesoro (Treasury Bills) in 1987.⁶⁶⁶ In addition to government securities, Spanish banking and corporate sectors issued a variety of money market instruments, including commercial paper, certificates of deposit, medium term notes and term deposits suitable of purchases of these funds.⁶⁶⁷ Spanish money market funds known as *fondos de inversion en activos del mercado monetario*, or investment funds in money market assets, were amongst the main investors in the short-term government and corporate securities. Regulation of these funds was focused on asset liquidity and to required final maturities of portfolio holding not exceeded 18 months.⁶⁶⁸ Regulatory maturity limit, in turn, dictated duration of securities issuance, e.g. the Spanish Treasury Bills and commercial paper were issued in maturities of 12 and 18 months to meet final maturity limits of money market funds.

Redemptions from money market funds could be achieved through use of a check book or a credit card tied to the fund. This means that investors could use their investment assets at any time, which explains the regulatory focus on fund liquidity, which was based on the underlying assumption that a security of no more than 1.5 years to maturity is *liquid*, or could always be sold to a willing buyer at a price close to what the fund has it on its book. Nonetheless, the views of pan-European and national regulators on what constitute a *liquid* security varied, e.g., German regulators concurred with the European Central Bank when limited the final maturities of their *domestic* money market funds to one year.⁶⁶⁹ These varying views, in turn, promoted diversity of national markets while impeding development of a uniform pan-European short-term market.

Notably, an investment objective of Spanish money market funds to track short-term interest rates was consistent with that of French and German money market funds; thus Spanish money market funds' share prices were expected to fluctuate reflecting the interest rate

⁶⁶⁶ European Money Market Paper - Spain (FA Verbriefte Geldmarktprodukt March 2004) at 5.

⁶⁶⁷ *Id.* at 4.

⁶⁶⁸ This requirement covered 90 per cent of money market fund assets. The remaining 10 per cent of assets could be invested in other types of securities.

⁶⁶⁹ *Supra* note 656.

movements.⁶⁷⁰ In practice, investors in these funds expected values of their shares to increase steadily due to accumulation of capital gain and interest income, consistent with the investors' expectations of money market fund performance in France and Germany. Thus, due to similarities of an investment objective to track short-term interest rates and an expectation of a steady increase in fund share prices due to accumulation of capital gains and interest income this type of funds are often considered as a homogenous group of *Continental* European money market funds.⁶⁷¹

4.2.1.6 The United Kingdom

The history of European money market funds would be incomplete without mentioning the UK, even though its own *domestic* money market fund industry is rather limited.⁶⁷² An example of the UK money market funds illustrates the importance of other factors for the industry development, including the position of banks and presence of a deep and liquid public market. Fidelity Investments, one of the largest US asset managers, laid the foundation of the UK money market fund industry in the late 1980s, when it launched its first sterling-denominated Fidelity Cash Unit Trust.⁶⁷³ Fidelity sought to offer an alternative means of managing cash to its institutional clients doing business in Europe and deliver a return consistently higher than that

⁶⁷⁰ See section 4.2.1.1 *supra* note 629 describing short-term market indices tracked by money market funds.

⁶⁷¹ The group of *Continental* European money market funds include money market funds domiciled in certain other countries of continental Europe pursuing a similar investment objective and offering a *variable net asset value* share price. Because assets under management of *domestic* money market funds in these countries are relatively small, they are omitted from the study of the origin and development of European money market funds.

⁶⁷² As of 31 March 2011, assets under management of the UK money market funds were €3.4 billion, or \$4.8 billion, which constitutes 0.3 per cent of total assets under management in European money market funds. *Source:* the Investment Company Institute. *Available at:* www.ici.org.

⁶⁷³ Fidelity Investments has been managing money market funds in the US since 1974 by launching Fidelity Daily Income Trust only in two years after money market funds came about in the US. Fidelity Investments sought overseas expansion and in 1968 established a foreign subsidiary in Bermuda, Fidelity International to manage assets of non-US investors. Fidelity International had offices in London and other countries.

offered by banks.⁶⁷⁴ Launched by a US asset manager, the fund mirrored investment and operational policies accepted by the US money market funds.⁶⁷⁵

While the US institutional investors looked for the *US-style* money market funds in other jurisdictions, the local UK investors did not have any particular need to look beyond banks. The UK banking regulation did not limit deposit rates the way the US or French regulators did enabling the UK banks to offer higher interest rates and rendering emerging money market funds lacking meaningful yield advantage.⁶⁷⁶ Another significant factor inhibiting development of the UK money market funds was scarcity of government and corporate short-term issuance. The UK corporations relied mainly on bank financing for their borrowing needs and did not actively utilise the public market. The UK money market funds invested mainly in banks' call accounts and certificate of deposits and, therefore, lacked diversification.⁶⁷⁷ These two factors, namely competition from banks and the limited public short-term market curtailed development of the UK money market fund industry, which remained insignificant in terms of assets under management relative to other European countries.⁶⁷⁸

The major themes that can be drawn from this historical narrative related to the early days of the European money market fund industry are as follows: first, domestic bank regulation, limiting interest rates on bank deposit accounts, was a strong positive factor for money market funds (*e.g.*, France). Lack of such regulation rendered money market funds with no competitive advantage and hampered their development (*e.g.*, the UK). Second, the development of *domestic* European money market funds has been strongly correlated with the depth of the local short-term

⁶⁷⁴ FIDELITY INTERNATIONAL, Fidelity Cash Fund A Safe Haven for Your Cash *available at* <https://www.fidelity.co.uk/static/pdf/investor/forms-documents/cash-fund-brochure.pdf>

⁶⁷⁵ As opposed to *continental* European money market funds, Fidelity Cash Unit Trust maintained *constant net asset value* per share and daily liquidity at par. The fund was marketed as an alternative to bank deposits and had no penalties for early withdrawals.

⁶⁷⁶ See sections 3.2.1 and 4.2.1.1 *supra* analysing the origin of money market funds in the US and France, respectively.

⁶⁷⁷ Natwest Bank was amongst the first UK money market fund sponsors when launched the Reserve Fund. By the mid-1990s the Reserve Fund, which sold through the bank distribution channels and invested in bank deposits and corporate commercial paper, has become the largest sterling-denominated money market fund. The fund was managed in line with the US money market fund investment and operational practices.

⁶⁷⁸ The story of the UK money market funds industry was shared with me by David Hynes to whom I would like to express my deepest gratitude. Mr. Hynes has managed money market funds for a number of the UK and US asset managers, including NatWest, in the 1990s.

markets. A limited size of the local corporate issuance restricted money market funds' investment options and prevented the funds from achieving sufficient economy of scale to support their operations (*e.g.*, in Germany and the UK). On the other hand, an active local short-term market promoted *domestic* money market funds (*e.g.*, in France). Third, a favourable tax treatment helped *domestic* money market fund to gain investors' acceptance (*e.g.*, in France). Alternatively, a disadvantaging tax regime inhibited growth of *domestic* money market funds and pushed fund origination and management to European fund administration centres (*e.g.*, Germany).

The next section moves from the regulatory influences to an analysis of the industry from the capital market perspective. This is important in order to gain an insight into the evolution of money market fund regulation at this stage of market development and it ultimately links to my research question *how should money market funds be regulated?*

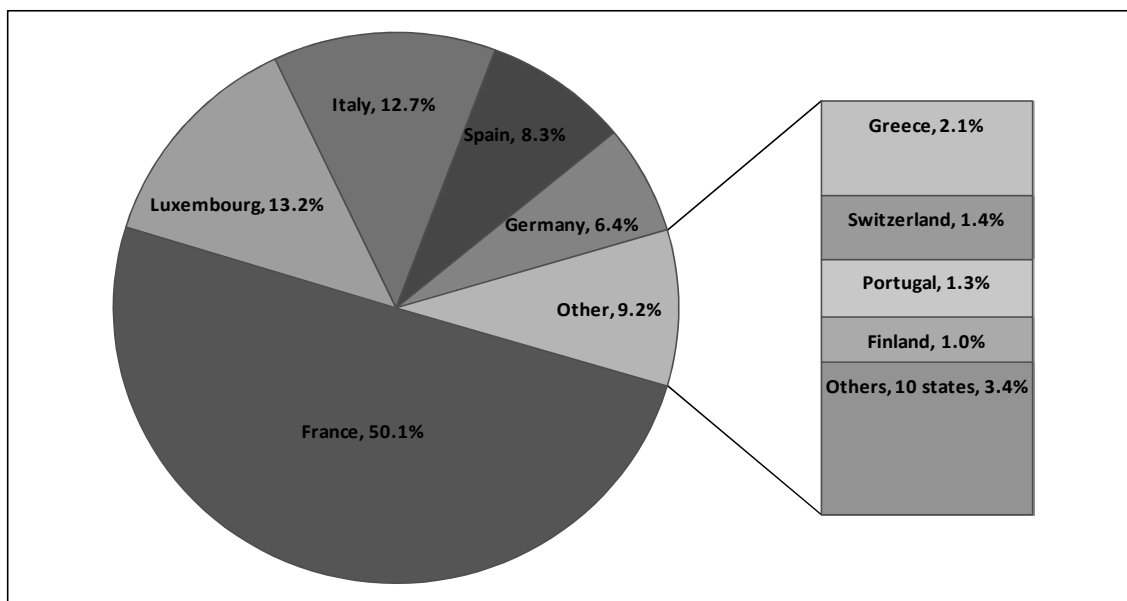
4.2.2 European money market fund industry from the early 2000s to today

By 2003, the size of the assets under management in European money market funds reached €666 billion, or 22 per cent of total European UCITS industry indicating a strong investor acceptance.⁶⁷⁹ French money market funds accounted for over half of the total European money market fund assets followed by Luxembourg and Italy. Exhibit 8 illustrates the relative size of the money market funds by country of assets domicile at the end of the first quarter of 2003.⁶⁸⁰

Exhibit 8: Size of European money market funds by home-domiciled assets

⁶⁷⁹ DELBECQUE, EFAMA Q1 2003 *supra* note 634 at 3.

⁶⁸⁰ European Investment Fund Industry in Q1 2003 *supra* note 634 at 9. The available data provides county allocation by the assets domicile, but not by the fund domicile, *e.g.*, Ireland is not represented on Exhibit 8 due to immaterial money market fund assets actually located in Ireland.



As explained in the previous section, historically European money market funds employed a wide range of investment practices driven by the structure of the national capital markets and, therefore, had different risk profiles. Prior to the introduction of a common definition of European money market funds in July 2011, European money market funds were generally divided into three broad categories.⁶⁸¹ First, there were *liquidity* – or *treasurer* – money market funds that sought principal preservation and provided on-demand liquidity at par.⁶⁸² Second, there were *regular* European money market funds aimed at tracking short-term interest rates. Third, there were other European money market funds with a somewhat broader investment mandate seeking to provide additional yield over the short-term interest rates. Hence, these funds were often referred to as *enhanced* money market funds.⁶⁸³ Exhibit 9 illustrates the

⁶⁸¹ See generally BAKLANOVA, (2010b) *supra* note 344.

⁶⁸² These funds are also often referred to as the *US-style* money market funds or *offshore* money market funds indicating their domiciliation outside the US. It is amusing that despite the majority of these funds' domiciliation in the Europe's leading fund administration *onshore* jurisdictions such as Ireland and Luxembourg it is an industry's tradition to refer to such funds as *offshore* money market funds. That said there is a number of the *US-style* money market funds established in the 'true' *offshore* domiciles such as Cayman Islands or Bermuda.

Another semantic detail is that the *treasurer* money market funds in the context of European money market funds have nothing in common with those *US Treasury* money market funds. One would refer to *treasurer* money market funds in Europe in case of funds that are mainly purchased by *corporate treasurers*, while a reference to the *US Treasury* money market funds assumes investment policies of such funds targeted at investments in the *US Treasury* securities.

⁶⁸³ In the context of French money market funds, certain *dynamic* and *dynamic plus* money market funds could fall in to this category. See section 4.2.1 *supra*.

funds' classification in the order of priorities in terms of capital preservation, liquidity and yield, giving their varying investment objectives.

Exhibit 9: European money market funds by investment objectives⁶⁸⁴

Types of money market funds	<i>Liquidity</i>	<i>Regular</i>	<i>Enhanced</i>
Primary Objective	Capital Preservation	Capital Preservation	Yield
Secondary Objective	Liquidity	Yield	Capital Preservation
Tertiary Objective	Yield	Liquidity	Liquidity

The difference in classification type related mainly to the differences in the market performance. For example, the benign interest rate environment prevailing since 2002 to early 2007 has encouraged the growth of *enhanced* money market funds.⁶⁸⁵ Yield enhancement was generally achieved through extension of credit to high quality mortgage-backed and asset-backed securities or investment grade corporate issuers.⁶⁸⁶ However, the deterioration in credit quality of mortgage-backed securities starting in 2006 exposed *enhanced* and *dynamic* money market funds to substantial losses.⁶⁸⁷ For example, BNP Paribas blamed “the complete evaporation of liquidity” for its decision of temporary suspending redemptions in its three *dynamic* money

⁶⁸⁴ Fund classification offered in exhibit 6 did not amount to a regulatory definition, but was used rather loosely as an industry jargon. Meaning of the presented factors could vary depending on the fund's domicile. The European Securities and Markets Authority introduced a common definition of European money market funds in July 2011. See CESR's Guidelines *supra* note 9. See also, EFAMA and IMMFA Recommendation for a European Classification and Definition of Money Market Funds (European Fund and Asset Management Association / Institutional Money Market Fund Association 8 July 2009) at 7. The recommendation letter provided one of the versions for the European money market fund classification system. The version presented in this chapter is substantially similar to the one offered in the letter.

⁶⁸⁵ These funds were also known as *dynamic* money market funds in France. However, because no precise classification of French money market funds existed, some of these funds could also be classified as *dynamic plus* money market funds implying that these funds are taking on slightly more credit and/or interest rate risk relative to those *dynamic* funds. See POIZOT, et al., (2006) *supra* note 209 at 3.

⁶⁸⁶ *Id.* at 3. Between 2002 and 2006, *dynamic* and *dynamic plus* money market funds outperformed *regular* money market funds by 60 basis points and 250 basis points, respectively.

⁶⁸⁷ FCIC Report *supra* note 27 at 221 – 223. Major rating agencies conducted numerous downgrades of mortgage-backed securities; e.g., Moody's downgraded 83% of Aaa-rated tranches of mortgage-backed securities originated in 2006. Nearly all investment grade tranches originated in the second half of 2007 were downgraded.

market funds.⁶⁸⁸ Two *dynamic* money market funds managed by AXA Investment Management lost approximately 13 per cent of their assets within just two trading days in July 2007.⁶⁸⁹ Notably, these funds were misconstrued by investors as low risk money market funds.⁶⁹⁰ In July 2007, another French asset manager ODDO announced that it would close and dissolve three of its *enhanced* money market funds.⁶⁹¹

It is because of these obvious differences in market performance amongst different types of money market funds in the EU encouraged the belief that it is plausible to provide a mechanism to protect investors by administering specifically designed investment rules. In retrospect, the credit deterioration in the *enhanced* money market fund segment in France served as the warning bell of the financial crisis.⁶⁹² Indeed, on the next day after BNP Paribas suspended redemptions the Federal Reserve announced that it would “provide liquidity as necessary to facilitate the orderly functioning of financial markets”.⁶⁹³ The European Central Bank took steps to normalise the markets by injecting €47.7 billion through its open market operations and soon announced a supplementary longer-term refinancing programme to support the functioning of the

⁶⁸⁸ BNP Paribas Investment Partners temporarily suspends the calculation of the Net Asset Value of the following funds : Parvest Dynamic ABS, BNP Paribas ABS EURIBOR and BNP Paribas ABS EONIA (BNP Paribas Investment Partners / Press release 9 August 2007) *See also* KATE BURGESS, *BNP reopens funds that sparked crisis*, Financial Times 24 August 2007. The funds had over 90 per cent of their portfolios invested in securities rated AAA and AA.

⁶⁸⁹ KATE BURGESS, *AXA IM defends funds with own money*, Financial Times 2 August 2007.

⁶⁹⁰ GILLIAN TETT, *Subprime woe produces some unexpected casualties*, *see id.* at 3 August 2007. Investors perceived these funds as stodgy, safe bet, but the loss of value in AXA’s funds raised a bigger question of how many other surprises are hidden in similar funds. AXA Investment Management, defending its reputation, investing €740 million (\$1 billion) of its own money in these funds to reduce investors’ losses. *See* RENÉE SCHULTES & HARRY WILSON, *AXA picks up tab on sub-prime fund*, Financial News 2 August 2007.

⁶⁹¹ Fonds monétaires dynamiques: point de la situation (ODDO Asset Management / Press release 6 September 2007). Assets of the funds – Oddo Cash Titrisation, Oddo Cash Arbitrages and Oddo Court Terme Dynamique – were later sold in two stages. First, marketable assets were sold immediately; assets whose values were *hard to obtain* were expected to be sold as the market conditions permit. There first two funds only had 50 per cent of their assets in marketable securities. *See also*, NEIL UNMACK & JACQUELINE SIMMONS, *Oddo to Shut Three Funds ‘Caught Out’ by Credit Rout*, Bloomberg 31 July 2007. The closed funds held approximately 15 per cent of their assets in the US collateralised debt obligations.

⁶⁹² FCIC Report *supra* note 27 at 251 – 252. The significance of the BNP Paribas’s funds closures is evidenced by the fact that the US Financial Crisis Inquiry Commission’s report included an entire section focused on these funds and entitled “BNP Paribas: “The Ringing of the Bell”.

⁶⁹³ The Federal Reserve is providing liquidity to facilitate the orderly functioning of financial markets. (Board of Governors of the Federal Reserve System / Press release 10 August 2007)

euro money market.⁶⁹⁴ Money market funds in other European countries have not been featured in the section of negative market news as prominently as French funds.

The bankruptcy of Lehman Brothers in September 2008 and the resulting liquidity crisis in the US money market funds and short-term markets put considerable pressure on European money market funds. In the fourth quarter of 2008 institutional investors withdrew over €45 billion from European money market funds.⁶⁹⁵ These redemptions gave rise to the market dynamic similar to that experienced by the US money market funds and their investors.⁶⁹⁶ When money market funds sought to raise cash to meet the redemptions and attempted to sell portfolio assets, the short-term market could not absorb all securities offered for sale and went into standstill. At the same time corporate issuers were unable to re-issue their commercial paper coming due because of a lack of money market fund investors. A funding source for corporations through money market funds had evaporated with negative consequences for the real economy.⁶⁹⁷

In the fall of 2008 European money market fund sponsors have come to rescue their funds once again. Société Générale, Deutsche Bank, Credit Suisse, among others made considerable injections to their money market funds in order to protect fund investors from losses.⁶⁹⁸ There were, however, fund families unable to support their money market funds – those lacking ‘a deep pocket’ of a bank affiliation or themselves facing a financial distress. For example, the *US-style liquidity* money market funds managed by Lehman Brothers Asset Management had to suspend redemptions to prevent a run.⁶⁹⁹ Investors in money market funds

⁶⁹⁴ Supplementary longer-term refinancing operation (European Central Bank / Press release 22 August 2007)

⁶⁹⁵ Annual Report 2008 - 2009 (European Fund and Asset Management Association June 2009) at 9.

⁶⁹⁶ Chapter 3 *supra*.

⁶⁹⁷ Chapter 2 *supra*.

⁶⁹⁸ *See, e.g.*, Deutsche Bank provides update on fourth quarter 2008 performance (Deutsche Bank / Press release 14 January 2009). The bank announced that it anticipates “a fourth quarter [of 2008] loss ... related to ... injections into money market funds”. *See also* Commission de Surveillance du Secteur Financier - Annual Report 2008 (1 March 2009) at 49. The Commission de Surveillance du Secteur Financier, the Luxembourg prudential regulator and financial supervisory authority, reported that in 2008 “certain money market funds had to temporarily take out short-term loans to finance their redemptions”.

⁶⁹⁹ Lehman Brothers Liquidity Funds Plc, an Irish Based UCITS Fund, Announces Temporary Suspension of Dealings in the Shares of its Cash Funds (Lehman Brothers Liquidity Funds Plc / Press release 19 September 2008).

managed by Lehman Brothers Asset Management feared a contagion from the affiliated investment bank, rather than concerns with the funds' intrinsic credit quality.⁷⁰⁰ A number of money market funds suspended redemptions, but ultimately paid shareholders in full.⁷⁰¹

Responses of national regulators to liquidity squeeze in money market funds appear to be correlated with the size of the *domestic* money market fund industry and importance of these funds to the *domestic* capital markets.⁷⁰² Luxembourg government demonstrated its commitment to the money market fund industry declaring that “the Luxembourg Central Bank will take all necessary steps to secure the liquidity of money market funds established under Luxembourg law”.⁷⁰³ German Bundesbank also announced that it will take all necessary steps to secure liquidity in money market funds and near-money market funds established under German law.⁷⁰⁴ The crisis management measures of other national governments varied causing concerns to financial regulators on the European level of potential inadequacy of unilateral actions.⁷⁰⁵ At the height of financial crisis in October 2008, the European asset management industry associations

⁷⁰⁰ *Id.* Dealings in shares of all three sub-funds – the Lehman Brothers Euro Liquidity Fund, the Lehman Brothers Sterling Liquidity Fund and the Lehman Brothers US Dollar Liquidity Fund – were suspended due to an unprecedented level of redemption requests caused by the bankruptcy filing of the parent company Lehman Brothers on 15 September 2008. The directors of the funds believed that suspension of dealings is necessary to avoid having to sell portfolio securities that the funds would not otherwise sell. Such sales as a result of the market liquidity restraints would have caused the funds to incur losses.

⁷⁰¹ SHILLING, MMF Support Report *supra* note 156 at 1. One of the fund sponsors unable to provide support to its *US-style* money market funds was Reserve Management, whose flagship US money market fund broke the buck on 16 September 2008. Reserve Management has also managed International Liquidity Fund, an *off-shore* money market fund organised in the British Virgin Islands. This fund had exposure to defaulted commercial paper issued by Lehman Brothers, which cause the fund closure and liquidation. Because of its island domicile, this fund is beyond the scope of this chapter.

⁷⁰² This conclusion is also supported by the actions of the US government that provided the most significant support to the US money market funds including issuing a temporary government guarantee covering investment in the US money market funds. *See* chapters 2 and 3 *supra*.

⁷⁰³ JEAN-CLAUDE JUNCKER, Déclaration du gouvernement luxembourgeois sur les Fonds du marché monétaire (Le gouvernement Luxembourgeois / Communiqué 14 octobre 2008).

⁷⁰⁴ German government measures: Package of measures to stabilise the financial markets and avoid adverse effects on the real economy (European Banking Authority / News from EBA members 13 October 2008).

⁷⁰⁵ JAMES K. JACKSON, The Financial Crisis: Impact on and Response by The European Union (US Congressional Research Service / Report for Congress 24 June 2009) at 4. The report reviewed, among other paragraphs, the current regulatory architecture of the EU and noted that “each EU member has its own institutional and legal framework for regulating its banking market, and national supervisory authorities are organized differently by each EU country with different powers and accountability”. Thus, beyond vague statements of common goals, a process of achieving specific coordinated actions is prone to lack of consensus.

engaged in discussions with the European Central Bank to structure a support programme for European money market funds although the industry lobby failed to bring about the desired regulatory actions.⁷⁰⁶

The two tumultuous periods of European money market funds in the fall of 2007 and in the fall of 2008 show that different degrees of risk taking in money market fund management strategies led to different levels of losses for investors. Those money market funds pursuing conservative investment strategies, which were mainly the *US-style liquidity* money market funds, weathered the financial crisis with no losses of capital to investors and only minimal loss of liquidity. However, money market funds investing in instruments with relatively high maturity and low credit quality and/or taking material exposures to relatively new types of financial instruments with unproven trading history sustained substantial losses.⁷⁰⁷ While both approaches have historically co-existed in the European money market fund industry, they clearly presented a challenge for regulators to conduct a meaningful oversight and also concerns were raised whether a two-tier industry structure could contribute to risk misrepresentation to investors.⁷⁰⁸

As a part of a broader reform of financial regulation, the de Larosière's Group report issued in February 2009 attempted to address these concerns by establishing "a much stronger coordinated supervision for all financial actors in the European Union", which included establishing a common definition for European money market funds.⁷⁰⁹ Following the de Larosière's Group recommendations, European asset management trade associations took an inventory of the existing European money market fund practices and proposed a two-tier

⁷⁰⁶ EFAMA Annual Report 2008 - 2009 *supra* note 695 at 12 – 14. The report describes the initiatives undertaken by the European Fund and Asset Management Association together with the Institutional Money Market Fund Association to achieve coordinated pan-European response to the liquidity crisis in money market funds. The industry proposals involved structuring a money market fund support programmes similar to those implemented in the US. *See* chapter 3 *supra*.

⁷⁰⁷ EFAMA and IMMFA Recommendation *supra* note 684 at 7.

⁷⁰⁸ *See* section 2.2 *supra* explaining money market fund categories. A two-tier structure references to a co-existence of *constant* net asset value money market funds and *floating* net asset value money market funds in Europe. Generally, *constant* net asset value money market funds are managed to more conservative investment guidelines, while *floating* net asset value money market funds operate under a broader investment mandate. *See Id.* at 4.

⁷⁰⁹ The High-Level Group on Financial Supervision in the EU Report (The de Larosière Group 25 February 2009) [The de Larosière Group's Report] at 4 and 26. The report highlights a particular need for a common pan-European definition of money market funds and a stricter codification of the assets in which they can invest in order to limit investment risks in these funds.

classification system allowing for two types of money market funds in Europe.⁷¹⁰ This proposal served as one of the main sources for the Committee of European Securities Regulators to develop its guidelines for a common definition of European money market funds published in 2010 and implemented in 2011.⁷¹¹ The next section offers a detailed analysis of these guidelines and other existing definitions of European money market funds against the backdrop of the overarching regulatory framework for collective investment schemes at the Community and national levels.

4.3 Money market fund regulation in the EU

The perceived need to regulate money market funds in Europe has been made most explicit on the EU level and it has been seen in a number of normative documents. I limit the discussion to what I consider to be the primary legislation of relevance to money market funds administered throughout the EU. Specifically, the Undertakings for Collective Investment in Transferable Securities Directive, known as “the UCITS Directive”,⁷¹² the Markets in Financial Instruments Directive, known as “the MiFID”,⁷¹³ and the CESR’s Guidelines on a common definition of European money market funds, referred in this thesis as “the CESR’s Guidelines”,⁷¹⁴ which are currently administered by the European Securities and Markets Authority, represent the primary sources of harmonised rules for European money market funds. In addition, certain aspects of the European Central Bank regulation are relevant to money market funds.

It appears that the motive for development of the Single Market for financial services in the EU and the related quest for harmonisation of regulation and oversight drives the policy debate towards providing regulation that controls investment activities and operations of money

⁷¹⁰ See, e.g., EFAMA and IMMFA Recommendation *supra* note 684. In addition to two *permanent* types of money market funds, the proposal included a temporary category of *other* money market funds seeking to grandfather a two-year grace period for the riskiest types of European money market funds.

⁷¹¹ CESR’s Guidelines *supra* note 9.

⁷¹² Directive 2009/65, [2009] OJ L302/32

⁷¹³ DIRECTIVE 2004/39/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 April 2004 on markets in financial instruments amending Council Directives 85/611/EEC and 93/6/EEC and Directive 2000/12/EC of the European Parliament and of the Council and repealing Council Directive 93/22/EEC (OJ L145/1 30 April 2004).

⁷¹⁴ CESR’s Guidelines *supra* note 9.

market funds throughout Europe. However, as opposed to the elevated profile of the money market fund-related debate at the EU level, it appears that this issue is rather insignificant for the great majority of national regulators. This could be explained by a relatively limited size of the local money market fund industries with notable exceptions of France, Ireland and Luxembourg and a negligible impact of these funds on the capital market activities in the majority of the EU countries.⁷¹⁵ Given this discussion, it is not surprisingly that the development of targeted regulation of money market funds at the member states' levels has been viewed as hardly a necessity. The following sections examine how investment activities, marketing and distribution of money market funds in the EU are affected by the existing regulatory framework and by the norms developed by non-governmental actors such as the Institutional Money Market Fund Association, known as "the IMMFA" and credit rating agencies.

4.3.1 UCITS framework

The UCITS Directive refers to a series of the EU directives establishing a common regulatory framework for marketing collective investment schemes throughout Europe.⁷¹⁶ Adopted in 1985, the UCITS Directive is considered one of the most significant accomplishments in establishing European single market and promoting European investment funds globally.⁷¹⁷ While the UCITS Directive does not target money market funds specifically, it still serves as a primary source of harmonised rules at the Community level applicable to European money market funds registered under the UCITS brand. There are, however, two general limitations of the UCITS regulatory framework regarding money market fund regulation. First, as explained later in this section, generic investment parameters established under the UCITS regime are too broad and, in and by itself, do not meet the spirit of a low risk investment product that is a money market fund. Second, a UCITS authorization is not compulsory. At the

⁷¹⁵ Exhibit 8 *supra*.

⁷¹⁶ Directive 2009/65, [2009] OJ L302/32

⁷¹⁷ JEAN-PIERRE CASEY & KAREL LANNOO, *Pouring Old Wine in New Skins: UCITS and Asset Management in the EU after MiFID*, CEPS-ECMI Task force report (2008) at 5.

end of 2010 approximately 25 per cent of European investment funds, including some money market funds, were established outside the UCITS brand.⁷¹⁸

Since its adoption, the UCITS Directive has undergone a number of adjustments. The initial version known as UCITS I was criticized for “unduly limiting the universe of eligible assets”.⁷¹⁹ In 2002 the original UCITS Directive was modified into the Management Directive and the Product Directive, collectively known as UCITS III.⁷²⁰ The Management Directive sought to give a “European passport” to UCITS management enabling them to operate throughout the EU.⁷²¹ The Management Directive also introduced a simplified prospectus, tightened up risk management frameworks and increased managers’ capitalisation requirements.⁷²² The Product Directive expanded a set of eligible investments to include derivatives and to allow certain new types of funds.⁷²³ The combined UCITS III Directive was intended to widen consumer choice and provide better investor protection. On 13 January 2009 the European Parliament approved the UCITS IV Directive that sought to further improve the regulatory framework for UCITS funds.⁷²⁴

⁷¹⁸ Quarterly Statistical Release No. 44 (European Fund and Asset Management Association 2011) at 3. European investment schemes that are not authorized under the UCITS and not subject to its investment and operational restrictions are still subject to national laws and regulations.

⁷¹⁹ DALE GABBERT, Europe’s Chance to Put Right UCITS Errors (International Finance Law Review June 2005) at 2. Specific to the subject of this study, deposits in banks not considered as *transferable securities* disadvantaged money market funds willing to operate under the UCITS brand relative to other investment schemes. UCITS could only hold such instruments as *ancillary liquid assets* although no limits on holdings of these assets were established.

⁷²⁰ The rise of UCITS III (BlackRock ViewPoints September 2010) at 1. The report explained that the second draft directive – UCITS II – was developed to rectify issues that were hampering implementation of UCITS I. However “extended political arguing between EU countries caused it to be abandoned”.

⁷²¹ DIRECTIVE 2001/107/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) with a view to regulating management companies and simplified prospectuses (OJ L41/20 13 February 2002).

⁷²² The rise of UCITS III *supra* note 720.

⁷²³ DIRECTIVE 2001/108/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 21 January 2002 amending Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS), with regard to investments of UCITS (OJ L41/35 13 February 2002).

⁷²⁴ Directive 2009/65, [2009] OJ L302/32

Essential for establishing a harmonised investment product, the UCITS IV Directive outlines a general framework for investment schemes operating under the UCITS brand. First, a UCITS must operate on a *principle of risk spreading*.⁷²⁵ Second, a UCITS must be open-ended, *i.e.*, investors should be able to redeem shares or units on demand. Third, a UCITS must be liquid.⁷²⁶ Fourth, assets must be entrusted to an independent custodian or depositary and held in a separate account on behalf of investors.⁷²⁷ The UCITS-authorized money market funds adhere to these common product rules notwithstanding their long-standing differences in investment management culture, national tax laws and regulatory regimes discussed in section 4.2.

In full accord with the general UCITS framework, money market funds operating under the UCITS brand seek to offer investors a convenient way to invest collectively in money market securities on the principle of risk spreading. The Product Directive, amending the scope of allowable investments to include money market securities, facilitated the use of the UCITS concept by European money market funds.⁷²⁸ In addition, in 2007 an implementing directive was adopted that allowed *inter alia* asset-backed securities and European commercial paper for the UCITS investments.⁷²⁹ Thus, besides its focus on facilitating cross-border distribution, the

⁷²⁵ The UCITS Directive spells out specific limits on how the spread of investments and an allowable level of leverage.

⁷²⁶ The underlying assumption of the UCITS Directive is that *transferable* securities, or those traded on organised exchanges are *liquid* securities. An asset manager must be able to sell fund assets in the secondary market to raise enough cash to meet redemptions in the fund and make payment for these redemptions at least on the next day. In practice, the vast majority of money market funds market themselves as being able to make payment for redemptions daily. *See also* The rise of UCITS III *supra* note 720.

⁷²⁷ JEAN-PIERRE CASEY, Eligible assets, investment strategies and investor protection in light of modern portfolio theory: Towards a risk-based approach for UCITS (European Capital Markets Institute Policy Brief No. 2 September 2006) at 11. The following safeguards, imbedded in the UCITS Directive, also referred to as “the six pillars of investor protection in the asset management industry” are: authorization rules; risk management framework; management of conflicts of interest; information disclosure; regulatory and third-party oversight; and quality and integrity of investment professionals.

⁷²⁸ Directive 2009/65, [2009] OJ L302/32 at Section I. The UCITS Directive defines ‘money market instruments’ as those “normally dealt in on the money market which are liquid, and have a value which can be accurately determined at any time.” In addition, two other mainstays of money market fund portfolios, short-term deposits with credit institutions and, to a lesser degree, units of other UCITS are considered UCITS-eligible investments. In addition, UCITS funds may invest up to 10 per cent of their assets in securities other than those described in the above thus providing money market funds with flexibility regarding the balance of their investment portfolios.

⁷²⁹ COMMISSION DIRECTIVE 2007/16/EC of 19 March 2007 implementing Council Directive 85/611/EEC on the coordination of laws, regulations and administrative provisions relating to

UCITS Directive laid out a set of standards related to eligible asset types and risk exposures in registered investment schemes. Specifically, the UCITS Directive sought to limit credit risk by restricting exposures to a single issuer, a counterparty and a group of affiliated issuers as well as investments in other UCITS.

It should be noted that despite its detailed investment guidance, the UCITS Directive delegates considerable powers to Member States with respect to local implementations of its prudential rules. Exhibit 10 illustrates what investments are allowed under the UCITS regime and what adjustments can be made by at a national level.⁷³⁰

Exhibit 10: Selected investment rules codified in the UCITS Directive⁷³¹

	<i>General</i>	<i>Maximum Adjustment</i>
Maximum single issuer exposure (% of assets)	5%	--up to 10% for no more than 40% of assets --up to 35% if issued or guaranteed by a Member State, or its local authorities, or a governmental international body --by way of derogation, up to 100% if issued or guaranteed by a Member State, or its local authorities, or a governmental international body --up to 25% for a bond issuer that is Member State's credit institutions subject to prudential standards up to a maximum of 80% of assets
Maximum investments in deposits with the same entity (% of assets)	20%	
Maximum cumulative investments in a single entity through securities, deposits and/or derivative exposure (% of assets)	20%	--up to 35%, but only for a single issuer, if justified by exceptional market conditions in particular highly concentrated markets

undertakings for collective investment in transferable securities (UCITS) as regards the clarification of certain definitions (OJ L79/11 20 March 2007).

⁷³⁰ Directive 2009/65, [2009] OJ L302/32 Note that exhibit 10 lists only those rules directly relevant to money market fund investment practices.

⁷³¹ The table in exhibit 10 is my own elaboration.

Maximum investments in another single UCITS (% of assets)	10%	--up to 20%
Total maximum investments in other UCITS (% of assets)	30%	--may not require this limit
Maximum investments in non-listed securities (% of assets)	10%	
Maximum borrowing limit, for temporary purposes only (% of assets)	10%	

Given the UCITS IV Directive's flexibility with respect to transposition to national laws, local versions of these prudential rules may vary reflecting the structure of national capital markets. In addition, as mentioned earlier, investment limitations of the UCITS IV Directive that were designed to address a wide range of investment products may not be sufficient to adequately restrict credit, market and liquidity risks in money market funds. Therefore, while achieving a great deal for a broad harmonisation of European investment practices, the UCITS IV Directive was viewed as an insufficient tool to substitute for targeted pan-European money market fund regulation. The European Securities and Markets Authority, a successor of the Commission of European Securities Regulators, has become the regulatory body in charge of administering and enforcing guidelines related to a common definition of European money market funds.⁷³² Section 4.3.4 analyses these guidelines and reports on their implementation across Member States.

4.3.2 MiFID definition

The market in Financial Instruments Directive 2004/39/EC, known as MiFID, seeks to provide harmonised pan-European regulation for investment services.⁷³³ Its relevance for European money market funds is mostly in MiFID's focus on safeguarding of clients' assets and

⁷³² CESR's Guidelines *supra* note 9.

⁷³³ Directive (EC) 2004/39, [2004] OJ L145/1 .

providing investment firms with adequate options for clients' cash management.⁷³⁴ To achieve this end, the MiFID incorporates a definition of those money market funds deemed appropriate for a temporary placement of un-invested cash balances.⁷³⁵ Specifically, the implementing directive spells out specific legal structure and portfolio parameters of *qualifying* money market funds, which could be UCITS harmonised or non-harmonised investment undertakings with a primary investment objective of preserve investors' capital.⁷³⁶

The implementing directive further prescribes specific investment parameters of a *qualifying* money market fund and requires same or next day liquidity.⁷³⁷ These parameters are largely consistent with investment and operating practices of the *US-style liquidity* money market funds thus promoting a wider acceptance of these funds as a cash management alternative to bank deposits. Other types of European money market funds appear to be unqualified for this purpose under the definition set forth by the MiFID.

4.3.3 European Central Bank

In order to fulfil its supervisory task the European Central Bank *inter alia* takes stock of balance sheet items of the Community's monetary financial institutions.⁷³⁸ Shares/units of money market funds are subject to reporting requirements under this regulation aimed at collecting monetary statistical information.⁷³⁹ Given lack of a uniformly accepted definition of European money market funds prior to the guidelines on a common definition being introduced in 2011,

⁷³⁴ *Id.* at Article 13(8). MiFID in its Level 1 Directive requires investment firms to make adequate arrangements to safeguard client rights and "prevent the use of client funds for its own account".

⁷³⁵ Directive 2006/73, [2006] OJ L 241/26 at Article 18(1)(d). MiFID requires investment firms receiving any client funds to promptly place those funds into an account opened with a bank, a credit institution or a *qualifying* money market fund.

⁷³⁶ *Id.* at Article 18(2)(a). A *qualifying* money market fund could be offering *constant* net asset value per share or *accumulating* shares. Constant net asset value money market funds price their shares net of earnings. Accumulating share classes do not pay out, but accumulate capital gain and interest income. In case of accumulating share classes, a *qualifying* money market fund must maintain the net assets value of the undertaking at the value of the investors' initial capital plus earnings.

⁷³⁷ *Id.* at Article 18(2)(b)-(c). The major investment parameters of *qualifying* money market funds are as follow: (1) the funds must invest exclusively in high quality money market instruments generally maturing within 397 days; (2) the weighted average maturity of a *qualifying* money market fund portfolio must be limited to 60 days.

⁷³⁸ Council Regulation (EC) No 2533/98 of 23 November 1998 concerning the collection of statistical information by the European Central Bank (OJ L318/8 27 November 1998).

⁷³⁹ Regulation (EC) No 2423/2001, [2001] OJ L333/1 at Part 2, Table A.

the European Central Bank has developed its own approach to analysing this type of investments and provided a definition to be used strictly in connection with the collection of banks' balance sheet statistical information.

Under this definition money market funds are collective investment undertakings that are “close substitutes for deposits and which primarily invest in money market instruments...with a residual maturity of up to one year”.⁷⁴⁰ The European Central Bank also prescribed a process under which the definition could apply. It recommended analysing fund prospectuses and other documents of incorporation in order to establish whether a particular investment undertaking meets the definition.⁷⁴¹ Bank holdings in those money market funds meeting the European Central Bank's definition are deemed to be a reportable item by European monetary financial institutions.

4.3.4 European Securities and Markets Authority

This section is focused on the main source of the targeted money market fund regulation in the EU, namely the CESR's Guidelines for a common definition of European money market funds currently administered by the European Securities and Markets Authority.⁷⁴² Established in January 2011, the European Securities and Markets Authority took over regulatory and oversight responsibility of the Committee of European Securities Regulators.⁷⁴³ Relevance of the European Securities and Markets Authority to money market funds is multi-pronged and includes issuances of guidelines concerning investment and operational practices as well as information transparency.⁷⁴⁴ Importantly for money market funds, the guidelines legalised amortised cost

⁷⁴⁰ *Id.* at Annex 1, Part 1, (I)(6).

⁷⁴¹ *Id.* at Annex 1, Part 1, (I)(6).

⁷⁴² CESR's Guidelines *supra* note 9.

⁷⁴³ REGULATION (EU) No 1095/2010 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC (OJ L331/84 15 December 2010)

⁷⁴⁴ Regarding the eligibility of investments, in March 2007 the Committee of European Securities Regulators issued Level III guidelines concerning eligibility of securities for investments by UCITS, which further reinforced eligibility of money market instruments for collective investment undertakings thus facilitating creation of European money market funds under the UCITS brand. *See* CESR's guidelines concerning eligible assets for investment by UCITS (Committee of European Securities Regulators March 2007) [Eligible Assets Guidelines] at 7. The guidelines clarified that “treasury and local authority bills, certificates of deposit, commercial paper, and banker's acceptances will usually

valuation for money market instruments by all UCITS provided that amortised cost valuation “will not result in a material discrepancy between the value of an instrument and its amortized cost value”.⁷⁴⁵

The guidelines further advised to monitor potential discrepancies between the market-based value of portfolio assets and their amortized cost to avoid *material* discrepancies between these two values. Furthermore, shares or units of those UCITS that invest solely in high quality short maturity instruments may be valued at amortised cost.⁷⁴⁶ This guideline mimics, albeit in a general and simplified way, the valuation approach employed by the US money market funds. Nonetheless, the Commission of European Securities Regulators’ guideline does not define parameters of *material* discrepancies thus UCITS including European money market funds may potentially have varying thresholds of materiality.⁷⁴⁷ Thus, in theory, valuations may vary radically depending on individual fund practices defined a material discrepancy is. Given this example, I would like to underscore an imbedded lack of specificity in the EU regulatory documents underlying the market infrastructure, which, in effect, contradicts to the thrust for development a uniformed regulatory regime in financial services.

Most importantly from the perspective of the money market fund industry is the European Securities and Markets Authority’s function of administering and enforcing a common definition of European money market funds that came into effect in July 2011.⁷⁴⁸ As explained in the previous sections, European money market fund definitions used prior to 2011 were developed by the European Central Bank and MiFID and describe these funds as collective

comply with the criterion of “normally dealt in on the money market”. In addition, the same guidelines advised on factors to consider while assessing liquidity of a UCITS portfolio such as frequency of trading, number of dealers/market-makers, size of the issuance and any repurchase or put features. At the portfolio level, in order to fulfil the Directive’s requirement of constant repurchase of UCITS’s units the following factors should be considered: the nature and the concentration of the unit holders, their cash flow patterns and, where appropriate, limitations on massive withdrawals.

⁷⁴⁵ *Id.* at 8. The guidelines state that valuing a money market security with “a residual maturity of less than three months and with no specific sensitivity to market parameters, including credit risk” at amortized cost would be appropriate.

⁷⁴⁶ *Id.* at 8. More specifically, the guideline defines eligible UCITS as those investing “solely in high-quality instruments with, as a general rule, a maturity or residual maturity of at most 397 days or regular yield adjustments within 397 days... and with a weighted average maturity of 60 days”.

⁷⁴⁷ *Supra* note 6. Rule 2a-7 governing the US money market funds defines a deviation between amortised cost-based net asset value per share and its market-based value of 50 basis points as material.

⁷⁴⁸ CESR’s Guidelines *supra* note 9.

investment schemes akin to bank demand deposits. These definitions were tailored to the tasks of the respective organisations, but did not mean to cover the entire diverse landscape of European money market funds. In May 2010, the Committee of European Securities Regulators issued the guidelines on a common definition, which codified specific portfolio management and operational rules deemed appropriate for European money market funds.⁷⁴⁹ Given the diversity of these funds analysed in section 4.2, the guidelines provided for a flexible two-tier structure of the European money market fund industry.

The two-tier structure sought to legalise different kinds of money market funds in the European marketplace and assist investors in distinguishing between two major types of money market funds: those holding short-dated securities and those investing in relatively longer-dated assets.⁷⁵⁰ Any investment schemes marketing itself as a *money market fund* must now conform to the definitions of either a *short-term money market fund* or a *money market fund* established by the European Securities and Markets Authority.⁷⁵¹ It was expected that the great majority of European money market funds would be able to meet the standards of a common definition with an exception of *enhanced* money market funds, which generally operate under less restrictive credit and interest risk standards than those deemed appropriate under the guidelines.⁷⁵² The majority of the *US-style liquidity* money market funds were expected to fall into the *short-term money market fund* category and *regular* money market funds were expected to fall into the *money market fund* category. This structure illustrates the divergence of market segments.

Notwithstanding the differences in risk profiles of the two fund types, both categories of money market funds must meet three requirements. First, the primary objective of the fund must be to maintain principal and provide returns in line with money market rates.⁷⁵³ Second, the fund must invest in money market instruments that comply with criteria set out under the UCITS IV

⁷⁴⁹ *Id.*

⁷⁵⁰ Changes to European Money Market Fund Definitions (JP Morgan Asset Management 2011).

⁷⁵¹ CESR's Guidelines *supra* note 9 at 3. Funds operating prior to 1 July 2011 were allowed for a six-month transitional period until 31 December 2011. The semantics of the definition is indeed confusing as a general reference to *any* money market fund could be confused with a reference to that less restrictive *money market fund* category. Thus, the market promptly adopted referring to the less restrictive money market funds as *regular money market funds*, while referring to the most restrictive money market funds as *short-term money market funds*.

⁷⁵² *Id.* at 6.

⁷⁵³ *Id.* at Box 2, paragraph 1 and Box 3, paragraph 1.

Directive or in deposits with credit institutions.⁷⁵⁴ Third, the fund must provide daily price calculations and daily liquidity.⁷⁵⁵ Definitional standards related to quality, diversification and maturity applicable to both fund categories are presented in Exhibit 11. These standards apply to all European money market funds regardless of the country of domicile and cover both UCITS-authorized funds and the ones regulated under national laws.⁷⁵⁶

Exhibit 11: Risk-limiting provisions for European money market funds⁷⁵⁷

Elements	Provisions	
	Short-term money market fund	Money market fund
Quality	<u>Subjective standard:</u> Each portfolio holding should be of <i>high quality</i> ⁷⁵⁸	
	<u>Objective standard:</u> A security should not be considered of <i>high quality</i> unless it has been awarded one of the two highest available short-term credit ratings by	In addition, may hold <i>sovereign issuance</i> of at least <i>investment grade quality</i> ⁷⁶⁰

⁷⁵⁴ *Id.* at Box 2, paragraph 2 and Box 3, paragraph 1.

⁷⁵⁵ *Id.* at Box 2, paragraph 6 and Box 3, paragraph 1. Daily liquidity requirement means that the fund must allow daily subscriptions and redemptions of its shares/units. Exception is made for those non-UCITS money market funds marketed solely through employee savings schemes and/or to specific categories of investors. These funds may provide weekly subscriptions and redemptions.

⁷⁵⁶ *Id.* at 3.

⁷⁵⁷ The table in exhibit 11 is my own elaboration.

⁷⁵⁸ CESR's Guidelines *supra* note 9 at Box 2, paragraph 3 and Box 3, paragraph 1. The determination of asset quality is made by management companies, including self-managed schemes and operators of non-UCITS investment undertakings. The guidelines offer a range of factors to consider while making an asset quality determination. These factors include, but not limited to the credit quality, liquidity, the nature of the asset class and specific risks inherent within the structured financial transaction. *See also*, Questions and Answers: A Common Definition of European Money Market Funds (European Securities and Markets Authority August 2011) at 5. The regulator expects management companies to conduct an assessment of credit quality in line with provisions of Article 23 of COMMISSION DIRECTIVE 2010/43/EU of 1 July 2010 implementing Directive 2009/65/EC of the European Parliament and of the Council as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company (OJ L176/42 10 July 2010).

	each <i>recognised credit rating agency</i> ⁷⁵⁹	
Maturity	<u>Objective standard:</u> Each security must mature within 397 days ⁷⁶¹ <i>Weighted average maturity</i> may not exceed 60 days ⁷⁶² <i>Weighted average life</i> may not exceed 120 days ⁷⁶³	Each security must mature within two years ⁷⁶⁴ <i>Weighted average maturity</i> may not exceed six months ⁷⁶⁵ <i>Weighted average life</i> may not exceed 12 months ⁷⁶⁶

As one can see from the above table and the following discussion, these rules go some way in establishing certain investment benchmarks, but are not anywhere near of providing guidance for genuine pan-European standardisation. For example, the objective standard of the *high quality* relies on credit ratings assigned by rating agencies.⁷⁶⁷ The guidance does not seek to further spread credit risk in money market funds through any additional diversification requirements above and beyond those imposed by the UCITS IV Directive. Given this approach, those money market funds unauthorised by the UCITS IV Directive could be managed to varying

⁷⁶⁰ CESR's Guidelines *supra* note 9 at Box 3, paragraph 2. *Sovereign issuance* are those securities “issued or guaranteed by a central, regional or local authority or central bank of a Member State, the European Central Bank, the European Union or the European Investment Bank”. See also, *Id.* at 11, paragraph 25. An *investment grade* rating category generally encompasses ratings from AAA to BBB. See, e.g., www.fitchratings.com/Credit Rating Scales.

⁷⁵⁹ CESR's Guidelines *supra* note 9 at Box 2, paragraph 4. See also Q&A: A Common Definition of European Money Market Funds *supra* note 758 at 6. The regulator explains that *recognised credit rating agencies* are those agencies registered in accordance with REGULATION (EC) No 1060/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on credit rating agencies (OJ L302/1 17 November 2009).

⁷⁶¹ *Id.* at Box 2, paragraph 5.

⁷⁶² *Id.* at Box 2, paragraph 7.

⁷⁶³ *Id.* at Box 2, paragraph 8.

⁷⁶⁴ *Id.* at Box 3, paragraph 4. The regulator requires, however that any security not maturing within 397 days would be a floating rate security with the interest rate reset date within 397 days provided that such a security resets to a money market rate index, e.g., LIBOR or EONIA.

⁷⁶⁵ *Id.* at Box 3, paragraph 5.

⁷⁶⁶ *Id.* at Box 3, paragraph 6.

⁷⁶⁷ *Id.* at 9, paragraph 11. This standard must be maintained at all times while the fund holds the security. If the rating no longer complies with the guidelines, a management company must take corrective actions.

diversification requirements based on the national laws and thus exhibiting varying degrees of concentration risk.⁷⁶⁸ Furthermore, (regular) *money market funds* are able to assume higher credit risk through investments in relatively low rated sovereign securities driving the differences in credit profiles between *short-term* and (regular) *money market funds* farther apart.⁷⁶⁹ Thus, extending to the relatively lower spectrum of credit risk, the rule may actually promote greater risk-taking by this type of funds, unfavourably for the fund investors seeking a low-risk investment option.

European money market funds manage their exposure to interest rate and market risk by limiting portfolio maturity. Exhibit 11 points to three tests related to maturity. The first test limits final maturities of all eligible securities to 397 days for *short-term money market funds* and two years for (regular) *money market funds* thus enabling (regular) *money market funds* to assume significantly greater market risk.⁷⁷⁰ The other two portfolio maturity tests are designed to limit interest rate, spread and liquidity risks. Weighted-average portfolio maturity may not exceed 60 days in *short-term money market funds* and six months in (regular) *money market funds* implies that (regular) *money market funds* are able to assume three times higher interest rate risk as compared to *short-term money market funds*.⁷⁷¹ To illustrate, an instant three per cent increase in interest rates would cause a *short-term money market fund* to lose 50 basis points, or a half of one per cent of its assets.⁷⁷² The same three percent increase in interest rates would cause a (regular) *money market fund* to lose 150 basis points, or one and a half of one per cent of its assets.⁷⁷³ For the sake of comparison with the US money market funds, this price volatility

⁷⁶⁸ *Id.* at 3.

⁷⁶⁹ *Id.* at 3. The allowance for investment grade sovereign securities was introduced to accommodate “possible difficulties” that would arise for funds based lower rated European countries and the need for financing of short-term sovereign debt across the European Union.

⁷⁷⁰ *Id.* at 6. The two-tier approach has recognised the historical structure of the European money market fund industry and codified “the distinction between *short-term money market funds*, which operate a very short weighted average maturity and weighted average life, and (regular) *money market funds*, which operate a longer weighted average maturity and weighted average life”.

⁷⁷¹ Weighted-average maturity serves as a measure of portfolio’s modified duration that indicates the change in value of a fixed income security for a given change in the level of interest rates. See STIGUM & CRESCENZI. *supra* note 225 at 85. In this example a fund portfolio as a whole is viewed as a single security.

⁷⁷² *Id.* An assumption is made that a *short-term money market fund* has maximum allowable weighted-average maturity of 60 days.

⁷⁷³ *Id.* An assumption is made that a (regular) *money market fund* has maximum allowable weighted-average maturity of six months.

would be unacceptable by placing it well beyond the materiality threshold of 50 basis point at which the fund boards must consider corrective actions.⁷⁷⁴

The potential for significant loss differential in two types of European money market funds – stemming mainly from the ability of (regular) *money market funds* to extend duration – raised concerns regarding merits of two-tier industry structure from the standpoint of investor protection.⁷⁷⁵ A common definition of European money market funds attempted to address this concern by requiring the funds themselves to indicate to investors what type of money market funds they belong to.⁷⁷⁶ No portfolio information is required to be disclosed to investors under the CESR’s Guidelines, which is, in my view, one of their most significant weaknesses in terms of not doing nearly enough for establishing the *good disclosure* standards, but instead relying on the boiler-plate language of *bad disclosure* that investors routinely ignore.⁷⁷⁷

Notably, the CESR’s Guidelines do not contain any specific liquidity standards either in the context of individual asset liquidity or portfolio liquidity of European money market funds, which could be explained by the fact that the European money market funds’ harmonised definition does not include fund liquidity as an objective.⁷⁷⁸ Instead, liquidity considerations are embedded in the asset credit quality assessment as one of the factors to consider in investment

⁷⁷⁴ Section 3.3.3.3 *supra*.

⁷⁷⁵ JP Morgan Comment to CESR *supra* note 13. JP Morgan Asset Management in its comment letter to the Committee of European Securities strongly disagreed with the proposal of two-tier structure of European money market fund industry. JP Morgan argued that a common definition “should only encompass funds that have short duration, daily liquidity, stable net asset value and invest in high quality money market instruments”. *See also* Feedback Statement *supra* note 112 at 4, paragraph 2. The feedback statement summarising the comment letters to the proposal on a common definition of European money market funds issued by the Committee of European Securities Regulators in October 2009 noted that respondents expressed mixed views related to the proposed names the two categories of money market funds. Some respondents suggested replacing the *longer-term* money market funds denomination with *short-term bond funds*.

⁷⁷⁶ CESR’s Guidelines *supra* note 9 at Box 1, paragraphs 3 and 4. In addition, all European money market funds must indicate in their prospectuses and, in the case of UCITS, in their Key Investor Information Document whether it is a *short-term money market fund* or a (regular) *money market fund*. *See also Id.* at 7.

⁷⁷⁷ *See* sections 1.1.3 and 1.2 *supra* for a discussion of the concept of *good disclosure* used in this thesis.

⁷⁷⁸ CESR’s Guidelines *supra* note 9 Box 1, paragraph 1 and Box 1, paragraph 1.

decisions.⁷⁷⁹ This implies the regulatory view that high quality short-term instruments are generally sufficiently liquid. However, this view ignores credit risk and a lack of secondary market liquidity demonstrated during the financial crisis.⁷⁸⁰

With respect to portfolio-level liquidity, the guidelines rely on Article 51 of the UCITS Directive requiring UCITS to employ a risk management process that enables them “to monitor and measure at any time the risk of the positions and their contribution to the overall risk profile of the portfolio”.⁷⁸¹ Specifically related to money market funds, the risk management process should include “a prudent approach to the management of currency, credit, interest rate and liquidity risk”, and stress testing.⁷⁸² Finally, with respect to liquidity of money market fund shares, the guidelines document refers to national authorities to establish an appropriate settlement process aligned with local practices.⁷⁸³ Thus, as shown in this section, in establishing investment management framework for European money market funds, regulators were mainly focused on issues of credit and interest rate risk exposure in individual funds, but not very concerned with developing regulatory parameters that would promote the market for European investors. To close this gap, this thesis seeks a solution for money market funds that protects investors not only through limiting idiosyncratic fund risks, but rather by a means of improving the market infrastructure through *good disclosure*.

With respect to currency risk, the CESR’s guidelines permit European money market funds’ investments in securities denominated in other than the fund’s base portfolio currencies

⁷⁷⁹ *Id.* at Box 2, paragraph 3(d) (In addition, money market instruments must comply with the criteria set forth in the Directive 2009/65, [2009] OJ L302/32 Non-UCITS money market funds are mandated to ensure that the liquidity of the portfolio is assessed on an equivalent basis.)

⁷⁸⁰ *See* section 4.2.2 *supra* for a detailed narration of market events concerning European money market funds during the financial crisis.

⁷⁸¹ CESR’s Guidelines *supra* note 9 at 10, paragraph 20. *See also* Directive 2009/65, [2009] OJ L302/32 at Article 51(1).

⁷⁸² CESR’s Guidelines *supra* note 9 at 10, paragraph 20. *See also* Directive 2010/43/EU, [2010] OJ L176/42 at Article 12. An implementing directive mandates every management company operating under the UCITS brand to establish a permanent risk management function.

⁷⁸³ CESR’s Guidelines *supra* note 9 at 9, paragraph 14. (Notwithstanding the derogation of the settlement to national authorities it was expected that ‘as a matter of best practice for UCITS money market funds, settlement would not exceed T+3’. This means that the payment for redeemed money market shares would be made by the management company within three days after shares have been redeemed. Fund shares, however, could be redeemed on daily basis in line with Article 84(1) of the Directive 2009/65, [2009] OJ L302/32)

provided exposure to the non-base currencies is fully hedged.⁷⁸⁴ However, such tolerance on the part of regulators with respect to the foreign currency exposure was not universally shared by the industry participants, who believe that currency risk and derivatives activities are inappropriate in European money market funds just like these activities are inappropriate in the US money market funds.⁷⁸⁵ Nevertheless, the EU regulator approached foreign currency risk by imposing disclosure requirements with respect to foreign currency trades in the funds' offering documents, but not through prohibiting or limiting transactions in foreign currencies and thus, on balance, it could be seen as encouraging risk-taking behaviour.⁷⁸⁶

To conclude the analysis of the common definition of European money market funds, I reiterate that, introducing a uniform two-tier industry structure, the guidelines sought to provide a more detailed understanding of the distinction between various types of funds operating in Europe and sold cross-border. The harmonised definition was expected “to play an active role in building a common supervisory culture by promoting common supervisory approaches and practices [within the EU]”.⁷⁸⁷ The common definition was not structured in isolation, but built upon an existing framework for the regulation of harmonised investment schemes in the EU. It could be retorted, however, that the UCITS regime when implemented at the national level results in a certain degree of diversity; in addition the CESR's Guidelines for a common definition also cover non-harmonised collective investment undertakings established under the national laws of Member States. Thus, the need to reconcile different objectives of various constituencies has weakened the regulatory response to the issue of standardisation of the money market fund practices in the EU.

⁷⁸⁴ CESR's Guidelines *supra* note 9 at Box 2, paragraph 11 and Box 3, paragraph 1. European money market funds are invested in securities denominated in various currencies with funds investing in securities denominated in the US dollars, British pound sterling and Euro being the most widely accepted by investors. A specific currency is normally chosen as a portfolio base currency. Investments in securities denominated in other than the portfolio base currency pose additional investment risks. It should be noted that no limiting criteria for foreign currency exposures relative to the fund assets are set by a common definition.

⁷⁸⁵ See, e.g., JP Morgan Comment to CESR *supra* note 13 at paragraph 11. JP Morgan Asset Management believed it would be inappropriate for European money market funds to assume currency risk neither did it believe that money market funds should be engaged in derivative transactions including those conducted for the hedging purposes. See also Feedback Statement *supra* note 112 at 6.

⁷⁸⁶ CESR's Guidelines *supra* note 9 at 10.

⁷⁸⁷ Q&A: A Common Definition of European Money Market Funds *supra* note 758 at 3.

In developing the definition, European regulators drew on the money management practices established internationally as well as the lessons learned from the financial crisis. Reflecting on the simple structure of the US money market fund industry, it is a valid concern that a two-tier approach may create confusion regarding a true investment nature of various types of money market funds. As the recent history of investor communication showed, funds with seemingly identical investment characteristics could easily be misrepresented unless clearly delineated.⁷⁸⁸ The next section discusses the voluntary measures that the European money market fund industry itself has developed to promote the best international practices in money market fund management, first, in the absence of specific regulation and, later, in the environment when the newly established definition seems to lack desirable clarity.

4.3.5 Self-regulation by the IMMFA

The first attempts to define and harmonise European money market funds can be attributed to the Institutional Money Market Fund Association, a trade association of triple-A rated European money market funds, formed in June 2000.⁷⁸⁹ The association was envisioned as a lobbying venue for regulatory issues related to money market funds and investor education.⁷⁹⁰ In addition, the association sought to facilitate distributional efforts of those asset managers lacking significant distributional channels.⁷⁹¹ The organisational efforts were backed by the

⁷⁸⁸ *Supra* note 692 and accompanying text.

⁷⁸⁹ More information about the Institutional Money Market Funds Association can be found at www.immfa.org.

⁷⁹⁰ The story behind formation of the International Money Market Fund Association was related to me by David Vriesenga, the first head of European money market fund business at Moody's Investors Service and by David Hynes, the first Chairman of the newly established Association. The 'founding fathers' of the Association were experienced industry insiders managing money market funds for large asset management firms and understood mutual benefits in consolidating industry efforts to promote high quality cash management services.

The formation of the International Money Market Fund Association was, in part, inspired by the experience of the Investment Company Institute in the US, which contributed significantly in protecting the US money market funds from banking lobbyists and represented the interests of mutual funds in front of regulators. *See generally* FINK, (2008) *supra* note 143.

⁷⁹¹ As to sources of asset inflows, large investment management firms and asset management subsidiaries of global banks were normally supported by internal distribution channels, while small and independent asset managers were struggling to achieve broader distribution of their products.

largest US asset managers who witnessed a spectacular growth of the US money market funds in the late 1990s and expected this trend to continue in the European market.⁷⁹²

The diversity of European money market funds presented a substantial challenge in determining the association's membership base – whether to accept the Continental Europe-style managers or limit it to the *US-style* managers only – the membership parameters were debated for several years after the association had been formed. The association sought to overcome investment and operational inconsistencies of European money market fund by developing an industry Code of Practice, which was put in place in 2003.⁷⁹³ The Code of Practice mirrored the main aspects of the US money market fund regulation and sought to provide portfolio management and operational guidance to those asset managers willing to join the association. Another pre-requisite of the membership besides accepting the Code of Practice was a triple-A money market fund rating from at least one of the three global credit rating agencies.⁷⁹⁴

The nascent association benefited from analytical services of credit rating agencies by adopting a triple-A rating as the central criterion of its membership. It is because a triple-A rating was mainly assigned to the *US-style* money market funds that the association *de-facto* became a European platform promoting the *US-style* money market funds, but not an association representing the full spectrum of European money market funds.⁷⁹⁵ Thus, the money market fund management practices originated in the US to meet the US regulatory requirements and credit rating agencies' criteria were exported to Europe by asset managers offering cash management

⁷⁹² In late 1990s the size of the assets under management in the US money market funds more than tripled expanding from \$753 billion at the end of 1995 to \$2,285 at the end of 2001. See www.ici.org.

⁷⁹³ Section 4.2.1 *supra*. Money market funds operating in various European countries exhibited vastly different portfolio characteristics and risk profiles.

⁷⁹⁴ Code of Practice (Institutional Money Market Funds Association 2009) [IMMFA Code of Practice] at Article 5.

⁷⁹⁵ Therefore, the *US-style* European money market funds are sometimes referred to as the *IMMFA funds*. See *Id.* at 1. The mission statement of the Institutional Money Market Funds Association reads that the association “represents promoters of, and providers of services to, triple-A rated *constant* and *accumulating net asset value* money market funds, domiciled in Europe”. Note that *floating net asset value* money market funds common in the Continental Europe are beyond the scope of the mission statement.

services internationally.⁷⁹⁶ These practices formed the foundation of the Code of Practice and were embraced by European asset managers. As money market fund management practices and regulation continue to evolve, the IMMFA's Code of Practice has been reviewed several times to ensure that the practices recommended by the association remain appropriate.⁷⁹⁷

Post-crisis, the Code of Practice has remained reflective of the developments in the US money market fund regulation. Amendments to Rule 2a-7 implemented in 2010 were largely mirrored by the Code of Practice albeit in somewhat abbreviated manner, *e.g.*, the *IMMFA* funds have changed their practices to meet the liquidity rules spelled out in the Code of Practice, while the newly adopted harmonised common definition of European money market funds does not impose any specific liquidity requirements.⁷⁹⁸ Thus, the Code of Practice serves as a source of self-imposed regulation for the *IMMFA* funds, a segment of European money market funds, which were largely transplanted to the European land by international asset managers, usually domiciled in the major European fund administration centres and distributed cross-border under the UCITS brand.

In my view, self-regulation by the IMMFA has succeeded in its consistent adoption and dissemination of the best industry practices, even though a self-regulatory regime is weakened by a lack of the enforcement power of a governmental regulatory regime. For this reason, self-regulation is unlikely to serve as a primary vehicle for production of standardised investment and operational norms adopted by the entire money market fund industry in the EU – self-regulation simply cannot promote the investor trust needed to support the market in the long-run.

⁷⁹⁶ According to my conversations with David Hynes, the first members of the Institutional Money Market Fund Association included some of the largest US asset managers such as AIM, Fidelity Investments, Goldman Sachs Asset Management and JP Morgan Asset Management.

⁷⁹⁷ The Institutional Money Market Fund Association's Code of Practice was last updated in December 2009 with the changes coming into effect in January 2010. *See IMMFA Announces Revisions to Code of Practice* (Institutional Money Market Funds Association / Press release 14 December 2009)

⁷⁹⁸ IMMFA Code of Practice *supra* note 794 paragraph 33. The Code of Practice maintains that “the *IMMFA funds* should maintain no less than five per cent of net assets in securities which mature the following business day and no less than 20 per cent of net assets in securities which mature within five business days”. *See also* CESR's Guidelines *supra* note 9 and section 4.3.4 *supra*.

4.4. Credit rating of money market funds in the EU

The history of the rating business with respect to the European money market funds is firmly associated with the development of international trade and import of the cash management culture from the US. As explained in section 4.2.1, in the 1990s some of the large US asset managers expanded their money market fund businesses in Europe in an attempt to provide their multi-national corporate clients with the type of cash management services they were getting in the US. Thus, money market funds administered by the US asset managers in Europe inherited key investment and operational characteristics of the US money market funds. Specifically, those US funds catered to institutional clients often carried a credit rating agency's rating due to corporate investment policies normally requiring a credit rating on all permissible investments.⁷⁹⁹ By the year 2000, credit rating agencies have been rating US money market funds for over 10 years and were able to adopt their rating methodologies for money market funds operating in Europe.⁸⁰⁰

Moody's Investors Service initiated money market fund ratings in Europe in 1993 and received over 60 rating requests just that year.⁸⁰¹ The volume of business suggested the high demand for professional cash management in Europe and related rating opinions at that time. Furthermore, in the absence of uniform government regulation of European money market funds, rating criteria administered by credit rating agencies served as a source of regulation albeit provided by non-state actors in markets with little homogeneity.⁸⁰² A number of objective rating

⁷⁹⁹ Available data suggest that demand for credit ratings from money market funds targeted to institutional investors trumps demand for ratings from retail funds. *E.g.*, Moody's Investors Service rates 92 per cent of the US institutional government money market funds, but only 29 per cent of this type of funds targeted retail investors. Furthermore, Moody's rates 64 per cent of the US prime institutional money market funds while only six per cent of retail funds of this type are rated, according to iMoneyNet data as of September 2011.

⁸⁰⁰ The story of money market fund rating in Europe was related to me by David Vriesenga, who head up the European money market fund business at Moody's Investors Service in 1990s and early 2000s. My conversations with Rudolf Siebel, ex-Moody's money market fund analyst and currently Managing Director/Head of Market and Service of BVI Bundesverband Investment und Asset Management e.V. have also contributed to this section.

⁸⁰¹ According to industry practitioners, the European money market fund rating history started in the UK. Fidelity Cash Unit Trust was the first European money market fund rated by Moody's Investors Service in 1993. By that time, Standard & Poor's has already had a few ratings assigned to European money market funds. Fitch Ratings has not entered the money market fund rating business until late 1990s.

⁸⁰² Section 4.2 *supra* underscores diversity of the European money market fund industry.

criteria established by credit rating agencies as guideposts to their highest money market funds rating have been adopted by the fund voluntarily and paved the way to the product standardisation in Europe. Moreover, rating agencies criteria applied uniformly to money market funds in the US and Europe, arguably, provided a venue for their comparability.⁸⁰³ The Institutional Money Market Fund Association adopted a requirement of a triple-A rating as a pre-condition of its membership thereby *de-facto* outsourcing credit risk assessment of the *IMMFA* funds to rating agencies.⁸⁰⁴

Prior to an implementation of a common definition of European money market funds in July 2011, the rating criteria for money market funds have been viewed as a suitable substitute for *official* regulatory norms albeit covering mainly *US-style* money market funds.⁸⁰⁵ The lack of formal rating criteria enforcement did not appear to weaken their bond on the investment management practices. The coercive power of rating criteria was evidenced in the way rated money market funds are managed to meet credit rating agencies' requirements. If the rating criteria are not met, a rating on a money market fund in violation could be lowered. Due to investment guidelines employed by institutional investors, a rating downgrade for a money market fund would likely result in cash outflows. Therefore, money market fund managers generally attempted to cure any breaches of rating criteria in a short order.⁸⁰⁶ This investment practice has resulted in a remarkable stability of ratings assigned to money market funds.⁸⁰⁷

⁸⁰³ See chapter 5 *infra* for analysis of the basic assumptions underlying such comparability.

⁸⁰⁴ The Code of Practice administered by the Institutional Money Market Fund Association does not contain any credit quality standards for its members above and beyond their ability to obtain a triple-A rating from at least one of the credit rating agencies. See *IMMFA Code of Practice supra* note 794.

⁸⁰⁵ Current information about rated money market funds can be found at Fitch Ratings web-site www.fitchratings.com; Moody's Investors Service www.moody.com; and Standard & Poor's www.standardsandpoors.com.

⁸⁰⁶ See, e.g., Fitch MMF Rating Criteria *supra* note 573 at 12. Fitch recognised that from time to time money market funds may *moderately* and *temporarily* deviate from the required rating parameters. Fitch would generally allow for a short grace period to cure the deviation without negative rating implications. See also S&P MMF Rating Methodology *supra* note 573 at paragraph 32. Standard & Poor's requires that money market fund net asset value deviations from the prescribed limits be cured within five business days.

⁸⁰⁷ While the author is not aware of any formal studies with respect to money market fund rating transition, the current inventory of rating assigned to these funds by all three rating agencies shows that approximately 99 per cent of published ratings on money market funds are triple-A ratings. Rating changes on money market funds are extremely rare, e.g., Fitch Ratings only reduced ratings assigned to the US money market funds twice since it started rating these funds in late 1990s. Both downgrades have taken place in 2010 and 2011. See Fitch Downgrades Alpine Municipal Money Market Fund to 'AAMmf'

In addition to its rating services, credit rating agencies have contributed in promoting better information flow in the European money market fund industry.⁸⁰⁸ Historically, European money market funds have limited their disclosures to prospectuses and annual reports, but seldom revealed contents of their investment portfolios to investors.⁸⁰⁹ Furthermore, in the absence of a central information depository, collection of data and fund analysis constitute a resource-intensive task. Credit rating agencies' rating opinions and credit reports on money market funds provided periodic portfolio information, albeit limited, to fund investor, including retail investors who often lack of sophistication to conduct a detailed portfolio analysis.⁸¹⁰

Thus it is evident that credit rating agencies have played an important role in the evolution of the European money market fund industry. At the early stages of the industry development, the credit rating criteria voluntarily adopted by money market fund managers served as a substitute for government-administered regulatory norms in the absence of thereof. Although rating criteria only covered the *US-style* money market funds and lacked a formal enforcement mechanism, institutional investors' preference for highly rated funds provides an evidence of coercive power of these self-made and self-imposed norms. In addition, credit rating opinions and fund reports added valuable insights into the money market funds' investment

(Fitch Ratings / Press release 31 January 2011). This track record suggests a much greater stability of money market fund ratings relative to ratings assigned to corporate issuers or structured finance issuers. By way of comparison, 7.7% of financial institutions rated triple-A at the beginning of 2010 saw their ratings downgraded by the end of the year. See CHARLOTTE L. NEEDHA & MARIAROSA VERDE, Fitch Ratings Global Corporate Finance 2010 Transition and Default Study (Fitch Ratings 23 March 2011) at 22.

⁸⁰⁸ Credit rating agencies published their rating opinion in a form of press-releases disseminated to financial media and available on respective rating agencies' web-sites at no charge. See www.fitchratings.com, www.moodys.com, www.standardandpoors.com. Press-releases contain pertinent information regarding fund investment objectives and policies as well as risks of investing in these funds.

⁸⁰⁹ See, e.g., IMMFA Code of Practice *supra* note 794 at Part VII. The Code of Practice requires the IMMFA funds to disclose asset maturity schedules, weighted average maturity and weighted average life of fund portfolios. The percentage invested in the fund by the top ten shareholders should also be made available to any fund shareholder upon request. Disclosure of portfolio holdings is not required by the Code of Practice.

⁸¹⁰ For example, Moody's Investors Service consolidated information on all its rated funds in its annually published "Fund Directory". The "Fund Directory" was discontinued in approximately 2005 and replaced with fund profile information available at www.moodys.com. See, e.g., DAGMAR SILVA, et al., Deutsche Investment Management Americas Inc. (Moody's Investors Service / Fund Analysis 29 April 2011). The credit report covers the main aspect of investment operations conducted by the asset manager and 14 money market funds managed by Deutsche Investment Management Americas Inc. and rated by Moody's Investors Service. The report is available at http://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_132918 at no charge.

practices and their risk profiles. These reports contributed to improvement of information flow in the European asset management that lacked transparency relative to the US regulatory regime.⁸¹¹ The next section discusses the future of the European money market fund industry including a potential effect of the enhanced transparency regime on money market funds under the UCITS Directive.

4.5 European money market fund industry outlook

The events of the financial crisis and liquidity squeeze confronting European money market funds in the fall of 2007 have moved the subject of the money markets high up on the list of financial regulatory agenda in Europe.⁸¹² The fragmentation of the European money market fund industry has been viewed as not only a source of confusion for investors, but also as a significant challenge in fostering a single market for financial services impeding the development of pan-European money market fund-specific regulation.⁸¹³ The European Securities and Markets Authority guidelines on a common definition of European money market funds were aimed at overcoming these challenges.⁸¹⁴

However, the international comparability of the US and European money market funds, the aspect of importance to institutional investors operating in many countries, is yet to be achieved.⁸¹⁵ A common definition of European money market funds did not close the gap, but

⁸¹¹ See chapter 5 *infra* for a comparative analysis of the US and European regulatory regimes applicable to money market funds.

⁸¹² See, e.g., The de Larosière Group's Report *supra* note 709. TUCKER, *supra* note 2.

⁸¹³ Section 4.2.1 *supra* analyses historical conditions of local European markets leading to the diversity of European money market funds.

⁸¹⁴ CESR Press release 19 May 2010 *supra* note 187. Lamberto Cardia, Chair of the Italian Commissione Nazionale per la Società e la Borsa and Chair of the Committee of European Securities Regulator's Investment Management Standing Committee, noted that the guidelines on a common definition of European money market funds are

...a significant step in improving investor protection and will help stakeholders -- competent authorities, management companies and investors -- to draw a clearer distinction between funds according to their investment strategies....[because]...the strategies of some funds may not always have been consistent with the generally accepted concept of money market funds as being relatively liquid, short-term investments.

⁸¹⁵ PETER CRANE, *European Regulators Keep Two-Tiered Definition of Money Market Fund*, CraneData 10 May 2010. The article stated that the Committee for European Securities Regulators

rather legalised the diversity of European money market fund management practices driving it further away from the unified view on these funds fostered in the US. On the other hand, the heterogeneity of European money market funds should be appreciated on its own grounds and, possibly, promoted as one of the factors limiting systemic implications of a money market fund failure. It was the definitional conundrum and attempts to mask the divergence of investment practices under the rhetoric of harmonisation that prompted investors' criticism.⁸¹⁶ Whether the harmonisation of European money market funds by way of eschewing their diversity is the desirable end from a standpoint of systemic stability remains to be debated. I contend that variability of investment practices must be preserved, while investors should be empowered by *good disclosure* to make their informed investment decisions.

Nonetheless, the positive aspects of formalising the standing of European money market funds under the common definition should not be overlooked.⁸¹⁷ At least three factors could be pointed out that stand to improve the position of investors in these funds. First, a common definition – despite all the criticism for its lacking desirable precision – still limits the appetite for risk of the asset managers and narrows their investment options to relatively safe investment alternatives. Second, fund risk-related disclosure requirements created an obligation for asset managers to report the risk profiles of European money market funds.⁸¹⁸ Third, the new powers given to the European Securities and Markets Authority offset, to some extent, the non-binding legal nature of the guidelines.⁸¹⁹ These factors provide some assurance that inconsistencies in

decision to keep a two-tiered system for European money market funds “is likely to cause continued confusion in the money markets”.

⁸¹⁶ One of the industry practitioners participating in the negotiation process related to developing a common definition of European money market funds, wishing to remain anonymous, admitted that “it was impossible for domestic regulators in Italy, Spain, Germany and Scandinavian countries to go back to their home countries and announce to their local investors that the product that they have held as a money market funds is no longer a money market fund”. *See also* Feedback Statement *supra* note 112 at 10. The initially proposed title *longer-term money market funds* was changed to (regular) *money market funds* in the final version. This change in the naming for the riskier type of European money market funds broadened the gap between the US money market funds (least risky) and European (regular) *money market funds* (most risky).

⁸¹⁷ CESR's Guidelines *supra* note 9.

⁸¹⁸ *Id.* at 3, 7 and 10. The guidelines require money market funds to clearly explain non-guaranteed nature of money market fund investments and disclose the fund risk profiles including risks of investing in foreign currency-denominated assets.

⁸¹⁹ Frequently Asked Questions: A Guide to Understanding ESMA (European Securities and Markets Authority 3 January 2011) [FAQ: A Guide to ESMA] at 4 – 7. Even though guidelines issued by the European Securities and Markets Authority remained not legally binding, national competent

European money market fund portfolio management and lack of transparency resulted in investor confusion and headline risk during the crisis could be mitigated.⁸²⁰

A common definition of European money market funds remains a work in progress as evidenced by continuing activities of the European Securities and Markets Authority in this field.⁸²¹ Moreover, anecdotal evidence suggests that a lack of uniformity inherited in the two-tier industry structure will inspire further lobbying activities from proponents of either approach.⁸²² Thus the continuing search for its own identity will be one of the major contributing factors in the future of the European money market fund industry.⁸²³ The second unknown is the outcome of other regulatory debates especially potential structural changes to the US money market funds.⁸²⁴ Some of the groundbreaking proposals discussed by the US regulators have only slim chances of being adopted in Europe thus largely negating previous efforts for the global comparability of money market funds.⁸²⁵

authorities are now required to indicate publicly if they comply within two months, and if they do not comply they will need to explain why. Financial market participants could be required to report publically whether or not they comply with non-binding guidelines and standards. The Authority's new powers also includes a power to ban financial products and services for up to three months and, potentially, investor compensations.

⁸²⁰ Section 4.2.2 *supra* at n. 699 and accompanying text.

⁸²¹ Q&A: A Common Definition of European Money Market Funds *supra* note 758.

⁸²² See, e.g., Procedures for implementing new classifications for money market funds (The Autorité des marchés financiers / News release 3 May 2011). French financial regulator stated that while the guidelines document on a common definition of European money market funds also considers that a *short-term money market fund* may have a *constant net asset value*, the Autorité des marchés financiers would not approve development of this type of funds in France. In the opinion of French financial regulator this type of funds present accounting issues and specific risks.

⁸²³ REBECCA BRACE, *Redefining Europe's 'Money Market Funds'*, Treasury & Risk May 2011. The article quotes IMMFA chairman Travis Barker pointing that a common definition is “definitely represents progress—but it doesn’t represent the final word on the matter. It’s hard to be sure of the time frame, but I think there will be further developments here”.

⁸²⁴ See section 3.5 *supra* for commentaries relating to the challenges facing the US money market funds including regulatory uncertainties. See also COZ, (2011) *supra* note 610 at 1. The comment letter to the PWG’s report on money market fund reform options from the Institutional Money Market Fund Association urge the US Securities and Exchange Commission to analyse regulatory changes being instigated elsewhere as “some of these changes will likely have substantive impacts upon the global money market fund industry”. The letter added that it is the IMMFA’s strong opinion that “the changes introduced by Basel III combined with the changes already made to the money market fund industry provide a framework for money market funds that is sufficiently robust to not require further wholesale alterations”.

⁸²⁵ Some of the groundbreaking proposals related to changing the money market fund industry structure include requirements for money market funds to establish a capital buffer that would absorb the

As opposed to the US regulators – with their drive for more substantive changes to the structure of the US money market funds – European money market funds are largely content with the recent changes within their respective sub-sectors, *short-term money market funds* and (regular) *money market funds*.⁸²⁶ With respect to the *short-term money market fund* sector, members of the Institutional Money Market Funds Association managing these funds believe that if capital buffer requirements are adopted in the US, it should not be copied by European *short-term money market funds*.⁸²⁷ Even though such a descent would drive a further gap in risk profiles of the US and the *US-style* European money market funds, the members of the Association argue that any benefit of reduction in investment risks would be greatly outweighed by the costs of establishing the new money market fund structure.⁸²⁸

European (regular) *money market funds* operating mainly in Continental Europe, largely untouched by the US regulatory conundrum, are content with the definitional changes implemented in 2011 and believe this development has already provided sufficient product differentiation. Thus, the near future of the European money market fund industry rests on the outcomes of two divergent trends: further harmonisation of investment products toward convergence of investment and regulatory practices and a desire for product differentiation driven by local nature of collective investments especially in regard of retail investors' preferences. These trends will be shaped by their respective costs and benefits for asset managers and investors in the contest of national laws including applicable tax regulation. Lastly, on-going European sovereign debt carries profound consequences for money market funds in the US and Europe.⁸²⁹ The major unknown with respect to the state of the future Europe creates, in turn, the major unknown for its money market fund sector.

first loss and further insulate money market fund shareholders from larger losses. See BARBARA NOVICK, et al., *Money Market Funds: Potential Capital Solutions* (BlackRock ViewPoint August 2011).

⁸²⁶ See, e.g., PWG's Report *supra* note 7. The report offers seven alternatives for changes in the US money market fund industry structure. See also section 3.5 *supra* discussing potential consequences of some of these alternatives.

⁸²⁷ *Short-term money market funds* also known as the *US-style* money market funds. See also section 4.3.4 *supra*.

⁸²⁸ Proposal to IMMFA (Institutional Money Market Funds Association / Technical Committee Summer 2011) (On file with the author).

⁸²⁹ See, e.g., CHARLOTTE QUINIOU, et al., *European Money Market Funds Sector Update* (Fitch Ratings September 2011) at 4. The report noted that as the European sovereign debt crisis intensified in the summer of 2011, European money market funds have reduced their investments to Spanish and Italian

4.6 Conclusion

The analysis of the European money market fund industry conducted in this chapter has confirmed my hypothesis that the heterogeneity of European money market funds is a product of diverse local investment traditions that were shaped by national capital markets and applicable national laws. Section 4.2 described the emergence of money market funds in selected European jurisdictions profiling those countries dominating the money market fund landscape including France, Ireland, Luxembourg, Germany, Spain and the United Kingdom. Section 4.2 concluded that the heterogeneity of European money market funds was a product of the local investment traditions which were, in turn, shaped by the national capital markets and applicable national laws.

My study of the European money market fund regulation in section 4.3 drew upon various sources of regulatory norms applicable to these funds including rules promulgated under the European Central Bank, guidelines and recommendations administered by the European Securities and Markets Authority and self-regulation developed by a professional trade association. Section 4.3 pointed to an on-going drive for harmonisation of investment standards across Europe and noted regulatory challenges in its attempts to standardise the inherited diversity of European money market funds.

Section 4.4 examined the practices of credit rating agencies in relation to European money market funds. The conclusion drawn from this section supports the notion of a diffusion of the investment practices developed in the US to Europe which at the time was lacking targeted money market fund regulation. Section 4.4 documented the regulatory effect of the criteria that credit rating agencies apply to money market funds: these criteria have been voluntarily adopted by the asset managers in Europe seeking recognition and legitimisation of their money market funds at the time when such funds were relatively new and largely unfamiliar to investors outside the US.

My inquiry in section 4.5 sought to identify the major trends that may potentially affect the structure and regulation of the European money market fund industry and change its outlook.

entities, both in terms of percentage allocation and tenor of investments. Funds avoid peripheral euro zone countries such as Ireland, Portugal and Greece. *See also* ROBERT GROSSMAN, et al., U.S. Money Funds and European Banks: Exposures and Maturities Decline Further (23 September 2011).

Section 4.5 concluded that the recently adopted CESR's Guidelines on a common definition of European money market funds was a step towards product harmonisation consistent with the idea of a single pan-European market for financial services. Yet, I point out that the CESR's Guidelines, while claiming investor protection, run a significant risk of confusion of purpose as investors may, in effect, suffer consequences of reduction in diversification and number of investment options.⁸³⁰ Moreover, it was noted that further harmonisation attempts are likely to run into standstill due to divergent objectives and practices of the *US-style* money market funds and those money market funds managed under a broader risk mandate. These findings are further examined in chapter 5 *vis-à-vis* the US regulatory model and serve to inform my normative proposals presented in chapter 6.

⁸³⁰ CESR's Guidelines *supra* note 9.

CHAPTER 5: COMPARATIVE ANALYSIS OF THE US AND EUROPEAN MONEY MARKET FUND REGULATORY MODELS

5.1 Introduction

Chapters 3 and 4 revealed a fundamental divergence of approaches relating to money market fund regulation between the US and the EU. The dominating thrust of the US federal securities law relating to investor protection has been disclosure, which in connection with money market fund regulation translated into an exhaustive transparency regime that makes actual portfolio holdings and pricing information available to any industry observer on a frequent basis. In Europe, regulators are less focused on establishing the market and fostering better consumer decision-making through transparency, but rather emphasise the development of prudential standards for money market funds as the primary mechanism of investor protection.⁸³¹

It is contended in this thesis that, with regard to the development of an appropriate regulation of money market funds, the establishment of a European regulatory framework outside the US that contemplates the same regulatory goals – investor protection and systemic stability – represents the pivotal opportunity for the development of a consistent regulation of these funds internationally. From a normative perspective, the comparison between the US and European money market funds presented in this chapter will lead to the advancement of a global view on what is perceived to be an increasingly global market. Indeed investors and financial media view all money market funds as substantially similar investments.⁸³² When the news of suspended redemptions in French money market funds was reported in the US, concerned investors increased their scrutiny of the US money market funds and their investments in asset-backed commercial paper and structured investment vehicles.⁸³³ None of the US funds experienced losses or suspended redemptions albeit some of them relied on financial support

⁸³¹ The US money market funds are also subject to risk limiting investment standards. Nevertheless, these standards built upon and reinforced by the overarching framework of investment management regulation. *See* section 3.3.1 *supra*.

⁸³² Lack of appreciation for the differences in money market fund structure and regulation amongst media ignited a wave of ill-informed reports on money market fund failures in 2007. *See* section 4.2.2 *supra*.

⁸³³ ICI Report *supra* note 21 at 48.

from their institutional sponsors.⁸³⁴ Learning from this episode of mass confusion, the US money market fund industry participants expressed objections to the two-tier structure of the industry in Europe precisely on the grounds of investor protection concerns.⁸³⁵ This point of diversion is worth highlighting: while in Europe a two-tier money market fund industry structure was praised citing enhanced investor protection, the US market participants stressed the confusion inherited in such a structure and related investor protection concerns.⁸³⁶

Chapter 4 demonstrated that when used in the European context the term *money market fund* does not identify a specific type of entities, but rather a set of financial products. The current heterogeneity of the European money market fund industry is largely attributable to the diverse structure of the national capital market and local investment preferences. This comparative chapter seeks to establish what are those fundamental divergences that so far have prevented an otherwise natural – amid the prevalent trends of globalisation of financial products and services – convergence of the US and European money market funds. It also assesses the similarities that inspire future efforts to develop homogenous cross-border money market funds.

In connection with my research question – *how should money market funds be regulated?* – this chapter further develops the arguments underpinning the normative proposals presented in chapter 6. For example, with respect to investor protection, two main approaches were identified in chapters 3 and 4: first, development of objective and subjective investments standards; and, second, *good disclosure*. This chapter compares and contrasts the US and European money market fund regulatory models to identify their prevailing venues for better investor protection. With respect to promoting systemic stability, once again, *good disclosure* was identified as a means to trace market interconnectedness and manage funding risk. It will be shown in this chapter that while the US regulatory model has made a significant progress to achieve this end, European money market fund regulators are counterproductively focused on the issue of harmonisation, which, in fact, may introduce a greater degree of systemic risk to the market.

This chapter prepares the ground for answering these questions by comparing the US and European money market fund regulatory models and the outcomes of the respective regulation.

⁸³⁴ *Id.* at 49 – 50.

⁸³⁵ *See* section 4.3.4 *supra*.

⁸³⁶ *Supra* note 13.

Section 5.2 comprises two parts: first section 5.2.1 discusses the main differences between governmental regulations originated in the US and the EU. The second section 5.2.2 reviews non-governmental self-regulatory standards for European money market funds developed by the Institutional Money Market Fund Association, a unique way to offer the industry-backed guidance in areas lacking government-administered regulation.

Section 5.3 analyses the similarities in regulatory approaches on both sides of the Atlantic and is divided into two parts: the first part reviews the commonalities in government-administered regulation, while the second part analyses the claim of a *global view* on money market funds advanced by non-governmental actors, namely the major international credit rating agencies. Examined from the standpoint of an international view on the capital markets, this section investigates whether such international regulatory norms could be drawn from the criteria used by credit rating agencies. Section 5.4 concludes by reporting the findings of my comparative analysis.

5.2 Main differences

The main differences in the regulatory approaches to money market funds on both sides of the Atlantic are captured in exhibit 12. The exhibit maps the major features of both regulatory regimes including risk-limiting standards, stress testing, asset valuation and disclosure requirements.

Exhibit 12: Money market fund regulation in the US and the EU⁸³⁷

Location:	The US	Europe	
Applicable regulation:	Rule 2a-7⁸³⁸	IMMFA's Code of Practice⁸³⁹	Common Definition of European money market funds⁸⁴⁰
Portfolio risk-limiting standards:			
--Credit risk	Money market funds	Money market	<i>Short-term money market</i>

⁸³⁷ The table in exhibit 12 is my own elaboration. While some items are marked as 'Not addressed' in the table under the respective rule, guidance or recommendation, other parts of securities or company laws may have addressed this aspect. Items marked as 'Not required' are not required or considered under any applicable laws.

⁸³⁸ 17 CFR § 270.2a-7 *See also* section 3.3.3 *supra*.

⁸³⁹ IMMFA Code of Practice *supra* note 794. *See also* section 4.3.5 *supra*.

⁸⁴⁰ CESR's Guidelines *supra* note 9. *See* section 4.3.4 *supra*.

	must invest at least 97 per cent of their assets in <i>first tier</i> securities and no more than three per cent in second tier securities No more than five per cent per a <i>first tier</i> issuer, no more than 0.5 per cent per a <i>second tier</i> issuer	funds must be rated triple-A	<i>funds</i> may invest in <i>first or second tier</i> securities In addition, <i>money market funds</i> may invest in sovereign securities rated investment grade
--Interest rate risk	Each <i>first tier security</i> must mature within 397 days; each <i>second tier security</i> must mature within 45 days <i>Weighted average maturity</i> may not exceed 60 days <i>Weighted average life</i> may not exceed 120 days	Each security must mature within 397 except for government securities that may have a maturity date within two years <i>Weighted average maturity</i> may not exceed 60 days <i>Weighted average life</i> may not exceed 120 days	<i>Short-term money market funds</i> : each security must mature within 397 days <i>Weighted average maturity</i> may not exceed 60 days <i>Weighted average life</i> may not exceed 120 days <i>Money market funds</i> : each security must mature within two years provided it has the next interest rate reset date within 397 days <i>Weighted average maturity</i> may not exceed six months <i>Weighted average life</i> may not exceed 12 months
--Liquidity risk	Invest no more than five per cent of total assets in illiquid securities Invest at least ten per cent of total assets in <i>daily liquid assets</i> Invest at least 30 per cent of total assets in <i>weekly liquid assets</i>	Invest at least five per cent of total assets in <i>daily liquid assets</i> Invest at least 20 per cent of total assets in <i>weekly liquid assets</i>	No guidelines
Stress testing:			
	Required	Not addressed	Required
Asset valuation and accounting operations:			
--Net asset value per share	Constant	Constant	<i>Short-term money market funds</i> : constant or

			floating
			<i>Money market funds:</i> floating
--Accounting	Amortised cost checked against market values Money market fund's Board consideration of deviations	Amortised cost checked against market values Deviations of 10, 20, 30 and 50 basis points reporting	Not addressed
--Treatment of capital gain/losses	No addressed	Money market fund's Board must approve a formal policy to address any realised gains and losses	Not addressed
Disclosure:			
--Portfolio holdings	On monthly basis on public web-site within five day after the month end	Not required	Not required
--Market-based net asset value	On monthly basis with a 60-day lag via disclosure to the US Securities and Exchange Commission	Not required	Not required
--Portfolio statistics	Weighted-average maturity Weighted-average life Both are disclosed on public web-site within five day after the month end	Fund liquidity profile monthly basis, following the expiry of a reasonable period after the month end Top ten shareholder composition should be available to other fund shareholders upon request Weighted-average maturity Weighted-average life should be published in the IMMFA's report	Not required

A discussion of each of the major features of the above table follows from section 5.2.1 to section 5.3.1.

5.2.1 Rule 2a-7 and the CESR's Guidelines on a common definition of European money market funds

5.2.1.1 Inconsistent definitions

My comparative analysis has, first, revealed that a divergence between the US and European regulatory models are what I call here the *statutory* and *substantive* definitions of money market funds. While the US money market funds are defined under the Investment Company Act of 1940, as amended, in the EU countries a *statutory definition* is enshrined in the national laws of only those countries with a significant money market fund sector.⁸⁴¹ The Irish financial regulator is a notable exception among other European national regulators as it has restricted the use of the term *money market fund* to only those funds defined in its guidance.⁸⁴² The lack of a *statutory definition* at the national level in the prevailing majority of European countries is due to a broad pre-crisis view on money market funds as a low-risk investment option. As shown in exhibit 8, in a majority of European countries money market funds account for a relatively small segment of the national capital markets; thus this segment did not warrant a significant regulatory attention before the crisis.⁸⁴³

⁸⁴¹ 17 CFR § 270.2a-7 (Rule 2a-7 under the Investment Company Act of 1940, as amended, defines money market funds by establishing a set of prudential rules that a mutual fund must follow if it wishes to market itself as a money market funds. Section (b) of the rule makes it illegal for the US mutual fund to hold itself out as a money market fund while not following the risk-limiting standards set forth in the rule.)

⁸⁴² See, e.g., A Guide to UCITS in Ireland (Dillion & Eustace 20 November 2009) at 17 – 18. The Irish regulator defines money market funds as those collective investment schemes following prescribed investment parameters and accounting practices, and carrying a triple-A rating from an internationally recognised credit rating agency or managed by an experienced management company.

⁸⁴³ Section 1.2 *supra* points to a nearly complete lack of academic and regulatory attention to money market funds pre-crisis with an exception of the US market. It can be retorted, however, that the definitional vagueness *per se* may have served as one of the obstacles for the industry development in Europe. Analysis of regulatory developments in the US offered in chapter 4 validates this argument as the US the money market fund industry itself petitioned regulators for establishing a clear *statutory definition* as a means to legalise its activities. See section 3.2.1 *supra*. The industry dialogue with various regulators,

The post-crisis review of financial regulation in Europe, which most directly affects the money market fund industry, resulted *inter alia* in the establishment of a harmonised definition of European money market funds currently administered by the European Securities and Markets Authority.⁸⁴⁴ The definition formulated by the Commission of European Securities Regulators, the predecessor of the European Securities and Markets Authorities, presupposed a two-tier industry structure comprising *short-term money market funds* and (regular) *money market funds*.⁸⁴⁵ The *short-term money market funds* are expected to be managed in a conservative fashion generally similar to the US money market funds.⁸⁴⁶ Money market funds managed to a broader risk profile were expected to qualify for the (regular) *money market fund* category.⁸⁴⁷

This lack of homogeneity within a common definition itself was cited by the market participants as a constraining factor to a further harmonisation of the money market fund industry not only in Europe, but also, and most importantly, internationally.⁸⁴⁸ In relation to the semantics of the definition, as noted earlier, the use of the term *money market fund* is inconsistent between the US and Europe.⁸⁴⁹ To clarify, the US *money market funds* are known to be held to the most conservative risk standards, while in Europe (regular) *money market funds* – as opposed to *short-term money market funds* – are the riskiest ones within their two-tier gradation. The inconsistent definitional semantics, which inevitably contributes to the investor confusion, highlights the barriers to the natural conversion of European money market funds into a homogenous investment product offered throughout all European markets.

As highlighted earlier, investors and financial media tend to disregard the definitional minutia perceiving all money market funds as substantially similar investments.⁸⁵⁰ Learning from the experience of the financial crisis, some industry stakeholders expressed objections to the two-

especially if popularised by the media, was one of the significant factors in promoting the US money market funds to investors.

⁸⁴⁴ CESR's Guidelines *supra* note 9.

⁸⁴⁵ *Id.*

⁸⁴⁶ *See* section 4.3.4 *supra*. Those European money market funds previously referred to as the *US-style* funds, the *IMMFA* funds, *treasury* funds and *liquidity* funds would generally fall into this category.

⁸⁴⁷ *Id.* This type of money market funds is generally offered in Continental Europe.

⁸⁴⁸ *Supra* note 13.

⁸⁴⁹ *Id.*

⁸⁵⁰ A lack of appreciation for the differences in money market fund structure and regulation amongst media ignited a wave of ill-informed reports on money market fund failures in 2007. *See* section 4.2.2 *supra*.

tier structure of the industry in Europe citing investor protection concerns.⁸⁵¹ Indeed, from the standpoint of the US investor, those collective investment schemes qualified as (regular) *money market funds* under the European definition should have been designated as *bond funds*.⁸⁵² This is because the *bond fund* designation is aligned with the *substantive function* of bond funds to track certain market indexes as opposed to the *substantive function* of the US money market funds to preserve principal value and provide liquidity. Nonetheless, while acknowledging these concerns, European regulators have chosen the semantics that remains at odds with the US naming conventions. Exhibit 12 sets out money market fund definitions accepted in the US and Europe underscoring the lack of convergence of money market funds across the borders.

Second, my analysis points to ambiguities related to the jurisdictional reach and enforcement of a common definition of European money market funds as compared to the US. As explained in Chapter 3, it is *unlawful* in the US to use the term *a money market fund* unless the fund in question complies with the risk-limiting provisions of Rule 2a-7.⁸⁵³ The more complex architecture of the European money market fund industry makes the application of the definition less clear-cut.⁸⁵⁴ The common definition guidelines are a non-binding document implementation and enforcement of which depends on the actions of 27 national regulators.⁸⁵⁵ However, it appears that the regulation of money market funds is not a priority for national regulators to consider it in their agenda setting.

⁸⁵¹ Section 4.3.4 *supra*.

⁸⁵² *Id.*

⁸⁵³ 17 CFR § 270.2a-7 at (b)(1). Sections (b)(2) and (3) of the same rule also prohibit mutual funds from adopting a name that is substantially similar to a ‘money market fund’ such as ‘cash’, ‘liquid’, ‘ready assets’ or other similar terms unless such a fund complies with the risk-limiting standards of Rule 2a-7.

⁸⁵⁴ CESR's Guidelines *supra* note 9 at 3. The definition is designed to apply to both, UCITS-authorized funds and those funds “regulated under the national law of a Member State and which are subject to supervision and comply with risk-spreading rules”. By July 2011 when the definition has come into effect, a number of national regulators made pertinent changes in the national laws. *See, e.g.*, UCITS IV News - Issue 18 (PricewaterhouseCooper May 2011) at 2. The newsletter notes that by May 2011, two months prior to the date of compliance [1 July 2011] with a common definition of European money market funds, only Luxembourg, Ireland, France and Germany have considered adaptation of the guidelines.

⁸⁵⁵ The European Securities and Markets Authority that administers a common definition of European money market funds at the level of the European Community is lacking enforcement authority at the national level for the Level III guidelines and standards. *Supra* note 819.

In effect, those European money market funds that have long been in operation may find limited benefits in changing their investment parameters only to conform to the pan-European guidelines. Lastly, the structure of the national markets in terms of their size and duration of the traditional security issuances may not support the required investment parameters under a common definition.⁸⁵⁶ The lesson learned from the new money market fund investment standards introduced in the US in May 2010 is that investment requirements, if not coordinated with the availability of investments, are prone to unintended consequences when the market focuses on creating financial instruments that have little economic purpose and, in fact, serves only regulatory compliance.⁸⁵⁷

Thus, the above discussion argues that benefits and incentives of transposing the European common definition guidelines into national laws could be rather weak for both national regulators and the regulated entities. Furthermore, hoarding of local money market funds into standardized investment parameters could be impractical in certain national markets. This finding comes in contrast to the history of the US money market funds, which have themselves been the greatest proponents of the regulatory standards and strict delineation of money market funds from other types of funds due to the causal link between strong regulation and investor acceptance. The difference in practical usefulness of a *statutory definition* is a result of the differences in the money market fund industry structures: homogenous in the US versus heterogeneous in Europe.

⁸⁵⁶ I am not aware of any consultations whether securities of desirable quality and maturity are available in the national markets to provide necessary supply of assets for money market fund portfolios invested in line with a common definition, *i.e.*, if in a certain markets 18-month securities have traditionally been issued and purchased by local money market funds, issuance of 12-month securities for the sole purpose of meeting the new money market fund investment requirement would, in fact, disadvantage the issuers, who would have to assume greater funding risk by shortening their liabilities.

⁸⁵⁷ Sections 3.3.3.2 and 3.5 *supra*. *E.g.*, under the latest amendments to Rule 2a-7, the US money market funds *inter alia* must allocate at least 30 per cent in securities that recover their principal within seven days. Prior to this requirement coming into force in May 2010, there was little availability of securities maturing weekly. After that date the market has become focused on developing new instruments that would meet money market fund demand for securities maturing within seven days or having a weekly demand feature even though there is no real economic need amongst issuers to finance themselves with such short-dated securities. *See, e.g.*, VIKTORIA BAKLANOVA, et al., Primer: CEF Variable-Rate Demand Preferred Shares - Closed-End Fund VRDPs Target Short-Term, Money Market Investors (Fitch Ratings 27 October 2011). The report describes the process of issuance of new securities featuring liquidity within seven-day to specifically meet demand for such securities from the US money market funds.

Likewise, significant differences exist in connection with the *substantive definition* of the term *money market fund* (i.e., a definition that places the emphasis on a fund's *investment strategies* rather than on its *nomenclature*). Whilst both the US Securities and Exchange Commission and European Securities and Markets Authority rely on a set of prudential rules to limit the ability of a money market fund manager to undertake risky strategies, cross-jurisdictional differences reveal variances in national regulatory perceptions of an appropriate level of risk in money market funds as shown in exhibit 12 earlier in this chapter. The US and European regulators diverge in their views on what are the appropriate credit risk and duration management standards, accounting, operations, recordkeeping, corporate governance and disclosure. It could also be said that such cross-jurisdictional differences are primarily driven by the nature of the national capital markets, not the risk perception *per se*. For example, if only 18-month securities are issued in a particular market, such securities are viewed as the least risky in the given market. For an observer operating in the market where overnight investments are traditional for money market funds, a duration mandate that include investments due in one and a half years would be viewed as inappropriate if not reckless.

5.2.1.2 Divergent views of investment risks

The level of credit risk in the US money market funds is constrained by a set of subjective and objective standards that impose minimum credit quality and diversification requirement for portfolio securities.⁸⁵⁸ These rules are a part of the overarching regulatory framework for all US collective investment schemes that provides *inter alia* the general basis of risk-spreading rules and prohibitions on affiliated transactions.⁸⁵⁹ The regulatory framework, including the roles of federal and state laws may specify, by implication, certain standard views, practices and processes of the market participants. As shown in chapter 3, Rule 2a-7, which is an essential regulation for the US money market funds, by virtue of market participants' compliance, established the discussed standards.⁸⁶⁰ For example, it limits credit quality of

⁸⁵⁸ Section 3.3.2 *supra*.

⁸⁵⁹ Section 3.3.1 *supra*. See also 15 U.S.C. § 80a-5 Subclassification of management companies. The US money market funds fall in to a *diversified investment company* classification, which generally limit such companies to investments of at most five per cent of their assets in securities of one issuer for 75 per cent of their portfolios.

⁸⁶⁰ 17 CFR § 270.2a-7

eligible securities for the US money market funds to those securities rated in two highest short-term rating categories by credit rating agencies with only up to three per cent of assets allowed to be invested in securities rated in the second highest short-term rating category.⁸⁶¹

In contrast, a common definition of European money market funds omits diversification requirements while relying on the risk spreading rules as set forth in the UCITS Directive for the UCITS-authorized money market funds or in the national law of a Member State for those non-harmonised money market funds.⁸⁶² The guidelines document directs European *short-term money market funds* to invest only in *high quality* securities, which could generally be interpreted as securities rated in the two highest short-term rating categories by recognised credit rating agencies.⁸⁶³ European *money market funds* could add securities of investment grade sovereign issuers, which are those rated in the three highest short-term rating categories or four highest long-term rating categories from AAA to BBB.⁸⁶⁴ Thus, the maximum dispersion of credit quality among money market funds in the US and Europe could be quite significant.⁸⁶⁵

In addition, the US and European regulators diverge in their views on the appropriate interest rate risk management standards in money market funds. Duration of the US money market funds is limited to 60 days, while the maximum duration of European (regular) *money market funds* could be three times of that, or these funds could incur three times higher interest rate risk.⁸⁶⁶ Final maturities of portfolio securities in the US money market funds are limited to 397 days with exception of the US government securities, while final maturities of European (regular) *money market funds* could be as long as two years, if floating rate securities.⁸⁶⁷ That said I note the conservatism of the European *short-term money market funds* standards that are

⁸⁶¹ Section 3.3.2 *supra*.

⁸⁶² Section 4.3.1 *supra*.

⁸⁶³ Section 4.3.4 *supra*.

⁸⁶⁴ *Id.*

⁸⁶⁵ Based on my experience, for practical purposes, the US money market funds generally limit themselves to investment in securities rated in the highest short-term rating category A-1 by Standard & Poor's, F1 by Fitch and/or P-1 by Moody's. The majority of European *short-term money market funds* adhere to investment practices of the US money market funds although they are allowed to assume greater credit risk under the common definition guidelines. European (regular) *money market funds* operate under a broader risk mandate especially with respect to European sovereign debt securities whose credit quality has been deteriorating as a result of the sovereign debt crisis of 2011.

⁸⁶⁶ Sections 3.3.2 and 4.3.4 *supra*. I note that those *short-term money market funds* are limited to 60 day duration in line with the US money market funds.

⁸⁶⁷ *Id.*

generally in line with the US money market fund regulatory requirements in terms of both duration and final maturities of portfolio securities.⁸⁶⁸ The above analysis shows that those collective investment schemes referred to as *short-term money market funds* in Europe exhibit a high level of convergence with the US money market funds, while European (regular) *money market funds* may incur substantially higher credit and interest rate risks.

5.2.1.3 Different asset valuation practices

The US and European regulator have different views on the acceptable accounting methods and asset valuation practices employed by money market funds. As explained in chapter 3, the US money market funds maintain their share price at a *constant net asset value* by valuing their assets at the amortised price according to the operational standards outlined in Rule 2a-7 and employing other measures that help to stabilise the share price.⁸⁶⁹ To insure that the *amortised cost-based* share price does not materially deviate from the *market-based* share price, the US money market funds undertake a parallel *market-based* pricing of their shares, a process referred to as *shadow pricing*.⁸⁷⁰

To compare, a common definition of European money market funds permits *short-term money market funds* to offer their shares at either a *constant net asset value* or *fluctuating net asset value*, while not allowing *money market funds* to peg their share to a *constant net asset value*.⁸⁷¹ The guideline document does not lay out any specific operational protocol, but instead refers to other Level III guidelines regarding UCITS asset valuation and the national laws.⁸⁷² Not surprisingly, European national regulators depart widely in their approaches to asset valuation in collective investment schemes. For example, the French regulator has commented that, notwithstanding the new guidelines for European money market funds, *short-term money market funds* offering *constant net asset value* per share “present accounting issues and specific risks

⁸⁶⁸ *Id.*

⁸⁶⁹ Section 3.3.2 *supra*.

⁸⁷⁰ *Id.*

⁸⁷¹ Section 4.3.4 *supra*.

⁸⁷² Section 4.3.4 *supra*.

which are currently being examined... it is too early for [these funds] to be developed in France”.⁸⁷³

In contrast, the Irish financial regulator expressed the opposite view when published its guidance note concerning asset valuation by money market funds in 2008.⁸⁷⁴ Under the guidance, those collective investment schemes that apply strict criteria to portfolio construction are permitted to use the *amortised cost* method for valuation of their assets and when accompanied by periodic mark-to-market and stress testing.⁸⁷⁵ Prior to publication of a common definition of European money market funds, only this type of funds were able to market themselves as money market funds in Ireland.⁸⁷⁶ The Irish regulator had to revise its guidelines to allow for other types of money market funds, namely those operating under a broader risk mandate, to be registered in Ireland.⁸⁷⁷

I point out the differences in views on harmonisation between the French and the Irish regulators. The French regulator refrained from allowing *constant net asset value short-term money market funds* to be developed in France, while the Irish regulator fully adopted a common definition of European money market funds even though prior to July 2011 the riskier version of these funds would not be qualified as a *money market fund* in Ireland.⁸⁷⁸ This episode underscores the limited practical usefulness of the harmonisation efforts if they are not in accord with the investment customs, traditions and risk perception of the particular investment community.

⁸⁷³ See AMF's Procedures for implementing new classifications for MMFs *supra* note 822.

⁸⁷⁴ For UCITS-authorized money market funds see Guidance Note 1/08 Valuation of Assets of Money Market Funds (Irish Financial Services Regulatory Authority August 2008) [Irish Regulator Guidance Notes 1/08]. For non-UCITS money market funds see NU 17.4 Collective Investment Schemes Other Than UCITS: Money market schemes (Irish Financial Services Regulatory Authority August 2003).

⁸⁷⁵ Irish Regulator Guidance Notes 1/08 *supra* note 870.

⁸⁷⁶ *Id.* These funds would generally fall under a definition of *short-term money market funds* under the new common definition.

⁸⁷⁷ For UCITS-authorized money market funds see UCITS NOTICES Undertakings for Collective Investment in Transferable Securities authorised under European Communities (Undertakings for Collective Investment in Transferable Securities) Regulations 2011 (Central Bank of Ireland July 2011) at 136. For non-UCITS money market funds see Appendix 7 Money Market Schemes (NU 17) (Central Bank of Ireland / Instructions paper July 2011).

⁸⁷⁸ See AMF's Procedures for implementing new classifications for MMFs *supra* note 822.

5.2.1.4 Divergence of operational practices

A significant divergence exists between the US and European views on operational practices related to the treatment of capital gain or losses and income received by a money market fund. The US money market funds strictly separate interest income on portfolio securities from any capital gain or losses incurred from asset transactions, a practice that helps to maintain a *constant net asset value* per share.⁸⁷⁹ This practice also appeals to certain US investors, who separate capital gain from dividends for tax purposes.⁸⁸⁰ European money market funds may employ different approaches to capital gain or loss, or interest income treatment, sometimes within one fund structure.⁸⁸¹ Generally, the *US-style* money market funds in Europe follow the same operational practices as their US peers. European money market funds featuring *floating net asset value* per share add capital gain/loss and interest income to the share price.⁸⁸²

Furthermore, given that money market funds are amongst the most credit-sensitive investors, in-house credit research and recordkeeping are also subject to detailed regulation in the US, but not in Europe.⁸⁸³ The CESR's Guidelines for European money market funds are much less detailed with respect to the operational aspects of the fund activities. The guidelines refer to an obligation of a management company to conduct a review of its investments' credit quality and points to a range of factors to consider thus deferring the legal framework of the operational aspects of the fund management to the national laws.⁸⁸⁴

⁸⁷⁹ Section 3.3.2 *supra*. The practice of separation of capital gain/loss eliminates the fluctuations of share prices caused by the accrued interest.

⁸⁸⁰ *Id.* Certain US investors apply different tax rates to dividends versus capital gains. Thus, the practice provides additional operational efficiency.

⁸⁸¹ (1) a *US-like* practice of separating capital gain/losses from interest income by *short-term money market funds* using amortised cost asset valuation accompanied by shadow pricing; (2) a practice of accumulating of capital gain/losses and interest income by *short-term money market funds* using amortised cost asset valuation accompanied by shadow pricing; (3) a practice of accumulating of capital gain/losses and interest income by *money market funds* using amortised cost asset valuation not accompanied by shadow pricing.

⁸⁸² This practice, called *smoothing*, helps the fund manager to project an appearance of a steady increase in the fund's share price. See section 4.2.1 *supra*.

⁸⁸³ Section 3.3.3.5 *supra*.

⁸⁸⁴ CESR's Guidelines *supra* note 9 at Box 2, paragraph 3 and Box 3, paragraph 1. Management company's operations and recordkeeping are covered in the Level II Management Directive 2001/107/EC, [2002] OJ L41/20. The UCITS IV implementing directive sets forth additional organisational requirements, rules on conduct of business, risk management, among other items. See Directive 2010/43/EU, [2010] OJ L176/42.

5.2.1.5 Differences in fund governance

My analysis found that corporate governance plays a more significant role in the US money market fund operations as compared to European money market funds. As shown in section 3.3.1.2, the first level of investor protection in the US money market funds is built upon activities of the mutual fund boards of Directors or Trustees that are independent from the asset management company and are charged with a range of the oversight responsibilities.⁸⁸⁵ Rule 2a-7 further counts on the money market fund Boards for investment, operations and stress testing processes and for an ultimate decision at the time of a crisis to suspend redemptions and liquidate the fund.⁸⁸⁶ Under the UCITS Directive framework, Directors are not required to be independent parties and may represent the management company or depository. The role of Directors is mostly focused on safekeeping of the clients' assets and does not extend to oversight credit decisions or investment processes, both of which fall solely under the purview of the management company.⁸⁸⁷

5.2.1.6 Differences in disclosure requirements

The US and the European money market funds are separated by a disclosure gap as wide as the Atlantic Ocean. The US money market funds are subject to a unique transparency regime that includes public disclosure of portfolio holding information and asset pricing in addition to regular filings of updated prospectuses and financial statements.⁸⁸⁸ Portfolio holdings are published on the funds' public web-sites on a monthly basis within five business days after the end of each calendar month; the same information is furnished to the US Securities and Exchange Commission, which also makes it available to public through its centralised database EDGAR albeit with a 60-day lag.⁸⁸⁹

⁸⁸⁵ Section 3.3.1.2 *supra*.

⁸⁸⁶ 17 CFR § 270.22e-3 *See also* section 3.3.3 *supra*.

⁸⁸⁷ Directive 2009/65, [2009] OJ L302/32 at Article 5 and Article 29. Non-UCITS money market funds regulated under the national law of a Member State are subject to the corporate governance structure established therein.

⁸⁸⁸ Sections 3.3.1.3 and 3.3.3.5 *supra*.

⁸⁸⁹ Section 3.3.3.5 *supra*. The US money market funds also disclose their *market-based* share pricing in monthly filings to the US Securities and Exchange Commission, who makes this information available to public with a 60-day lag.

The CESR's Guidelines do not contain fund-specific disclosure requirements except for requiring funds to identify risks of their investments strategies to investors.⁸⁹⁰ Therefore, with respect to details of disclosure, European money market funds are subject to varying requirements depending on the country of domicile's national law and whether the fund is a UCITS.⁸⁹¹ Generally, UCITS are required to provide offering documents and financial statements to their investors, but are not required to place these documents in the public domain.⁸⁹² Investors are further handicapped by lack of a centralised filings database. Currently, unearthing and interpreting information regarding European money market funds is challenging, if not impossible, especially for retail investors, who may not have sufficient resources to obtain and analyse the fund data. With the UCITS IV Directive implementation underway, the expectations are that a Key Investor Information Document, dubbed as KIID, will improve UCITS transparency and facilitate analysis of the fund information.⁸⁹³

Nonetheless, in the absence of adequate pan-European transparency standards for collective investment schemes, institutional investor-oriented European money market funds have voluntarily established a relatively high level of transparency, which goes above and beyond the KIID data.⁸⁹⁴ Because corporate treasurers normally conduct their cash investments on the basis of detailed due diligence requirements, which include a review of fund holding information, institutionally-oriented money market funds regardless of their domiciles meet the investor-determined level of transparency.⁸⁹⁵ Thus, regulatory requirements in Europe do not establish *de facto* baseline disclosures. In fact, it is the purchasing power and sophistication of institutional investors that define the level of disclosure in European money market funds. Given these differences in the powers to obtain disclosures, retail investors are disadvantaged.

⁸⁹⁰ CESR's Guidelines *supra* note 9 at Box 1, paragraphs 3 and 4.

⁸⁹¹ Section 4.3.1 *supra*.

⁸⁹² Directive 2009/65, [2009] OJ L302/32

⁸⁹³ *Id.* at 38. KIID is a two-page document featuring a consistent format across all UCITS. Information presented in KIID must be organized in five predetermined sections including the fund's investment policy and objectives, its risk/return profile, charges, past performance and contact information of the relevant parties. *See, e.g.*, UCITS IV - Key Investor Information Document (KIID) (PricewaterhouseCoopers 2010).

⁸⁹⁴ *Id.*

⁸⁹⁵ Integrating Money Market Funds and Corporate Investment Policies (Treasury Strategies Inc. 21 April 2011). The study reviews policies of 160 global corporate treasurers with respect to money market funds.

In sum, as exhibit 13 illustrated, the current money market funds regulatory models on both sides of the Atlantic are not symmetrical and, thus, are likely to entail material revisions if the objective of international harmonisation continues being pursued.⁸⁹⁶ It has been established that the US regulatory model that features *good disclosure* meets the underlying regulatory goal of investor protection and also establishes a foundation for managing systemic risk through transparency of fund investments.⁸⁹⁷ The EU regulatory framework, on the other hand, lacks disclosure requirements, but instead is primarily focused on coordination of investment standards cross-border, which is currently viewed as a primary investor protection tool in European money market funds.

5.2.2 IMMFA's Code of Practice

While *de jure* the Code of Practice administered by the Institutional Money Market Fund Association has no power, *de facto* it establishes an additional level of self-imposed regulation for the *US-style* money market funds in Europe.⁸⁹⁸ The main unique feature of the IMMFA's Code is a requirement for the funds being rated triple-A by at least one credit rating agencies.⁸⁹⁹ By virtue of this requirement, the Association assumed credit rating agencies' criteria as a workable substitute for its own credit risk-limiting rules. Hence, the IMMFA's Code of Practice does not impose any other credit quality standards above and beyond those outlines in the credit rating agencies' criteria.⁹⁰⁰

The Code is tailored to those European money market funds employing an *amortised cost* valuation method accompanied by a *shadow pricing* and features a detailed operational process

⁸⁹⁶ That said, the thesis highlights the misguided regulatory move for harmonisation of money market fund investment practices, which ultimately runs contrary to a regulatory objective of systemic stability. The normative proposal presented in chapter 6 focuses on preserving the heterogeneity of money market fund investment practices as a means to enlarge consumer choices and improve credit availability through protecting diversity of funding options.

⁸⁹⁷ Section 1.2 *supra*

⁸⁹⁸ Section 4.3.5 *supra*. These funds generally fall into a *short-term money market fund* category under a common definition of European money market funds.

⁸⁹⁹ IMMFA Code of Practice *supra* note 794 at Articles 5 and 6.

⁹⁰⁰ Credit rating agencies generally view only securities rated in the highest short-term rating category as appropriate for triple-A rated funds. Specific credit quality and diversification criteria adopted by credit rating agencies with respect to money market funds in the US and Europe are discussed in sections 3.4 and 4.4, respectively.

for the *IMMFA funds*.⁹⁰¹ This level of operational details sets the Code apart from the guidelines on a common definition of European money market funds and brings it closer to the US legal framework.⁹⁰² With respect to operational practices, the IMMFA's Code recommends the funds' Boards to develop policies addressing allocation of realised capital gain or loss, or so-called 'loss smoothing'.⁹⁰³ Issuing this recommendation, the Code once again seeks to mirror the operational practices employed by the US money market funds that carry realised losses forward for a number of years and offset these losses over time with realised capital gain. This process dampens volatility of the fund's net asset value per share.⁹⁰⁴

As shown in exhibit 12, other areas of divergence of the IMMFA's Code of Practice from the guidelines on a common definition of European money market funds can be found in managing liquidity risks and the disclosure regime.⁹⁰⁵ Because the *IMMFA funds* are deemed similar to the US money market funds, it is not surprising that the IMMFA's Code adopted the US approach to money market fund liquidity management and requires a certain amount of the fund assets to be maturing daily and within one week.⁹⁰⁶ This is in contrast to a common definition of European money market fund, which does not establish objective standards for liquidity management. The IMMFA's Code addresses liquidity risk by recommending an

⁹⁰¹ IMMFA Code of Practice *supra* note 794 at Articles 25 and 26. The Code also requires marking assets to market periodically, generally weekly, to ensure that the deviation of the fund's *market-based* share price from the *amortised cost*-based share price remains immaterial.

⁹⁰² *Id.* at Part V. The Code of Practice includes a detailed process for monitoring of the *market-based* net asset value deviations from a *constant net asset value*, or so-called 'escalation policy'. The escalation policy prescribes certain actions to be taken by specific individuals such as directors of the fund's management company in the case of the fund's net asset value calculated on the basis of *amortised cost* deviates from its *market-based* net asset value more than a predetermined amount, *e.g.*, if the deviation reaches 20 basis points, it should be reported to the senior management of the fund's management company; a deviation of 30 basis points is to be reported to the fund's trustee. *See also* CESR's Guidelines *supra* note 9.

⁹⁰³ IMMFA Code of Practice *supra* note 794 at Articles 29 (The policies related to treatment of realised capital gain/loss must be approved by the fund's board and reviewed at least annually.)

⁹⁰⁴ The treatment of capital gain/loss is not addressed in Rule 2a-7, but falls under the purview of the US Internal Revenue Code.

⁹⁰⁵ Section 5.2 *supra*.

⁹⁰⁶ 17 CFR § 270.2a-7 at (c)(5)(ii) and (iii). Rule 2a-7 requires the US money market funds to invest at least ten per cent of their total assets in securities maturing daily and at least 30 per cent of their assets in securities maturing weekly. *See also* section 3.3.3.2 *supra*.

allocation of at least five per cent of the funds' assets in securities maturing daily and at least 20 per cent of the funds' assets in securities maturing within one week.⁹⁰⁷

Lastly, the transparency regime recommended by the IMMFA goes far beyond the CESR's Guidelines.⁹⁰⁸ In line with its focus on liquidity, the IMMFA's Code requires the *IMMFA's funds* to report their liquidity profiles to the public on a monthly basis and to disclose the composition of the top ten shareholders to other fund shareholders upon request.⁹⁰⁹ This transparency regime seeks to inform fund shareholders, mainly institutional investors, regarding those with whom they share fund liquidity. Nonetheless, even though the *IMMFA funds* are positioned to mirror the US regulatory practices, the IMMFA's Code falls short of the comprehensive disclosure regime for the US money market funds detailed in section 3.3.3.5.⁹¹⁰ Drawing on the experience of the US money market funds, it is the availability of portfolio holding information that enables a healthy discussion of portfolio risks between the fund management and its investors and promotes prudent investment behaviour among asset managers.⁹¹¹

To summarise, the IMMFA's Code of Practice, the industry-developed self-imposed regulation for triple-A European money market funds, has made a significant stride to bridge the gap between the US and the EU money market fund regulatory models. Its investment standards which are, in effect, the industry best practices adopted internationally, provide a strong example of a natural conversion of regulatory standards cross-border. The IMMFA's Code is generally in line with regulatory requirements for the US money market funds and provides recommendations that are more detailed in operational aspects and require more comprehensive disclosure relative to the CESR's Guidelines for European money market funds. Nonetheless, neither the IMMFA's Code of Practice nor CESR's Guidelines require *good disclosure*. As such, these regulations are not enough to empower investors or adequately inform regulators of looming systemic risks.

⁹⁰⁷ IMMFA Code of Practice *supra* note 794 at Article 33. *See also* section 4.3.5 *supra*.

⁹⁰⁸ CESR's Guidelines *supra* note 9.

⁹⁰⁹ IMMFA Code of Practice *supra* note 794 Articles 42 and 43. *See also* section 4.3.5 *supra*.

⁹¹⁰ *See also* 17 CFR § 270.2a-7 (c)(12). The rule features a powerful requirement of a full disclosure of portfolio holdings on frequent basis with a minimum time lag.

⁹¹¹ *Supra* note 565.

5.3 Main similarities

5.3.1 Similarities shared by the US Securities and Exchange Commission and the European Securities and Markets Authority

As shown in the previous section, while the US and European money market fund regulatory regimes differ substantially in details, they nevertheless share a number of common features. Thus, a closer review of cross-jurisdictional patterns can provide useful insights into the design of an optimal money market fund regulatory scheme covering both sides of the Atlantic. One of the principal conceptual similarities shared by the US and European regulators is the view on the essential function of money market funds as collective investment schemes providing safety of principal, liquidity and yield consistent with short-term market rates.⁹¹² Another area of concord is that regulators orient themselves towards controlling the product-side aspects through a set of prudential rules. Unfortunately, in Europe the ideology of harmonisation seeks to transform the naturally diverse industry landscape into a limited number of specific investment strategies thus increasing – not decreasing – systemic instabilities.

Contemporary money market fund regulation, motivated by investor protection, focuses mainly on portfolio investment restrictions, which, not surprisingly, becomes the main areas of contention when it attempts to alter investment policies that have served local investors for years. There are only two aspects of money market fund investment practices where the US and European regulators have achieved a relative accord. First, both the US and European money market funds are expected to invest only in high quality securities rated within two highest short-term rating categories by major credit rating agencies with certain limited exceptions.⁹¹³ Second, both the US and European regulators expect money market funds to pursue conservative portfolio management strategies consistent with the notion of safety and demonstrate prudent risk management by stress testing their portfolios periodically.⁹¹⁴ The Venn diagram in Exhibit

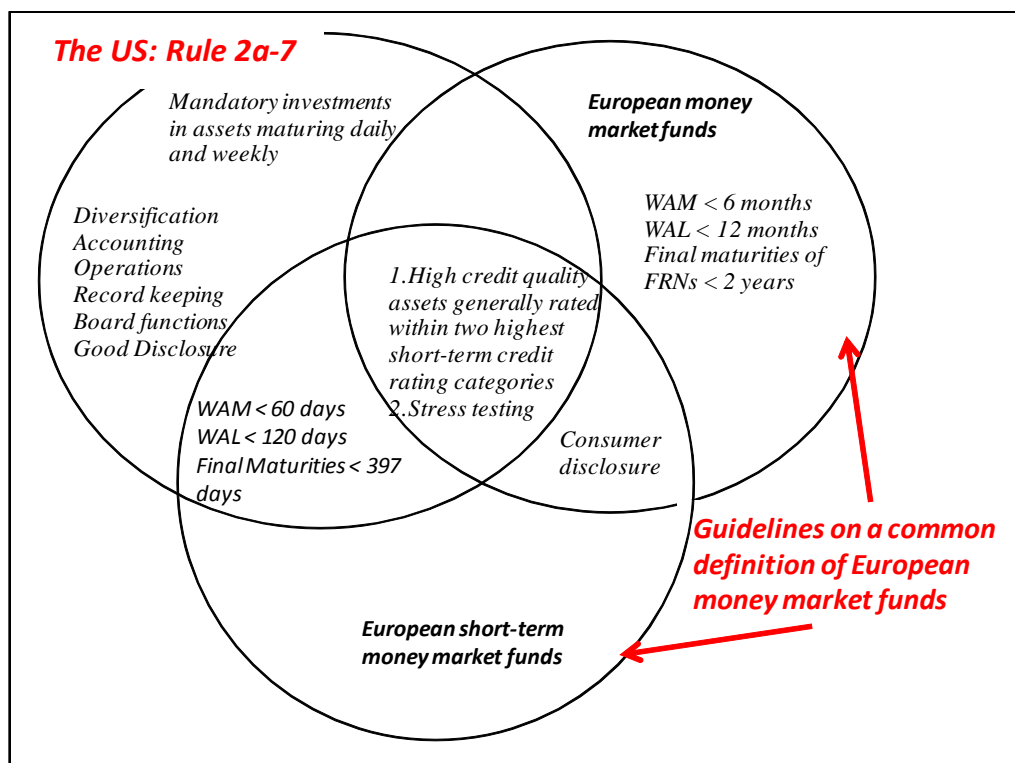
⁹¹² Section 1.1.1 *supra*.

⁹¹³ 17 CFR § 270.2a-7 at (c)(3) and CESR's Guidelines *supra* note 9 at Box 2, paragraphs 3 and 4, Box 3, paragraph 1. European (regular) *money market funds* can invest in sovereign securities rated at least investment grade, which would generally fall within three highest short-term rating categories. *See also* sections 3.3.3.2 and 4.3.4 *supra*.

⁹¹⁴ 17 CFR § 270.2a-7 at (c)(10)(v). CESR's Guidelines *supra* note 9 at Article 20. *See also* sections 3.3.3.3 and 4.3.4 *supra*. It worth noting that stress testing process has been mandated by the Irish

13 depicts a small area of overlap between the US and European regulatory standards related to the credit quality and stress testing.⁹¹⁵

Exhibit 13: Money market fund regulation in the US and the EU: lack of common grounds



The exhibit above contains three large areas depicting the US Rule 2a-7, European *short-term money market funds* and European (regular) *money market funds*. Each area has specific characteristics: first, the exhibit shows that Rule 2a-7 limits credit risk by imposing credit quality and diversification standards.⁹¹⁶ It also limits market risk exposures by placing specific requirements on the asset maturities, the weighted average maturities and the weighted average

regulator for Ireland-domiciled money market funds since 2008 prior to implementation of the guidelines on a common definition of European money market funds. The Irish Regulator also requires making results of the stress tests available upon request. *See* Irish Regulator Guidance Notes 1/08 *supra* note 874 at 5. In 2009, when the US Securities and Exchange Commission considered amendments to Rule 2a-7, stress testing requirement was included following the practice of the Irish regulator. *See* SEC Rel. No. IC-28807 at note 125 and accompanying text.

⁹¹⁵ The proprietary diagram represents a compilation of the main rules applicable to money market funds in the US and Europe discussed throughout this thesis.

⁹¹⁶ 17 CFR § 270.2a-7

life of the fund portfolio.⁹¹⁷ Importantly, Rule 2a-7 prescribes specific liquidity parameters for the fund in an attempt to manage their liquidity risk.⁹¹⁸ Other aspects targeted by Rule 2a-7 are fund operations and accounting practices, recordkeeping, fund governance and disclosure.⁹¹⁹

The CESR's Guidelines, which cover two types of European money market funds, govern significantly fewer aspects of the funds' investments and operations and are mostly focused on establishing credit and market risk parameters in these funds.⁹²⁰ Notably, an important aspect of asset liquidity for money market funds is missing from this regulation.⁹²¹ As exhibit 13 shows, the only fully intersecting area is indeed the asset credit quality section, which is featured as an important part of money market fund regulations on both sides of the Atlantic. Partially intersecting are the views on asset maturities, portfolio weighted average maturities and weighted average life, parameters that are meant to limit market risk exposure in money market funds. However, these regulations are only similar for the US and European *short-term money market funds*. On the other hand, European (regular) *money market funds* have little in common with their US peers.

Notwithstanding the concord in the regulatory views on appropriate credit quality evidenced from exhibit 13, diversification requirements, which are another aspect of the credit risk management, differ substantially.⁹²² The US regulators are quite restrictive with respect to money market fund holdings of securities rated in the second highest short-term rating category limiting such holdings to no more than three per cent of the funds' assets, while the European Securities and Markets Authority offer no money market fund-specific diversification guidance.⁹²³ Therefore, European money market funds are able to invest in a portfolio of greater concentration and thus execute riskier investment strategies from the diversification standpoint as compared to their US counterparts.

⁹¹⁷ *Id.*

⁹¹⁸ *Id.*

⁹¹⁹ *Id.*

⁹²⁰ CESR's Guidelines *supra* note 9.

⁹²¹ *Id.*

⁹²² Sections 3.3.3.2 and 4.3.4 *supra*.

⁹²³ Section 3.3.3.2 *supra*. Rule 2a-7 limits investments in *second tier* securities to three per cent of the fund's assets with no single issuer exceeding a half of one per cent of the fund's assets. In addition, such investments must have maturity dates within 45 days.

Consistent with the notion of safety and low risk investment, both the US and European regulators provide very specific guidance with respect to interest rate and market risk management by establishing limits concerning maturities of fund holdings and the overall portfolio duration.⁹²⁴ However, only guidelines for *short-term money market funds* in Europe can be viewed as isomorphic to those rules imposed on the US money market funds.⁹²⁵ The outer boundaries of interest rate risk taking deemed acceptable for European (regular) *money market funds* represent a significant divergence of the US and European approaches due to a much broader risk mandate of European (regular) *money market funds*.⁹²⁶ As explained in section 5.2.1, European (regular) *money market funds* could incur three times greater interest rate risk relative to the US money market funds and even relative to their peers in the *short-term money market fund* category.

Lastly, both the US and European regulators require consumer disclosure and periodic information documents as those specified for mutual funds in the US and UCITS in Europe.⁹²⁷ In addition, the CESR's Guidelines require more exacting language with regard to the risks associated with money market funds that seeks to set money market funds apart from bank deposits and revolves around lack of a government guarantee for these funds.⁹²⁸ Thus, European money market funds are also required "to provide sufficient information to explain the impact of the longer duration on the risk profile".⁹²⁹ Here is where the similarities end and the differences in the scope of disclosure become prominent. As shown in section 5.2.1.6, the US money market funds are subject to a unique *good disclosure* regime and must reveal the content of their

⁹²⁴ 17 CFR § 270.2a-7 at (c)(2) and CESR's Guidelines *supra* note 9 at Box 2, paragraphs 5, 7 and 8, Box 3, paragraphs 4, 5 and 6. *See also* sections 3.3.3.2 and 4.3.4 *supra*.

⁹²⁵ CESR's Guidelines *supra* note 9 at Box 2, paragraphs 5, 7 and 8. *See also* section 4.3.4 *supra*.

⁹²⁶ In the US this type of funds could not be marketed as money market funds, but fall into a bond fund category and sometimes are also referred to as ultra-short or short-term bond funds.

⁹²⁷ Sections 3.3.1.3 and 4.3.1 *supra*.

⁹²⁸ A typical US money market fund prospectus language reads "An investment in [the fund name] is not a deposit of any bank or other insured depository institution and is not insured or guaranteed by the FDIC or any other government agency. Although [the fund name] seeks to preserve the value of your investment at \$1.00 per share, it is possible for an investor to lose money by investing in [the fund name]". *See, e.g.*, Morgan Stanley Institutional Liquidity Funds Prospectus (Morgan Stanley Investment Management 28 February 2011) Available at http://www.morganstanley.com/msamg/msimintl/docs/en_US/publications/prospectus/MSIL/inst_cl_port_pro.pdf. *See also* CESR's Guidelines *supra* note 9 at 3.

⁹²⁹ CESR's Guidelines *supra* note 9 at 3.

investment portfolios in the public domain on frequent basis. In contrast, European money market funds are not obligated to reveal the content of their portfolios to the public.

5.3.2 Credit rating agencies' approach to money market funds in the US and the EU

This section discusses the unique position of credit rating agencies as organizations empowered enough to form a cross-border view on risks in money market funds and provide their relative risk gradation. By virtue of rating assignment and maintenance requirements, credit rating agencies enjoy an availability of fund information regardless of the state-mandated transparency regime in a given jurisdiction. Thus, armed with an access to the funds' data and an array of tools for measuring portfolio risks, credit rating agencies are the best positioned to serve as information hubs for all other industry stakeholders.⁹³⁰ However, notwithstanding the informational advantage, credit rating agencies have so far been unable to establish themselves as a significant factor in dispelling the information asymmetry between money market funds and their investors.

As explained in sections 3.4 and 4.4, there are three international credit rating agencies – Fitch, Moody's Investors Service and Standard & Poor's – that currently offer money market fund ratings in the US and Europe. These ratings are assigned on the basis of proprietary rating criteria and incorporate any unique views that a particular agency may have with respect to the product.⁹³¹ This comparative analysis identifies three factors that make money market fund ratings assigned by any of the agency sufficiently comparable to the others despite proprietary rating criteria developed by each rating agency. First, all three agencies are focused on the funds' abilities to fulfil their essential functions of preserving capital and providing liquidity.⁹³² Second, all three rating agencies use unique rating scales applied exclusively to money market funds to distinguish these ratings from traditional credit ratings assigned to debt securities.⁹³³ Third, the

⁹³⁰ All three international credit rating agencies, Fitch, Moody's Investors Service and Standard & Poor's, require rated money market funds to submit rating monitoring reports on weekly basis. The reports typically include selected portfolio statistics and a list of portfolio holdings. *See* Credit rating agencies' methodologies *supra* note 573.

⁹³¹ Credit rating agencies' methodologies *supra* note 573.

⁹³² *Id.* For example, Moody's money market fund rating methodology states that Moody's "will rate money market funds based on [Moody's] opinion of [funds] ability to meet the dual objectives of preserving principal and providing liquidity to holders".

⁹³³ Exhibit 7 *supra*.

analytical framework of money market fund ratings is applied uniformly across different jurisdictions, *i.e.*, fund ratings are independent from the funds' domicile.⁹³⁴

The last factor is especially important in the context of this chapter. If rating agencies succeeded in measuring money market fund risks on a uniform basis cross-border, their framework could be used as a foundation for a normative proposal for money market fund regulation applicable on both sides of the Atlantic. Unfortunately, the answer is in the negative. As explained in sections 3.4 and 4.4, rating agencies are uniquely positioned to obtain money market fund information and, thus, offer the best informed rating opinions.⁹³⁵ The rating agencies' ability to obtain information is especially valuable in Europe, where the disclosure requirements from money market funds are lower relative to their peers in the US.⁹³⁶ Even though the information obtained in the course of the rating assignment, as a general rule, may not be revealed to public, rating opinions should have reflected the difference in funds' risk profiles.⁹³⁷ Notwithstanding this opportunity for differentiating funds on the basis of their risk

⁹³⁴ See, *e.g.*, Moody's MMF Rating Methodology *supra* note 573 at 3. Moody's money market fund rating methodology states that "The same methodology applies to both constant and variable NAV funds, both in the US and Europe, as long as both fund types pursue the primary objectives of the preservation of principal and providing liquidity on demand". See also Fitch MMF Rating Criteria *supra* note 573 at 1. Fitch states that its rating criteria reflect its "views on assigning ratings to constant net asset value and variable net asset value money market funds globally". Fitch also points to its rating criteria for 'AAmmf' and 'Ammf' rated funds that are expected to have particular relevance in the context of the harmonised pan-European definitions of money market funds.

⁹³⁵ See, *e.g.*, Standard & Poor's Fund Ratings Criteria (The McGraw-Hills Companies 2007) at 16. Standard & Poor's requests at least 30 pieces of information from a money market fund for an initial rating assignment including the most recent prospectus, statement of additional information, annual report, a copy of the fund's investment policy, and copies of material agreements with third parties, to mention just a few. See also Detailed Guidance on the Application of Moody's Money Market Fund Rating Methodology (Moody's Investors Service 25 August 2011) at 8. Moody's analysts meet with the money market fund's asset management company on annual basis to review the portfolio strategies in the coming year, to discuss trends in the markets, and any other factors potentially affecting the fund management. See also Fitch MMF Rating Criteria *supra* note 573 at 13. Fitch states that as a part of in the rating maintenance process it "performs periodic site visits, and meets with senior managers responsible for portfolio management, credit analysis, risk management, operations." In addition, Fitch may request "access to senior management as events may warrant, and on an as-needed basis may request meetings with relevant external parties, such as fund boards of directors, accountants, or legal counsel".

⁹³⁶ Sections 3.3.3.5 and 4.3.4 *supra* discuss disclosure requirements applied to money market funds in the US and Europe, respectively.

⁹³⁷ See, *e.g.*, Worldwide Confidentiality, Conflicts of Interest and Securities Trading Policy (Fitch Ratings 1 October 2011) at 5. Fitch confidentiality policy states that it "shall not reveal any third party inside information to anyone, except those employees, consultants and agents of Fitch needing such information in connection with Fitch products".

profiles, no empirical evidence has been found of credit rating agencies achieving this end. Quite the opposite, an academic study taking a cross-section of money market fund risks conducted post-crisis revealed that the presence of a fund rating has been of little use in predicting the risk of money market fund portfolios.⁹³⁸

A similar conclusion can be drawn from an analysis of a distribution of ratings assigned to money market funds. For example, a review of 269 money market fund ratings assigned by Moody's to the US and European funds as of May 2011 revealed that all but two ratings are triple-A.⁹³⁹ Fitch and Standard & Poor's money market fund ratings are likewise largely concentrated within the triple-A rating category.⁹⁴⁰ Furthermore, despite the differences in credit rating agencies' views related to the risk factors in money market funds discussed in section 3.4, to the extent a fund applied for ratings with two or three agencies, these agencies assign the same-level ratings.⁹⁴¹ Different credit rating agencies tend not to give different ratings to the same money market funds.⁹⁴²

These observations are hardly the evidence of credit rating agencies providing idiosyncratic information regarding the fund risk profiles. Such homogeneity of credit opinions not only across funds rated by the same agency, but across all three major agencies could be viewed as a strong statement of confidence that nearly all funds are approximately equal and are of the highest abilities to achieve the preservation of principal and providing liquidity.⁹⁴³ Yet, it can be argued that the uniform highest ratings to these funds are of little use for investors since

⁹³⁸ MCCABE, *supra* note 210 at 33. According to the study, a triple-A rating was a weak indication of cash outflows during the run in 2008 or exposure to distressed paper during the ABCP crisis. Thus, credit agencies' ratings failed to differentiate money market funds on the basis of their risk profiles and, in addition, had little in any predictive power of the future negative outcomes.

⁹³⁹ Moody's Money Market Fund Ratings, Based on New Rating Methodology (Moody's Investors Service 21 May 2011). Available at http://www.moodys.com/research/Moodys-Money-Market-Fund-Ratings-Based-on-New-Rating-Methodology--PBC_133314.

⁹⁴⁰ All but two ratings on the list of 89 public ratings assigned by Fitch to the US and European money market funds as of October 2011 were triple-A ratings. Available at <http://www.fitchratings.com/jsp/sector/Sector.faces?selectedTab=Issuers&Ne=11+4293330944+4294965802&N=4293330818+4294965741+416>.

⁹⁴¹ *Id.* These ratings are normally triple-A ratings.

⁹⁴² This observation is as of September 2011 and is based on my review of money market rating lists available on credit rating agencies' web-sites www.fitchratings.com, www.moodys.com and www.standardandpoors.com, respectively.

⁹⁴³ See generally Credit rating agencies' methodologies *supra* note 573 for money market fund rating definitions at a respective rating agency.

they do not provide sufficient fund differentiation.⁹⁴⁴ Furthermore, differences across national capital markets, corporate structure, fund governance, to mention just a few aspects, are assigned no weights in credit rating agency analysis.⁹⁴⁵ Instead, certain assumptions are made with respect to specific legal contracts, *e.g.*, Standard and Poor's assumes, for the purposes of money market fund rating analysis, that European repurchase agreement contracts backed by investment grade quality sovereign securities are equivalent to those contracts originated in the US and backed by the US government securities.⁹⁴⁶ Obviously, this is a quite crude interpretation that ignores multiple risks entailed by the differences in the market infrastructure.

Understandably, this and other similar assumptions are conventions put in place for the purposes of achieving a broad comparability of the US and European money market funds solely on the basis of portfolio investments. Nonetheless, contractual and structural market differences result in uncertainties which are significant sources of portfolio risks. It is obvious that a complete disregard of these factors lessens the value of the rating analysis. Indeed, despite homogenous ratings – over 95 per cent are triple-A – money market funds have exhibited varying degrees of susceptibility to credit events during the financial crisis. Frequency and size of fund bailouts of the US money market funds by their institutional sponsors underscore the fact that some money market funds do incur more risk than others.⁹⁴⁷

⁹⁴⁴ Differentiation among peers was cited by money market funds as one of the motivating factors when the funds apply for a rating. *See* section 3.4 *supra*.

⁹⁴⁵ Credit rating agencies' methodologies *supra* note 573.

⁹⁴⁶ S&P MMF Rating Methodology *supra* note 573 at paragraph 117. The assumption significantly underestimate the legal and structural differences of the repurchase agreement markets in the US and Europe. Specifically, the US money market funds settle all trades via a third party repo settlement banks, which mitigates the settlement risk, while the majority of the repo trades in Europe is conducted bi-laterally. The US money market funds haircut the collateral in addition to marking it to market, while European money market funds do not assign haircuts to the collateral. Lastly, the US contracts are covered under the US Bankruptcy Code, while European money market funds' repo contracts could be under a number of national laws thus increasing legal uncertainties. For a detailed description of the infrastructure of the US repurchase agreement market *see* Task Force on Tri-Party Repo Infrastructure Report *supra* note 264. For a description of the infrastructure of the European repurchase agreement market *see* European repo market survey Number 21 - conducted June 2011 (International Capital Market Association September 2011). Available at <http://www.icmagroup.org/ICMAGroup/files/02/023c9f4c-062f-4750-a6f8-167514ab3497.pdf>.

⁹⁴⁷ *See* no-action letters filed to the US Securities and Exchange Commission by money market fund affiliates purchasing impaired securities from money market fund portfolios. Available at *Division of Investment Management Staff No-Action and Interpretive Letters Affiliated Transactions — Money Market Fund Letters*, US Securities and Exchange Commission (27 October 2011), at

To sum up, while the agencies have all necessary information to grade the funds according to their risk profiles, they have come short of achieving this end. Instead, generic rating opinions are normally issued attesting the funds' ability to perform their essential functions.⁹⁴⁸ I attribute the failure on the part of credit rating agencies to diagnose incremental differences in fund risk profiles to two factors. First, credit rating agencies' methodologies are geared mainly towards controlling credit, market and liquidity risks in individual funds through a uniform set of investment restrictions and place little weight on other portfolio management aspects that could alter the fund's risk and return profile.⁹⁴⁹ Second, money market fund rating criteria tend to discount the lack of homogeneity in the national markets, *e.g.*, rating agencies operate under an implicit assumption that the market for Euro bonds is just as active and liquid as the market for US dollar bonds.⁹⁵⁰

This thesis found that changes in fund yield, the primary indicator of the fund's risk taking, do not matter to money market fund ratings and do not translate in the rating differential, *i.e.*, the highest and the lowest yielding funds are rated at the same rating level.⁹⁵¹ Despite a significant yield spread between the US and European money market funds, ratings on all funds

http://www.sec.gov/divisions/investment/im-noaction.shtml#affiliatedtrans_mm. Nonetheless, some commentators noted that while there were 36 US money market funds that received financial support at the height of the crisis in the fall of 2008, these funds accounted for only five per cent of all US money market funds; hence 95 per cent of the funds were managed to adequately perform their essential functions during the worse crisis since the Great Depression. *See* JOHN D. HAWKE JR., Supplemental Comment of Federated Investors, Inc. in Response to Comment of The Squam Lake Group; the PWG's Report on Money Market Fund Reform SEC Rel. No. IC-29497 (Arnold & Porter LLP 24 February 2011) at 3.

⁹⁴⁸ *See* sections 3.4 and 4.4 *supra*.

⁹⁴⁹ Credit rating agencies' methodologies *supra* note 573. Although in the latest version of its rating criteria that came into effect in May 2011, Moody's has included considerations of shareholder concentration, *i.e.*, assessment of the liabilities of money market funds, not only their assets.

⁹⁵⁰ Of course, this is widely untrue. For a comparison of trading activities of the US and European government bond markets *see, e.g.*, ROBERT GROSSMAN & MARTIN HANSEN, U.S. Treasuries Expected to Remain Global Benchmark (Fitch Ratings 27 July 2011). For example, the size of the US government securities market (appr. \$12 trillion) exceeds the largest European market (France, \$1.9 trillion) six-fold. The difference in the market size leads to differences in trading activities and the overall market liquidity.

⁹⁵¹ *See, e.g.*, MARCIN KACPERCZYK & PHILIPP SCHNABL, *Implicit Guarantees and Risk Taking: Evidence from Money Market Funds*, NBER Working Paper No. 17321 (August 2011) at 20. The authors found that starting in August 2007 money market instruments become significantly riskier, which allowed more scope in funds' risk-taking choices. It could be argued that with a change in riskiness of the portfolio investments, the fund ratings should have been reviewed to reflect an incremental increase of risk in some funds outweighed in such risky investments. Nonetheless, it did not happen.

are the same highest triple-A ratings.⁹⁵² Given this evidence of a lack of discrimination among money market funds as well as among different national markets on the part of rating agencies it is hardly surprising that these ratings are mainly used for the purposes of regulatory compliance and seldom as an input in the investment decision making process.⁹⁵³ As shown in this section, notwithstanding the appeal of uniform standards, money market fund rating criteria developed by credit rating agencies could not substitute for a regulatory framework and oversight due to observable lack of discrimination of fund risk profiles.

5.4 Conclusion

The comparative analysis of the US and the European money market funds regulation conducted in this chapter revealed that despite their functional similarities and shared rationale, the US and Europe present two regulatory models that differ in several significant respects from one another. The main difference arises from the deep fragmentation of the European money market fund landscape leading to a more complex industry structure. A two-tier structure is complemented by differences of regulatory culture and investment and saving attitudes at the national level as well as by differences in the interpretation of the European Union rules relating to money market funds.

The US and the European money market funds regulation departures extend over so wide a range of factors that they are unlikely to wither away without significant alterations of the industry structure on the either side of the Atlantic. Given the uniform regulatory focus on managing the product side, the major points of discord relate to establishing harmonised prudential rules that are workable in a given national market. The challenge arises from the diversity of the national capital markets, in which such rules, especially if imported from other more established money market fund jurisdictions, may either be not practical and thus unworkable or fail to achieve the goal of limiting portfolio risks.

⁹⁵² *E.g.*, in October 2011, while the top-yielding US money market fund were gaining 0.21 per cent per annum, the top-yielding European money market funds operating in US dollars, Euro and Pound Sterling delivered 0.33 per cent, 1.26 per cent and 0.87 per cent per annum, respectively *Source*: iMoneyNet. Available at *Offshore Money Market Funds*, iMoneyNet. (28 October 2011), at <http://www.imoney.net.com/offshore-money-funds/index.aspx>.

⁹⁵³ Chapter 3.4 *supra*.

Another significant point of divergence between the US and European regulatory approaches to money market funds relates to information transparency. As explained in section 1.2, the theoretical roots of the US securities laws in the neoclassical economic theory are traceable in the regulatory approach to money market funds with its emphasis on the information symmetry. *Good disclosure* is viewed as an important mechanism of investor education and a tool that empowers investors to make rational investment decisions. This comes in contrast to the European approach to money market funds, which emphasises the product homogeneity as a primary mechanism of investor protection. While a consideration is given to a certain level of disclosure, the transparency mechanism is not envisioned as the central piece of the money market fund regulation in Europe.

The analysis identified a non-governmental actor – the IMMFA, a professional trade association – which contributed to the development of the European money market fund regulation. The IMMFA is also mostly focused on limiting idiosyncratic fund risks by establishing additional prudential rules and other requirements largely imported from the US securities market regulation. Because the IMMFA’s primary focus is on promoting a particular type of money market funds, namely the *IMMFA funds*, the recommendations offered under its auspices are geared towards promoting this product notwithstanding other regulatory concerns.

Lastly, a review of the methodologies of the credit rating agencies for money market fund ratings, which claim a global comparability of the rating analysis, revealed that the harmonisation of the rating approach was achieved on the basis of crude assumptions which disregard the contractual and structural differences of the national capital markets. As a result, all three major international credit rating agencies arrived at a uniform conclusion of the highest triple-A quality of nearly every money market fund that applied for a rating. Having examined existing regulatory practices with respect to money market funds operating in the US and Europe, in the next chapter I present my normative proposals that seek to answer the research question *how should money market funds be regulated?*

CHAPTER 6: NEW REGULATORY ARCHITECTURE FOR MONEY MARKET FUNDS

6.1 Introduction

Chapters 3, 4 and 5 illustrated that the state of the money market fund industry and its regulation in a particular jurisdiction depend on multiple factors spanning the nature of the national capital markets, investor demand and the rationale behind regulation. As demonstrated in chapter 3, the structure of the US money market funds was shaped by investor demand for alternative ways to manage cash assets away from banks. While initially this demand was driven by the yield differential, later, with an increase of the cash assets, diversification and specialised liquidity management has become the primary motivator for money market fund investments. Chapter 4 depicted a striking diversity of the European money market fund landscape and reflected differences in the relative importance of the money market sector from one country to another. The differences and similarities of the regulatory approaches affecting money market funds in the US and the EU were assessed and analysed in chapter 5.

Chapter 6 seeks to answer the research question of this thesis – *how should money market funds be regulated?* – by offering the normative proposals that reconcile the dual regulatory goal of investor protection and systemic stability.⁹⁵⁴ I contend that currently the implementation of measures to support investor protection and systemic stability presents shortcomings – and often paradoxes – in different jurisdictions. For example, in EU countries valuation recommendations for money market securities in UCITS that are based on amortised cost valuation result in decreasing rather than increasing share price transparency for investors.⁹⁵⁵ Thus the investors' purchase price could overestimate the market value of the fund's assets causing the investor loss.

⁹⁵⁴ See section 1.1.3 *supra* that purports that both the US and the European regulatory models ought to feature investor protection and systemic stability as their primary goals.

⁹⁵⁵ See section 4.3.1 *supra*. The current guidelines concerning valuation of money market securities in UCITS do not require marking such securities to market provided they are scheduled to mature within three months. Assets of *short-term money market funds* are not required to be marked to market. These recommendations are rooted in a long-standing assumption that market prices of high quality securities with short periods remaining until maturity exhibit low volatility and generally approximate amortised cost. In a volatile market environment, which tends to persist in the present, market price fluctuations for portfolio assets may cause the fund's net asset value per share being over or under stated. See also Eligible Assets Guidelines *supra* note 744 at 8.

Furthermore, if the investors are unsure about the true market value of the fund's assets, it may create a run on a fund, which on a bigger scale could lead to a manifestation of systemic risk. This thesis detected another paradox in the implementation of systemic stability-inspired measures. As chapter 4 demonstrated, the post-crisis emphasis on the harmonisation of the European money market funds through consolidation of a diversified universe of money market funds operating across different national markets in prescribed strategies may lead to heightened systemic risk.⁹⁵⁶

On the other side of the Atlantic, the US money market fund regulation has benefited from the deep commitment to the principles of disclosure in the federal securities law. Moreover, as reported in section 3.3.1, the strength of the US money market funds is rooted in the overall regulatory framework covering other US investment management companies that includes oversight of funds, safekeeping of fund assets, restrictions on leverage, prohibition of affiliated transactions as well as asset valuation transparency. Despite the strength of the foundation tested through the multiple economic cycles, the US regulators believe that “additional money market fund reforms are necessary”.⁹⁵⁷ The current US regulatory focus on more money market fund reforms is, however, facing opposition from all other industry stakeholders – investors, including their political representatives in Congress, issuers and asset managers.⁹⁵⁸ These parties do not share the view of the on-going money market funds riskiness, but rather believe that the US money market funds continue to provide a safe investment product.⁹⁵⁹

This chapter is organised as follows. Section 6.2 evaluates the dual regulatory goal outlined in section 1.1.3 – investor protection and preservation of systemic stability – as it applies to regulation of money market funds in the US and the EU. The normative proposals

⁹⁵⁶ A number of academic studies have suggested that lack of harmonisation, implying the possibility that different jurisdictions make different decisions, introduces benefits of risk diversification, thereby limiting the overall society's exposure to risk. *See, e.g.,* ALESSANDRA ARCURI & GIUSEPPE DARI-MATTIACCI, *Centralization versus Decentralization as a Risk-Return Trade-Off*, 53 *Journal of Law and Economics* 359 (2010)

⁹⁵⁷ SCHAPIRO, (2011) *supra* note 31.

⁹⁵⁸ See comment letters to the PWG's Report *supra* note 7. Available at <http://www.sec.gov/comments/4-619/4-619.shtml>.

⁹⁵⁹ Senate Letter to SEC Chairperson Mary Schapiro (United States Senate 15 November 2011). The letter from the US Senate warns of additional regulatory action towards money market funds such as imposing bank-like capital buffers, which are likely to force the industry consolidation and, ironically, lead to the “too big to fail” risk.

presented in section 6.3 outlines specific policy steps aimed to promote each regulatory goal in the US, the EU and at the level of national regulation. Section 6.4 reviews the quasi-regulatory standards administered by non-governmental actors with respect to the attainment of these two goals. Section 6.5 concludes the chapter commenting on the role and problems of the international regulatory regime in the money market fund sector.

6.2 Dual regulatory goal of money market fund regulation in the US and the EU

6.2.1 Investor protection

As pointed out in section 1.2, the investor protection-based measures in application to money market funds have resulted in a two-pronged regulatory approach currently shared on both sides of the Atlantic, albeit with different degrees of emphasis. First, both the US and the European regulatory schemes feature a set of prudential rules related to limiting idiosyncratic risks in money market funds. These rules seek to promote conservative investment practices thereby facilitating low-risk investment products for investors. Second, a comprehensive transparency regime that enhances the investors' ability to make informed investment decisions and enables regulators to monitor activities in the liquidity markets has emerged as another cornerstone of money market fund regulation, particularly in the US.

My analysis of the existing money market fund regulatory models in chapter 5 highlighted a number of controversies and inconsistencies with the dual regulatory goal of investor protection and systemic stability. Indeed, it was pointed out in this thesis that technical rules related to money market fund investments upon which the current regulatory models are based, while providing guidance for building a conservative portfolio, may increase systemic vulnerabilities of the overall capital markets and add to the fragility of those firms borrowing from money market funds.⁹⁶⁰ Notwithstanding its shortcomings, such an approach is most commonly used in financial product regulation as it is practical.

⁹⁶⁰ Section 3.5 *supra*. See also GORDON, *supra* note 216 at 3. Gorton states that "...by shortening maturities [of money market funds' investments] the SEC proposal will increase rather reduce the fragility of these markets because it makes it easier for MMFs to "run" at a time of financial distress".

Nonetheless, given the role of money market funds as financial intermediaries – as identified in section 2.3 – which is somewhat similar to the intermediating function of banks, the introduction of prudential rules would be entirely defensible provided that accumulation of risk could be monitored and corrected if warranted.⁹⁶¹ This thesis approaches the issue of market integration and development of uniform investment standards applied cross-border with a fair amount of scepticism.⁹⁶² Because of the existing heterogeneity among the types of European money market funds, the recent introduction of a harmonised common definition for these funds has been a contentious process. From the standpoint of the European national markets, their regulators and local investors, the necessity to change investment strategies solely to conform to the new definition adds little value and could prove impractical.

There are three reasons for this view. The primary concern with respect to the one-size-fits-all standardisation relates to the potential reduction in consumer choices in countries lacking the depth and diversity of those markets where the investments standards had originated. Second, the lower disintermediation of European national capital markets, where borrowers generally exhibit greater dependence on bank credit facilities than the public market, may not be able to maintain the issuance in particular credit and maturity segments to meet money market funds demand under the new rules.⁹⁶³ The third reason relates to the difference in investment preferences of local money market fund investors: while the US money market funds are marketed as a close substitute for cash forfeiting yield for safety and liquidity, investors in

⁹⁶¹ Sections 1.3.4 and 1.3.5 *supra* discuss academic literature and other sources related to overlapping functions of banks and money market funds and unique issues raised by these funds under banking laws.

⁹⁶² Prudential rules that set money market funds apart from other mutual funds were first promulgated in the US in the early 1980s. *See* section 3.3.2 *supra*. The same rules then formed a basis for credit rating agencies criteria for rating money market funds and were later imported to Europe to form a foundation for managing *US-style* European money market funds. *See* sections 3.4 and 4.4 *supra*. However, this thesis also found that money market funds in the Continental Europe have historically placed less reliance on generic investment limitations, but adhered to asset management policies deemed consistent with a low risk investment option. *See* section 4.2.1 *supra*.

⁹⁶³ *Supra* note 666. For example, issuance of commercial paper in Spain has historically been focused on 18-month maturities. The new harmonised European money market fund standards call for limiting maturities of fixed-rate securities to 13 months. *See also* GERARD HERTIG & RUBEN LEE, *Four Predictions About the Future of EU Securities Regulation*, 3 JCLS 359 (2003) at 8. The article asserted that national regulators, German in particular, resisted liberalisation of the financial services sector, which could penalise the German financial centre.

Continental Europe emphasise the role of money market funds as low risk investment option and expect yield tracking short-term interest rates.⁹⁶⁴

Thus, prudential rules originated in the US and appropriate for the US money market funds could be impractical for funds in other markets. To further explain this point, because the bank-like function of money market funds as the place to park cash and to outsource liquidity management is de-emphasised in Continental Europe, in particular, I contend that risk-limiting rules initially envisioned for the US money market funds are not an appropriate investor protection tool for the use in every other market. Instead, such ill-fitted rules may interfere with the accepted investment products, reduce consumer choice and negatively affect the structure of the national capital markets.⁹⁶⁵ Furthermore, given the mutual recognition principles for collective investment schemes under the UCITS framework, the harmonised common definition for European money market funds will cause further fund concentration in fewer countries that have already established themselves as fund administration centres with the likely consequences that some national markets will see their money market sector shrinking.⁹⁶⁶

With respect to the role of information disclosure, the analysis of the existing regulatory framework of mutual funds in the US in section 3.3.1.2 (applicable to all mutual funds) and section 3.3.3.4 (specific to money market funds) found that a comprehensive disclosure regime is

⁹⁶⁴ Section 4.2.1 *supra*. This distinction is particular important during the current economic cycle of exceptionally low policy rates, *i.e.*, interest rates set by monetary authorities in respective countries. Market rates such as LIBOR or EONIA could be substantially higher reflecting market expectations regarding ability of financial institutions fund themselves at these rates. Therefore, investors in money market funds tracking market indexes would require higher yield relative those money market funds focused on stability of principal and daily liquidity.

⁹⁶⁵ This outcome has become apparent after one of my conversations with a representative of the Institutional Money Market Fund Association, who related me a story of internal debates surrounding the consultation period with respect to a common definition of European money market funds in 2009. Before vetoing a common definition, a few national regulators expressed concerns whether the existing money market funds would continue to qualify as *money market funds* under the new definition. National regulators simply could not come back home and announce to local investors that their holdings of money market funds are no longer money market funds.

⁹⁶⁶ Ireland and Luxembourg command the largest market shares of the money market fund industry by domicile. Irish national law has historically supported the operational structure typical for the *US-style* money market funds, while Luxembourg accommodated both the *US-style* and the Continental money market funds. Under a common definition of European money market funds all Member States are expected to accept a two-tier industry structure. *See* section 4.2.1 (historical background of European money market funds and the size of the industry by country) and section 4.3.4 (a common definition of European money market funds) *supra*.

placed at the core of the investor protection measures. In the context of this thesis the meaning of comprehensive disclosure, which I labelled as *good disclosure*, goes well beyond of the boilerplate language of the funds' offering documents, generally found to be "lengthy, legalistic and confusing", which could be appropriately labelled as *bad disclosure*.⁹⁶⁷ The essence of the *good disclosure* regime applicable to money market funds is in public availability of portfolio holding information and in complete transparency of the fund's share pricing mechanism.

Good disclosure not only benefits fund investors, who are now empowered to curb asset managers' risk appetite, but also enables other industry stakeholders, including regulators, to monitor portfolio management activities. In turn, asset managers have become more cognisant to the broader effect of their investment actions from the standpoint of investor perception.⁹⁶⁸ Furthermore, given the view that the US money market funds are among the most sophisticated investors in the short-term capital markets, their investment preferences are analysed as forward-looking indicators of credit risk, which could indicate early signs of a funding stress for a particular issuer, better than credit default swaps spreads and market-implied pricing.⁹⁶⁹ The importance of this aspect for other prudential regulators and systemic risk regulators is further explained in section 6.2.2 *infra*.

The second ingredient of a *good disclosure* regime, in addition to the full transparency of portfolio holdings, relates to transparency of portfolio pricing mechanism. Section 3.3.3.3 described the pricing mechanism utilised by the US money market funds to maintain *constant net asset value* per share, which has been a point of contention since the concept was introduced in the early 1980s through the present.⁹⁷⁰ Nonetheless, its convenience and operational efficiency has been prized by investors on numerous occasions.⁹⁷¹ As illustrated in section 3.3.3.4, asset

⁹⁶⁷ Andrew J. Donohue, Director of the US Securities and Exchange Commission's Division of Investment Management noted that "many investors often find current fund prospectuses to be lengthy, legalistic and confusing..." See *SEC Improves Disclosure for Mutual Fund Investors*, US Securities and Exchange Commission. (19 November 2008), at <http://www.sec.gov/news/press/2008/2008-275.htm>.

⁹⁶⁸ Section 3.3.3.4 *supra*.

⁹⁶⁹ See, e.g., ROBERT GROSSMAN, et al., *CDS Spreads and Default Risk: A Leading Indicator?* (Fitch Ratings 12 May 2011) at 1. Grossman, et al. found that credit default swap spreads are only a week indicator of a future default.

⁹⁷⁰ Section 3.2 *supra*.

⁹⁷¹ The origination of the *stable net asset value* concept is described in section 3.2.1 *supra*. Section 3.3.2 *supra* relates the legislative history of Rule 2a-7 that establishes conditions under which the US money market funds may maintain a *stable net asset value* per share. The current regulatory debate

valuation in the US money market funds under the existing regulatory regime is transparent to investors – assets are valued twice: at amortised cost (daily) and at their market value (normally, weekly) – with both prices disclosed to investors.⁹⁷²

An analysis of the freely accessible analytical coverage of the US money market fund investment activities illustrates a sharp increase in availability of such information since the *good disclosure* regime was put in place.⁹⁷³ Investors preferences formed on the basis of *good disclosure* have caused changes in money market fund portfolio compositions (e.g., reduction of investment risks as illustrated by decrease in allocations to European banks in the summer of 2011). These changes are illustrative of the impact of disclosure on the behaviour of both fund managers curbing in unwarranted risks and fund shareholders exhibiting a higher level of engagement with their investments – the outcome consistent with the goal of investor protection.

Against this backdrop, portfolio analytics for European money market funds remains unavailable due to the limited scope of disclosure requirements for these funds.⁹⁷⁴ As illustrated

related to whether to permit the US money market funds to continue to price their shares at a *stable net asset value* is analysed in section 3.5 *supra*. Section 4.2.1 *supra* reported on the use of the stable net asset value concept by certain European money market funds. For letters from investors advocating usefulness of the *stable net asset value* concept see *supra* note 357. See also SCHAPIRO, (2011) *supra* note 31. Mary Schapiro, the US Securities and Exchange Commission's chairwoman acknowledged that "a stable net asset value product that has met many of [investors'] needs".

⁹⁷² 17 CFR § 270.30b1-7 Monthly disclosures are available with a 60-day lag through the US Securities and Exchange Commission's maintained database of public filings.

⁹⁷³ Since the web-site disclosure requirements came into effect in October 2011, a number of private vendors have developed money market fund-specific portfolio analytics services, e.g., www.cranedata.com, www.imoney.net. Bloomberg has developed its own analytics based on portfolio holding information disclosed by eight largest US money market funds, see RADI KHASAWNEH & ALBERTO FUERTES, *U.S. Prime Money-Market Funds Pull \$8 Billion From Deutsche Bank*, Bloomberg 11 November 2011. Available at <http://www.bloomberg.com/news/2011-11-11/blackrock-among-u-s-money-market-funds-cutting-deutsche-bank-investments.html>. In addition, rating agencies and asset managers have been covering trends in money market fund portfolio composition, e.g., a series of money market fund portfolio holdings reports published by Fitch Ratings *supra* note 110 and ROBERT CALLAGY & DANIEL SERRAO, *Money Market Funds Navigate Risks From Europe's Credit Concerns* (Moody's Investors Service / Special Comment 13 July 2011) Available at www.moodys.com. See also SYLVAIN BROYER, et al., *US money market funds: shifts in funding for French and European banks* (Natixis / Special report 15 November 2011). Available at <http://cib.natixis.com/DocReader/index.aspx?d=784F482F682B466554547A2B586756523763637646513D3D>.

⁹⁷⁴ European money market funds' disclosure framework is built upon the UCITS Directive (for those USITS-authorized money market funds) and governed applicable national laws. A common definition of European money market funds contains few references to information disclosure. See sections 4.3.1 and 4.3.4 *supra*. See also exhibit 12 *supra* for comparison of the US and European money market fund regulation.

by exhibit 12 in section 5.2, none of the valuable elements of *good disclosure* is available to the investment public under the European regulatory framework for money market funds. The latest enhancement to the UCITS transparency regime in a form of KIID is expected to be of only marginal utility for money market fund investors.⁹⁷⁵ The reluctance of European regulators to adopt more open information channels between investment public and asset managers could be attributed to a number of factors including the industry capture, national protectionism and bureaucratic inertia. Moreover, as noted in section 4.3.4, the recently implemented CESR's Guidelines for European money market funds attempted to adopt the US prudential framework omitting the disclosure requirements thus eliminating a powerful investor protection tool.⁹⁷⁶ The normative proposals in section 6.3 seeks to remedy this deficiency.

6.2.2 Systemic stability

This section conducts an examination of the existing money market fund regulation from the standpoint of reduction of systemic risk – what is deemed in this thesis to be the other essential public policy objective related to money market funds. The aspect of systemic stability has only entered the realm of money market funds in the fall of 2008 when a failure the Reserve Primary Fund, one of the largest US money market funds ignited a wide-spread liquidity squeeze.⁹⁷⁷ The post-mortem of this event has produced a vast literature that tries to empirically document inter-linkages of money market funds and other parts of capital markets.⁹⁷⁸ It is important to note that while referencing money market funds generically, other academic studies are focused almost exclusively on the *US prime money market funds*, i.e., those money market

⁹⁷⁵ KIID is envisioned as a document providing investors with essential information in a concise format, but not meant to serve as venues for detailed portfolio analytics. *See, e.g.*, UCITS Disclosure Testing Research Report. Prepared for European Commission By IFF Research and YouGov (June 2009)

⁹⁷⁶ CESR's Guidelines *supra* note 9.

⁹⁷⁷ *See, e.g.*, TARA SIEGEL BERNARD, *Money Market Funds Enter a World of Risk*, The New York Times 17 September 2008. *See also* section 2.4 *supra*.

⁹⁷⁸ *See* section 1.3.5 *supra* referencing just a few of such studies. *See also* Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations—Background Paper. Report to the G-20 Finance Ministers and Central Bank Governors (International Monetary Fund / Bank for International Settlements / Financial Stability Board October 2009) at 21. The report erroneously points to a run on the entire money market mutual fund industry of \$3.5 trillion, when, in fact, government money market fund experienced significant inflows resulting from prime money market funds' outflow. The total assets under management of money market funds remained largely unchanged.

funds that invest in corporate securities, maintain *constant net asset value* per share and governed by Rule 2a-7.⁹⁷⁹

Other categories of money market funds such as those investing in government securities or located in other countries seem to be of little concerns for academic researches.⁹⁸⁰ This lack of distinction could be attributed to the size of the US prime money market fund segment, which approached its all-times high of \$2.2 trillion in September 2008, dwarfing other segments of the money market fund industry.⁹⁸¹ In addition to the size of the industry, the other most important factor arguing for the systemic importance of the US prime money market funds relates to their track record.⁹⁸² Because the US money market funds almost never lose money, “...consumers developed unrealistic expectations about money market funds...” and such expectations *per se* could result in a run should any concern about safety of these fund surface.⁹⁸³ If indeed such a run materialises, an instantaneous demand for sizable liquidity could not be met by the market, but only by a government intervention.⁹⁸⁴ Therefore, the developing views on supervision of

⁹⁷⁹ See, e.g., Global Financial Stability Report. Chapter 1: Overcoming Political Risks and Crisis Legacies (International Monetary Fund September 2011) at 24. The report states that given their sizable holdings of European bank papers, the US money market funds are a potential transmission channel of the European sovereign debt crisis. See also section 2.2 *supra* contains a detailed explanation of all money market fund categories.

⁹⁸⁰ Section 1.3.6 *supra* provides an overview of those limited studies of money market funds operating in international markets.

⁹⁸¹ Since then, the US prime money market fund sector has contracted to almost a half of its peak size and currently does not exceed assets under management of European money market funds. Source: www.ici.org. See also exhibit 3 *supra* for the current size of each segment of the US and European money market funds. Given the asset decay from the sector exacerbated by regulatory uncertainty created by expectations of the future structural reforms of the US money market funds analysed in section 3.5, the sheer size is unlikely, in my opinion, to cause systemic implications in the future. Importantly, the US money market funds do not incur leverage; therefore the size of the industry is easily trackable. See exhibit 1 *supra* for an illustration of money market fund structure.

⁹⁸² See also section 3.2 *supra* outlining the performance track record of the US money market funds.

⁹⁸³ See, e.g., RICHARD A. BOOTH, *Things Happen*, 55 VILL. L. REV. 57 (2009) at 8: “...no fund could afford to break the buck. [Because] the illusion of absolute safety would be shattered and depositors would make a run on the fund”.

⁹⁸⁴ A substantial body of finance and economic research exists showing that if potential buyers of assets are financially constrained, the price of such assets in fire-sale liquidation may fall below their fundamental value and be determined by the available liquidity. Such available liquidity, in turn, depends on pledgeability of the assets to the ‘lender of the last resort’. See, e.g., ANDREI SHLEIFER & ROBERT W. VISHNY, *Liquidation Value and Debt Capacity: A Market Equilibrium Approach*, 47 Journal of Finance 1343, (1992) See also a seminal work related to liquidity risk DOUGLAS W. DIAMOND & PHILIP H. DYBVIK, *Bank Runs, Deposit Insurance, and Liquidity*, 91 Journal of Political Economy 401 (1983). The

systemically important non-banking institutions may, under certain scenarios, include the largest US prime money market funds under its guidelines.⁹⁸⁵

European money market funds, especially those domiciled in Continental Europe are unlikely to trigger systemic stability-related concerns based on their moderate size and an investment objective that does not purport cash-like assets. Indeed, as illustrated by a discussion in section 2.4, the role of risk transmitters in the global financial crisis is exclusively attributed to the US prime money market funds. Furthermore, according to the analysis presented in section 4.2, European money market funds domiciled in different countries have historically been targeted to different investor bases and utilise diverse investment strategies. The existing diversity, while presenting an obstacle for crafting uniform regulatory guidelines, serves as a substantial mitigant to the accumulation of systemic risk.⁹⁸⁶ Given this discussion, a question arises whether prudential rules imposed on European money market funds under the banners of investor protection could lead to the unintended consequences of systemic risk accumulation.⁹⁸⁷

To conclude, this section underscores two paradoxes in the existing regulatory models for money market funds in the US and the EU. First, there is a discord of the underlying theories and

authors studied contracts that can prevent bank runs and showed that under certain circumstances government provision of deposit insurance can produce a superior contract.

⁹⁸⁵ The Dodd-Frank Act Pub.L. 111-203, H.R. 4173 Title I – Financial Stability, Subtitle A – Financial Stability Oversight Council. The Financial Stability Oversight Council, the US systemic risk regulator created by the Dodd-Frank Act was charged with a responsibility to ensure that all financial companies, not just banks, whose failure could pose a threat to the financial stability of the US, will be subject to stronger oversight. *See* 12 CFR § 1310 RIN 4030-AA00 Authority To Require Supervision and Regulation of Certain Nonbank Financial Companies (Financial Stability Oversight Council) The notice of the proposed rulemaking was published on 11 October 2011. Such companies would include the largest, most interconnected and highly-leveraged companies and under the recently proposed rule, those US money market fund with assets under management exceeding \$50 billion may, potentially, be presumed as systemically important and come under additional supervision of the Board of Governors. *See, e.g.,* H. RODGIN COHEN, *Designation of Systemically Important Nonbank Financial Companies Under Dodd-Frank*, The Harvard Law School Forum on Corporate Governance and Financial Regulation. (3 November 2011), [at](http://blogs.law.harvard.edu/corpgov/2011/11/03/designation-of-systemically-important-nonbank-financial-companies-under-dodd-frank/) <http://blogs.law.harvard.edu/corpgov/2011/11/03/designation-of-systemically-important-nonbank-financial-companies-under-dodd-frank/>.

⁹⁸⁶ *See* ROMANO, *supra* note 114.

⁹⁸⁷ The recent financial crises highlighted the dangers inherited in providing a regulatory license in favour of a particular strategy. *See* section 2.4 *supra* explaining that when one of the largest US money market funds experienced a run, investors in other money market funds pulled out their holdings. It could be envisioned that two processes inspired by a common definition of European money market funds: increased concentration of funds in a few countries and increased concentration of fund investments in fewer instruments may, at the end, work counterproductively with the regulatory goal of systemic stability.

the implemented policy measures with respect to both investor protection and systemic stability. Section 1.2 showed that, in line with the principles of neoclassical and behavioural economics, *good disclosure* and a set of thoughtful prudential rules could provide adequate investor protection. In fact, the extent to which transparency requirements are implemented in the European money market fund regulation is inadequate to provide consumers with the substantive information to make an investment decision and monitor investment risks. Instead, the EU regulation is focused on crafting harmonised investment rules that are most likely to reduce consumer choices in the European national markets.

The second paradox relates to the systemic stability concerns. While the US money market funds could be viewed as transmitters of funding risk through the capital markets, European money market funds *per se* are unlikely to trigger systemic instability due to their limited size and diversity of investment policy.⁹⁸⁸ Remarkably, however, the recently introduced CESR's Guidelines promote specific investment strategies thus adversely affecting existing investment diversity, which is one of the important factors limiting systemic risk.⁹⁸⁹ Comprehensive proposals for the money market fund industry's normative future presented in the following section ventures to resolve these paradoxes. It also seeks to address the systematic monitoring of the emerging risks not only in order to minimise the systemic stability threat of a money market fund failure, but, more importantly, to prevent accumulation of risks that the industry is yet to face.

6.3 Normative proposals

This section presents the new regulatory architecture arguing that despite the jurisdictional divide of the US and European money market funds examined in section 5.2, the regulatory goals of investor protection and systemic stability ought to be upheld equally on both sides of the Atlantic. Underscoring the challenge, exhibit 13 identified the substantial asymmetry in how these goals are currently understood by regulators in the US and the EU. These normative proposals purport to project a common international view of money market funds from the standpoint of the dual regulatory goal established in section 1.1.3 and further elaborated in the

⁹⁸⁸ See section 2.4 *supra* for the role of money market funds in the financial crisis. See also section 4.2 *supra* explaining diversity of European money market funds.

⁹⁸⁹ CESR's Guidelines *supra* note 9.

above.⁹⁹⁰ Thus, the proposals emphasise the common feature of money market funds, *i.e.*, their function as financial intermediaries and revolves around improving investor education and understanding of the funds' investments and operations. On the other hand, these proposals de-emphasise regulatory interventions dictating the fund investment strategies on the grounds that an international response that is focused on approving particular fund investments could not only be impractical and unworkable in different national markets, but also introduce greater systemic risk.

6.3.1 Good disclosure for investor protection and systemic stability

As discussed earlier in this thesis, the federal securities law in the US and the UCITS framework in Europe provide a strong foundation for establishing a comprehensive *good disclosure* regime as a coordinated public policy response to the development of money market funds internationally.⁹⁹¹ Furthermore, as reported in section 3.3.3.4, a *good disclosure* regime targeting specifically the US money market funds has already been implemented and inspired a growing body of academic research, professional studies and media reports.⁹⁹² In Europe, however, the UCITS Directive is mainly focused on regulating cross-border marketing of collective investment schemes under the stated goal of investor protection with only a tangential attention to disclosure.

Good disclosure process is aimed at removing impediments to, and perfecting the mechanism of a free and open market, which benefit both investors and regulators. To achieve the said benefits, information about money market fund activities must be accurate, concise and

⁹⁹⁰ There could be counter-arguments to such an approach as these funds often serve different purposes for their end-users depending on the fund domiciliation. The US money market funds are used mainly as a cash/liquidity management vehicle and an alternative to bank deposits. The secular rise of institutional cash pools created a need for cash management outside the banking system as there are not enough banks to spread out the volume of institutional cash. For example, in 2010 the size of institutional cash pools is estimated at \$3.4 trillion, of which the US money market funds are a part. See POZSAR, (2011) *supra* note 154 at 10. European money market funds, depending on their types, serve different purposes. While *short-term money market funds* that are substantially similar to the US money market funds are used as cash/liquidity management vehicles outside the US, *money market funds*, mainly domiciled in the Continental Europe, are used as a low-risk investment option, but still not comparable to bank deposits. For the historical background of this dichotomy see sections 3.2 and 4.2 *supra* reporting on the origin and evolution of money market funds in the US and Europe, respectively.

⁹⁹¹ Sections 3.3.1 and 4.3.1 *supra*.

⁹⁹² *Supra* note 565.

specific to the decision making process and include both, the funds' assets and liabilities. On the asset side, good disclosure *ought to* provide the full description of portfolio holdings and their market pricing for all collective investment schemes that market themselves as money market funds.⁹⁹³ On the liability side, the list of the largest fund investors must be made available to the public. Moreover, the informational aspect constitutes only the first pillar of the *good disclosure* regime. Its second pillar is a central depository of such information accessible to the public for free.

These policy steps towards *good disclosure* would align the response with the underlying theory outlined in section 1.1.3 coming in contrast to the principal focus of the recently established European regulatory framework on the direct money market fund regulation through prescribing specific investment standards. As shown in this thesis, this approach was imported from the US through the cross-border diffusion of substantially similar funds and not without the help of international credit rating agencies.⁹⁹⁴ These historical developments could be responsible for a distortion of the perceptions on where the emphasis of the pan-European and national supervisory efforts should be placed and supervisory resources devoted.

Re-focusing regulatory efforts on implementing *good disclosure* by European money market funds offers a mechanism with which both central regulatory goals – investor protection and systemic stability – are achieved. It also removes the asymmetry of the current money market fund supervision regimes in the US and Europe. It equips investors and regulators with the information they need to assess money market fund risks both in terms of risks to investors and funding risks to fund borrowers. A centralised collection of portfolio holding data would enhance fund monitoring and provide a foundation for active supervision of idiosyncratic fund

⁹⁹³ The full description of a holding includes its individual identification number assigned by the the Committee on Uniform Security Identification Procedures (CUSIP) or its equivalent, the name of the issuer, the purchase date, the settlement price, identification of various structural attributes such put or call features, fix or floating rate, reference index, coupon, maturity date, additional credit or liquidity enhancements, availability of collateral and any other details that may affect investors' decision to purchase such an asset.

⁹⁹⁴ See section 4.2 *supra* describing historical origin of European money market funds and section 4.4 *supra* for contribution of credit rating agencies in developing product-specific regulatory approach to these funds. As explained earlier, regulation of the US money market fund has been built on the foundation of federal securities law that incorporates a strong tradition of disclosure. See section 3.3.1 *supra*.

risks and an analysis of cross-exposure to other market players, *i.e.*, accumulation of systemic risks.⁹⁹⁵

The national supervisors' power to collect fund information should be strengthened by defining applicable reporting standards for all money market funds regardless of domicile and by establishing practices necessary to support the close monitoring of compliance by fund managers. This could be done by amending the recently implemented Level III guidelines⁹⁹⁶ of a common definition of European money market funds administered by the European Securities and Market Authority.⁹⁹⁷ The amendment process based on sound regulatory principles – a bottom-up approach, open consultation, impact analysis, early and thorough participation of market professionals – must also insure participation of all groups of stakeholder and, in particular, money market fund investors themselves.

Broad investor participation is paramount to combat the evident industry capture which was manifested in the comments submitted to the consultation paper on a common definition of European money market funds: the comments exclusively represented national regulators, asset management associations and asset managers themselves, while not a single investor participated.⁹⁹⁸ A resolution of the technical complexity related to collection of the large volumes of data could greatly benefit from a similar process that is underway for European listed

⁹⁹⁵ Despite a seemingly insurmountable task of processing the holding-level data for all money market funds, given the current level of technological development and data standardisation, this could be achieved in a quite reasonable time and with minimal costs. For example, portfolio analytics for the US prime money market funds with current assets under management of \$1.4 trillion becomes available via private vendors generally within five to seven business days after such information appears on the funds' public web-sites as required under the US money market fund regulation. Based on my experience, generally two or three employees are involved with collecting and processing portfolio information at organisations offering such services.

⁹⁹⁶ Level III guidelines are meant to assist national regulators in consistent and equivalent transposition of pan-European legislation. *See* Initial report of the Committee of Wise Men on the regulation of the European securities markets (The Committee of Wise Men under Chairman Alexandre Lamfalussy 9 November 2000).

⁹⁹⁷ CESR's Guidelines *supra* note 9. The guidelines came into effect in July 2011. *See also* section 4.3.4 *supra*.

⁹⁹⁸ Amongst 28 comments submitted to the Committee of European Securities Regulators in response to a consultation paper on a common definition of European money market funds published in October 2009, there was a notable absence of comments from money market fund investors. *See Consultation on common definition of European money market funds* (31 December 2009), at <http://www.esma.europa.eu/index.php?page=responses&id=151>.

companies.⁹⁹⁹ A consultation process for developing the pan-European access to financial information on listed companies yielded positive responses to the proposal from virtually all market constituents from investors to issuers to market infrastructure companies.¹⁰⁰⁰

Lastly, the structure of the consultation process must ensure that active industry participation would not promote its self-interest and would not introduce a solution that is sub-optimal from the standpoint of investor protection. To avoid such industry capture, regulators should develop a process of placing a lower weight to those comments representing asset managers and higher weight to the opinion of end-users of money market funds as well as independent parties such as academia. From the standpoint of cost-allocation for regulators themselves, the responsibility for the monitoring of the industry's risks could be functionally allocated between national supervisors (responsible mainly for micro-prudential aspects) and pan-European supervisors (responsible mainly for macro-prudential aspects).¹⁰⁰¹

The second pillar of the comprehensive *good disclosure* regime, that is, the creation of a central depository of money market fund information, could draw on an example of the EDGAR system established and maintained by the US Securities and Exchange Commission.¹⁰⁰² A central depository under the auspices of the pan-European securities market regulator (European Securities and Markets Authorities) is necessary not only to confront a probable industry capture and political capture of the securities market supervisor at the domestic level, but more importantly, to maintain a uniform reporting structure and a public access mechanism. These two steps – information collection and dissemination – achieve both, a micro-prudential goal of monitoring fund investment activities and a macro-prudential goal of tracing cross-border exposure and interconnectedness of financial intermediaries.

⁹⁹⁹ Development of Pan-European Access to Financial Information Disclosed by Listed Companies (Committee of European Securities Regulators / Consultation Paper July 2010)

¹⁰⁰⁰ *Consultation on the Development of Pan-European Access to Financial Information Disclosed by Listed Companies* (24 September 2010), [at](http://www.esma.europa.eu/index.php?page=responses&id=174) <http://www.esma.europa.eu/index.php?page=responses&id=174>.

¹⁰⁰¹ Given that the money market fund industry inspired both general public and research interest, it is anticipated that not only national regulators and the European Securities and Markets Authority would benefit from the proposed transparency regime, but also other supervisory and supra-national organisations such as the European Central Bank and the International Monetary Fund as well as financial media and academia. The greater available research in this field would, in turn, inform investor actions and policy decisions.

¹⁰⁰² For an example of such central depository of regulatory filing in the US *see EDGAR supra* note 438.

Placing *good disclosure* in the focus of the money market fund normative future, I would like to pre-empt concerns that are often raised on the basis of the perceived lack of analytical skills to process detailed information by even the most sophisticated investors. Section 3.2.2 addresses these concerns describing the regime of enhanced information disclosure for the US money market funds, which itself prompted development of needed skills as more data became available.¹⁰⁰³ A. A. Sommer, Jr., the Commissioner of the US Securities and Exchange Commission, aptly observed:

...the disclosure philosophy [is] having its roots deep in American history and ideology: the belief that the "common man" had an innate wisdom, a natural capacity for the absorption of knowledge, an inborn facility for sound judgment if only he had the facts. This is reflected in many of our popular sayings; for instance, "let people know and the truth shall make them free." It is reflected in our commitment to education and the assumption, now perhaps discredited, that everyone has the capacity for the fullness of a classical education. This ideology has its origins, of course, in Rousseau and many others.¹⁰⁰⁴

It is a responsibility of securities regulators to ensure that investors have the information they need to make informed decisions. Whether investors do actually use it or not will be a matter of a continuing debate, but what is irrefutable is the fact that mandatory disclosure "leverages market discipline as a means of accountability that obviates the need for more substantive government regulation of securities-related activities".¹⁰⁰⁵

The normative proposals presented in this chapter envisage empowering investors through a *good disclosure* regime that includes a fully transparent asset pricing and portfolio valuation mechanism. As discussed earlier in this thesis, the current state of the money market fund industry is characterised by lack of consistency in asset valuation.¹⁰⁰⁶ "Two European money market funds with identical portfolios but domiciled in different member states might have different net asset values per share as a result of the valuation method established in each

¹⁰⁰³ *Supra* note 565.

¹⁰⁰⁴ A. A. SOMMER, JR., *Differential Disclosure: To Each His Own*, Address at the Second Emanuel Saxe Distinguished Accounting Lecture (US Securities and Exchange Commission 19 March 1974)

¹⁰⁰⁵ TROY A. PAREDES, *Speech by SEC Commissioner: Twelfth Annual A.A. Sommer, Jr. Lecture on Corporate, Securities and Financial Law*, US Securities and Exchange Commission (27 October 2011), at http://www.sec.gov/news/speech/2011/spch102711tap.htm#P33_7091.

¹⁰⁰⁶ The current valuation processes are explained in sections 3.3.1.6 and 3.3.3.3 (for the US money market funds) and section 4.3.1 (for European money market funds).

jurisdiction”.¹⁰⁰⁷ For example, France prohibits portfolio asset valuation based on amortised cost – a permissible valuation method under Directive 2007/16/EC.¹⁰⁰⁸

Inconsistencies of asset valuation and share price calculations amongst the Member States and, more broadly, between the US and European money market funds have so far disadvantaged fund investors from a standpoint of the risk and reward relationship.¹⁰⁰⁹ Thus, my normative proposals include a recommendation to improve transparency of asset pricing and consistency in administering portfolio valuation methods. Investors ought to know the price of their investments, which behoves the funds to conduct market valuation of all portfolio assets. Money market funds may continue to offer *constant net asset value* per share using any of the share price volatility stabilising techniques discussed in section 3.3.3.3, while informing investors as to where the “true” market price is. This step is not only consistent with the underlying philosophy of disclosure, but offers an advantage of expanding consumer choices.¹⁰¹⁰

These proposals intend to resolve a highly contentious debate as to the merits of *constant net asset value* money market funds and their susceptibility to runs versus *variable net asset value* funds.¹⁰¹¹ The available sources discussed and cited through this thesis offered no certainty as to whether a particular accounting method makes the fund a riskier vehicle, while there are believers on both sides. It is certain instead that differences “evolved in the various markets due to a variety of factors, including local market perceptions and tolerances around risk, investor preferences for income or capital gains due to differing rates of taxation, operational simplicity

¹⁰⁰⁷ Response by the Advisory Committee of the Comision Nacional Del Mercado De Valores to the CESR Consultation Paper "A Common Definition of European Money Market Funds" (4 November 2009)

¹⁰⁰⁸ Directive 2007/16/EC [2007] OJ L79/11 at Article 4, Item 2(b). Money market funds offering *constant net asset value* per share cannot be offered in France. See AMF's Procedures for implementing new classifications for MMFs *supra* note 822.

¹⁰⁰⁹ As share price of a *variable net asset value* money market fund tend to be more volatile, fund managers smooth the volatility by adding fund income to the share price. See IMMFA on CNAV and VNAV MMFs *supra* note 632 at 6. The article notes that accumulation of income into a share price affects the fund investment performance.

¹⁰¹⁰ The US money market funds as a result of the most recent regulatory changes that came into effect in January 2011 disclose the “true” market price to investors, albeit on a monthly basis and with a 60-day lag, while still selling/redeeming shares at a *constant net asset value* price. See section 3.3.3.4 *supra*. European *US-style* money market funds do not disclose their market value per share, while money market funds in Continental Europe often do not mark-to-market assets maturing within three months. See sections 4.3.1 and 4.3.5 *supra*.

¹⁰¹¹ See section 4.5 *supra*.

and accounting regulation”.¹⁰¹² Therefore, a solution to this debate offered in my proposals allow for both types of funds as long as the pricing mechanism is explained and the ‘true’ market price is disclosed.¹⁰¹³

6.3.2 Financial product regulation – specific risk-limiting standards

The first part of this section presented a *good disclosure* regime as the primary means of investor protection. Nonetheless, academic sources argue that even the best disclosure may not be entirely sufficient to forestall a market failure and protect investors.¹⁰¹⁴ In the domain of money market fund regulation, risk-limiting standards, whether administered by governmental or non-governmental actors such as credit rating agencies, have served as an important mechanism of investor protection. As evident especially in Europe, the debates over investor protection in money market fund regulation are still focused almost exclusively on the funds’ investment parameters, but not on the requirements for fund information transparency.¹⁰¹⁵

I argue that, notwithstanding its apparent practicality, product regulation in a form of establishing specific investment rules could only achieve its goal of investor protection when a well-developed market infrastructure is available. Moreover, transposing such rules into other markets with a different infrastructure may not be possible and will, at the end, be counterproductive to investor protection. Not surprisingly, the process of arriving at common investment standards for the diverse universe of European money market funds has been contentious due to the divergent infrastructure of the national markets and regulatory regimes.¹⁰¹⁶ Indeed, the transposition of the CESR’s Guidelines into national laws was met with a degree of scepticism from national regulators exactly on the grounds of investor protection.¹⁰¹⁷

¹⁰¹² MARK STOCKLEY, *Money Market Funds: A Global Story*, GTnews 29 November 2011

¹⁰¹³ Section 3.3.3.3 *supra*.

¹⁰¹⁴ See, e.g., BREYER. *supra* note 71.

¹⁰¹⁵ Section 4.3.4 *supra*.

¹⁰¹⁶ See section 4.2.2 *supra*. National regulators understandably portray their local version of money market fund as an established product that should be copied through the European Union or at least not harmed by a common definition of European money market funds. For 28 responses to the consultation paper on a common definition of European money market funds, see *Consultation on European MMFs supra* note 998.

¹⁰¹⁷ The Autorité des marchés financiers, French securities market regulator banned the *US-style* money market funds – called *short-term money market funds* under the CESR’s Guidelines – on its

Furthermore, as demonstrated in the discussion in section 4.5, pan-European product-specific standards that are aimed at containing idiosyncratic fund risks for funds could potentially be responsible for at least two counterproductive developments. First, rules that are hoarding the naturally diverse money market funds into a specific investment strategy could be responsible for greater risk accumulation. Second, uniform rules could disadvantage those national markets lacking issuance of such regulatory ‘approved’ securities. Quite obviously, these developments would lead to increased systemic stability concerns.

Harmonised investment standards could also be harmful from the standpoint of investor protection as limiting consumer choice. Therefore, regulation of money market funds on the pan-European level should avoid dictating specific investments. Rather, it should focus on defining the appropriate risk level that these funds can undertake relative to a pre-specific short-term market benchmark. I argue that the European investors would be better served under this approach as an option that preserves the natural diversity of investment strategies. Under this approach, *good disclosure* would be an essential tool for both investors and regulators to analyse the funds’ investments, to make educated decisions and to conduct fund supervision as well as to monitor market interconnectedness. Thus, even in the absence of uniform product rules, the dual goal of investor protection and systemic stability could be achieved.

As reported in section 3.5, additional reforms to the US money market industry structure are currently considered by various US regulatory bodies.¹⁰¹⁸ According to the industry research, the continuing regulatory debate around money market funds has been driven mostly by the need to deliver a political statement rather than any objectively stated concerns.¹⁰¹⁹ The proposals presented in this chapter assume the business status quo for the US money market fund, which are legitimate cash management vehicles providing much needed services outside the banking

territory citing systemic stability concerns and their untested nature in France. *See* AMF’s Procedures for implementing new classifications for MMFs *supra* note 822. For the opposite view, *see* CESR Press release 19 May 2010 *supra* note 187. The press release stated that “[t]he guidelines aim to improve investor protection by setting out criteria to be applied by any fund that wishes to market itself as a money market fund”.

¹⁰¹⁸ *See, e.g.,* NOVICK, et al., *supra* note 825. The detailed analysts of the potential capital solutions for the US money market funds finds that none of the options is without its own flows, which substantially outweigh those minor benefits of any additional reforms.

¹⁰¹⁹ ROEVER, et al., (2011c) *supra* note 171.

system.¹⁰²⁰ The position maintained in this thesis is that the additional structural reforms for the US money market funds discussed in section 3.5 are unnecessary. Furthermore, the alternative of subjecting money market funds to bank-like regulation (*i.e.*, establishing capital buffers) is regarded as counterproductive, as it would arguable reduce consumer choice and expose investors to greater systemic risk due to concentration of the money market funds within a fewer asset managers.

To conclude, the blueprint of the international money market fund regulation *ought to* focus on *good disclosure* as the primary measure of investor protection. *Good disclosure* also addresses systemic stability concerns by empowering regulators to monitor distribution of funding risk in the global capital markets through money market fund investments. The presented proposals do not purport to do away with the rules limiting investment risks for money market funds in particular markets. Thus, for example, it endorses the rules that the US market adopted relating to the requirements of its domestic funds. However, the diversity of European money market funds could be impaired leading to systemic risk accumulation should harmonised investment standards be enforced across the EU. For example, for certain markets lacking issuance of high quality securities, an objective of stability of principal could be unachievable.

6.4 The non-role of non-governmental actors

This thesis considers two types of non-governmental actors affecting the behaviour of money market funds: credit rating agencies and professional trade associations.¹⁰²¹ As reported in section 4.2, the evolution of European money market funds was, in a large part, affected by the development of their US peers; moreover, the current regulatory views on European money market funds was shaped by the diffusion of the US money market fund regulatory practices internationally. Section 4.4 followed the mechanics of this process and described the quasi-regulatory nature of credit rating agencies' methodologies as a critical link. Indeed, all three

¹⁰²⁰ SCHAPIRO, (2011) *supra* note 31. Mary Schapiro, the Chairwoman of the US Securities and Exchange Commission noted that the substantial money market fund reforms implemented in 2010 have made a substantial difference and were successfully tested in summer 2011 when these fund remained resilient despite the high market volatility related to the sovereign debt crises in the US and Europe.

¹⁰²¹ See sections 3.4 and 4.4 *supra* reporting on the role of credit rating agencies for the US and European money market fund industry, respectively. See also section 4.3.5 *supra* discussing self-regulatory practices of certain European money market funds adhering to the IMMFA's Code of Practice.

major international credit rating agencies that currently assign ratings to money market funds do so on the basis of rating methodology that are claimed to be applied ‘globally’.¹⁰²²

Professional trade associations, on the other hand, have historically played only a limited role in money market fund regulation, but served as consulting and organisational venues for the industry regulatory lobby efforts.¹⁰²³ The Institutional Money Market Fund Association has been a notable exception pioneering risk limiting standards for European money market funds, given lack of government-administered regulation.¹⁰²⁴ It is worth noting that the IMMFA’s Code of Practice did not lose its significance after the recent implementation of the pan-European definition of money market funds, but continues to fill the regulatory gap for those funds considering the common definition guidelines and the overall UCITS framework falling short of providing sufficient investor protection.¹⁰²⁵

The normative proposals presented in this chapter do not reserve a particular role for non-governmental actors given their lack of enforcement powers. Yet, both credit rating agencies and asset management trade associations are expected to continue to play valuable roles in at least two respects: stirring the industry behaviour in a desirable way through means of developing voluntary principles and providing investor education. As shown earlier in this thesis, the Institutional Money Market Fund Association uses its Code of Practice to require better information disclosure from the *IMMFA’s funds* well above and beyond of what has become the norm under the pan-European definition of money market funds.¹⁰²⁶ It is likely that the

¹⁰²² *Supra* note 573. I would like to note that a claim of so-called ‘global’ approach to money market fund ratings amongst credit rating agencies should be taken with a grain of salt. Generally, such money market fund rating criteria only applied to the US and European funds, while money market funds in other country could be rated on the basis of other, so-called ‘national’, rating criteria. As a result, ratings for money market funds in countries other than the US and Europe may not be comparable. Such ratings are normally differentiated by a country-specific subscript. Thus, the so-called ‘global’ view is limited to the US and European money market funds.

¹⁰²³ *See, e.g., Preserving Money Market Funds For Investors, For America* Investment Company Institute (2011), at <http://www.preservemoneymarketfunds.org/>. The website established by the Investment Company Institute, the US investment company trade association, with a goal is to promote the US money market fund industry’s agenda in preserving these funds. European trade associations include European Fund and Asset Management Association and its members located in various European countries, none of which focused on money market funds exclusively.

¹⁰²⁴ *See* section 4.3.5 *supra* reporting on activities of the Institutional Money Market Fund Association.

¹⁰²⁵ The *IMMFA’s funds* continue to abide by the Code of Practice. *See* section 4.3.5 *supra*.

¹⁰²⁶ Section 4.3.5 *supra*.

Association will continue to pioneer self-regulatory developments, which will be tested on a limited universe of funds and will later become enshrined in the government-administered regulation, the process that has already taken place with respect to fund information disclosure.¹⁰²⁷

The value adding proposition for credit rating agencies can be found in their core focus on serving investors “beyond the rating through independent and prospective credit opinions, research and data”.¹⁰²⁸ Even in the realm of *good disclosure*, when ample information is available, individual investors may find it too complex for their comprehension.¹⁰²⁹ Thus, the role of rating agencies is envisaged in bridging the gap in analytical skills and making sense of the ocean of disclosed data for a financial layman. The information value of the credit ratings for money market funds may, nevertheless, diminish in the future against the backdrop of availability of data supplied by the funds themselves under an obligation policed by the government regulator.

Furthermore, given a limited ability of rating differentiation on the basis of current rating criteria discussed in sections 3.4 and 4.4, investors’ interest in credit ratings *per se* could also decline if no longer supported by statutory or voluntary rating requirements for approved investments in charters of institutional investors.¹⁰³⁰ Credit rating agencies could improve their credibility with investors by reviewing their market assumptions and providing better risk differentiation among money market funds. Better risk differentiation could emerge from rejecting a long-standing practice of deriving money market fund ratings from fundamental credit ratings for individual portfolio securities. Because fundamental credit ratings are a lagging indication of liquidity risks, money market fund ratings are inevitably lag negative portfolio developments.¹⁰³¹ Lastly, if the current focus on the standardisation of rating methodologies were

¹⁰²⁷ *Id.*

¹⁰²⁸ *About Us*, Fitch Ratings (2011), at <http://www.fitchratings.com/web/en/dynamic/about-us/about-us.jsp>.

¹⁰²⁹ *See, e.g.*, A. A. SOMMER, JR., *Random Thoughts on Disclosure as Consumer Protection*, 27 *Bus. Law* 85 (1971).

¹⁰³⁰ *Supra* note 593. A large number of institutional investors rely on internal investment policies that direct them towards rated investments.

¹⁰³¹ *See, e.g.*, JONATHAN KATZ, et al., *Credit Rating Agencies*, Note No. 8 The World Bank Group / CrisisResponse, (October 2009) at 4. The report observed that ratings have little informational value and that rating changes generally lag the market.

to prevail, the value of the information provided by the analysis of money market funds would inevitably decrease as diversity of analytical opinions could be missing.

I conclude that credit rating agencies could not realistically become the anchoring point for money market fund-specific regulation since the dual regulatory goal is not achievable on the basis of credit ratings alone. Nonetheless, credit rating agencies, as well as professional trade associations, can play a useful role of investor educator.

6.5 Conclusion

The regulatory architecture I propose for money market funds on both sides of the Atlantic introduced a *good disclosure* regime as the primary measure to achieve the dual regulatory goal of investor protection and systemic stability despite jurisdictional divides and structural differences in the respective capital market. *Good disclosure* includes full transparency of the fund portfolio assets and their market prices as well as their largest investors, freely accessible to the public via a central depository of money market fund data. *Good disclosure* is conducive to preservation of systemic stability by enabling regulators to track market interconnectedness and distribution of funding risk. The information regarding money market fund investors provides an insight into those entities that manage cash outside the conventional banking system. Thus, the risk of investor run could be monitored, measured, controlled and pre-empted thereby limiting market failures.

A *good disclosure* system benefits the money market fund industry *indirectly* in at least three significant ways. First, it empowers investors to make educated decisions and encourages prudent investment behaviour on the parts of the asset managers. Second, it provides regulators with a monitoring mechanism to follow funding linkages in the global capital markets. Third, it offers academia an invaluable source of financial data that could be studied and used to further inform the market stakeholders and regulators. It was noted that *good disclosure* has been largely implemented in the US with an exception of disclosure of the fund's investors. In the EU, a *good disclosure* regime is yet to be established.

In addition, the money market fund data storage recommended in this thesis could be accompanied by several 'collateral' advantages, especially for the European markets, that are

outside the scope of this thesis, but nonetheless worth mentioning. First, it provides a practical example of cooperation and information sharing, a critical link of building a single market in Europe. Second, ample disclosure would render European money market funds more attractive due to better information availability. Lastly, *good disclosure per se* could amount to a first significant step towards a truly ‘global’ regulatory model capable of being extended to other jurisdictions that were left beyond the scope of this thesis. Agreeing on *good disclosure* practices can potentially pave the way for the normative and supervisory practices’ integration that are currently lacking in money market fund regulation.

On the other hand, traditional product regulation in money market funds by a means of establishing risk-limiting standards, while considered useful, is de-emphasised under these proposals. Sections 3.5 and 4.5 revealed significant limitations of this regulatory approach on both sides on the Atlantic. Limitations include unanticipated side effects on the market upon the rule changes, lack of available investment alternatives under the overly prescriptive rules, reduction in product diversification and, ultimately, reduction in consumer choices. Most importantly, an international approach to money market fund regulation would be unachievable if it relied exclusively on product regulation due to significant differences in the market infrastructure between the US and the EU as well as within the European national markets.

Lastly, this thesis considers the role of non-governmental actors and any self-regulatory measures that can be developed under their auspices as insufficient to meet the dual regulatory goal of investor protection and systemic stability. This conclusion is based on a review of contributions of credit rating agencies and the Institutional Money Market Fund Association in developing, promoting, monitoring and enforcing practices consistent with the established regulatory objectives. It was established that, with respect to credit rating agencies, the value of credit ratings as an investor protection tool is diminished by a lack of risk differentiation among money market funds, which mainly receive the highest triple-A rating. With respect to the Institutional Money Market Fund Association, which caters to the *US-style* money market funds in Europe, its limited focus prevents a broader adoption of the industry-developed Code of Practice. Thus, any measure focused on investor protection and systemic stability in the realm of money market fund regulation ought to be a part of government-administered regulation to ensure proper supervision and enforcement.

CHAPTER 7: CONCLUSION

7.1 Introduction

This concluding chapter reports on the four contributions to knowledge that the thesis sought to achieve.¹⁰³² The first contribution relates to the categorisation of money market funds, establishing their essential functions and detailing the role of these funds in the financial crisis as well as in the European sovereign debt crisis. Indeed, as pointed out in chapter 1, academic sources are rather undeveloped with regard to the categorisation of money market funds especially on the international scale. A fast growing body of academic research in relation to these funds is conducted on the erroneous assumption of their categorical and functional isomorphism. Chapter 2 addressed this issue by identifying the categories of money market funds and analysing the related variances in funds' riskiness. Section 7.2 below summarises these findings.

The second contribution concerns the regulatory framework of money market funds. Chapter 3 provides a detailed top-down analysis of a comprehensive regulatory scheme under the federal securities laws applied to the US money market funds, while chapter 4 studies the European Community rules governing activities of money market funds operating in Europe. In addition, both chapters consider the effect of non-governmental actors on the international development of the money market fund industry that contributed to the diffusion of the US law to European countries. The third contribution relates to a comparative analysis of the US and European regulatory systems in the context of money market funds, which was presented in chapter 5. A summary of the analysis and comparison of the US and EU regulation are presented in *infra* section 7.3.

Section 7.4 provides my response to the research question: “*how should money market funds be regulated?*”. The response first establishes that there are two overarching goals in money market fund regulation: investor protection and systemic stability. It consequently argues that these two goals could be achieved through a comprehensive *good disclosure*.

¹⁰³² Section 1.1.5 *supra*.

7.2 Money market fund categories, their essential functions and risks

Section 1.1.1 of chapter 1 defined the subject of my research and established the generic structure of a money market fund as a simple pool of investors' cash invested in a diversified portfolio of high quality short-term securities. Investors acquire ownership interests in the portfolio, participate in the pool's profit, share losses and expenses and can sell their share of ownership back to the fund at any time. Money market funds are seen as the least risky investment option available to investors in a given market owing to the high quality and short duration of portfolio securities.

As pointed out in section 1.3, although money market fund types are many and more can be found especially in different countries not covered in this thesis, academic studies tend to focus on one particular type of the US money market funds, so-called prime funds. The findings they present and the policies they suggest are extrapolated from these narrowed studies that blatantly overlook the variances occurring in the funds' risk profiles. Chapter 2 fills this gap in the understanding and appreciation of the variability of the international money market funds landscape by presenting their essential characteristics as well as establishing a detailed categorisation of the money market fund universe in multiple dimensions. Exhibit 3 in section 2.2 illustrated the significance of each money market fund category through their size of assets under management. While US money market funds dominate the landscape with approximately \$2.6 billion in assets, European funds still represent a substantial part of this market just shy of \$1.5 billion.¹⁰³³

Chapter 2 established that the geographic location dictates not only the regulation affecting the funds and the portfolio's base currency, but also the funds' operational and accounting practices and the funds' investment preferences. It was also established that the funds' shareholder base has a significant impact on the fund risk profile with funds offered to retail investors being less susceptible to a run as illustrated by an analysis of the cash flows in and out of different types of funds during the tumultuous period of the fall of 2008. Most importantly, it was shown that money market funds incur in a different degree of risks depending on the nature of their investments. Prime money market funds investing in short-term securities

¹⁰³³ Section 2.2 *supra*.

issued by corporate entities assume substantial credit risk, while funds investing in government or municipal securities are less likely to face losses stemming from credit quality deterioration of the portfolio assets.

Finally, this thesis categorises money market funds on the basis of their asset valuation practices. There were two types of funds established: those funds selling and repurchasing their shares at a constant net asset value and those funds with variable net asset value per share. It was also established that seemingly inconsequential details of accounting methods have a profound effect on the acceptance of funds by various groups of investors even though the overall economic experience of investing in either type of funds is substantially similar.¹⁰³⁴ For example, the US institutional investors have an overwhelming preference for constant net asset value money market funds.¹⁰³⁵ Thus, abrupt regulatory changes affecting the money market fund industry structure and, in particular, its accounting methodology as the ones contemplated by the Report of the President’s Working Group on Financial Markets “Money Market Fund Reform Options” are likely to jeopardise the viability of the US money market funds.¹⁰³⁶

Chapter 2 further established that in the space of 40 years, when the first money market fund was launched in the US, these funds have become an essential part of the global capital markets. A sample of the recent academic studies (presented in section 1.3.5) dedicated to financial intermediaries acting outside traditional banking system dubbed as ‘shadow banks’ included money market funds as investors in ‘shadow banks’. These studies were often conducted with the implicit assumption of a somewhat illicit nature of ‘shadow banks’ activities aimed solely at avoiding banks’ regulatory tenets (and costs). Nonetheless, section 2.3 reports legitimate reasons for cash management outside the regulated banking system through money market funds. First, at the initial stages of their developments, money market funds provided returns superior to those of regulated banks in the countries where interest rates on bank deposits were subject to a cap.¹⁰³⁷

¹⁰³⁴ IMMFA on CNAV and VNAV MMFs *supra* note 632.

¹⁰³⁵ Chapters 3 and 4 provide exhaustive historical backdrop for the genesis of this distinction in the US and Europe, respectively.

¹⁰³⁶ *See, e.g., FISCH & ROITER, (2011) supra* note 6

¹⁰³⁷ *See* sections 3.2.1 and 4.2.1 *supra* for origin and development of money market funds in the US and France, respectively.

Since then the interest rate ceiling on bank deposits was lifted, yet the appeal of money market funds as a safe and convenient cash management option remained intact and multiplied by the wide socio-economic gains resulting from money market fund activities. Moreover, a growing body of the post-crisis analysis of the traditional banking system warns of eroding effectiveness of an official safety net for banks and deposits that explains the rise of money market funds amongst other institutional cash pools.¹⁰³⁸ Thus, my second contribution adds to this literature assessing the role of money market funds as key intermediaries facilitating the global flow of capital (in section 2.3) and analysing their risk transmitting role in both the financial crisis and the European sovereign credit crisis of 2011 (in section 2.4).

Section 2.3 reported that money market funds enabled development of the short-term capital market expanding a choice of funding opportunities for various issuers. Serving as intermediaries between investors and issuers, money market funds channelled investments from cash-rich households to cash-strapped businesses and governmental entities, including municipal authorities and sovereign states.¹⁰³⁹ The danger, however, is that if money market funds cease to function because of cash withdrawals by investors, these markets would freeze leaving the borrowers without sources of funding. This has happened in the fall of 2008 leaving a deep trauma on the short-term markets from which they are yet to recover.¹⁰⁴⁰ Money market funds' role in the financial crisis and the European sovereign debt debacle described in section 2.4 earned these funds an ill-fated association with systemic risk.

Thus, one of the two goals that according to this thesis the regulation of money market funds ought to achieve is systemic stability. To be clear, whether money market funds *cause* systemic risk remains debatable in the academic literature and in industry sources.¹⁰⁴¹ Nonetheless, the role of money market funds in *transmitting* systemic risk has been established (in section 2.4) and, therefore, policy steps are considered on both continents to address it. These steps include: (1) the structural reform of the US money market funds in line with the proposals outlined in the President's Working Group report and additional options,¹⁰⁴² and (2) Regulation

¹⁰³⁸ See, e.g., POZSAR, (2011) *supra* note 154.

¹⁰³⁹ Sections 2.3.2.1 through 2.3.2.6 *supra*.

¹⁰⁴⁰ Section 1.2 *supra*.

¹⁰⁴¹ See, e.g., FISCH & ROITER, (2011) at 6.

¹⁰⁴² See PWG's Report *supra* note 7 and STULZ, The Squam Lake Group's Proposal *supra* note

of European money market funds as “shadow banks” as per recommendations published by the Financial Stability Board.¹⁰⁴³ Unintended consequences of these regulatory efforts are also critically analysed in chapters 3 and 4 related to the US and European money market funds, respectively.

7.3 Money market funds in the US and the EU – comparative analysis

The third contribution of my research is an original comparative analysis of money market fund regulatory models in the US and the EU. This analysis specifically focuses on the efficiency of both models with respect to the attainment of the dual regulatory mandate established in section 1.1.3, namely investor protection and systemic stability. In order to do so, I study the development of money market funds on both sides of the Atlantic, including contributions of non-governmental actors, and related regulatory processes in the respective jurisdictions. Chapter 3 was focused on the US money market funds and chapter 4 followed these funds in the EU. Both chapters 3 and 4 are similarly structured to facilitate the comparative analysis presented in chapter 5.

In particular, chapter 3 provides an analysis of the US money market fund regulation as a part of a comprehensive regulatory scheme under the federal securities law put in place after the Great Depression, as subsequently amended. Under this scheme, measures relating to investor protection are rooted in the philosophy of disclosure, which, in case of money market funds, is operationalised through ultimate transparency of portfolio information – referred to as *good disclosure* in this thesis. Chapter 3 also demonstrates that specific policy steps inspired by stability concerns are more difficult to be agreed on, despite multiple regulatory reform options and academic proposals, as their very rationale for such measures, namely whether money market funds are systemically risky, is still being debated (*see infra*).

Chapter 4 presents European money market funds from multiple dimensions. The empirical study of these funds as set up in different countries shows that the diversity of European money market funds is rooted in the historical developments of the respective countries’ financial markets. Moreover, law and regulation have played a key role in the

¹⁰⁴³ See FSB Report *supra* note 32.

development and acceptance of these funds. Still, the research shows that not every state has developed targeted money market fund regulation at the national level.

At the EU level, a definition and regulation of money market funds were put in place as recently as July 2011. Until then, it was noted, non-state actors – credit rating agencies and professional trade associations – filled the gap by developing their own bodies of rules concerning activities of money market funds, which were voluntarily adopted by the industry. This thesis points out two general tendencies in the development of rules by non-state actors that shaped the European money market fund industry: (1) use of the industry best practices as a basis for subsequent regulatory development; (2) introduction of stricter regulation imported from other jurisdictions. For example, European subsidiaries of the US asset management companies introduced the *US-style* money market funds to meet the demand for cross-border cash management services from multinational corporations and, despite European domiciliation of these funds, they continued to conform to the rules mandated for the US money market funds in the absence of domestic regulation.

Thus, this thesis provides an appraisal of the dynamics of the development of the law concerning money market funds by explaining how money market funds were developed in the US and Europe and how these funds were offered to investors and traded in the initial absence of regulation. Another remark (presented in chapter 3) relates to the unintended consequences of regulation, namely, to the very stimulation of the avoidance of legal rules. Much of the research conducted in this thesis revolves around the circular relationship between law and financial markets development. Therefore, chapter 3 traced the legislative history of Rule 2a-7, which governs activities of the US money market funds. Its initial draft published in 1983 was informed by the existing best industry practices and was subsequently amended a number of times to strengthen fund regulation following the significant market events until the latest 2010 amendments were implemented as the regulatory response to the events of the fall of 2008.

Likewise, chapter 4 analyses the work process on the publication of a common definition of European money market funds by, first, tracing national-level definitions, albeit only found in a limited number of states; second, reporting on multiple proprietary definitions utilised by various regulatory agencies for their purposes; and, third, commenting on the consultation process with the industry stakeholders. The chapter points to the heterogeneity of European

capital markets as well as the investors' cultural preferences and local investment traditions as the main reasons for the diversified landscape of the European money market fund industry. It should be noted that while the publication of a harmonised definition was portrayed as an investor protection-motivated step, the need for such a definition should be attributed to the general drive for harmonisation of financial services regulation in the European Union, but not to the genuine investor need.

Indeed, this thesis points out that in the field of asset management the concept of harmonisation, more often than not, is in conflict with the basic concept of investment diversification. Specifically to the subject of this research, harmonisation of money market fund investment strategies may work counterproductively to the principle of investor protection by reducing diversification options and consumer choices. Moreover, given that the common definition guidelines were in many ways imported from the much broader and more liquid US short-term market, some of the smaller European capital markets may not be able to support the investment requirements of the harmonised money market funds. Thus, *inter alia*, chapter 4 pointed out the limitations of the harmonised definition for European money market funds to guide and redress their regulation.

Finally, chapter 5 presents a comparative analysis of money market fund regulation on both sides of the Atlantic *vis-à-vis* my theory of a dual regulatory goal - investor protection and systemic stability. It was established that despite functional similarities of the US and European regulatory models and their shared goals, the differences are significant. The major point of discordance relates to the development of investment standards workable in both the US and the EU markets. This is hardly achievable given their significant differences. In effect, it was shown in this thesis (in section 4.5) that when such uniform investment standards are sought and implemented, they may lead to a reduction in consumer choices and diversification options thus weakening investor protection and leading to a potential accumulation of systemic risk thus defeating the established regulatory goals.

This thesis further contributes to the development of a comparative view on the US and European regulatory approaches to money market funds regulation by pointing out the most significant departure related to information transparency. As explained in section 1.2, the theoretical foundation of the US securities regulation is deeply rooted in the seasoned culture of

disclosure. Consistent with this culture, the rules governing the activities of the US money market funds create a substantially enhanced disclosure regime – referred in this thesis as *good disclosure* – so that everyone, from investors to regulators, can better monitor the risk characteristics of these funds. Moreover, the US Securities and Exchange Commission called for building a database of money market fund information making it available to the public, albeit on a delayed basis.¹⁰⁴⁴

Again, the strong focus on disclosure as well as the Commission’s activities to ensure a broad access to this information for the investment public is based on the underlying theory that informed investors could impose a discipline on fund managers to avoid taking undue risks. Thus, the *good disclosure* regime for the US money market funds is found entirely consistent with a dual regulatory goal of investor protection and systemic stability. This is in contrast to the regulation of European money market funds, which emphasises development of the harmonised prudential rules, while de-emphasising transparency above and beyond prospectus regulation and fairly generic KIIDs for those UCITS-authorized investment schemes. As pointed out earlier in this section, the prudential rules may or may not achieve the investor protection goal, while lack of *good disclosure* clearly impedes investors’ ability to monitor fund risks.

In a way, de-emphasising *good disclosure* and not participating in facilitating investors’ access to fund information, regulatory actions seem to work to protect the asset managers, not the investors. Thus, the contemporary money market fund regulatory framework in the EU that features harmonised prudential rules as its cornerstone is unlikely to achieve the stated goal of investor protection, while also working counterproductively in terms of systemic stability concerns. The problems and paradoxes identified in analytical chapters 3 and 4 and in comparative analysis in chapter 5 are further elaborated in the next section that provides my answer to the research question.

Lastly, this thesis contributes to the comparative study by considering the role of the non-governmental actors – credit rating agencies and professional trade organisations – in the development and regulation of money market funds, a subject not so far covered in the academic literature. The analysis of the criteria for money market funds utilised by the credit rating

¹⁰⁴⁴ SCHAPIRO, (2010) *supra* note 88.

agencies revealed that while credit rating agencies indeed attempt to measure risks in the US and European funds with the same benchmark, seeking a *global* comparability, such comparability is achieved on the basis of a crude assumption of homogeneity of international capital markets and their infrastructure.¹⁰⁴⁵ The lack of discrimination on the basis of the national market infrastructure undermines the ability of credit rating agencies to capture idiosyncratic risks. This leads to rating analysis to be overly generic, concentrated in triple-A ratings and, therefore, unsuitable to be considered an essential tool for improving investor protection or systemic stability.¹⁰⁴⁶

Professional trade organisations, another type of non-governmental actors, were identified mainly as aiming to investor education and the lobbying venues of the industry on both sides of the Atlantic. Nonetheless, they contributed to informing the regulatory debate by summarising the best industry practices and providing a link between legislators and the industry. This with an exception of the Institutional Money Market Fund Association, which developed its Code of Practices to guide investment activities of European money market funds in the absence of regulation targeting these funds. The study of the role of the Association contributes to the broader research on the development of money market fund regulation and the role of non-governmental actors. The study found that while *de jure* the Code of Practice has no power, *de facto* it establishes an additional level of self-imposed regulation on those European money market funds voluntarily adopting the Code.

The study found that the initial version of the Code of Practice was informed largely by the investment practices of the US money market funds and credit rating agencies' criteria. Thus in the absence of money market fund-targeted regulation in Europe, the Code of Practice served as the only regulatory guidance for these funds. The Code was motivated by concerns for investor protection and is mainly centred on a set of standards aimed at limiting idiosyncratic fund risks. However, bridging a wide disclosure gap between the US and European money

¹⁰⁴⁵ Ironically, only the US and European money market funds are approached on the basis of *global* criteria. Money market funds operating in other continents are mainly rated on the basis of so-called *national* scale and rating criteria.

¹⁰⁴⁶ It should be mentioned that credit ratings do not seek to achieve investor protection, but rather provide an input in the overall investor decision making process in a form of their rating opinion. See rating definitions on respective rating agency web-sites, e.g., www.fitchrating.com, www.moodys.com and www.standardandpoors.com.

market fund regulatory models, albeit partially, the Code calls to disclose a number of useful items above and beyond of what is required under the pan-European definition of money market funds and the UCITS Directive.

A somewhat enhanced disclosure regime and more restrictive investment standards for the *IMMFA's funds* are advocated by the members of the Association themselves as a measure aimed at additional investor protection in European money market funds. This demonstrates the industry's self-interest in additional guideposts promoting investor confidence. The study nonetheless identified at least two aspects that are likely to weaken the effectiveness of the Code for the European money market fund industry: (1) lack of enforcement power of the Association and (2) its limited applicability given the voluntary nature of the Code and the diverse industry landscape with a significant number of funds operating outside the Code's investment and disclosure standards. For these reasons the normative proposals presented in chapter 6 do not afford a regulatory role to non-governmental actors, while still considering their positive influences on behaviour of fund managers.

7.4 How should money market funds be regulated?

So, how should money market funds be regulated? It was established in this thesis that money market funds, particularly those operating in the US, are already subject to extensive regulatory oversight and, arguably, are some of the most regulated financial products.¹⁰⁴⁷ Nonetheless, money market funds remain on the forefront of the regulatory agenda on both sides of the Atlantic. In effect, the ongoing debates cloud the future of the industry as documented in sections 3.5 and 4.5.

Building on the theory of the dual regulatory goal – investor protection and systemic stability – this thesis provides two main normative contributions. First, it critically evaluates the existing US and pan-European regulatory models and, second, it introduces an alternative framework.

¹⁰⁴⁷ BRIAN REID, *Time to Stamp Out the Confusion Around 'Shadow Banking'*, Investment Company Institute (6 December 2011), at <http://www.ici.org/viewpoints?tag=Fund%20Regulation>. The article states that the US money market funds are among the most strictly regulated financial products offered to American investors.

Sections 3.3 and 4.3 offered detailed analysis of money market fund regulation in the US and Europe, respectively, and illustrated that, with respect to investor protection-motivated measures, regulators on both sides of the Atlantic rely heavily on product regulation by developing a set of risk-limiting standards deemed consistent with the function of money market funds.¹⁰⁴⁸ However, as pointed out in sections 3.3 and 4.2, such an approach overlooks the fact that the different states and infrastructures of the local markets are the very reasons for the existence of money market funds in different countries. Such differences underpin the observed heterogeneity in funds' risk profiles as well as local investment preferences and practices. In addition, every national market differs in terms of accounting and taxation. Thus, this thesis concluded that the risk-limiting rules promulgated in a particular market (*e.g.*, in the US) and based on the assumption of local markets homogeneity are unlikely to be transferred to a universal financial product that meets the needs of other markets and investment communities. Nevertheless, it has been an aspiration of the European regulators to achieve a single market and a single regulation of financial products and services including, in particular, money market funds.

Under the banner of investor protection, the harmonised rules for European money market funds not only have an explicit goal to make all these funds look alike in Europe, but also an implicit ambition to achieve a greater *global* comparability (*i.e.*, with the US money market funds). However, as illustrated in chapter 5, the harmonisation of long-standing investment practices in Europe has been subject to a contentious debate. Thus, despite the wide consultation process, it has not been possible to identify a convincing regulatory framework for the European money market fund industry.¹⁰⁴⁹ Moreover, it is argued in this thesis that for money market funds in many European countries – outside Ireland and Luxembourg fund administration centres mainly hosting the *US-style* money market funds – harmonisation is impractical and entirely

¹⁰⁴⁸ Essential functions of money market funds are identified in section 1.1.1 *supra*.

¹⁰⁴⁹ Guidelines for a common definition of European money market funds outlines a two-tier industry structure, where two types of funds with a vastly different risk profiles are, supposedly, have the same investment objective “of maintaining the principal of the fund and aim to provide a return in line with money market rates”. *See* CESR's Guidelines *supra* note 9. Clearly, given that one type of funds is riskier than the other, less risky ones have higher probability of achieving the stated objective of maintaining principal. *See also* section 4.3.4 *supra*.

unnecessary on both regulatory grounds: these funds were not known for harming investors nor they have been seen as culprits of the systemic stability concerns.¹⁰⁵⁰

Thus, this research has identified the important limitations of regulation prescribing specific investment standards in money market funds and thereby providing investor protection. Such standards aim to select harmonised products that tend to simplify and ignore existing investor preferences and market infrastructure as demonstrated in this thesis. Indeed the contribution of finance to the productive sector of the economy, to which finance is supposed to be a servant – one of the political-economic objectives widely professed by regulators today – is almost always neglected in the debates relating to reforming the global money markets. Instead, this thesis envisages the objective of systemic stability as contingent on the positive role of money market funds of contributing to the livelihood of other economic actors.¹⁰⁵¹

Thus, this thesis proposes to reform money market funds in ways that favour ‘active’ rather than ‘passive globalisation’, that is, “the engagement of local market actors with the world economy without abandonment of their distinctive strategies”.¹⁰⁵² The first recommendation for the coherent approach to money market fund regulation on both sides of the Atlantic is therefore to give up the emphasis on regulating the fund’s investment standards, and instead allow local money market funds to develop their own approaches that service the needs of investors. These proposals stand in contrast to the ongoing efforts to develop a single ‘harmonised’ view based on

¹⁰⁵⁰ See, e.g., Comment Letter - Consultation Paper on CESR’s Proposal for a Common Definition of European Money Market Funds (CESR/09-850) (Bundesverband Investment und Asset Management e.V. 30 December 2009). The comment letter from the professional trade association representing German investment fund and asset management industry stressed the need to provide for extended WAL and WAM limits for certain money market funds “in order to be able to provide the investor base with the requested money fund products going forward”.

¹⁰⁵¹ See, e.g., TAMARA LOTHIAN, *Rethinking Finance Through Law: A Theoretical Perspective*, Columbia Law and Economics Working Paper No. 412 (21 November 2011). See also section 2.3 *supra* for analysis of the money market funds’ contribution to the global capital markets.

¹⁰⁵² *Id.* at 7. The author argues for developing institutional arrangements that supports the broadening economic opportunities, without the imposition of a single set of financial arrangements. The author warns that “such arrangements are likely to contradict the institutional formulas preferred by the interests and ideas prevailing in the great powers of the day”. See also ROMANO, *supra* note 114 and TAMARA LOTHIAN, *Beyond Macro-Prudential Regulation: Three Ways of Thinking About Financial Crisis, Regulation and Reform*, Columbia Law and Economics Working Paper No. 411 (17 November 2011).

the best practice accepted in the most developed markets for a specific type of money market funds.¹⁰⁵³

Further, with respect to investor protection, the underlying theory outlined in section 1.1.3 calls for information disclosure detailed enough as to empower the fund investors to influence the fund managers' behaviour by virtue of the on-going monitoring of portfolio risks. While the normative proposals outlined in this thesis call for homogeneous information transparency requirements for money market funds on both sides of the Atlantic, the need for *good disclosure* is underscored for European money market funds in particular. Furthermore, to facilitate access to this information, a global money market fund information depository should be developed. Such depository could be modelled on the successful experience in this area of the US Securities and Exchange Commission and private information portals.¹⁰⁵⁴

With respect to the goal of systemic stability, this thesis has demonstrated that neither of potential money market fund industry reforms – change in accounting practices or introduction of capital buffer – is certain to eliminate the possibility of a run, the main regulatory concern with respect to these funds.¹⁰⁵⁵ At the same time, each of these proposals carries its own weaknesses and shortcomings that substantially outweigh any marginal improvements.¹⁰⁵⁶ Critically, this thesis argues that the on-going financial regulation reforms in banking regulation following the passage of the Dodd-Frank Act in the US and the implementation of the provisions of Basel III are redressing the risk profiles of global capital markets. This would affect the investment activities of money market funds in unexpected and unintended ways.¹⁰⁵⁷

Without further study of how the most current changes to financial regulation have altered the markets any additional reforms to the money market fund industry are premature, at a

¹⁰⁵³ Section 4.3.4 *supra*.

¹⁰⁵⁴ See EDGAR *supra* note 438. See also private money market fund information portals, e.g., www.cranedata.com, www.imoney.net. It should be noted that private information portals serve mainly as facilitators of information that has already been disclosed to the public market by virtue of regulatory requirements. Nonetheless, information providers do make efforts to encourage fund managers to offer more information to the investment public on the voluntary basis. For example, in the late 2011 information portals have started offering data on those European money market funds that cooperate with the data collection process.

¹⁰⁵⁵ Sections 3.5 and 4.5 *supra*.

¹⁰⁵⁶ See NOVICK, et al., *supra* note 825 for a detailed analysis of the proposed US money market fund reform options.

¹⁰⁵⁷ Sections 3.5 and 4.5 *supra*.

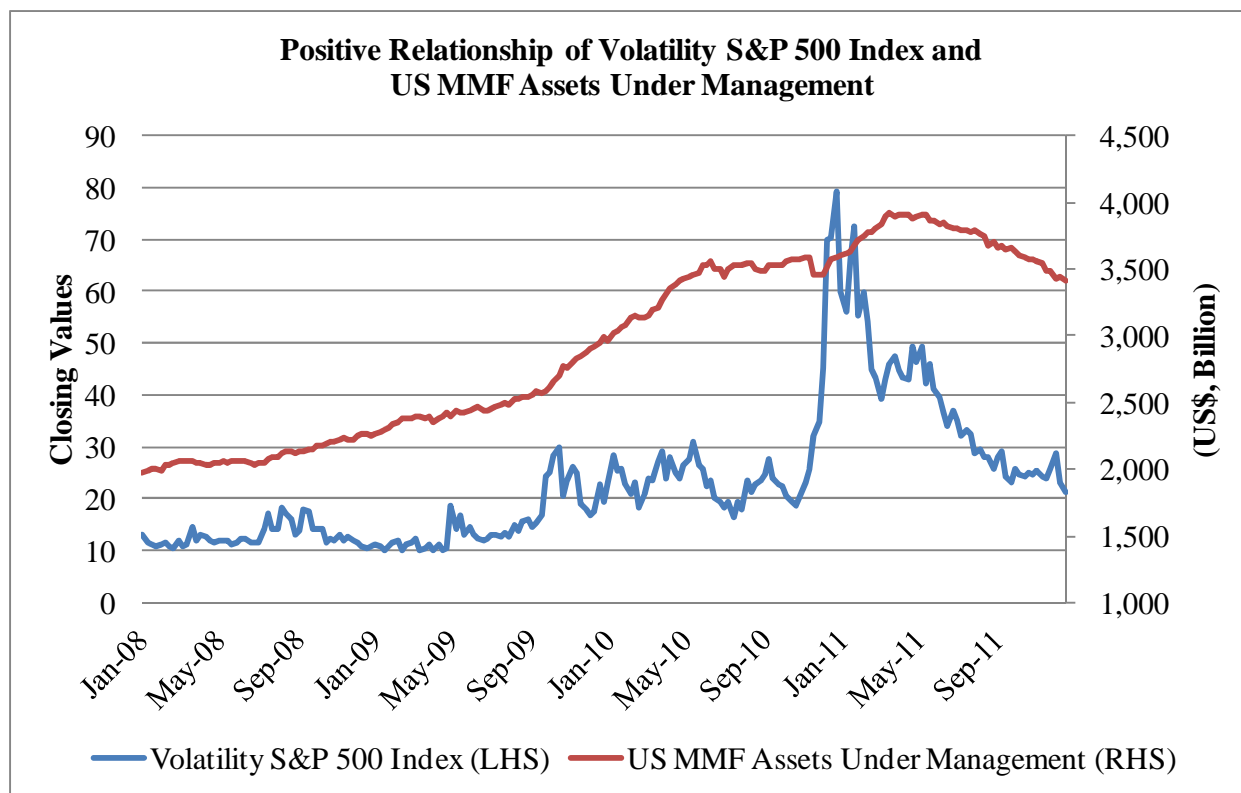
minimum, but most likely unnecessary.¹⁰⁵⁸ Therefore, this thesis does not consider any proposed changes to the industry structure described in section 3.5 as achieving the dual regulatory goals – investor protection and systemic stability – with certainty giving the changing landscape of the international capital markets. The solution for the money market fund industry regulation should be found in (1) education of the investment public through *good disclosure*; (2) making information available to all; and (3) promoting those money market fund investment strategies that both serve funding needs of the national capital markets and meet expectations of local investors for a safe and liquid investment product.

With respect to the jurisdictional aim of the proposals, which mostly concern European money market funds, the recommendation is to enhance the powers of the European Securities and Markets Authority with respect to money market fund registration, operational and governance oversight and data collection function. This regulatory structure facilitates two fundamental objectives: (1) enforcing a rule-based definition of European money market funds and (2) monitoring of cross-border movements of cash investments as a proxy for assessing of funding needs, which will be facilitated by virtue of a *good disclosure* regime.

I conclude this assessment of my contributions to knowledge by acknowledging these four contributions as providing both a theoretical framework and generous details that are of practical use for informed debate about individual money market funds, the money market fund industry structure and its regulation in the US and Europe. Furthermore, given the reach of money market funds far beyond these two markets, it is wished that the findings of this research may be appreciated by international regulatory bodies and other investment communities.

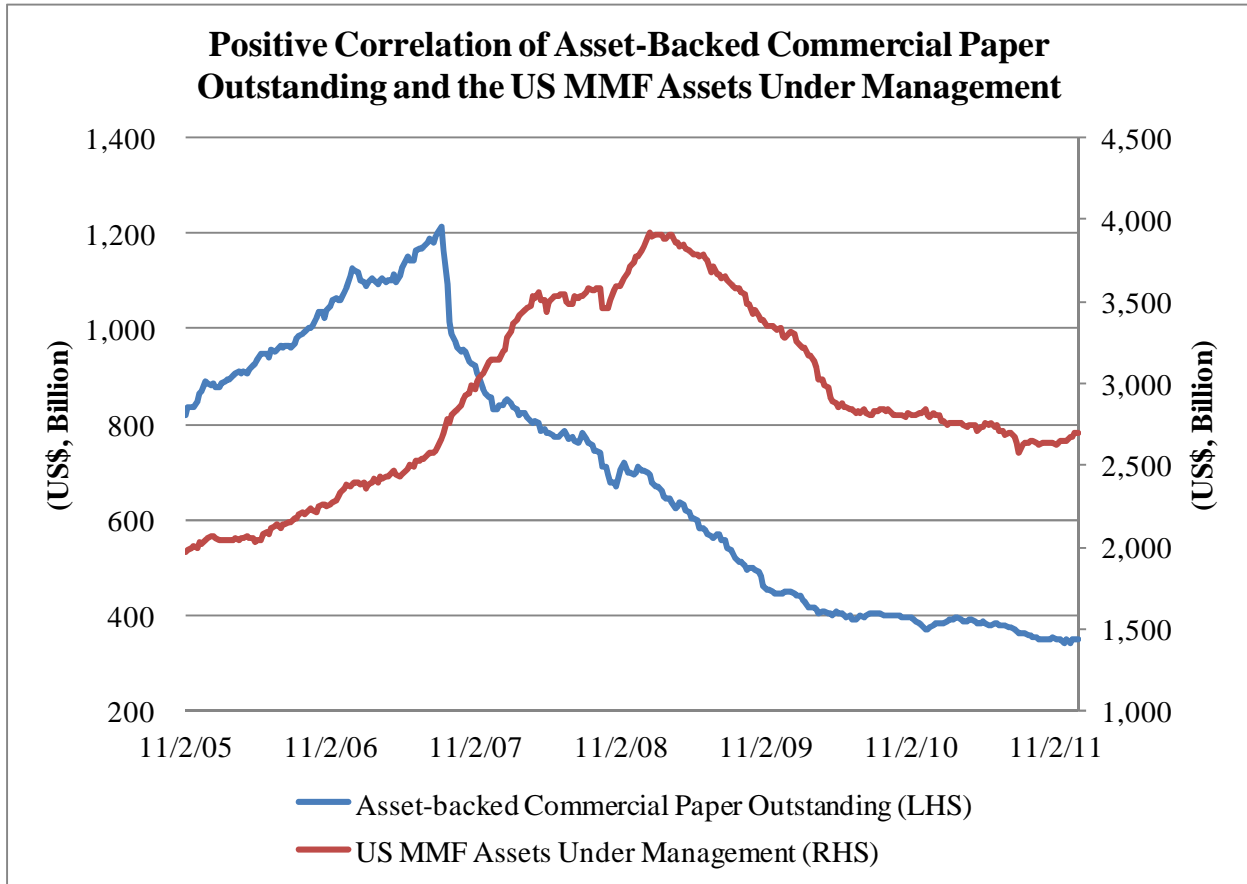
¹⁰⁵⁸ DANIEL M. GALLAGHER, SEC Reform After Dodd-Frank and the Financial Crisis (US Securities and Exchange Commission 14 December 2011)

Annex A



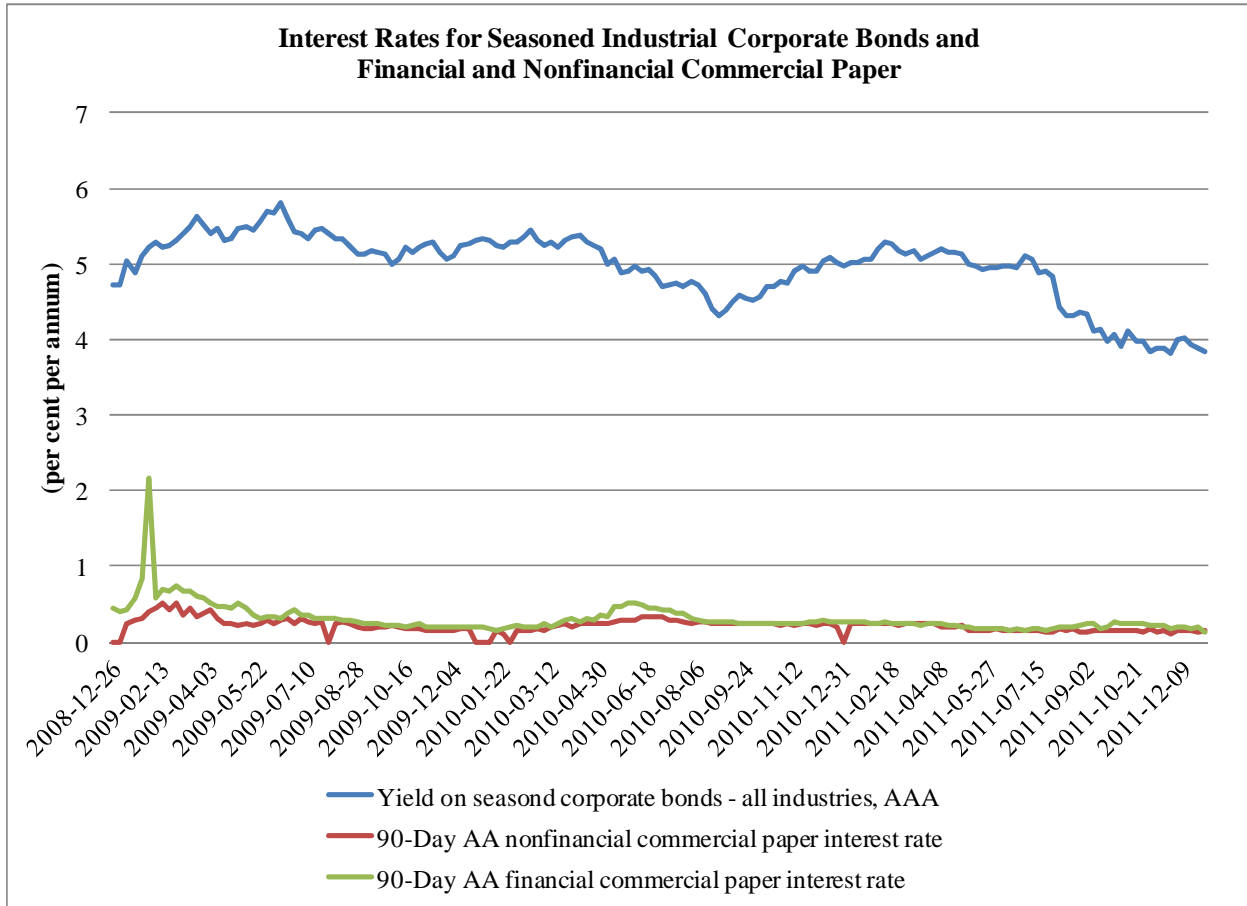
Sources: Volatility S&P 500 Index: <http://finance.yahoo.com/q/hp?s=%5EVIX+Historical+Prices>, for the US money market funds' assets under management: www.ici.org.

Annex B



Sources: for the asset-backed commercial paper outstanding: the Federal Reserve at <http://www.federalreserve.gov/econresdata/default.htm>, for the US money market funds' assets under management: www.ici.org.

Annex C



Source: the Federal Reserve at <http://www.federalreserve.gov/econresdata/default.htm>,

Annex D

3-month Treasury bill



Source: Federal Reserve Board 2012

Annex E

List of the US Government Liquidity Programmes

Program Name	Authority	Purpose	Peak Utilization
Asset-Backed Commercial Paper Money Market Liquidity Facility	Federal Reserve	Liquidity	\$145.9 Billion
Temporary Guarantee Program for Money Market Mutual Funds	U.S. Treasury	Guarantee	\$3,355.3 Billion
Commercial Paper Funding Facility	Federal Reserve	Liquidity	\$349.9 Billion
Temporary Liquidity Guarantee Program	U.S. Treasury/ FDIC	Guarantee	\$834.5 Billion
Money Market Investor Funding Facility	Federal Reserve	Liquidity	\$0

Source: Morgan Stanley Investment Management. *Available at*

http://www.morganstanley.com/views/perspectives/investment_journal_vol2_is2.pdf

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