



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

The Global Financial Crisis and the Disclosure Paradigm in European Financial Regulation

Citation for published version:

Avgouleas, E 2009, 'The Global Financial Crisis and the Disclosure Paradigm in European Financial Regulation: The Case for Reform' *European Company and Financial Law Review*, vol 6, no. 4, pp. 440-75., 10.1515/ECFR.2009.440

Digital Object Identifier (DOI):

[10.1515/ECFR.2009.440](https://doi.org/10.1515/ECFR.2009.440)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Publisher final version (usually the publisher pdf)

Published In:

European Company and Financial Law Review

Publisher Rights Statement:

©Avgouleas, E. (2009). The Global Financial Crisis and the Disclosure Paradigm in European Financial Regulation: The Case for Reform. *European Company and Financial Law Review*, 6(4), 440-75. 10.1515/ECFR.2009.440

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



The Global Financial Crisis and the Disclosure Paradigm in European Financial Regulation: The Case for Reform

by

EMILIOS AVGOULEAS*

The global financial crisis has exposed the many limits of disclosure as an effective regulatory tool in financial markets. First, the famed disciplining power of the market failed to constrain disastrous risk taking by banks. Second, most of the risks that led to the creation of the 2008 catastrophe were often fully disclosed but the markets failed to understand them. In the case of banks, disclosure-based market discipline failed mainly because of the implicit government guarantee. In the case of capital markets, the reasons for disclosure's failure were product complexity and the impact of socio-psychological factors. Yet much of European Financial Regulation is based on the disclosure paradigm to remedy market failure, discipline market actors, improve investor/consumer choice, and prevent abuse. The EU needs to re-examine the role of disclosure in two contexts: prudential regulation of banks and retail investor protection. EU policy-makers should use empirical and experimental studies before any reform of the investor protection framework. Insertion of default options in a variety of financial contracts may be a necessary supplement to disclosure for retail investors. Furthermore, an independent EU financial products committee would be a better regulatory protection strategy than reliance on investor choice assisted by enhanced disclosure.

* Reader in International Financial Law, School of Law, University of Manchester. This paper is based on research funded by the UK's Arts and Humanities Research Council (AHRC) and was completed while spending time as the Global Capital Markets Center Fellow at the School of Law, Duke University. A first version of the paper was presented in the conference of the National Institute of Economic and Social Research and EUROFRAME, 'Causes and Consequences of the Financial Crisis', London, British Academy, 12 June 2009. I am greatly indebted to Professor Julia Black of the LSE and Jeremy Cooper and Pamela Hanrahan of the Australian Securities and Investments Commission for very constructive comments and critical encouragement.

Table of Contents

ECFR 2009, 440–475

- I. Introduction 441
 - 1. Overview 441
 - 2. Reconsidering the Disclosure Paradigm in EC Financial Regulation 445
- II. Disclosure Regulation, the Global Financial Crisis, and the Behavioural Decision Theory Critique 447
 - 1. Disclosure as a Regulatory Tool and the Global Financial Crisis 447
 - 2. Limitations of Disclosure Regulation 450
 - 3. Lessons from the Global Financial Crisis and the BDT Critique 455
- III. EC Banking Regulation and Disclosure-based Market Discipline: Lessons from the Global Financial Crisis 458
 - 1. Market Discipline ‘is not working’? 458
 - 2. Whither Reform for EU Banking Regulation 462
- IV. Reform of the EU Retail Investor Protection Framework 465
 - 1. What is the Case for Reform? 465
 - 2. Can Economic Experiments Help? 466
 - 3. Two Proposals for Reform 470
- V. Conclusion 474

I. Introduction

1. Overview

The global financial crisis of 2008 and the systemic threats created by the financial troubles of European banks and their cross-border spillover implications exposed the many gaps in the supervision of EU based banks. It also uncovered loopholes in other parts of European financial regulation.¹ Several policy initiatives are under way to remedy most of the observed defects in EC financial regulation. Chief among them is the Commission proposal for the adoption of the recommendations of the de Larosiere Committee for the macro-prudential and micro-prudential regulation of financial institutions in the EU.² Other legislative initiatives pertain to the

1 For the purposes of this article EC financial regulation encompasses EC banking regulation, EC securities regulation, and the laws pertaining to the supervision of insurance firms and marketing of retail insurance products. For a description of the boundaries and objectives of European securities regulation see Niamh Maloney, *EC Securities Regulation* (OUP, 2nd edition, 2008) 1, 8, 24.

2 ‘Report of the High-Level Group on Financial Supervision in the EU’, 25 February 2009. The de Larosiere Committee recommendations were incorporated in a Commission Communication. See Commission (EC), ‘European Financial Supervision’ (Communication) COM(2009) 252 final, 27 May 2009. The European Council of 18/19 June 2009 endorsed the de Larosiere Committee proposals. Council of the European Union,

licensing and supervision of hedge fund operators³ and of credit rating agencies.⁴ Yet the crisis has also exposed the many problems associated with the disclosure based model of investor protection that predominates EU financial regulation.

Since the enactment of so-called US New Deal Statutes: mainly Securities Act 1933⁵ and Securities and Exchange Act 1934,⁶ mandating extensive disclosure requirements imposed on securities issuers and underwriters to battle fraud and market abuse, disclosure has been seen as the cornerstone of any investor protection regime in securities markets. As a result, EC Securities Directives have fully incorporated the disclosure paradigm.⁷ However, disclosure's ascent to the 'regulatory Olympus' in the past twenty five years was the product of considerations that had little to do with the battle against fraud and market abuse.

With the advent of financial liberalization and with the aid of modern finance theory, but not with its full endorsement, policy-makers and regulators came to view financial markets as an agglomeration of rational investors, who make optimal resource allocation and wealth maximization decisions, when provided with sufficient information and appropriately structured economic incentives. So all regulators had to do to safeguard efficient markets and help investors was to ensure that a vast volume of pertinent information entered the public domain in any given area of financial market activity. Provision of information to rational actors would then allow the market to self-regulate avoiding to large extent public intervention.

To put it simply, it was assumed that on the basis of all available information, market actors would adjust their investment decisions, positions, and strategies to information's content and with the aid of arbitrage efficient

'Brussels European Council 18/19 June 2009 – Presidency Conclusions' 19 June 2009, 11225/09, available at <http://www.consilium.europa.eu/uedocs/cms_data/docs/press-data/en/ec/108622.pdf>.

3 Commission (EC), 'Proposal for a Directive of the European Parliament and of the Council on Alternative Investment Fund Managers and amending Directives 2004/39/EC and 2009/.../EC', COM(2009) 207 final, 30 April 2009.

4 Commission (EC), 'Proposal for a Regulation of the European Parliament and the Council on Credit Rating Agencies' COM(2008) 704 final, 12 November 2008.

5 Securities Act of 1933, 15 U.S.C. § 77a to 77 mm (1994).

6 Securities Exchange Act of 1934, 15 U.S.C. § 78a to 78 mm (1994).

7 E.g., Directive (EC) 2003/71 on the Prospectus to be Published when Securities are Offered to the Public or Admitted to Trading [2003] OJ L 345/64 [hereinafter the *Prospectus II Directive*]; Directive (EC) 2004/109 on the Harmonization of Transparency Requirements in Relation to Information About Issuers Whose Securities are Admitted to Trading on a Regulated Market [2004] OJ L390/38; Directive (EC) 2003/6 on Insider Dealing and Market Manipulation (market abuse) [2003] OJ L 96/16; Council Directive (EC) 2004/39 on Markets in Financial Instruments [2004] OJ L 145/1 (MiFID).

markets would be perpetuated, in accordance with the main assumptions of Efficient Market Hypothesis (EMH),⁸ which is a direct application of rational choice theory⁹ to market behaviour. Thus, no further consideration was usually given to other very important issues, such as the question whether market actors used all of the disclosed information and if so what kind of decisions they took on the basis of abundant supplies of information.

Based on the rational investor model, modern financial regulation has stretched the disclosure paradigm and reliance on self-regulation far beyond its original realm of issuer disclosure and prevention of market abuse to financial services consumer (retail investor) protection and prudential regulation of banks with mixed results. For example, the third pillar of Basle II¹⁰ (market discipline) mandates extensive disclosure obligations for banks operating under this framework, on the assumption that timely informed rational actors are capable to act as *de facto* supervisors and enforcers of prudential regulation rules. Essentially, Basle II gave to market self-regulation a crucial and strategic role in pricing risk¹¹ and preventing institutional collapses and systemic crises.¹² The EU fully endorsed that view

- 8 See from the very extensive literature Paul Samuelson, 'Proof that Properly Anticipated Prices Fluctuate Randomly' (1965) 6 *Industrial Management Review* 41 and Benoit Mandelbrot, 'Forecasts of Future Prices, Unbiased Markets, and Martingale Models' (1966) 39 *Journal of Business* 242. For a re-formulation of EMH to strong, semi-strong, and weak form, depending on the amount of private information that is publicly available, and empirical testing see Eugene F. Fama, 'Efficient Capital Markets: A Review of Theory and Empirical Work' (1970) 25 *Journal of Finance* 383; Fama, 'Efficient Capital Markets II' (1991) 46 *Journal of Finance* 1575.
- 9 Milton Friedman, 'The Methodology of Positive Economics' in Friedman, *Essays in Positive Economics* (University of Chicago Press, 1953), 3.
- 10 Basel Committee on Banking Supervision, 'International Convergence of Capital Measurement and Capital Standards, A Revised Framework', Updated November 2005, [hereinafter *Basel II Accord*].
- 11 For very insightful criticism of the pro-cyclical bias of (draft) Basel II standards and of its undue reliance on credit ratings, which was ultimately overseen with undesirable consequences, see Jon Danielson, Paul Embrechts, Charles Goodhart *et al.* 'An Academic Response to Basel II', LSE Financial Markets Group, Special Paper, 130, June 2001, available at <<http://www.bis.org/bcbs/ca/fmg.pdf>> accessed on 20 June 2009.
- 12 See Basel Committee on Banking Supervision, Transparency Group, 'Working Paper on Pillar 3 – Market Discipline', September 2001, available at http://www.fma.gv.at/cms/basel2/attachments/6/3/9/CH0329/CMS1143022409903/bcbs_wp7.pdf.
 'The New Basel Capital Accord is based around three complementary elements or "pillars". Pillar 3 recognises that *market discipline has the potential to reinforce minimum capital standards (Pillar 1) and the supervisory review process (Pillar 2), and so promote safety and soundness in banks and financial systems. Market discipline imposes strong incentives on banks to conduct their business in a safe, sound and efficient manner,*

by premising the Capital Requirements Directive (CRD)¹³ on the Basle II framework.¹⁴ CRD provides the foundations of EU's harmonized prudential regulation regime, which governs the licensing and supervision of banks by member state authorities.

Given the predominance of the rational investor model on policy-makers', analysts', and regulators' thinking, it is not surprising that mis-aligned incentives and inadequate disclosure have been widely cited as almost the sole cause of the global financial crisis.¹⁵ The inadequate disclosure critique has not, however, been fully endorsed by all analysts of the global financial crisis. A significant minority of commentators have argued that closer examination shows that investors had in many cases sufficient information about the risks of their investment strategies and of the financial products used to implement them.¹⁶ Yet market actors could not properly process available information in those cases and adjust their positions to the riskiness of structured credit securities for a variety of reasons.

First, due to product complexity, boundedly rational investors failed to understand the mechanics and risks of shadow banking and structured credit securities.¹⁷ Second, because of market players' tendency to herd, responding strategically to other market actors' behaviour, these did not have the capacity or the desire to use in a rational way the disclosed information and take contrarian positions. Third, the influence of other behavioural factors such as the use of heuristics,¹⁸ and investor overconfidence in times of market

including an incentive to maintain a strong capital base as a cushion against potential future losses arising from risk exposures.' (Emphasis added), Id.

13 The consolidated Capital Requirements Directive comprises European Parliament and Council Directive (EC) 2006/48 for the Taking up and Pursuit of the Business of Credit Institutions [2006] OJ L 177/1 and European Parliament and Council Directive (EC) 2006/49 on the Capital Adequacy of Investment Firms and Credit Institutions [2006] OJ L 177/201.

14 Pillar 3 of the Basle II Framework is reflected in rec. 62, Arts 145–149, and Annex XII of Directive 2006/48.

15 The President's Working Group on Financial Markets (PWGFM), 'Policy Statement on Financial Market Developments', March 2008.

16 Steven Schwarcz, 'Disclosure's Failure in the Subprime Mortgage Crisis' (2008) *Utah Law Review* 1109. Schwarcz accurately notes: 'In the subprime mortgage crisis, there is to date relatively little dispute that the disclosure documents describing MBS, CDO, and ABS CDO securities and their risks generally complied with the federal securities laws.' *Id.* 1113.

17 Steven Schwarcz, 'Protecting Financial Markets: Lessons from the Subprime Mortgage Meltdown' (2008) 93 *Minnesota L. Rev.* 373.

18 An excellent analysis of the limitations that financial product complexity posed for investors' understanding of them and the catastrophic consequences of this limited understanding is given in Steven Schwarcz, 'Regulating Complexity in Financial

euphoria, because of abundance of easy credit and rising market prices, meant that investors chose to ignore the warning signals in the disclosed data in favour of over-reliance on credit ratings.¹⁹ Arguably, the view taken by this second group of commentators makes the inadequate disclosure argument a much less powerful explanation of the global financial crisis.

2. Reconsidering the Disclosure Paradigm in EC Financial Regulation

This article sets to investigate whether the standing of disclosure as the centrepiece of EU financial regulation is justified in the post global financial crisis era. In this context, it opens two lines of enquiry. First, it examines the constraints that disclosure-based market discipline faces in being an effective tool of systemic stability regulation. Second, it considers the value of extensive disclosure to retail investors under conditions of complexity. In this context, it discusses the impact of socio-psychological factors on investor decision-making, including cognitive biases, bounded rationality, and herding.

Consequent to this analysis, the article argues that EU policy makers should try to understand disclosure's limitations and devise alternative strategies. In the case of systemic stability regulation, disclosure-based market discipline needs to be rethought, as it may not be a good alternative to strict protective rules, such as institutional segregation of commercial and investment banking and position limits, which would also contain the 'too big to fail' phenomenon. In the field of securities regulation, enhanced disclosure standards may prove beneficial in certain areas, chiefly in the regulation of short sales. However, in other areas, and especially in the field of retail investor protection regulation, it is suggested that disclosure's impact may be rather limited.

Thus, EU policy-makers should consider the implementation of two pressing reforms, either as complementary or even as alternative (substitutable) measures. The first reform pertains to the introduction of sub-divisions in the retail investor (or non-professional or consumer) class, envisaged in MiFID,²⁰ in the Distance Marketing Directive (concerning promotions of consumer financial services through the use of a distance communication medium),²¹ the

Markets', Duke Public Law & Legal Theory Research Paper Series No. 217, revised February 26, 2009.

19 Emilios Avgouleas, 'The Global Financial Crisis, Behavioural Finance and Financial Regulation: In Search of a New Orthodoxy' (2009) 9 *Journal of Corporate Law Studies* 121.

20 MiFID, Art. 19 and Annex II.

21 European Parliament and Council Directive 2002/65/EC concerning the distance marketing of consumer financial services and amending Council Directive (EEC) 90/

recast UCITS Directive,²² and the Public Offer Prospectus Directive II.²³ This should be followed by tailor made disclosure requirements with respect to the public offer of securities, the provision of investment advice, and investment promotions for each retail investor sub-class. As this solution may, in practice, prove expensive or impractical, the second reform refers to the establishment of an independent EU body that would scrutinize financial products addressed to the retail investor market and recommend default options. In both cases the extensive use of empirical studies, complemented by properly calibrated economic experiments,²⁴ would considerably improve the effectiveness of EU regulation in this area. Such improvement is of colossal importance to the EU, as its ever ageing population²⁵ increasingly relies on retail financial products to ensure acceptable living standards in retirement.

The paper is divided in five sections. The first section is the present introduction. The second section provides a concise overview of the main welfare benefits of disclosure rules under the rational investor model. It also examines the limitations of disclosure regulation under the lens of behavioural decision theory. It explains why investors' flawed use of information, due to socio-psychological factors, built many of the conditions that led to the global financial crisis. The third section examines the role of disclosure-based market discipline in EU banking regulation. It explains why excessive reliance on market discipline was the wrong approach to protect both against individual institution failure and against a systemic crisis. The fourth section examines the role of disclosure regulation within the EU retail investor protection

619/and Directives (EC) 97/7 and 98/27 [2002] OJ L 271/16. For an analysis of the ambit of the consumer protection regime established by this Directive and its relationship with the retail investor used by MiFID see Maloney (n 1), 574–581.

22 'Directive 2009/65/EC of the European Parliament and the Council on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)(recast)', 2008/0153 (COD), 19 June 2009.

23 The Prospectus Directive II (Art. 3(2)(a)) exempts issuers of securities from an obligation to issue a prospectus when, *inter alia*, the offer is solely addressed to 'qualified investors' (defined in Art. 2(1)(e) & (f) & Art. 2(2)). Thus, by implication, the Directive divides investors to 'qualified' (professional and institutional) investors and 'public' (retail) investors.

24 See for an overview of experimental methods to test legal rules Colin Camerer and Eric Talley, 'Experimental Study of Law' in A. Michell Polinsky and Steven Shavell (eds.), *Handbook of Law and Economics*, (North-Holland, 2007), 1619–1650.

25 Estimates made by respectable institutions indicate that by 2050 the EU's pensioner population will be more than 100 million and the number of workers for every individual of 65-plus will fall from more than three to fewer than two. See Gary Duncan, 'Ageing Population Brings Grave Problems', *The Times*, 25 June 2007, available at <<http://business.timesonline.co.uk/tol/business/columnists/article1980413.ece>> accessed on 8 July 2009.

regime. It offers two proposals for the reform of European financial products regulation placing the role of disclosure on a more effective and realistic footing. The fifth section brings the different strands of the present discussion to a comprehensive conclusion.

II. Disclosure Regulation, the Global Financial Crisis, and the Behavioural Decision Theory Critique

1. Disclosure as a Regulatory Tool and the Global Financial Crisis

Disclosure has been regarded as the most potent tool of corporate and financial market regulation for seven reasons²⁶: (a) it increases publicly available information enabling market actors to make informed investment decisions, (b) it improves market efficiency: increased availability of information leads to better pricing of securities and of other financial instruments enhancing allocative efficiency, (c) it reduces the cost of information searches, which, when excessive, are pure social waste in zero sum securities markets; (d) it fosters fair, ethical, and competitive markets, as it obliterates (along with prohibitions of insider dealing) the information advantage that insiders enjoy over public investors in financial markets, (e) it may help market stability by containing market volatility that is usually caused by limited information regarding the merits or risks of financial products, (f) it promotes market discipline, and (g) it deters fraud.

Arguably, some of the aforementioned benefits of disclosure regulation not only are undisputable but also have served multiple causes. For instance, mandatory (securities issuer) disclosure has both helped to improve the integrity of securities markets and to advance the cause of democratic capitalism by eradicating the information advantages of the established economic elites, where corporate insiders normally belong.

However, the above benefits are not the sole reason explaining why disclosure has become the cornerstone of modern financial regulation. And it is neither

26 For an overview of the many studies that provide an economic analysis of the merits and de-merits of disclosure regulation see Emiliios Avgouleas, *The Mechanics and Regulation of Market Abuse, A Legal and Economic Analysis* (OUP, 2005) 173–183. The two most convincing academic analyses in favour of disclosure regulation are John Coffee ‘Market Failure and the Economic Case for a Mandatory Disclosure System’, (1984) 70 *Virginia Law Review* 717 and James Cox, ‘Insider Trading and Contracting: A Critical Response to the “Chicago School”’ (1986) *Duke Law Journal* 628. Other authors have dismissed the benefits of mandatory disclosure mostly because of the high costs it entails. *E.g.*, Frank H Easterbrook and Daniel R Fischel, ‘Mandatory Disclosure and the Protection of Investors’ (1984) 70 *Virginia Law Review* 669.

because it is an inexpensive or non-intrusive regulatory technique. It is both very costly and intrusive for the subject of relevant disclosure requirements. Regardless of context, e.g., periodic issuer disclosure, offer prospectus etc., an army of expensive auditors, lawyers, and compliance officers are assigned the task of processing and verifying disclosable information. As mentioned in the first section, disclosure's ascent is rather the result of deregulation and the latter's reliance on the rational investor model and self-regulation; hence, the pre-eminence of rational choice theory in modern financial regulation.

In one way or another rational choice theory proposes that human agents strive to maximize their utility from a stable set of well-defined preferences accumulating, in the process, an optimal amount of information and other inputs in a variety of contexts.²⁷ Thus, in the face of uncertain outcomes, individuals will choose a decision or a course of action that maximizes expected utility, so called *expected utility hypothesis*.²⁸ The 'homo economicus' is supposed to act to maximize expected utility, because his/her preferences are given, consistent, and representable in the form of a utility function.

Provision of information becomes very important in this model of decision-making, because, where individuals operate under conditions of uncertainty about the results of their actions, they are assumed to be able to assess the probability distribution in accordance with their level of knowledge. If new information can be collected from the environment and individuals know the information's possible content they assess it, in accordance with Bayes' law, by calculating the probability distribution based on the interplay between the new information's content and their prior knowledge.

As mentioned in section I, given the predominance of rational investor model, it is not surprising that inadequate disclosure is thought to be main generator of the conditions which led to the global financial crisis. In specific, inadequate disclosure has been identified in five areas of market activity that have been closely linked to the creation and amplification of the global financial crisis: (a) inadequate disclosure of risks to subprime borrowers, (b) opacity of highly structured financial products, which also incorporated very complex pricing formulas, and sometimes possible obfuscation by financial institutions of the

27 See Gary S. Becker, *The Economic Approach to Human Behavior* (University of Chicago Press, 1976), 14 and Richard Posner, *Economic Analysis of Law* (6th ed., 2003), chs. 1–3.

28 This hypothesis was first clearly expressed by Daniel Bernoulli in 'Exposition of a New Theory on the Measurement of Risk' originally published in 1738 and reproduced in (1954) 22 *Econometrica* 23. It was further refined in John Von Neumann and Oskar Morgenstern, *Theory of Games and Economic Behavior* (Princeton University Press, 1944).

risks associated with such products, in spite of relevant legal and regulatory requirements, (c) inadequate disclosure by financial institutions of their on- and off-balance sheet exposures, (d) inadequate disclosure by Credit Rating Agencies (CRAs) of the limitations of credit ratings and their conflicts of interest, and (e) inadequate disclosure of the short-termist nature of executive and trader compensation.

It is an undisputable fact that as regards structured credit products lack of standardization and limited, if not non-existent, disclosure meant that the market had considerable difficulty to fill the gaps and properly evaluate the risks of those securities. Thus, it could not price them with any degree of accuracy. Moreover, in the highly complex and fast moving environment of global financial markets it is easy for regulators to make the wrong choice regarding the kind of data that has to be disclosed. Thus, either because of the pro-cyclical nature of Basle Capital Adequacy standards²⁹ or of the poorly thought of supervisory focus on institutional capital adequacy (micro-prudential),³⁰ instead of the systemic implications of institutions' behaviour (macro-prudential), financial intermediaries were not requested to make any kind of assessment of the systemic implications of their business activities nor did they have to disclose such assessment.

However, in other areas there was considerable disclosure of information regarding the risk of investment products and techniques that have been highly implicated in the building up and amplification of the global financial crisis. In those cases, market actors either did not read properly the warning signals or did not understand or acted on the disclosed information. There seem to be three areas of protective regulation where disclosure did not work as expected: (a) risk assessment/management, (b) prudential regulation/systemic stability, (c) consumer protection. These disclosure failures are analytically discussed in the next few paragraphs, after first discussing the main assumptions of behavioural decision theory (BDT), on is based the alternative to insufficient disclosure explanation of the global financial crisis.³¹

29 See in general, Markus Brunnermeier, Andrew Crockett, Charles Goodhart, Avinash D. Persaud, and Hyun Shin, 'The Fundamental Principles of Financial Regulation', Geneva Reports on the World Economy 11, January 2009, ch. 4. [Hereinafter the Geneva Report].

30 Martin Hellwig, 'Systemic Risk in the Financial Sector: An Analysis of the Subprime-Mortgage Financial Crisis', Max Planck Institute for Research on Collective Goods Bonn 2008/43, November 2008, 56–60.

31 Andrew Lo, 'Regulatory Reform in the Wake of the Financial Crisis of 2007–2008' (2009) 1 *Journal of Financial Economic Policy* 5, 19–21.

2. Limitations of Disclosure Regulation

2.1. Prospect Theory, Experimental Economics, and Disclosure Regulation

As mentioned above under the rational investor model of regulation, disclosure leads to informed investment decisions in accordance with investor risk and return preferences. Rational and self-disciplined wealth maximizing investors need large volumes of information in order to calculate the risk and return probabilities of an investment, in order to maximize their expected utility (expected profit) in accordance with their risk and return preferences.

This is also the first statement that would fall foul of a Prospect Theory analysis of disclosure. Kahneman and Tversky's Prospect Theory³² constitutes the core of so-called psychology of choice and judgement, one of the two pillars of Behavioural Decision Theory (BDT) (the other pillar is experimental economics). Prospect Theory assumes, *inter alia*, that preferences are not constant and choice may be manipulated through the framing of information. If the assumptions of Prospect Theory are correct, namely that by changing a reference point human actors' evaluation of gains and losses will change and that in any case individuals' ability to make actuarial calculations is limited, then the utility of the provision of vast amounts of information to especially retail investors looks much diminished. Disclosure seems even less effective as a regulatory technique, if the effects of problem description or framing³³ are also taken into account. There is strong evidence that preferences may change, depending on the wording of a problem.³⁴ This essentially means that individuals' choices can be manipulated depending on the way relevant information is presented. The effect of framing is stronger among the less sophisticated members of any group.³⁵ However, even thoughtfulness is not sufficient to counter the effect of framing; thoughtful individuals are still in need of a relevant cue in order to untangle the impact of framing.³⁶ Kahneman and Tversky's and other behavioural psychologists findings have been extensively utilized by so-called behavioural finance theorists to explain why financial markets deviate so often and in so many contexts from the

32 See Daniel Kahneman and Amos Tversky, 'Prospect Theory: An Analysis of Decision under Risk' (1979) 47 *Econometrica* 263.

33 Amos Tversky and Daniel Kahneman, 'Rational Choice and the Framing of Decisions' (1986) 59 *Journal of Business* S251-S278.

34 Nicholas Barberis and Richard Thaler, 'A Survey of Behavioral Finance' National Bureau of Economic Research, Working Paper No. 9222, 20 September 2002, 20, recording a 30%-40% shift in preferences, due to framing, in relevant studies.

35 R. A. LeBoeuf and E. Shafir, 'Deep Thoughts and Shallow Frames: On the Susceptibility to Framing Effects' (2003) 16 *Journal of Behavioral Decision Making* 77.

36 *Ibid.*

fundamental assumptions of EMH, a series of phenomena that behavioural economists call ‘anomalies’ or ‘puzzles’.³⁷

Nonetheless, the above is not the full story. Neither the critical importance of disclosure in promoting clean markets and protecting investors should be easily dismissed nor should rational choice theory be proclaimed dead. In fact, there is plenty of empirical and experimental evidence that validates and refutes the assumptions of both BDT and rational choice theory. For example, experimental economics shows that human activity is diffused and dominated by unconscious, autonomic, neuropsychological systems.³⁸ These enable people to function effectively without always calling upon the brain’s scarcest resource: attentional circuitry. However, through trial and error learning, individuals may eventually make decisions that are compatible with expected utility theory. For instance, experimental economics holds that, in competitive markets, and financial markets are normally highly contested markets, institutions (the rules of the game) matter, because they determine information and private incentives.³⁹ But the incentives to which people respond are sometimes not those one would expect based on the canons of economic theory. Thus, it is very doubtful whether financial incentives could act as generalized substitutes to prescriptive regulation.⁴⁰

This conflicting evidence leads to the plausible assumption that ‘human decision-making is simply a more nuanced phenomenon than unitary-process theories permit.’⁴¹ Thus, instead of focusing on the unitary theories of decision-making like rational choice and prospect theory, it is better to understand human decision-making as the product of multiple-processes.⁴² Individual cognitive processes may become dominant in different context-specific situations and cross-context comparisons may potentially lead to observed inconsistencies in behaviour.⁴³

37 Barberis and Thaler (n 34).

38 See Vernon L Smith, *Papers in Experimental Economics* (Cambridge University Press, 1991) and John H. Kagel and Alvin E. Roth (eds), *The Handbook of Experimental Economics* (Princeton University Press, 1995).

39 Vernon L Smith, ‘An Experimental Study of Competitive Market Behavior’ (1962) 70 *Journal of Political Economy* 111.

40 For a summary of relevant studies see Gregory Mitchell, ‘Why Law and Economics’ Perfect Rationality Should not be Traded for Behavioral Law and Economics’ Equal Incompetence’ (2002) 91 *Georgetown Law Journal* 67.

41 Jennifer H Arlen and Eric L Talley, ‘Introduction’, in Arlen and Talley (eds), *Experimental Law and Economics* (Elgar, 2008) xix.

42 *Ibid.* xviii-xx.

43 *Ibid.* xviii.

Accordingly, relevant research on investors' use of disclosed information would possibly show that sometimes new information is used in a deliberative way leading to outcomes that are consistent with rational choice theory. Other times, non-conscious (intuitive), automatic decision-making processes will be found to account for market phenomena that do not fit with the rational choice prescribed outcomes, so-called 'market anomalies' or 'puzzles'.⁴⁴ Because these automatic processes intervene, short-circuit, or overrule deliberative processes they may develop into a cognitive bias, which induces behaviour inconsistent with rational choice/expected utility theory.⁴⁵

The above view abides well with the main assumptions of Andrew Lo's Adaptive Markets Hypothesis (ACH),⁴⁶ which has, so far, offered the best alternative to the battling rivals of efficient market hypothesis and behavioural finance. ACH incorporates several of the assumptions of both theories in an evolutionary framework. Lo submits that markets often can be efficient, but with strong deviations caused by behavioural factors. These are caused by the fact that, as explained above, market actors' computational ability is limited and cognitive biases do play a role in their investment decisions.⁴⁷ The predominant theme of ACH is that market actors ultimately struggle not for optimal returns (as the EMH holds) – optimization is costly – but for survival, like all living species in an evolutionary framework. Namely, ACH holds that market actors behave sometimes rationally and other times irrationally depending on which strategy suits best their struggle for survival. For the reasons explained in the next few paragraphs, herding may easily become the only survival strategy in a falling market even for professional (normally rational) investors.

On the basis of the above analysis it appears that the more accurate assumption is that markets are complex adaptive systems that encompass both rational and quasi-rational actors.⁴⁸ Therefore, only through the use of both empirical and

44 See Barberis and Thaler (n 34).

45 Arlen and Talley (n 41) xix, xx, xxviii.

46 Andrew Lo, 'Reconciling Efficient Markets with Behavioral Finance: The Adaptive Markets Hypothesis' (2005) 7 *Journal of Investment Consulting* 21.

47 According to Lo the forms of market behaviour cited by behavioural finance as contradicting the assumptions of EMH, such as loss aversion, overconfidence, overreaction, and other cognitive biases, are merely evidence of an evolutionary model of decision-making, where individuals in adapting to a changing environment rely on past experiences ('best guesses'), namely they use simple heuristics. Where AMH differs from behavioural finance is in that it assumes that if the decision making challenges that investors face remain stable, outcomes from the use of heuristics will gradually adapt, leading in the process to nearly optimal results. *Ibid.*

48 See also Richard H. Thaler, 'The End of Behavioral Finance' (November/December 1999) *Financial Analysts Journal* 12, 12–13.

experimental studies the actual value of disclosure as a protective regulatory technique can be properly ascertained. The findings of such studies should guide the formulation of disclosure policies, techniques, and formats that truly aid individual investor choice and market welfare.

2.2. Bounded Rationality and Herding as Barriers to Rational Reaction to Disclosed Information

In addition to limitations in the use of information highlighted by Prospect Theory, there are two other factors that seem to limit the effectiveness of disclosure. First, bounded rationality⁴⁹ may account for market actors' limited understanding of disclosed information regarding highly complex financial instruments.⁵⁰ Second, herding (strategic trading behavior), either due to peer pressure or in response to career/reputational concerns, also means that disclosed information is ignored in favour of the safer 'follow the herd' strategy.⁵¹ Thus, herding places a very powerful limitation to rational reaction to disclosed information.

Because individuals are boundedly rational, as securitisation markets grew and products became more complex, expert investors showed limited capacity for understanding the disclosed mechanics and calculate the attendant risks of structured credit products and for developing tools to value them. Instead, investors replaced rigorous credit controls and valuation models with over-reliance on credit ratings.

Furthermore, institutions' herding has been recognized as one of the main builders and amplifiers of the crisis in the review of Lord Turner (chairman of the UK's Financial Services Authority) into the causes of the global financial crisis.⁵² Herding is often due to irrational exuberance. Yet it may also be triggered by the 'beauty contests' described by Keynes,⁵³ in their post-modern form that intrinsically links them to the agency problem. This, in turn, may be nothing else than AMH's famed battle for survival.

49 This concept essentially, means that individuals have limited ability to process information because of their limited computational ability and flawed memory. See Herbert A. Simon, 'A Behavioral Model of Rational Choice' (1955) 69 *Quarterly Journal of Economics* 99; Simon, 'Rationality as Process and Product of Thought' (1978) 68 *American Economic Review: Papers and Proceedings* 1.

50 See Schwarcz (nn 16–18).

51 See Schwarcz (n 16) and Avgouleas (n 19).

52 FSA, *The Turner Review, A Regulatory Response to the Global Banking Crisis* (March 2009).

53 John M Keynes, *General Theory of Employment, Interest and Money* (New York: Harcourt Brace and Co, 1936), ch. 12.

In much the same way that the corporate governance (separation of ownership from control) dilemma was formulated, institutional investors' money is today managed by expert individuals, who allocate, as agents, the money of their principals (so-called separation of brains from money). Their interests, as in most principal-agent relationships, are not perfectly aligned and sometimes diverge considerably. While shareholders or fund investors are concerned, under the rational choice model, with an optimal mixture of risk and return that ensures sustained profitability, bankers' and fund managers' concerns are markedly different. They have to show that their performance is equal to or better than the rest of the market.⁵⁴ Performance affects bonus payments and the bankers' and fund managers' tenure in the job.⁵⁵ Individuals, who work for institutional investors, are in the market in order to make money and save their jobs and not in order to 'correct' prices through arbitrage trading, as the Efficient Market Hypothesis assumes. As a result, they are very likely to follow the herd,⁵⁶ playing the 'momentum game'⁵⁷ in the hope that they will be able to sell and materialize their gains, before markets fall. Thus, bankers, traders, and fund managers concentrate on trades and trading techniques that enable them, if not to beat the market, at least, not to post returns inferior to the market average saving their jobs and compensation packages.⁵⁸ Namely, they resort to the safest short-term survival strategy disregarding the EMH search for fundamental value. Such behaviour does not only undermine the efficiency of market prices, but also underscores the limitations of disclosure, as it shows that peer pressure and other survival concerns and not new information are the decisive factor in traders' behaviour.

54 For an analysis of the impact of the principal-agent relationship (within financial institutions) on the failure of disclosure in the market for structured credit securities see Schwarcz (n 16).

55 See Judith Chevalier and Glenn Ellison, 'Career Concerns of Mutual Fund Managers' (1999) 114 *Quarterly Journal of Economics* 389.

56 Paul Gompers and Andrew Metrick, 'Institutional Investors and Equity Prices' (2001) 116 *Quarterly Journal of Economics* 229; Russ Wermers, 'Mutual Fund Herding and the Impact on Stock Prices' (1999) 54 *Journal of Finance* 58; see also David S. Scharfstein and Jeremy C Stein, 'Herd Behavior and Investment' (1990) 80 *American Economic Review* 465.

57 Mark Grinblatt, Sheridan Titman, and Russ Wermers, 'Momentum Investment Strategies, Portfolio Performance, and Herding: A Study of Mutual Fund Behavior' (1995) 85 *American Economic Review* 1088; David Hirshleifer and Siew H Teoh, 'Herd Behaviour and Cascading in Capital Markets: a Review and Synthesis' (2003) 9(1) *European Financial Management* 25–66.

58 Paul M Healy and Krishna Palepu, 'Governance and Intermediation Problems in Capital Markets: Evidence from the Fall of Enron' (2003) 17 *Journal of Economic Perspectives* 3.

3. Lessons from the Global Financial Crisis and the BDT Critique

3.1. Risk Assessment

A recurring theme in every regulatory report on the causes of the global credit crisis is the role of lax risk management controls within financial institutions. The failures of internal risk management controls were concentrated in five areas: (a) failing credit control and borrower vetting standards, (b) inability to properly value positions in structured credit securities, (c) excessive reliance on credit ratings in spite of their widely known shortcomings, (d) inadequate use of information when this was provided, and (e) ignorance of senior bank management of the true function of Special Investment Vehicles (SIVs) and thus of the institution's actual exposure to them.⁵⁹ The cause of some of these failures, however, was not lack of information but inappropriate use of what was disclosed, due, no less, to behavioural factors.

For example, institutional buyers and sellers of structured credit securities used credit ratings in order to price them, when reliable price quotations were unavailable.⁶⁰ As a result, credit ratings came to play a key role in the 'valuation of customized or illiquid structured credit products'.⁶¹ However, these highly sophisticated market participants knew all too well that the ratings produced by the major CRAs suffered several shortcomings.

First, they were built to measure. Namely, the issuers of the products were using CRAs' know how and software in order to build baskets of securities that would ensure an AAA rating. Second, the insatiable appetite of global markets for credit ratings and the fact that the relevant market was highly oligopolistic – three major agencies: Standard & Poors, Fitch, and Moody's have traditionally dominated the market – meant that the industry suffered from a considerable lack of incentives to seriously stress test credit ratings, a fact that was well known to most market professionals.⁶² Third, CRAs were

59 PWGFM (n 15) 15.

60 IMF, Global Financial Stability Report, 'Containing Systemic Risks and Restoring Financial Soundness', April 2008, 55.

61 *Ibid.*

62 There is a lively debate in scholarship as to whether CRAs are or should be regarded as gate-keepers, in the same way as auditors etc. See Frank Partnoy, 'How and Why Credit Rating Agencies Are not Like Other Gatekeepers' in Yasuyuki Fuchita and Robert E. Litan, (eds.), *Financial Gatekeepers: Can They Protect Investors?* (Brookings Institution Press, 2006) and Patrick C Leyens, 'Unabhängigkeit der Informationsintermediäre zwischen Vertrag und Markt – Zur Dogmatik der Unabhängigkeit von Abschlussprüfern, Finanzanalysten und Rating-Agenturen' in Harald Baum, Andreas M. Fleckner, Alexander Hellgardt, and Markus Roth, *Perspektiven des Wirtschafts-*

often subject to considerable conflicts of interest, as the buyers of their ratings were the issuers whose products they rated.⁶³ Finally, asset value in the case of securities is often intrinsically linked to the marketability/liquidity of a financial product, but this parameter is not measured by credit ratings.

Of course, modellers and risk managers in most institutions understood very well the implications of the absence of such information and yet chose to continue relying on credit ratings. Arguably, there are two ways to explain why big institutions chose to substitute proper analysis and due diligence for 'a subscription to a ratings publication'.⁶⁴ The rational choice explanation is that, in order to economise in substantial research costs and thus facilitate transactions, investors choose to ignore the known flaws of credit ratings. Yet given how pronounced, serious, and well known were those flaws, this explanation does not sound convincing. Therefore, the second explanation, which highlights the behavioural aspects of investor reliance on credit ratings, is also worth considering.

It is possible that investor 'irrational' reliance on credit ratings was the result of the operation of the *availability* and *representativeness heuristics*. Namely, market participants relying much more heavily on *heuristics* than on rational computations decided that painstaking calculations of market value were not necessary for structured credit products. There was no memory of serious failures of the ratings process, since structured credit securities were predominantly new products without long trading histories. On the contrary, given also the prevailing conditions of market euphoria, credit ratings could serve as a usable, although inaccurate, benchmark of value so that trading could go on as normal generating sizeable returns. Namely, sophisticated investors' cognitive limitations and focus on short-term profit meant that they chose to ignore the warning signals. This explains both the incredible amount of trust placed on the ratings of CRAs and why these 'had grown more powerful than anyone intended'.⁶⁵

rechts: Deutsches, Europäisches und Internationales Handels-, Gesellschafts- und Kapitalmarktrecht (Berlin: de Gruyter, 2008), S 423–452.

63 For analysis of the Credit Rating Agencies' paradox see Steven L. Schwarcz, 'Private Ordering of Public Markets: The Rating Agency Paradox' (2002) *University of Illinois Law Review* 1.

64 Mark Carney, 'Addressing Financial Market Turbulence', Remarks of the Governor of the Bank of Canada to the Toronto Board of Trade, 13 March 2008, 3–4.

65 IMF, Containing Systemic Risks (n 60) 56.

3.2. *Consumer protection*

There is a rational choice explanation of the subprime crisis that focuses on inadequate disclosure of risks, especially once so called ‘teaser’ rates had ceased and interest payments adjusted to higher rates, and of the mortgage brokers’ conflicts of interest.⁶⁶ According to this approach US sub-prime borrowers did not obtain loans that they could not afford on the basis of their income, job prospects, and value of their asset, they simply did not have enough information to make a rational risk analysis of their investment. This approach is, of course, accurate in explaining the unscrupulous practices of US mortgage brokers. Yet it also greatly discounts an undisputable fact. US subprime borrowers were buying into a ‘dream’: the infinite rise of US housing market. Even if the risks of the mortgage were not properly disclosed it was not difficult to figure out that US housing price markets were at historical highs and house price increases could not last forever. Nor was it a secret to both borrowers and lenders that they borrowed/lent money in excess of the already over-priced asset’s value. Therefore, it seems unlikely that inadequate disclosure and sharp practice were the sole culprits of the explosion of US sub-prime loans.

Collective speculative fever, usually called irrational exuberance and, perhaps, the inherent inability of a number of consumers, due to low levels of education and financial expertise, to fully understand the risks involved in the mortgages they were buying, were possibly more important factors. Mortgage borrowers in the US and the rest of Western world, *anchored* to the prevailing environment of low interest rates and overconfident that rising house prices would last forever, rushed to jump on the property bandwagon, playing the ‘momentum game’. In doing so they were rather reluctant to engage into careful calculations regarding the sustainability of their borrowings. The above essentially mean that overconfidence and inability to make an informed financial decision were at the heart of consumers’ credit decisions in the context of sub-prime loans. Thus, it is unlikely that consumers would have acted much differently had they been given accurate information about the risks of sub-prime lending and the conflicts of interest of the intermediating brokers.

66 The Becker-Posner Blog, ‘The Subprime Mortgage Mess-Posner’s Comment’, 23 December 2007, available at <http://www.becker-posner-blog.com/archives/2007/12/the_subprime_mo.html> accessed 24 June 2009.

III. EC Banking Regulation and Disclosure-based Market Discipline: Lessons from the Global Financial Crisis

1. Market Discipline 'is not working'?

The chief objective of banking regulation is the protection of systemic stability and prevention of individual institution collapses.⁶⁷ The latter is much more important than in other industries, because bank collapses are highly contagious and they can evolve, aided by market panic, to full scale financial cascades threatening the stability of the financial system. In the past twenty years the regulatory tool that has mostly been relied upon to buttress banking institutions' financial health and soundness is capital adequacy standards. The standards currently applicable to the majority of international banks are those fashioned by the Basel Committee on Banking Supervision. The third pillar of the Basel II Accord provides an increased number of regulatory and market disclosures by regulated banks,⁶⁸ in order to enhance market discipline.⁶⁹

It is accurately suggested that the concept of market discipline and its processes lacks a precise definition,⁷⁰ and seems to have developed more as the product of intuition.⁷¹ Broadly defined market discipline encompasses the discipline imposed by shareholders and the market for corporate control on

67 Ross Cranston, *Principles of Banking Law* (OUP, Oxford 2002, 2nd ed.), ch. 3. Other commentators add a third objective the minimization of the public cost of bank failures. See also Charles Goodhart *et al.*, *Financial Regulation: Why, How and Where Now?* (Routledge, London, 1998), ch 1.

68 Under Art. 145 *et seq.* and Annex XII of Directive 2006/48, which enacted Pillar 3 of the Basel II Accord in EC Law, EU banks are required under to regularly disclose, inter alia, (a) the composition of their Tier 1 and Tier 2 capital, the total amount of capital, and the accounting policies they use for the valuation of their assets and liabilities, (b) risk management objectives and policies of each kind of risk, (c) an exposure assessment comprising information about the asset side of balance sheet, the different types of risk to which the bank is exposed and the amounts exposed, the method used for calculating those risks, the external credit agency used for the risk-weighting purposes, in the case of banks using the standardized approach, and general information on the risk assessment methodology used, in the case of banks using the Internal Ratings Based approach and the capital requirements for each different type of risk and the total capital requirements.

69 'See Basel II: The New Basel Capital Accord – Third Consultative Paper', April 2003, Part 4: The Third Pillar – Market Discipline – A. General Considerations, paras 757 *et seq.*

70 David T Llewellyn, 'Inside the "Black Box" of Market Discipline' (2005) 25 *Economic Affairs* 41.

71 Costas Stephanou, 'Rethinking Market Discipline', World Bank Policy Brief, June 2009.

bank management⁷² and discipline imposed by subordinated short-term creditors,⁷³ as well as other creditors,⁷⁴ by bank customers, and even highly mobile groups of bank employees.⁷⁵ All of the above are assumed to have the right incentives to monitor bank behaviour in order to avoid being caught in a bank failure and a messy winding up that would bring them large losses. The most important mechanism to facilitate market discipline is thought to be disclosure of accurate information to the market, and the market's ability to process it properly.⁷⁶ Also the mix of debt and equity chosen by a bank is regarded as a serious determinant of the effectiveness of market discipline.⁷⁷

Pillar 3 of Basle II was premised on a narrower version of market discipline revolving around the assumption that, if the regulatory capital positions and risk exposures of banks are regularly disclosed, banks facing difficulties, because, for instance, they pursue risky business policies, will be restrained/disciplined by the rest of the market. Thus, disclosure-based market discipline became one of the most important tools of monitoring and enforcement of capital adequacy regulation.⁷⁸

72 *Ibid.* For a good description of the role of market discipline in corporate governance and some very convincing arguments about its ineffectiveness see Martin F. Hellwig, 'Market Discipline, Information Processing and Corporate Governance', Max Planck Institute for Research on Collective Goods, Preprint No 2005/19 October 2005.

73 A view that was tentatively based on Charles W Calomiris and Charles M Kahn, 'The Role of Demandable Debt in Structuring Optimal Banking Arrangements' (1991) 81 *American Economic Review* 497. This analysis focused on the role of demandable bank debt in disciplining bankers. However, the strength of the countervailing power possessed by the existence of 'too big to fail' banks and deposit insurance was not accounted for. To account for these limitations Calomiris argued in a subsequent article for banks to maintain a minimal proportion of subordinated debt finance, while at the same time restricting the means by which government recapitalization of insolvent banks occurred. See Charles W. Calomiris, 'Building an Incentive-Compatible Safety Net' (1999) 23 *Journal of Banking and Finance* 1499.

74 Donald P Morgan and Kevin J Stiroh, 'Bond Market Discipline of Banks: Is the Market Tough Enough?' *Federal Reserve Board of New York Staff Report No. 95*, December 1999. Available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=207148> accessed on 15 June 2009.

75 David T Llewellyn and David G Mayes, 'What is Market Discipline?' in George G. Kaufman, *Market Discipline in Banking: Theory and Evidence* (Elsevier, 2003), 186–188.

76 *Ibid.* 189–193. This ability is also severely limited by the discussed above fund manager's propensity towards strategic trade behaviour (herding).

77 Adam B. Ashcraft, 'Does the Market Discipline Banks? New Evidence from the Regulatory Capital Mix' *FRB of New York Staff Report No. 244*, March 2006, available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=901805> accessed on 1 July 2009.

78 Basle II Framework, Part 4 (n 69).

It has to be noted that from the outset serious doubts were expressed as to how well calibrated and reinforcing to the other two pillars of Basle II (capital requirements and supervisory review) the market discipline pillar was.⁷⁹ Apart from those very well argued technical objections, there are a number of more general reasons that make market discipline an inadequate protection mechanism both against individual institution failure and against the threat of systemic collapse. Market discipline works if market monitors have sufficient incentives and there are no impediments to information signals.⁸⁰

However, at the individual institution level, a number of perverse incentives substantially weaken the importance of market discipline. The most important of these perverse incentives are the possibility of public bank rescues⁸¹ and deposit insurance. Inadequate cover by deposit insurance may make a bank susceptible to a run, as the Northern Rock incident proved beyond doubt.⁸² Thus, deposit insurance fosters systemic stability, albeit it also weakens market discipline.⁸³

Furthermore, because of the very nature of its business, the banking industry creates interconnectedness leading to ‘too big to fail’ banks. Since failure of such banks could create uncontrollable ruptures to the financial system, governments are very unlikely to let them fail. This was made abundantly clear from the public rescue programmes put in place by various countries during the global financial crisis. The strong public guarantee obliterates the restraining force of market discipline. It provides bank management with a powerful incentive to behave in an imprudent way and expand a banking institution’s balance sheet, since the larger the institution becomes and the more inter-connected the more likely is that its failure will also drag down other big (inter-connected) financial institutions necessitating a public rescue.⁸⁴ In addition, bank creditors will continue lending it funds without

79 See David Van Hoose, ‘Market Discipline and Supervisory Discretion in Banking: Reinforcing or Conflicting Pillars of Basel II?’ Networks Financial Institute, Working Paper 06/ 2007, February 2007. Available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=985659> accessed on 20 June 2009.

80 Llewellyn and Mayes (n 75) 190.

81 *Ibid.* 191. *E.g.*, evidence from the bond markets well before the implementation of Basel II showed that bond-markets were taking a softer approach to big banks assuming that they were too big to fail or they were simply too complex in their structure for the bond market to understand and price effectively. See Morgan and Stiroh (n 74).

82 House of Commons, Treasury Committee, *Fifth Report of Session 2007–08, The Run on the Rock* (24 January 2008).

83 Inter-American Development Bank, ‘Unlocking Credit: the Quest for Deep and Stable Bank Lending – Economic and Social Progress in Latin America, 2005 Report’ (2004) ch. 7.

84 The Geneva Report calls this risk the ‘interconnectedness spillover’ (n 29) 20–21.

any substantial fear of losses that any financial institution's bankruptcy would entail, significantly weakening market discipline.

Moreover, even if it was possible to eliminate moral hazard and design appropriate incentives so that, at least, bank creditors became effective monitors of banks, in which case extensive market disclosure would have been very useful, still market monitoring would mean little in terms of preventing institutional failures and/or safeguarding systemic stability for two reasons. First, as Hellwig accurately notes⁸⁵:

Because of systemic interdependence, the individual bank's risk exposure cannot be ascertained by just looking at the bank's assets and liabilities, on balance sheet and off balance sheet. If the bank's asset position involves a certain risk and the bank has hedged this risk by contracting with a third party, the effectiveness of the hedge depends on the third party's ability to fulfil its obligations when needed. If the risk in question is of macroeconomic dimension, an interest rate risk, exchange rate risk, or a housing-price risk, the counterparty's ability to fulfil its obligation depends on how many similar contracts it has concluded with other market participants. If risk correlations across contracts are such that the counterparty to the hedge must deliver on many of them at the same time, this in itself may destroy the counterparty's viability.

In today's globalized markets, there is no private institution that possibly has the ability, resources, and access to information to be able to conduct a risk analysis of all financial institutions, regulated and unregulated. Even if such institution existed, the colossal costs of universal monitoring would far exceed the expected benefits.

Moreover, due to, first, banks' susceptibility to runs, second, to business competition reasons, and, third, to various confidentiality agreements, crucial data on a bank's business and performance/profitability of certain business relationship, will never be made public on a disaggregated manner.⁸⁶ As a result, the effectiveness of individual institution monitoring by the market on the basis of disclosed data becomes of much lesser importance. Especially in the case of mega-banks, which are normally very complex financial conglomerates with opaque structures, the market's ability to price properly the risk of the bank may face insurmountable obstacles.

Finally, market discipline is no protection against systemic risk. First, there is a serious possibility that the disclosed information itself is unhelpful, as is the case with information disclosed under the highly pro-cyclical mark to market

85 Hellwig (n 30) 59–60. Hellwig accurately notes that: 'The difficulties that the monoline insurers of credit risk in mortgage-backed securities have had over the past year – or the more recent crisis of AIG – provide a telling example of the problem.' *Id.*

86 In fact, such information is respectively regarded by the EC Directive 2006/49 as 'proprietary' or 'confidential'. Annex XII, paras 2–3.

accounting standards.⁸⁷ Second, even if a financial institution behaves individually in a prudent way, or even if all financial institutions behave in a prudent, but un-coordinated, way a systemic crisis may not be averted. Especially in the event of a liquidity crunch, even the prudent behaviour of one financial institution can create spillovers that may undermine the stability of other institutions leading to systemic instability. This problem is due to another (risk-spillover) externality: Fire-sales.⁸⁸ According to the Geneva Report:

[T]he fire-sale externality arises since each individual financial institution does not take into account the price impact its own fire-sales will have on asset prices in a possible future liquidity crunch. Hence, fire-sales by some institutions spillover, and adversely affect the balance sheet of others, causing a negative externality.

At the same time, the market focusing on disclosed data showing that an individual institution (or a number of institutions) in distress behaves in a prudent way, namely, sells assets to lower its leverage, would react in an assured and complacent way, although a financial catastrophe could be imminent. Therefore, EU policy-makers should become more pragmatic about the true benefits of disclosure-based market discipline and more creative in terms of new regulatory strategies ensuring systemic stability and controlling the ‘too big to fail’ phenomenon.

2. *Whither Reform for EU Banking Regulation*

As mentioned in the introduction there is underway a major initiative at the EU level to restructure and reform cross-border financial supervisory structures. Relevant reforms follow the recommendations of the de Larosiere Committee and have led to the establishment of: (a) European Systemic Risk Council (ESRC), chaired by the European Central Bank, which will monitor and assess risks to the stability of the financial system as a whole, so-called ‘macro-prudential supervision’; (b) a European System of Financial Supervisors (ESFS), which is assigned the task of supervising individual financial institutions, so-called ‘micro-prudential supervision’; and of (c) three new

87 Geneva Report (n 29).

88 This externality was first explained in a model in John Geanakoplos and Heracles Polemarchakis, ‘Existence, Regularity, and Constrained Suboptimality of Competitive Allocation When the Asset Market is Incomplete’ in Heller, Starr, Starrett (eds), *Uncertainty, Information and Communication, Essays in Honor of Kenneth J. Arrow*, Vol. 3, (CUP, 1986).

European Supervisory Authorities that will replace the three existing EU supervisory networks operating under the Lamfalussy process.⁸⁹

The ESRC will, *inter alia*, operate as an early warning system making, where necessary, recommendations for action to deal with emerging systemic risks. It is thought that the establishment of the ESRC will address one of the fundamental weaknesses in EU financial architecture, as exposed by the global financial crisis: the vulnerability of the financial system to interconnected, complex, sectoral and cross-sectoral systemic risks. The ESRC will not have legally binding powers. However, it is expected that its warnings and recommendations will be taken very seriously by national governments and other addressees. Thus, in order to enhance their effectiveness those recommendations will be made public. However, in the most critical of circumstances, when in the context of a cross-border bank crisis ESRC's intervention will be needed most, because safeguarding the interests of national stakeholders would reign supreme for the home country authorities, the fact that ESRC's recommendations are not binding may prove an obstacle to their effectiveness.

On the other hand, the ESFS will have a much more formal supervisory role. According to the Commission: 'the ESFS is to be built on shared and mutually-reinforcing responsibilities, combining nationally-based supervision of firms with specific tasks at the European level. It aims to foster harmonised rules and coherent supervisory practice and enforcement.'⁹⁰ The ESFS will comprise representatives of national financial supervisors, of the new European Supervisory Authorities, and of the Commission and will work in tandem with the new European Supervisory Authorities.⁹¹

The new European Supervisory Authorities are established as European agencies with formal legal powers under EU Law and will have the power to: co-ordinate the work of national supervisors, arbitrate between national supervisors in supervisory colleges in case of disagreement on supervisory issues regarding a cross-border financial institution; take steps to harmonise national regulatory rules and move towards a common European rulebook; directly supervise certain pan-European institutions which are regulated at EU level, such as Credit Rating Agencies.

89 The Lamfalussy Committees are: the Committee of European Securities Supervisors (CESR), the Committee of European Bank Supervisors (CEBS), and the Committee of European Insurance and Occupational Pensions (CEIOPS).

90 EU Commission Press Release, 'Financial services: Commission proposes stronger financial supervision in Europe', 27 May 2009, IP/09/836.

91 Council Conclusions (n 2) 8.

In spite of the above very useful reforms, EU policy-makers have not considered yet the issue of disclosure-based market discipline. As explained in the preceding sections, disclosure-based market discipline is insufficient to enforce the prudent operation of individual institutions and to protect the financial system from the risk of contagion. It will remain a strong supervisory tool only if it is used to supplement the impact of protective rules.

Proposals for the introduction of restraining protective regulation in banking markets include calls for the imposition of dynamic pre-provisioning obligations, so that banks set aside more capital in good times in order to restrain the credit flows to the economy that may feed asset bubbles,⁹² other measures for counter-cyclical financial reporting,⁹³ and of an upper level (maximum gross) leverage ratio for banks.⁹⁴ Furthermore, academic commentators have suggested that inherent moral hazard in the banking industry, the cognitive limitations of human actors, corporate governance failures, and the inability of disclosure to solve any of these problems call for the imposition of restrictions on the kind of business activities savings and loans banks should undertake. The same commentators have called for the imposition of limits on the use of securitisation by commercial banks and of their exposure to the capital markets.⁹⁵

Such restrictions would of course herald a radical transformation of regulatory thinking in this field at a global level, as reforms with a domestic focus are bound to prove ineffective due to regulatory arbitrage. They would also mean the separation of commercial banking from ‘casino banking’, as the Turner Review calls the capital market activities of banks.⁹⁶ At the EU level, where the mega-bank model has been happily embraced and championed by the Banking Directives,⁹⁷ due to the continental European tradition and the influence of the Basle Accords, adoption of the above proposals would mean a radical reconceptualization of the prevailing bank business model that may be authorized to operate at a pan-European level.

92 Geneva Report (n 29) 35, 38–39, 59–60.

93 See Council of the European Union, Economic and Financial Affairs, Press Release 7 July 2009, available at <http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ecofin/109064.pdf>.

94 Turner Review (n 52) 7, 53, 95, 118.

95 For a first approach and the description of this new licensing/supervisory model for the banking industry see Avgouleas (n 19) 149–150.

96 Turner Review (n 52) 43, 94.

97 Second Council (EEC) Directive 89/646 [1989] OJ L 386/1, replaced by Council (EC) Directive 2006/48 [2006] OJ L 177. The Second Banking Directive allowed deposit-taking European Banks to also engage in the kind of investment market activities that were usually reserved, at least outside of Germany, for securities firms and non-deposit taking investment banks.

IV. Reform of the EU Retail Investor Protection Framework

1. What is the Case for Reform?

None of disclosure's limitations diminishes its importance in securities regulation. They just call for a radical rethinking of the disclosure paradigm. Disclosure's undisputable benefits include battling market abuse and democratizing capital markets, which has encouraged access to them and fostered liquid markets. A good example of an area of securities regulation where more disclosure is required is the regulation of short sales.⁹⁸ Apart from the obvious benefits of increased market transparency, uniform disclosure standards in the field of short sales may both play a stabilizing role in times of market turbulence⁹⁹ and provide the template for further harmonisation of trading rules in EU securities markets.¹⁰⁰

Given the wide range of lessons that may be drawn from the global financial crisis, discussed in section II, and the impact of cognitive biases or irrational exuberance on investor decision-making, in the field of retail investor protection, there is arguably, a need for the overhaul of the disclosure regimes provided by the EC Securities Directives. This is especially the case with regard to the extensive retail investor protection regime provided by MiFID.¹⁰¹ As explained in section IV.3 below, relevant reforms may not be limited to changes of disclosure techniques, volume, and format changes. They should be more far reaching and consider the feasibility of insertion of default options in certain retail financial products and the establishment of a Pan-European financial products Committee. Arguably, this means that disclosure regulation reform should be guided by empirical and experimental studies,¹⁰² which should measure the actual impact of disclosed information,

98 See FSA, Discussion Paper 09/1, 'Short Selling', February 2009.

99 *Ibid.*

100 Emilius Avgouleas, 'The Vexed Issue of Short Sales Regulation: Why Prohibition is Inefficient and Disclosure Insufficient', Working Paper, 29 May 2009, available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1411615> accessed on 2 July 2009.

101 MiFID has created a wide-ranging retail investor protection regime for the provision of investment services, including the provision of investment advice, based on a host of provisions regulating conflict of interests, client suitability, disclosure of information to retail customers, best execution, and client order handling. See Maloney (n 1) 542–553, and for excellent analysis of the role of disclosure in MiFID's retail investor regime *id.* 591–608.

102 The value of experimental studies in testing financial regulation has also been stressed in the context of laws designed to limit market imperfections such as asset price bubbles within complex adaptive markets. See Erik F. Gerding, 'Laws Against Bubbles: An

and thus the effectiveness of disclosure rules. As Julia Black has accurately observed: ‘Regulators have to have knowledge about retail investors’ skills, knowledge, behaviour and needs if they are to design regulation which provides them with appropriate protections.’¹⁰³

2. Can Economic Experiments Help?

Experimental economics focuses on an ecological concept of rationality, which asks questions as to why a specific social practice, or a specific game, has been chosen instead of another. Thus, experimental tests are suitable to measure the impact of disclosure rules on investor decisions and market efficiency. Testing how expert and lay investors process, utilize, and strategically use disclosed information in the context of financial markets, in order to measure the impact of disclosure rules, will require highly complex and sophisticated experiments conducted by a broad alliance of lawyers, economists, psychologists, and regulators. As a result, relevant teams will probably present serious co-ordination issues. Furthermore, such experiments in order to have credibility they must engage real life investors, traders and other human participants trying to observe how these react to different pieces of information and what is the result of their reaction in terms of market outcomes. Naturally, conducting experiments with real life actors will require expending considerable public resources. Overall the number of experiments attempting to explain market actors’ behaviour, including the way they react to differential volume of disclosed information, is on the rise.¹⁰⁴ Furthermore, as a recent experiment on herding behaviour in financial markets – conducted by IMF economists using market professionals – has shown the use of experiments in this context is both feasible and very useful to test theoretical assumptions.¹⁰⁵

Nonetheless, the use of experiments to test the impact of disclosure rules will not prove unproblematic. Strong evidence points to the fact that individuals

Experimental-Asset-Market Approach to Financial Regulation’ (2007) *Wisconsin Law Review* 977.

103 Julia Black, ‘Involving Consumers in Securities Regulation’, A Report prepared for the IDA Taskforce to Modernize Securities Regulation in Canada, 23 June 2006, 89.

104 E.g., John Beshears, James J Choi *et al.*, ‘How Does Simplified Disclosure Affect Individuals’ Mutual Fund Choices?’ 11 September 2008, available at <<http://www.som.yale.edu/faculty/jjc83/summaryprospectus.pdf>> accessed on 20 June 2009.

105 See Marco Cipriani and Antonio Guarino ‘Herd Behavior in Financial Markets: An Experiment with Financial Market Professionals’ IMF Working Paper 141/08, June 2008. Their research comes to validate to some degree older experimental evidence on the impact of herding. See Lisa R. Anderson and Charles A. Holt, ‘Information Cascades in the Laboratory’ (1997) 87 *American Economic Review* 847.

do not use exclusively unitary processes of decision-making, as rational choice and prospect theory hold, but rely instead on multiple processes,¹⁰⁶ ‘complicates efforts to derive broad normative policy prescriptions from isolated experimental results.’¹⁰⁷ Also, in terms of methodology, experimenters should comply with all six criteria set for successful experimental testing of legal rules: Control, Internal Validity, Falsifiability of Theory, Replicability, External Validity and Contextual Attentiveness.¹⁰⁸

A plausible objection that may be raised here is regarding the need of experiments. Is it not enough to just conduct empirical studies? The answer to this objection is rather straightforward. First, experimental evidence shall be used to complement, verify or nullify empirical research and not as a self-standing body of evidence. Second, since what is really required to be identified here is why market actors behave in particular way, while in possession of full information, rather than how market actors behave in the same circumstances, such evidence is difficult to be derived from empirical studies. Third, assessing how market actors process information is a rather complex issue and will also require the conduct of qualitative studies (interviews, questionnaires) to accompany/interpret empirical data observations. However, qualitative studies in this context are open to manipulation by the subjects of the study, who will probably lie in many contexts in order to present themselves much more ‘clever’, alert, or rational and much less prone to peer pressure than their actual market behaviour would indicate. On the other hand, in the controlled environment of an experiment, using real life subjects, many of these problems may be overcome. This makes experiments very useful and reliable method to gauge the actual impact of disclosed information on market actors’ behaviour, though their results shall be a useful basis for law reform only if they are corroborative with the findings of empirical studies.

It is hoped that, following the conduct of the discussed extensive empirical and experimental studies, a new framework for the use of disclosure, as a regulatory technique in capital markets, will emerge. One of the thorniest questions that experiments on the effectiveness of disclosure regulation must address relates to whether disclosure is sufficient with respect to certain classes of retail investors, who present limited financial sophistication and are also at the lower ranks of the earnings and education ladder? On the basis of present evidence, there is room for a prediction that experiments may lead to the conclusion that disclosure of information under whatever format or technique

106 Arlen and Talley (n 41) xxviii.

107 *Ibid* xviii.

108 *Ibid* xxxii.

may have to be complemented by soft paternalism mechanisms,¹⁰⁹ such as default investment/savings options,¹¹⁰ in order to facilitate welfare enhancing decision-making by such investors. Default options, in turn, may be chosen by a public or other non-profit consumer body in relevant financial contracts.

The assumption that simply modifying the volume of disclosed information may have an imperceptible impact on investor behaviour is re-enforced by a recent experiment conducted by Laibson, Choi *et al* on the way individuals may use the proposed by the SEC ‘summary prospectus’ to be issued by mutual funds. The main objective of this proposal was to improve retail investors’ processing and digestion of product information, something that is not usually possible with the bulky and very detailed full prospectus that mutual funds are obliged to issue. The experiment, where subjects were Harvard staff, showed that ‘the Summary Prospectus [did] not meaningfully alter subjects’ investment choices. Average portfolio fees and past returns [were] similar whether or not subjects receive[d] the Summary Prospectus.’ The welfare gains the authors identified were in relation to spending less time to read the prospectus and wasting less paper, not exactly the gains intended by the SEC when it proposed the Summary Prospectus.¹¹¹

If we assume that the findings of this experiment are robust and may be replicated then initiatives such as the imposition of a requirement, by recast Directive 85/611/EC,¹¹² on UCITS management companies and UCITS sellers and advisors to provide a document called ‘Key Investor Information’ (‘KII’),¹¹³ to replace the ‘simplified prospectus’ may have limited effectiveness.

109 Colin Camerer, Samuel Issacharoff *et al.* ‘Regulation for Conservatives: Behavioral Economics and the Case for “Asymmetric Paternalism”’ (2003) 151 *University of Pennsylvania Law Review* 1211. For an analysis of possible uses of soft paternalism mechanisms to protect investors see Emilios Avgouleas, ‘Reforming Investor Protection Regulation: The Impact of Cognitive Biases’, in Michael Faure and Frank Stephen (eds), *Essays in the Law and Economics of Regulation in Honour of Anthony Ogus* (Hague: Intersentia, 2008), 143–176.

110 From the ever expanding literature on the effect of defaults on savings planning see James J Choi, David Laibson, Brigitte C Madrian, and Andrew Metrick, ‘Optimal Defaults’ (2003) 93 *American Economic Review*, 180–185 and by the same authors ‘For Better or For Worse: Default Effects and 401(k) Savings Behavior’ in David A. Wise (ed.), *Perspectives in the Economics of Aging* (Chicago, IL: University of Chicago Press, 2004). For the active choice of defaults by the financially literate see Gabriel D Carroll, James J Choi, David Laibson, Brigitte C. Madrian, and Andrew Metrick, ‘Optimal Defaults and Active Decisions’ (2009) 124 *Quarterly Journal of Economics* (forthcoming, November 2009).

111 See Beshears, Choi *et al.* (n 104).

112 Recast UCITS Directive (n 22).

113 Section 3 of the recast UCITS Directive. Art 78(1) of the recast UCITS Directive provides that: ‘Member States shall require that an investment company and, for each

However, the Commission's initiative *per se* constitutes a very welcome change of attitude to the one size fits all disclosure documents of previous Directives. The same applies to EU Commission's willingness to test *ex ante* with consumers (through interviews undertaken by two specialized contractors) the effectiveness of this new document.¹¹⁴ This shows that EU regulators have increasingly become very receptive to the benefits that extensive empirical and experimental studies may bring in the field of retail investor regulation.

of the common funds it manages, a management company draw up a short document containing key information for investors. That document shall be referred to as 'key investor information' in this Directive.' With regard to the content of the 'Key Investor information' the recast UCITS Directive provides: '2. Key investor information shall include appropriate information about the essential characteristics of the UCITS concerned, which is to be provided to investors so that they are reasonably able to understand the nature and the risks of the investment product that is being offered to them and, consequently, to take investment decisions on an informed basis.3. Key investor information shall provide information on the [investment's] essential elements . . . Those essential elements shall be comprehensible to the investor without any reference to other documents.' *Id.* As regards the format of 'Key Investor Information' document, Recital 59 of the recast UCITS Directive provides: 'Key investor information should be presented in a short format. A single document of limited length presenting the information in a specified sequence is the most appropriate manner in which to achieve the clarity and simplicity of presentation that is required by retail investors, and should allow for useful comparisons, notably of costs and risk profile, relevant to the investment decision'.

- 114 IFF Research and YouGov, 'Executive Summary: Research on KII Disclosures for UCITS Products, Prepared for European Commission', 28 October 2008, available at <http://ec.europa.eu/internal_market/investment/docs/other_docs/keyinvestor_exe_summary_en.pdf>. This report discusses the results of Phase 1 of testing of key concepts of the 'KII' document. This is how the report describes the objectives of the research and its methodology: 'The [research] consortium . . . undertake a detail review of the effectiveness of new forms of disclosure for UCITS funds to replace the simplified prospectus. . . the research design covers two inter-related phases of work. Phase one, based around both qualitative and quantitative research methods aims to: test the individual variants that constitute the core elements of a KII – strategy and objectives; risk and reward, performance; and charges . . . and to make recommendations for how to improve these variants in the second stage of the work. The second phase of the work seeks to test two fully mocked-up documents, the design and content of which is informed by evidence gathered in phase one . . .' *Id.* See also EU Commission, 'Workshop on Key Investor Information (KII) Brussels, 20 October 2008 Summary Conclusions', 29 October 2008, available at <http://ec.europa.eu/internal_market/investment/docs/other_docs/keyinvestor_summary_en.pdf>.

3. *Two Proposals for Reform*

3.1. *Pluralism in Investor Protection Rules*

Arguably, if the requested above experimental and empirical studies verify the discussed limitations of disclosure, then with respect to retail investor markets EU legislators have two options in to improve the effectiveness of disclosure. The first option is to keep relying on the force of disclosure but as regards provision of issuer information, offer of investment advice, and investment promotions create a more pluralistic investor protection regime than that mandated by MiFID, the Prospectus II, and UCITS Directives. The second reform option, which may be used to either complement or substitute (apart from the field of mandatory disclosure in securities regulation) the first policy measure is the establishment of an independent Pan-European commission for financial products. Such commission should scrutinize savings and investment products addressed to the retail investor market and recommend default options.

As regards, the first option, in the field of investment advice and investment promotions, it seems plausible that individual investor classification systems should become more pluralistic allowing for a larger number of investor categories. Such increase would better reflect the fact that there is a serious heterogeneity within the retail investor body and that, depending on their investment sophistication and expertise, individual investors are susceptible to cognitive biases to a different degree.¹¹⁵ In fact, the definition of ‘retail client’ (investor) in Art 4(12) of MiFID as somebody who is not a professional client, and the fact that public investor is regarded by the Prospectus Directive II (by implication) as any investor who is not a ‘qualified investor’,¹¹⁶ shows how fluid and ripe is this class of investors for specification and further categorization.

Accordingly, the suggested division should be based on the dual assumption that experts normally avoid many (but not all) of the cognitive errors of lay (retail) investors and that within the general group of lay (retail) investors wider classification is possible based on their investment experience, track record, education, financial resources, and even psychological preferences.¹¹⁷

115 Jeffrey J Rachlinski, ‘Cognitive Errors, Individual Differences, and Paternalism’ (2006) *University of Chicago Law Review* 207, 216–224.

116 See above n 23.

117 As Professor Cunningham suggests, individual investors may have their psychological profile taken and their psychological attitude to risk identified and recorded in the context of suitability tests which are already carried out by broker-dealers in compliance with existing conduct of business regulations. Lawrence Cunningham,

The identification of biases in the investment decisions of individuals and of institutions, in order to allow for more pluralistic investor categorization, would require a lengthy and large-scale study by psychologists, economists, and regulators of investor choices and of their trading behaviour. Serious objections have been raised as to whether such categorization is at all possible, due to difficulties in identifying and separating expert from non-expert investors.¹¹⁸ However, given that most investors follow specific trading patterns, certain objective characteristics of trading and investment habits can emerge without serious difficulty. In addition, this gigantic exercise may be less costly than it appears at first glance, since the data that needs to be collected is already at the disposal of investment firms.¹¹⁹ Finally, the processing of relevant data could be conducted without revealing individuals' identities, protecting thus individual investor privacy.

The suggested increase of investor classes recognized in disclosure and conduct of business regulation would not necessarily place a significant new burden on financial services firms in the EU, for two reasons. First, MiFID already separates investors into retail clients, professional clients, and eligible counterparties.¹²⁰ Although the third group concerns exclusively financial institutions, the other two are not as clear-cut as they seem. There is a class of individuals, who based on their investment experience may be categorized as professional clients, enjoying thus a lower level of protection.¹²¹ Secondly, computerization, amortization, and increased sophistication on the part of compliance professionals would help investment firms to comply with new rules at an imperceptible expense, absorbing the initial costs that measures such as the narrow categorisation of investors would entail.

Furthermore, expanding investor categorization seems to be the only immediate remedy in the case of mandatory disclosure. Since disclosure 'may not protect investors if cognitive biases prevent them from rationally incorporating the information disclosed into their investment decisions',¹²² the limitations of bounded rationality should be resolved through the

'Behavioral Finance and Investor Governance' (2002) *Washington & Lee Law Review* 767, 800–807.

118 See Stephen J. Choi and Adam C Pritchard, 'Behavioral Economics and the SEC', *Berkeley School of Law*, Public Law and Legal Theory Research Paper No. 115, 2003, 66–68, available at <<http://ssrn.com/abstract=500203>>.

119 In this area very interesting are efforts by the Canadian government to develop 'a national Investor Index' which provides 'data on retail investors' skills, needs, behaviour and awareness' of applicable regulation. As Julia Black accurately notes: 'The database should enable analysis across different demographic groups' making it more usable and precise. Black (n 103) 8.

120 MiFID, Annex II.

121 MiFID, Annex II.ii.1.

122 Choi and Pritchard, (n 118) 4, 22–23.

adoption of other strategies. Thus, a good *debiasing* technique would be increased pluralism (fragmentation) of investor classes and appropriate modification of the format and volume of information addressed to each class of investors. Namely, firms instead of producing single format disclosure prospectuses or one set of other disclosure or marketing documents would have to produce several in varied formats depending on the kind of investor each document is addressed to. Of course, all classes of investors should have access to all documents.

3.2. An EU Financial Products Agency

It may be plausibly assumed that tailor made disclosure regimes for various sub-classes in the retail investor class may prove unfeasible or very expensive. At the same time, in the absence of a default option, disclosure of information alone, in whatever format or volume, may not be enough to counter individuals' general exhibition of limited self-control and tendency to prefer instant gratification over long-term rewards, which, of course, fosters speculation. Therefore, if outside the field of securities offers, insertion of default options in retail financial contracts is the more cost-effective and realistic of the two reforms suggested here, then the next question is who should have the duty to scrutinize financial products targeting the unsophisticated retail investor market.

Harvard Professor Elizabeth Warren suggested in an article in 2007 that the US mortgage catastrophe would have been averted if there was an independent financial products watchdog guarding against hazardous financial products such as adjustable rate subprime mortgages.¹²³ This is an idea that has been embraced by US Congress¹²⁴ and adopted by the Obama administration in US Treasury's June 2009 proposals for the reform of financial regulation and supervision.¹²⁵ Thus, there is an expectation that legislation will soon be introduced in the US establishing an independent financial products commission.

123 Elizabeth Warren, 'Unsafe at Any Rate' (2007) *Democracy a Journal of Ideas*, available at <<http://www.democracyjournal.org/article.php?ID=6528>> accessed on 30 June 2009.

124 Durbin, Schumer, Kennedy ask Treasury to Support Creation of a Financial Product Safety Commission' Press Release, April 24, 2009, available at <http://schumer.senate.gov/new_website/record.cfm?id=311958>.

125 US Treasury Department, 'Financial Regulatory Reform, A New Foundation: Rebuilding Financial Supervision and Regulation', 18 June 2009.

Of course, the EU did not have a subprime mortgages scandal. On the other hand, it has an ageing population with pressing investment for retirement needs. In addition, there is no evidence that lay EU citizens exhibit a level of financial sophistication higher than that observed among the general population in the US. Individuals and households in the UK¹²⁶ and in Central and Eastern European countries¹²⁷ proved to be as capable of crippling over-indebtedness and high loan to asset value (LTV) mortgages (usually considered to be an over 75 % LTV) as their US counterparts. It should be noted that increased indebtedness may not only have a serious impact on financial stability, but also heightens the sensitivity of households' well being to changes in interest rates, income and asset prices.¹²⁸ This means that, in times of crisis, household income and asset prices may experience a sudden drop making debt service problematic and posing all kinds of systemic, economic, and social problems.

In addition, just expecting brokers and other financial advisors to act as champions of consumer protection for their clients, based on MiFID's investor suitability regulations and other conduct of business rules,¹²⁹ which

126 UK household indebtedness stood in 2004 at 140 % of aggregate household income, just over 1 trillion GBP. The ratio in 1994 was just 105 % of aggregate household income. In 2008, 4 years later, household debt in the UK had exceeded 150 % of aggregate household income and stood at 1,6 trillion GBP, an average of 60,000 GBP per household. See Orla May *et al.*, Bank of England Quarterly Bulletin, Q4, 2004, 'British Household Indebtedness and Financial Stress: A Household-level Picture', available at <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=699225> accessed on 4 July 2009. and Tomas Hellbrandt *et al.*, Bank of England Quarterly Bulletin, Q4, 2008, 'The Financial Position of British Households: Evidence from the 2008 NMG Research Survey', 384–384, available at <<http://www.bankofengland.co.uk/publications/quarterlybulletin/qb080401.pdf>> accessed on 10 July 2009.

The same 2008 survey points out to the large number of borrowers with high LTV mortgages

127 For the exponential growth of individual and household debt in the Baltic countries and Eastern Europe, which, eventually, along with unsustainable external public debt sown the seeds for the present crisis of their national economies see 'Consumer Borrowing May Hit Future Growth', Emerging Europe Monitor, Section: Economy/Romania, January 2004; 'Credit Book or Credit Bust?' Emerging Europe Monitor, Section: Economy/Lithuania, July 2005. Available at <<http://www.emergingeuromonitor.com>> accessed on 10 July 2009.

128 See Guy Debelle, 'Household Debt and the Macroeconomy' Bank of International Settlements Quarterly Review, Special Features, March 2004, 51–63, available at <http://www.bis.org/publ/qtrpdf/r_qt0403e.pdf> accessed on 10 July 2009.

129 For an overview Christos Gortsos, 'MiFID's Investor Protection Regime: Best Execution of Client Orders and Related Conduct of Business Rules' in Emiliios Avgouleas (ed.), *The Regulation of Investment Services in Europe under MiFID: Implementation and Practice* (Tottel Publishing, 2008) ch. 5.

oblige providers and sellers of financial products to disclose as much information as possible for the products' nature and risk and ascertain whether it is suitable for the customer's risk profile, is a plausible but possibly inadequate protection mechanism. First, relevant rules do not always work properly, because of broker/financial advisor expected tendency to avoid complying with them, where possible, no less due to the complexity of relevant rules. Second, due to the explained above limited ability of consumers to understand what is disclosed and act on such information in a rational way, retail investors may not make full or proper use of disclosed information. Therefore, an independent watchdog that would advise, scrutinize, and recommend options for financial products, rather than regulate them or prohibit them from entering the market, could be, on the basis of the preceding discussion, a very positive development. However, given the structure of the internal market for financial services and the ability of financial services firms to offer financial products on a cross-border basis, such an agency would be effective only if it has a formal pan-European standing.

V. Conclusion

The old disclose and self-regulate paradigm in financial markets has been widely castigated as among the main culprits of the current global financial catastrophe. However, this does not diminish the value of disclosure as regulatory technique; it simply calls for a radical rethinking of its uses, processes, volume, timing, and format, in order to make it more effective and better adapted to actual market conditions. This article has attempted to map disclosure's future in European financial regulation on the basis of lessons learnt from the global financial crisis.

The article has argued that premising EU banking regulation on disclosure-based market discipline was a flawed approach. Disclosure can have an effective role in EC banking regulation only as a supplement to strict protective rules that limit the kind of activities an institution may undertake and restrain its risk-taking appetite. Furthermore, it has been suggested that the disclosure conundrum in EC securities regulation shall only be resolved if disclosure rules are subjected to extensive and rigorous empirical and experimental studies.

It is possible that such studies will show that, inspite of mandating extensive disclosure regimes, certain classes of individual investors simply need to either be granted pluralistic (almost tailor made disclosure regimes) or be aided by the identification of default choices in retail financial contracts. The latter may prove to be the preferred solution both in terms of costs and retail investor protection effectiveness, especially in a region like the EU with a rapidly

ageing population that has to save ever more and invest ever more productively for what looks an uncertain financial future in retirement. Finally, the role of scrutinizing retail financial contracts and identifying default options should be assigned to an independent pan-European body that is less susceptible to regulatory capture than national authorities.