

Cornell International Law Journal

Volume 48
Issue 1 *Winter 2015*

Article 1

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Recommended Citation

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Law and Finance in the Chinese Shadow Banking System

Dan Awrey[†]

Almost twenty years after economists Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny published their groundbreaking and controversial research examining the relationship between investor protection laws and stock market development, our understanding of the relationship between law and finance is still in its theoretical infancy. Today, few would argue that strong laws do not help generate credible commitments and thereby promote financial development. Ultimately, however, this observation is little more than a useful starting point for exploring the complex, dynamic, and structurally interdependent relationship between law and finance within modern financial markets.

So where might we turn for further insights into this important relationship? One potentially useful framework is the 'Legal Theory of Finance' (LTF). At the heart of LTF are four interwoven propositions. These propositions emphasize the legal construction of financial markets, their essential hybridity and inherent hierarchy, and the role of the law as not only a mechanism for generating credible commitments, but also as a potential source of financial instability. LTF thus both complements and expands upon conventional frameworks for understanding the relationship between law and finance.

This Article uses LTF to explore the emergence, growth, and risks residing within a little known but increasingly important segment of the Chinese shadow banking system: the \$USD2 trillion dollar market for wealth management products (WMPs). WMPs possess a number of distinctive legal and economic features. First, despite being marketed by banks and other intermediaries as substitutes for conventional deposit accounts, the liabilities generated by the majority of these products do not reside on bank balance sheets. Second, while WMPs typically lock-in investors' capital for relatively short periods of time, this capital is often invested into less liquid, longer-term assets. The resulting maturity and liquidity mismatches thus recreate the fragile capital structure of banks. Third, WMPs have emerged largely in response to China's interventionist approach toward both banking regulation and broader macroeconomic policy.

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As we shall see, LTF holds out a number of important insights into the emergence of WMPs, their legal structure, their dramatic growth in the wake of the financial crisis, and the risks they may pose to financial stability. More broadly, understanding WMPs through the lens of LTF highlights the fact that, far from simply representing the ‘rules of the game,’ the law is also often the board, the game pieces, and the dice.

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Introduction

Amongst the many forgotten treasures on display at the New York Public Library is the Hunt-Lenox Globe. Dating from the early fifteenth century, the globe is one of the earliest surviving cartographic representations that includes a depiction of The New World.¹ Equally significant, however, is a small notation on the other side of the globe. There, scribbled over a patch of terra firma barely recognizable as the southeast coast of modern day China, appear the words “*hc svnt dracones*”.² Many believe that this phrase was used by the cartographer to warn explorers of dangerous or uncharted territories.³ Loosely translated from the original Latin, it

1. See Benjamin Franklin de Costa, “The Lenox Globe” (1879), 3 *MAGAZINE OF AMERICAN HISTORY* 529, available at <http://www.rockvillepress.com/TIERRA/TEXTS/DECOSTA.HTM>.

2. *Id.*

3. It is often thought that the phrase “Here Be Dragons” - along with depictions of dragons or sea monsters - was widely used on medieval maps as a means of identifying such territories. In reality, the Hunt-Lenox Globe is the only surviving medieval cartographic representation that actually bears this phrase. See *Inhuman Geography: Here There Be Dragons*, U.C. SANTA BARBARA DEP’T OF GEOGRAPHY (July 7, 2011), <http://>

declares simply: Here Be Dragons.

Over 500 years later, there is still a great deal we do not know about China. Today, however, our most pressing objective is not to map the contours of the country's mountain ranges, rivers, or coastline, but those of its vast, complex, and constantly evolving financial system. At the apex of this system is the Chinese government and its labyrinthine network of wholly and partially state-owned enterprises (SOEs).⁴ These SOEs include five state-owned commercial banks.⁵ Together, these five institutions have a market capitalization of approximately RMB4.3 trillion (\$USD700 billion) and represent almost half of the total assets within the Chinese banking system.⁶ Residing beneath these state-owned behemoths are then a handful of smaller joint-stock commercial banks and foreign banking subsidiaries.⁷ Collectively, these privately-owned financial institutions account for approximately one-fifth of total banking assets.⁸ At the periphery of the Chinese banking system, meanwhile, exists a vast network of over 3,000 city commercial banks, village and township banks, rural commercial banks, rural cooperative banks, and rural credit cooperatives.⁹

The Chinese financial system is also home to a large and vibrant shadow banking system. Very broadly speaking, the term 'shadow banking' refers to financial markets and institutions that perform credit, maturity, or liquidity transformation outside the formal banking system.¹⁰ In China, this system includes a diverse range of financial products, trust and guarantee companies, brokerage firms, cooperative associations, pawn

www.geog.ucsb.edu/events/departments-news/891/inhuman-geography-here-there-be-dragons/.

4. See MICHAEL F. MARTIN, CONG. RESEARCH SERV., CHINA'S BANKING SYSTEM: ISSUES FOR CONGRESS 1-2 (2012).

5. *Id.* at 3. The banks were previously state-owned, but have since been transformed into joint-stock companies with various shareholder categories. *Id.* Although in theory the banks are operating as commercial banks, the majority of shares in four of the five banks are non-tradable shares held by government entities. *Id.*

6. *Id.* at 7. By way of comparison, the five largest commercial banks in the U.S.—Wells Fargo, JP Morgan, Citigroup, Bank of America, and US Bancorp—had an aggregate market capitalization of approximately \$USD725.1 billion as of April 30, 2013. See *The World's Largest Banks and Banking Groups by Market Cap (as of March 2013)*, BANKSDAILY.COM, <http://www.banksdaily.com/topbanks/World/2013.html>. Combined with wholly state-owned 'policy banks', these state-owned institutions account for approximately 55% of total banking assets. MARTIN, *supra* note 4, at 7. For further information about the ownership structure and governance of these state-owned institutions, see *infra* Section IV(a).

7. See MARTIN, *supra* note 4, at 5.

8. Annual Report, CHINA BANKING REGULATORY COMMISSION (2011) at 119 [hereinafter CBRC Annual Report]. For further information, see *infra* Section IV(a).

9. As described in Section IV(a), these smaller banks and cooperatives are subject to varying degrees of state ownership and political influence. See MARTIN, *supra* note 4, at 4, 7.

10. See Zoltan Pozsar et al., *Shadow Banking*, FEDERAL RESERVE BANK OF NEW YORK STAFF REPORT No. 458 (February 2012), available at http://www.newyorkfed.org/research/staff_reports/sr458.pdf. The utility and potential limits of this definition are examined in Section IV.

shops, and informal lenders.¹¹ Given its heterogeneity and relative opacity, it is difficult to measure the size of the Chinese shadow banking system with any certainty. Recent estimates range from \$USD2.2 trillion to \$USD4.8 trillion.¹² What is clear, however, is that this system has grown rapidly in the wake of the recent global financial crisis.¹³

This Article explores the emergence, growth, and latent risks residing within a little known but increasingly important segment of the Chinese shadow banking system: the market for so-called 'Licai' or wealth management products (WMPs). WMPs are collective investment schemes that effectively serve as higher yielding substitutes for the time deposits and other savings products traditionally offered by Chinese banks.¹⁴ The first WMP was introduced in 2004.¹⁵ It was not until after the crisis—and the RMB4 trillion (\$USD652 billion) stimulus package introduced by the Chinese government in November 2008—that these markets emerged as an important vehicle for savings and investment, however.¹⁶ Between January 2009 and May 2013, the total volume of WMPs issued and outstanding grew from just over RMB2 trillion (\$USD328 billion) to approximately RMB13 trillion (\$USD2.12 trillion).¹⁷ To put this figure into perspective, \$USD2.12 trillion is equivalent to approximately 16% of total bank deposits in China, or almost 22% of total deposits in the U.S.¹⁸ WMPs thus represent a significant and expanding segment of the Chinese financial system.

WMPs possess a number of distinctive legal and economic features. First, despite being marketed by banks and other intermediaries as substitutes for conventional deposits, the liabilities generated by the majority of these products do not technically reside on bank balance sheets. Second, while WMPs typically lock-in investor capital for a relatively short period of time, this capital is often channeled into less liquid, longer-term assets such as loans to small and medium-sized enterprises (SMEs), local government financing vehicles (LGFVs), private equity, and commercial real

11. See Cindy Li, *Shadow Banking in China: Expanding Scale, Evolving Structure*, FEDERAL RESERVE BANK OF SAN FRANCISCO 2, 4 (2013), <http://www.frbsf.org/banking-supervision/publications/asia-focus/2013/april/shadow-banking-china-scale-structure/asia-focus-shadow-banking-in-china.pdf>.

12. *Id.* at 1.

13. See *id.* For a more detailed discussion of the growth of the Chinese shadow banking system in the wake of the crisis is discussed in greater detail, see *infra* Section IV.

14. See Li, *supra* note 11, at 2.

15. Nicholas Borst, *Shadow Deposits in the United States and China*, CHINA ECON. WATCH (April 4, 2013, 9:48 AM), <http://blogs.piie.com/china/?p=2390>.

16. See Li, *supra* note 11, at 1.

17. *General Comment, Chinese Banks: Issuance of Wealth Management Products Moderates*, FITCH RATINGS (June 10, 2013), available at http://www.institutionalinvestor.china.com/arfy/uploads/soft/130617/32320_0922082021.pdf. [hereinafter FITCH RATINGS].

18. *Id.* In September 2013, total deposit liabilities in commercial banks in the United States equaled 9.6 trillion dollars, seasonally adjusted. Board of Governors of the Federal Reserve System, *Selected Assets and Liabilities of Commercial Banks in the United States as of November 2013*, H.8, 3 (Nov. 7, 2014), available at www.federalreserve.gov/releases/h8.pdf.

estate.¹⁹ The resulting maturity and liquidity mismatches thus recreate the fragile capital structure of banks.²⁰ Third, and perhaps most importantly for the purposes of this Article, WMPs have emerged largely in response to China's interventionist approach towards both banking regulation and broader macroeconomic policy.

Like all explorers, we need a good map. Articulated somewhat more formally, we need a *theory* to help us better understand how the law and regulation have shaped the emergence, growth, and structure of WMPs. Conventional 'law and finance' scholarship has struggled to reconcile the dominance of China's state-owned banks, its relatively weak investor protection laws, and its underdeveloped stock markets with its impressive track record of economic growth.²¹ More broadly and importantly, this scholarship suffers from a number of manifest blind spots. These blind spots stem from the scholarship's reductionist view of the law and legal institutions, its failure to acknowledge the endogenous role of both the law and politics in shaping patterns of ownership and financial development, and its almost complete disregard for the relationship between the law, financial instability, and financial crises. Collectively, these blind spots render this scholarship a relatively anemic framework for exploring the relationship between law and finance within the Chinese shadow banking system.

Other scholars, including perhaps most notably Franklin Allen, have argued that the emergence of the Chinese shadow banking system is at least partially attributable to the use of relationship and reputation-based enforcement mechanisms as substitutes for strong laws and legal institutions.²² Indeed, this argument has considerable traction within many of the more informal segments of the Chinese shadow banking system. Intuitively, however, we would expect such extra-legal enforcement mechanisms to play a far less important role in connection with financial instruments such as WMPs, which are typically documented in legally enforceable contracts and issued by financial institutions licensed and supervised by public regulatory authorities.²³ Like conventional law and finance scholarship, therefore, frameworks based on these mechanisms are unlikely to provide us with a compelling explanation for the existence of WMPs, the determinants of their legal structure, or the risks this structure may pose to, *inter alia*, financial stability.²⁴

19. See Li, *supra* note 11, at 2.

20. For a discussion of the fragile capital structure of banks, see generally Douglas W. Diamond & Philip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity* (1983), 91 J. POL. ECON. 401 (1983); Douglas W. Diamond & Raghuram G. Rajan, *Liquidity, Credit Creation and Financial Fragility: A Theory of Banking* (2001), 109 J. POL. ECON. 287 (2001);

21. See generally Franklin Allen et al., *Law, Finance and Economic Growth in China*, 77 J. FIN. ECON. 57, 57 (2005).

22. *Id.*

23. See Li, *supra* note 11, at 3.

24. Reputation-based enforcement mechanisms may, however, actually play a curious and potentially important role within the market for WMPs. See *infra* Section V.

So where do we turn when the conventional frameworks for understanding the relationship between law and finance seem unlikely to yield meaningful insights? One potentially useful framework is what Katharina Pistor and others have labeled the 'Legal Theory of Finance' (LTF).²⁵ LTF focuses on the dynamic, interdependent relationship between public regulation, private contracts, and the structure of the financial system.²⁶ Perhaps most importantly, it highlights how law and regulation spur contractual innovation, how this innovation changes the structure of financial markets and institutions, and, ultimately, how these evolving structures may be vulnerable to potential instability. LTF thus both complements and significantly expands upon the conventional frameworks for analyzing the relationship between law and finance, which focus primarily on how strong laws and legal institutions help market participants make credible commitments, thereby influencing patterns of ownership and financial development.²⁷ As we shall see, LTF is thus able to provide us with a unique and valuable perspective on the important role of the law and regulation in shaping the emergence, growth, and potential risks of WMPs.

This Article is structured as follows. Section I begins by examining conventional law and finance scholarship and identifying its principal shortcomings as a framework for exploring the complex, structurally interdependent interactions between law and finance. Section II advances LTF as a complimentary theoretical framework. At the heart of this framework are four interwoven propositions. These propositions emphasize the *legal construction* of financial markets, their *essential hybridity* and *inherent hierarchy*, and the role of the law as a *potential source of financial instability*. Shifting focus from theory to practice, Section III describes the structure and regulation of the Chinese banking system, along with the origins, basic mechanics, and legal structure of WMPs. Utilizing LTF, Section IV then examines how the legal structure of WMPs has developed as a private contractual response to certain restrictive features of the regulatory regime governing Chinese banks. This section also examines how this legal structure effectively recreates the fragile capital structure of banks, while simultaneously circumventing the capital, liquidity, and other regulatory requirements that are typically employed to mitigate the attendant risks to both institutional and broader financial stability created by that structure. Lastly, this section examines whether and how this potential instability is likely to manifest itself in light of the essential hybridity and inherent hierarchy of both the market for WMPs and the Chinese banking system. Section V briefly canvasses some of the policy implications that flow from this

25. See generally Katharina Pistor, *A Legal Theory of Finance*, 41 J. COMP. ECON. 315 (2013).

26. *Id.* at 315-16.

27. Pistor, *supra* note 25, at 326. The conventional frameworks also focus, conversely, on how weak laws and legal institutions spur the emergence of institutional and extra-legal substitutes. See *infra* Section II for further discussion.

exploration of the relationship between law and finance in the Chinese shadow banking system.

I. Law and Finance: The Conventional “Reductionist” View

In its quest to emulate the logical formalism, rigorous empiricism, and hypothesis testing of physics and other ‘hard’ sciences, mainstream (neo-classical) economics has long attempted to build theories which abstract from the complexities of the real world.²⁸ These complexities typically include the decision-making processes of individuals, firms, and other economic actors, along with the diverse range of conditions under which these decisions are made. Importantly, these complexities also often include both the law itself and the political, historical, and cultural contexts in which the law is made and in which it evolves over time. In effect, neo-classical methodologies have come to demand that any variables that are not susceptible to relatively precise measurement be either replaced with more abstract and cooperative proxies or simply removed from the equation. As a result, the defining feature of neo-classical economics has arguably become its seemingly relentless focus on making predictions about how rational, autonomous, utility-maximizing actors will behave given a specific set of highly stylized legal and other parameters.²⁹ Yet, insofar as these parameters do not reflect the contours of the real world, it is not entirely unrealistic to suggest, as Roman Frydman and Michael Goldberg have, that neo-classical economics is best understood as a normative theory about how economic actors and institutions *should* work, as opposed to a positive theory about how they actually do—and sometimes don’t—work in practice.³⁰

All this is not to suggest that neo-classical economics has not contributed greatly to our understanding of the economic world. What it does do, however, is highlight the necessity and importance of theoretical choices and the inherent dangers of excluding important explanatory variables. It was none other than Milton Friedman who suggested that these choices are what ultimately demarcate the thin line between the “crackpot” and the “scientist.”³¹ From Friedman’s positivist perspective, however, the exclusion of important explanatory variables was essentially unproblematic so long as the relevant theory possessed strong predictive power. Following this logic, the best theories are those that generate the most accurate pre-

28. For a discussion of this trend, see generally Geoffrey Hodgson, *Observations on the Legal Theory of Finance*, 41 J. COMP. ECON. 331 (2013).

29. For an example of this approach, see generally Oliver Hart and Sanford Grossman, *Disclosure Laws and Takeover Bids*, 35 J. FIN. 323, 323–34 (1980).

30. ROMAN FRYDMAN AND MICHAEL D. GOLDBERG, *BEYOND MECHANICAL MARKETS: ASSET PRICE SWINGS, RISK AND THE ROLE OF THE STATE* 95–96 (2011). See also Katharina Pistor, *Regulatory Implications of Financial Theories 2* (on file with author).

31. See MILTON FRIEDMAN, *The Methodology of Positive Economics*, in *ESSAYS IN POSITIVE ECONOMICS* 3, 25 (1953). For a critique of Friedman’s positivist methodology, see Dieter Helm, *Predictions and Causes: A Comparison of Friedman and Hicks on Method*, in 36 *Ox. ECON. PAPERS* 118 (1984).

dictions on the basis of the fewest number of independent variables.³² On the surface, this logic seems virtually unassailable. Inevitably, however, theories based on this logic are vulnerable to changes in the underlying causal dynamics and interdependencies between different (and potentially excluded) variables. In many cases, understanding these dynamics and interdependencies is of clear theoretical and practical importance. Put simply, if a variable such as the law is both important and non-static, then a theory which abstracts from this variable is not likely to be highly predictive—or, in any event, at least not for very long.³³

Somewhat paradoxically, the “reductionist”³⁴ approach to the law and legal institutions embedded within neo-classical economics is also reflected in conventional law and finance scholarship. This scholarship traces its origins to a pair of influential articles by economists Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny (LLSV) that examined the legal protections afforded to shareholders and creditors in different countries, the legal traditions from which these protections emerged, and their impact on stock market development.³⁵ LLSV started by constructing a series of formal indices designed to represent the quality of investor protection laws and their enforcement.³⁶ Using regression analysis, they then examined the relationship between these indices and both their sample countries’ legal tradition (e.g. English common law, French civil law, etc.) and various measures of domestic stock market development (e.g. aggregate market capitalization and the number of listed firms).³⁷

On the basis of this analysis, LLSV arrived at two striking conclusions. First, common law countries afforded investors higher levels of legal protection than civil law countries.³⁸ Second, higher levels of legal protection

32. FRIEDMAN, *supra* note 31, at 25.

33. Implicit within this idea is the possibility that a variable that was previously unimportant can, owing to a change of circumstances, subsequently become very important indeed.

34. See, e.g., John Armour et al., *Regulatory Sanctions and Reputational Damage in Financial Markets* 5, Ctr. for Economic Policy Research Discussion Paper No. DP8058 (2011).

35. Rafael La Porta et al., *Law and Finance*, 106 J. POL. ECON. 1113 (1998); Rafael La Porta et al., *Legal Determinants of External Finance*, 52 J. FIN. 1131 (1997). Ultimately, of course, it is difficult to completely ring fence what qualifies as “conventional” law and finance scholarship. For the purposes of this Article, however, this term refers to scholarship that shares both LLSV’s reductionist approach toward the law and legal institutions and its strict adherence to the assumption that the law is fundamentally exogenous to finance.

36. To measure the quality of legal protections available to shareholders, for example, LLSV focused on voting powers, the ease with which shareholders could participate in the voting process, and the existence of legal protections against expropriation by management. To measure the quality of legal protections available to creditors, meanwhile, LLSV focused on, *inter alia*, the ability to take security and seize assets upon default. For further details, see La Porta et al., *Legal Determinants of External Finance*, *supra* note 35, at 1134–35.

37. See La Porta et al., *Law and Finance*, *supra* note 35, at 1122–1125; see also La Porta et al., *Legal Determinants of External Finance*, *supra* note 35, at 1137–1139.

38. See La Porta et al., *Law and Finance*, *supra* note 35.

were associated with more developed stock markets.³⁹ Using similar methodologies, subsequent empirical research also found a strong relationship between stock market development and *private*—but not *public*—enforcement of these protections.⁴⁰ LLSV and their progeny have thus become widely associated with the view that the law should be understood as playing only a supporting role in finance and financial development, principally through the provision of clearly defined property rights and the efficient contract enforcement necessary for private market participants to make credible commitments to one another.⁴¹

LLSV's research provided the theoretical and empirical foundations for what has become an important body of scholarship examining how the quality of private contractual mechanisms, public legal frameworks, and background enforcement institutions influence investor behavior and, ultimately, the patterns of ownership and financial development.⁴² At the same time, however, this scholarship has attracted considerable methodological and other criticisms. As a preliminary matter, LLSV's reductionist approach—as embodied in its famous indices for measuring the quality of investor protection laws—often failed to fully or accurately account for the legal substance, practical impact, or functional equivalence of these laws in different countries.⁴³ Along the same vein, LLSV's proxies for the quality of enforcement - e.g. the governance and formal legal authority of public

39. La Porta et al., *Legal Determinants of External Finance*, *supra* note 35, at 1137-1139.

40. See Simeon Djankov et al., *The Law and Economics of Self-Dealing*, 88 J. FIN. ECON. 430, 449 (2008); see also Rafael La Porta et al., *What Works in Securities Laws?*, 61 J. FIN. 1, 22 (2006).

41. In this respect, LLSV and their progeny can be viewed as consistent with Douglass North's conception of legal and other institutions as establishing the "rules of the game." See DOUGLASS C. NORTH, *INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE* 3 (1990). This view is also reflected in a common, yet seemingly untenable, interpretation of the Coase theorem as standing for the proposition that the null hypothesis should be that the optimal government policy is to leave markets unregulated. See La Porta et al., *What Works in Securities Laws?*, *supra* note 40, at 1. Ultimately, however, this view is dependent on a number of assumptions—e.g., perfect information, clearly defined property rights, and costless enforcement—which, as Coase himself acknowledged, are extremely unlikely to hold in the real world. See Djankov et al., *The Law and Economics of Self-Dealing*, *supra* note 40, at 463.

42. See Thorsten Beck et al., *Law and Finance: Why Does Legal Origin Matter?* 31 J. COMP. ECON. 653 (2003); Bernard S. Black, *The Legal and Institutional Preconditions of Strong Securities Markets*, 48 UCLA L. REV. 781 (2001); Brian R. Cheffins, *Does Law Matter? The Separation of Ownership and Control in the United Kingdom*, 30 J. LEGAL STUD. 459 (2001); John C. Coffee, *The Rise of Dispersed Ownership: The Roles of the Law and the State in the Separation of Ownership and Control*, 111 YALE L. J. 1 (2001); Luzi Hail & Christian Leuz, *International Differences in the Cost of Equity Capital: Do Legal Institutions and Securities Regulation Matter?*, 44 J. ACCOUNTING RESEARCH 485 (2006); Rafael La Porta et al., *Investor Protection and Corporate Valuation*, 57 J. FIN. 1147 (2002). For a wide ranging survey of this literature, see Rafael La Porta et al., *The Economic Consequences of Legal Origins*, 46 J. ECON. LIT. 285 (2008).

43. See Holger Spamann, *The 'Anti-Directors Rights Index' Revisited*, 23 REV. FIN. STUD. 467, 469 (2010). After correcting for these inaccuracies, Spamann re-ran LLSV's regressions and found significantly lower correlations between legal tradition and the quality of investor protection laws, and between the quality of investor protection laws and LLSV's measures of stock market development.

agencies responsible for enforcing investor protection laws - failed to capture other potentially important determinants of the intensity of enforcement.⁴⁴ Together, these criticisms reflect the fact that conventional law and finance scholarship has often confined its analysis to the 'law on the books', thereby implicitly discounting the importance of the 'law in action'.⁴⁵

Upon closer scrutiny, however, there exists an even more fundamental lacuna at the heart of conventional law and finance scholarship. Consistent with its origins and grounding in the theory and methodologies of neo-classical economics, LLSV and their progeny focus on developing predictions about the impact of the law on patterns of ownership and financial development. This scholarship does not, however, attempt to explore the myriad ways in which law and finance may be structurally interdependent.⁴⁶ Indeed, LLSV viewed the law as fundamentally *exogenous* to finance.⁴⁷ On one level, this view was likely driven by methodological pragmatism; treating a country's legal tradition as independent of the structure of its financial system enabled LLSV and other scholars to sidestep potential endogeneity issues in connection with their regression analyses. On another level, however, this view arguably reflects the implicit assumption that the law ultimately stands *outside* the structure of the financial system. As explained by Katharina Pistor:

[This scholarship] treat[s] law and finance as separate spheres that are related in a causal, unidirectional fashion, not as structurally intertwined. Law determines the degree of investor protection and thereby establishes the rules of the game for a financial marketplace in which actors respond to the incentives [that] law creates . . . It follows that within this theoretical framework law plays a critical role in the making of liquid markets . . . [b]ut this is where the story ends.⁴⁸

Viewed from this perspective, the most fundamental criticism of conventional law and finance scholarship arguably stems from its failure to engage in a more systematic and rigorous examination of the many different ways in which the law and finance interact with one another in the real world.

44. See John C. Coffee, *Law and the Market: The Impact of Enforcement*, 156 U. PA. L. REV. 229, 277 (2007); Howell Jackson & Mark Roe, *Public and Private Enforcement of Securities Laws: Resource-Based Evidence*, 93 J. FIN. ECON. 207, 210 (2009); John Armour, *Enforcement Strategies in U.K. Corporate Governance: A Roadmap and Empirical Assessment* 34-36 (European Corporate Governance Institute Working Paper Series in Law, No. 106, 2008). As Jackson and Roe observe, these other determinants might include, for example, financial, human, and other resources possessed by these agencies. As Coffee observes, different countries might also have different 'styles' of enforcement not captured by more formal measures. Coffee, *supra* note 44, at 277.

45. The phrase is borrowed from Roscoe Pound. Roscoe Pound, *Law in Books and Law in Action*, 44 AM. U. L. REV. 12, 14 (1910).

46. Katharina Pistor, *Towards a Legal Theory of Finance*, 35-36 (Columbia Law Sch. Pub. Law and Legal Theory Working Paper Grp., Paper No. 13-348, 2013).

47. See La Porta et al., *Law and Finance*, *supra* note 35, at 1126. See also La Porta et al., *The Economic Consequences of Legal Origins*, *supra* note 42, at 286, 298.

48. Pistor, *supra* note 46, at 35-36.

The theoretical limits of conventional law and finance scholarship can be observed across at least three dimensions. First, this scholarship discounts the role of *politics* as an intervening variable in shaping both law and financial development. This is most clearly reflected in La Porta, Lopez-de-Silanes, and Shleifer's 2008 article "The Economic Consequences of Legal Origins," in which the authors challenge the claim that a country's legal tradition is little more than a thinly veiled proxy for domestic politics.⁴⁹ Predictably, the authors attempt to refute this claim by abstracting away from the 'messy' dynamics of real world politics and instead constructing a set of formal proxies designed to measure variables such as a country's level of 'social democracy,' 'leftist' politics, and voting system.⁵⁰ While this once again enables La Porta et al. to subject their data to quantitative analysis, it also forces them to disregard a wealth of potentially useful information about how law, finance, and politics interact in different countries. As research by John Armour and Priya Lele⁵¹, Curtis Milhaupt and Katharina Pistor,⁵² Mark Roe,⁵³ and others⁵⁴ has demonstrated, this three-way interaction can play an important role in determining the quality of investor protection laws and their enforcement.

Second, conventional law and finance scholarship exhibits a pronounced bias towards examining the role of the law in relation to a very small subset of financial markets and instruments. More specifically, this scholarship has gravitated toward the markets for equity and debt, while largely neglecting the derivatives, structured finance, and wholesale funding markets at the heart of the financial systems of most developed countries.⁵⁵ Along the same vein, conventional law and finance scholarship has tended to focus on a relatively narrow subset of the legal rules—e.g. company, securities, and bankruptcy law—which we might expect to influence the behavior of financial market participants. As described above, this scholarship views these laws through the lens of their domestic legal tradition, predicting that common law countries are more likely to rely on private ordering and 'market-supporting' laws while civil law countries are more likely to rely on direct public regulatory intervention.⁵⁶ Intuitively,

49. La Porta et al., *The Economic Consequences of Legal Origins*, *supra* note 42, at 311-15.

50. *Id.*

51. John Armour & Priya Lele, *Law, Finance, and Politics: The Case of India*, 43 L. & SOC. REV. 491 (2009).

52. CURTIS J. MILHAUPT & KATHARINA PISTOR, LAW AND CAPITALISM: WHAT CORPORATE CRISES REVEAL ABOUT LEGAL SYSTEMS AND ECONOMIC DEVELOPMENT AROUND THE WORLD 28-31 (2008).

53. MARK ROE, POLITICAL DETERMINANTS OF CORPORATE GOVERNANCE 61 (2003).

54. See PETER GOUREVITCH & JAMES SHINN, POLITICAL POWER AND CORPORATE CONTROL: THE NEW GLOBAL POLITICS OF CORPORATE GOVERNANCE 2-3 (2005); Raguram Rajan & Luigi Zingales, *The Great Reversals: The Politics of Financial Development in the 20th Century*, 69 J. FIN. ECON. 5, 6 (2003).

55. This same bias can be observed in pre-crisis corporate finance scholarship. See Perry Mehrling, *Minsky and Modern Finance: The Case of Long-Term Capital Management*, 46 J. PORTFOLIO MGMT. 81 (2000).

56. See generally La Porta et al., *The Economic Consequences of Legal Origins*, *supra* note 42.

however, these predictions are likely to have limited traction in many areas of *financial regulation*.⁵⁷ Perhaps most starkly, the fact that the U.S. and U.K.—both common law jurisdictions—resorted to massive public bailouts to support failing financial institutions during the recent crisis would appear to contradict this scholarship’s central prediction. This scholarship is also unable to account for the ongoing *harmonization* of financial regulation in many areas—e.g. capital, liquidity, and resolution requirements—under the auspices of organizations such as the Financial Stability Board and Basel Committee on Banking Supervision.⁵⁸ Nor, similarly, can it account for the emergence or increasing institutionalization of the regulatory regimes governing the single market for financial services within the E.U.⁵⁹

Third, and most importantly, conventional law and finance scholarship has largely overlooked the relationship between law, financial instability, and financial crises. At first glance, this might seem like a somewhat curious oversight. Upon closer inspection, however, it is an almost inevitable byproduct of this scholarship’s narrow substantive focus and theoretical underpinnings. As described above, the primary thrust of this scholarship has been to examine how the law influences the incentives of investors. This scholarship then makes the—often implicit—leap to say that what is good for investors is also good for the broader financial system. As Katharina Pistor and others have observed, however, this leap rests on neo-classical assumptions about the absence of information costs, Knightian uncertainty,⁶⁰ and, perhaps most importantly, liquidity constraints.⁶¹ It also ignores the potentially destabilizing effects of both widespread regulatory arbitrage and the negative externalities associated with socially excessive risk-taking. As we shall see, however, once we reintroduce these variables into the equation, legal rules that may have been desirable from the perspective of investors may be undesirable from the perspective of broader social welfare.⁶² Accordingly, as Pistor explains, conventional law and finance scholarship can essentially be understood as

57. This is something which La Porta, Lopez-de-Silanes, and Shleifer rightly acknowledge. *Id.* at 327.

58. See JOHN ARMOUR ET AL., *PRINCIPLES OF FINANCIAL REGULATION* (forthcoming 2015).

59. For a description of this evolving institutionalization, see Eilis Ferran, *BUILDING AN E.U. SECURITIES MARKET* 58-69 (2004); Eilis Ferran, *Understanding the New Institutional Architecture of E.U. Financial Market Supervision*, in *FINANCIAL REGULATION AND SUPERVISION* 111, 130-44 (Eddy Wymeersch et al., 2012).

60. ‘Knightian,’ or ‘fundamental,’ uncertainty refers to future contingencies that are not susceptible to probabilistic—i.e. statistical—measurement. See FRANK KNIGHT, *RISK, UNCERTAINTY AND PROFIT* 19-20 (1921). Unless otherwise indicated, references to ‘uncertainty’ in this Article should be construed as referring to Knightian uncertainty. Ultimately, the distinction between high information costs and uncertainty is often difficult to make out in practice. Accordingly, while this Article acknowledges that these two concepts are conceptually distinct, it treats them as functionally equivalent insofar as they both serve to undermine the ability of market participants to identify, estimate the probability, or evaluate the likely impact of potential future states of the world.

61. Pistor, *supra* note 46, at 36-37.

62. *Id.* at 22-23.

offering a theory for the *good* times in finance—not the *bad*.⁶³

In the wake of the global financial crisis, it seems remarkable that a theory of law and finance would not seek to incorporate these important dimensions. Yet this is precisely where conventional law and finance scholarship—rooted in neo-classical assumptions, a reductionist view of the law and legal institutions, and the belief that the law is fundamentally exogenous to finance—ceases to provide us with meaningful insights. What we need, therefore, is a complementary set of theoretical tools to help us better understand the complex, dynamic, and interdependent relationship between law and finance.

II. Law in Finance: The Legal Theory of Finance

The view that conventional law and finance scholarship is hamstrung by significant theoretical and methodological blind spots is hardly new.⁶⁴ Nor would many deny that the law plays an important role in the structure of the financial system. It is only recently, however, that scholars have begun to more systematically examine the role of the law within different market and institutional structures with the objective, ultimately, of developing more robust explanatory theories of the relationship between law and finance. Perhaps the most ambitious of these examinations has given birth to what Katharina Pistor and others have labeled the ‘Legal Theory of Finance’ (LTF).⁶⁵

In sharp contrast with the prevailing neo-classical paradigm, LTF proceeds from the observation that high information costs, uncertainty, and liquidity constraints are fundamental features of modern financial markets.⁶⁶ Indeed, LTF views these market frictions as fundamentally intertwined.⁶⁷ In the absence of information costs and uncertainty, market participants would be able to write complete state contingent contracts which that allocated risk in every potential future state of the world—thereby *ex ante* addressing any potential future liquidity problems. In the absence of liquidity constraints, meanwhile, market participants could rest easy in the knowledge that, whatever unforeseen contingencies might arise *ex post*, it would be possible for them to obtain refinancing.

Where high information costs, uncertainty, and liquidity constraints converge, however, the inevitably incomplete contracts written by market participants can become potentially significant triggers for market volatil-

63. *Id.* at 36.

64. See Spamann, *supra* note 43; Jackson and Roe, *supra* note 44; *Coffee*, *supra* note 44.

65. LTF was the product of an interdisciplinary research project examining the role of the law in the structure of consumer credit, foreign exchange, sovereign debt, and derivatives markets. The results of this research were published in a special issue of the *Journal of Comparative Economics*. See generally Katharina Pistor, *Law in Finance*, 41 *J. COMP. ECON.* 311 (2013).

66. Pistor, *supra* note 46, at 3–6. See also Dan Awrey, *Complexity, Innovation and the Regulation of Modern Financial Markets*, 2 *HARV. BUS. L. REV.* 235.

67. Pistor, *supra* note 46, at 27.

ity and, *in extremis*, financial instability.⁶⁸ At the root of this potential instability is the relationship between funding and market liquidity. Intuitively, we would expect the ability of market participants to pay their liabilities (i.e. funding liquidity) to be a function of their ability to transform non-cash assets into cash on a timely basis and with minimal price impact (i.e. market liquidity).⁶⁹ We would expect this market liquidity, in turn, to be a function of, *inter alia*, the information costs market participants must incur in order to value these assets, along with these market participants' perceptions of any fundamental uncertainty associated with their value. *Ceteris paribus*, we would expect higher information costs and uncertainty to be reflected in lower levels of market liquidity, higher market volatility and, ultimately, lower asset prices.

Where market participants are driven by liquidity constraints to sell assets into markets characterized by high information costs and uncertainty, therefore, the resulting realizations may be insufficient to cover their liabilities. As Hyman Minsky observed, this convergence of uncertainty and liquidity constraints is likely to be especially problematic for market participants that engage in maturity transformation and, therefore, rely on the continued availability of short-term funding in order to finance the acquisition and holding of long-term assets.⁷⁰ Viewed from this perspective, the potential for broader financial instability is then a function of how many market participants are driven to seek refinancing—i.e. funding liquidity—at the same time.⁷¹ Importantly, as described in greater detail below, the law often plays a central role in terms of both triggering these liquidity demands and determining their degree of correlation.

It is against this backdrop of high information costs, fundamental uncertainty, liquidity constraints, and potential instability that LTF offers us valuable insights into the relationship between law and finance. At the heart of LTF are four interwoven propositions.⁷² First, financial markets do not exist independently of the contracts, private rules, and public laws that create and support them. Put differently, contrary to the assumptions embedded within conventional law and finance scholarship, the law is *endogenous* to finance. Second, these legal constructions invariably emanate from both public and private sources, making financial markets *hybrid* systems. Third, the extent to which market participants will be required to strictly adhere to these legal constructions is a function of their position relative to the apex of the system. The financial system is thus inherently *hierarchical*. Forth, while these rules are necessary to support

68. *Id.*

69. For a more fulsome examination of the relationship between market and funding liquidity and its implications in terms of the stability of financial markets, see Markus K. Brunnermeier & Lasse Heje Pedersen, *Market Liquidity and Funding Liquidity*, 22 REV. OF FIN. STUD. 2201, 2201–02 (2009).

70. Hyman Minsky, *The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to 'Standard Theory'*, in CAN "IT" HAPPEN AGAIN?: ESSAYS ON INSTABILITY AND FINANCE 65 (M.E. Sharpe, Armonk, eds., 1982).

71. Pistor, *supra* note 46, at 6–7.

72. For a detailed discussion of each of these propositions, see *id.* at 21–33.

the development of financial markets, they are also a potentially significant source of financial *instability*. The remainder of this section briefly examines each of these four propositions.

A. The Legal Construction of Financial Markets

Financial markets are not naturally occurring phenomena. Financial markets are *made*. They are made of private contracts which create the financial claims we often refer to as ‘equity,’ ‘debt,’ or ‘derivatives.’ They are made of the private rules created by market participants in order to foster deep, liquid markets for these contracts. And, importantly, they are made of the public laws and legal institutions which support these contracts and ensure their effective enforcement.⁷³ The global markets for interest rate, currency, credit, equity, and other swaps offer an illustrative example. The emergence, growth, and proliferation of these markets in recent decades owes much to the development of standardized contracts by market participants working under the auspices of the International Swaps and Derivatives Association (ISDA).⁷⁴ ISDA has also played an important role in developing private rules—e.g., auction settlement and determination committees for credit default swaps (CDS)—that ensure the smooth and orderly functioning of these markets.⁷⁵ Finally, and once again owing to ISDA’s intervention, swaps typically enjoy explicit carve-outs from the automatic stay and fraudulent preference provisions under public bankruptcy laws, thereby enabling market participants to enforce close-out netting and related financial collateral arrangements upon a termination event or event of default under these contracts.⁷⁶ In the absence of any one of these legal constructions, it seems highly unlikely that the structure of these markets would look anything like it does today.

73. As Pistor observes, we would expect this reliance on public laws and legal institutions to become more pronounced as societies move toward more ‘market-based’ systems of finance. The reason for this is that the fungibility and liquidity of contracts within such systems depends on credible contractual commitments that are enforceable in a court irrespective of the identity or idiosyncratic characteristics (e.g. creditworthiness) of the relevant counterparties. Pistor, *supra* note 46, at 1–2. One potential exception is sovereign debt issued under domestic law, where the ability of the state to opportunistically amend the law *ex post* makes it difficult for the law or legal institutions to generate credible commitments. See Anna Gelpern & Brad Setser, *Domestic and External Debt: The Doomed Quest for Equal Treatment*, 35 GEO. J. INT’L L. 795 (2004).

74. See Dan Awrey, *The Dynamics of OTC Derivatives Regulation: Bridging the Public-Private Divide*, 11 EUR. BUS. ORG. LAW REV. 155, 163 (2010); Dan Awrey, *Toward a Supply-Side Theory of Financial Innovation*, 41 J. COMP. ECON. 401, 402 (2013); Glenn Morgan, *Market Formation and Governance in International Financial Markets: The Case of OTC Derivatives*, 61 HUM. REL. 637, 644–645 (2008).

75. See Dan Awrey, *The Limits of Private Ordering Within Modern Financial Markets*, 34 REV. BANKING AND FIN. L. (forthcoming 2015) (manuscript at 24–25), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2262712.

76. See Mark Roe, *The Derivatives Players’ Payment Priorities as Financial Crisis Accelerator*, 63 STAN. L. REV. 539, 565 (2011). Until recently, they have also been effectively exempt from public securities laws in a number of core jurisdictions. See Awrey, *supra* note 66, at 164. .

These contracts, private rules, and public laws create a complex web of rights and obligations between market participants, between market participants and the state, and between states.⁷⁷ Indeed, in a very real way, these rights and obligations are the financial system. Moreover, as the swaps example clearly illustrates, these rights and obligations are often structurally interdependent. As a result, we would expect changes in one part of the system to precipitate changes elsewhere. Perhaps most importantly, changes in public law can spur private contractual innovation. Thus, for example, the introduction of Regulation Q in the U.S., which imposed a hard ceiling on the interest rates that banks were permitted to pay depositors, set the stage for the emergence of money market funds.⁷⁸ The core contractual features of modern structured finance markets were similarly motivated by the desire to minimize the impact of the regulatory capital requirements introduced under Basel II.⁷⁹ The introduction of Basel III has also predictably spurred a new round of contractual innovations, such as collateral swaps and synthetic exchange-traded funds.⁸⁰ At the same time, these private contractual innovations can also be seen as driving changes in public law, whether it be to ensure their enforceability or ameliorate their harmful effects. As Pistor observes, law and finance are thus engaged in a dynamic process where private contracts and rules emerge and evolve in response to changes in public laws, and where public laws respond to the problems generated by these contractual innovations.⁸¹ Viewed from this perspective, the law becomes of first order importance in terms of explaining the behavior and interactions of market participants and, ultimately, the structure of the financial system.⁸²

B. The Essential Hybridity of Finance

Once we acknowledge the legal construction of financial markets, the essential hybridity of finance comes squarely into view. This hybridity can be observed in a variety of different contexts. Perhaps most obviously, fiat money issued by central banks is used as a medium of exchange in what

77. Pistor, *supra* note 46, at 8.

78. See Timothy Cook & Jeremy Duffield, *Money Market Mutual Funds: A Reaction to Government Regulation or a Lasting Innovation?*, 65 FED. RES. BANK OF RICHMOND ECON. REV. 15 (1979); R. Alton Gilbert, *Requiem for Regulation Q: What It Did and Why It Passed Away*, FED. RES. BANK OF ST. LOUIS REV. 22, 22 (1986), available at https://www.richmondfed.org/publications/research/economic_review/1979/pdf/er650402.pdf. Indeed, as described in greater detail in Sections IV and V, the development of money market funds shares a number of important parallels with the development of WMPs.

79. See David Jones, *Emerging Problems with the Basel Capital Accord: Regulatory Capital Arbitrage*, 24 J. MONEY, BANKING & FIN. 35 (2000). As described by Jones, these features include: (1) the concentration of credit risk through structural subordination (i.e. tranching), (2) the remote origination of loans through special purpose vehicles, and (3) indirect credit enhancement in the form of, *inter alia*, the provision of back-up liquidity facilities by sponsoring financial institutions. *Id.* at 41-42.

80. See Awrey, *Toward a Supply Side Theory of Financial Innovation*, *supra* note 74, at 274-75.

81. *Id.* See also Pistor, *supra* note 46, at 2.

82. Pistor, *supra* note 46, at 3.

many might characterize as purely 'private' transactions. Ultimately, the fact that you bought your morning coffee with cash and not, say, a pineapple is a direct product of state intervention. This same observation applies equally to far more complex financial transactions where fiat money is used either as a medium of exchange or as financial collateral. This hybridity is also reflected in the structure of foreign exchange and sovereign debt markets; both are private markets for financial claims that are underwritten by states.⁸³ More fundamentally, as we have already seen, contracting parties often rely on the state to provide background enforcement institutions and other laws necessary to support the development of ostensibly private markets. Finally, and perhaps most importantly, it is the state—in its capacity as lender of last resort—which stands as the ultimate guarantor of the contractual rights and obligations which collectively make up the financial system.⁸⁴ Indeed, it is at precisely this point that the essential hybridity of finance intersects with yet another fundamental feature of the financial system: its inherent hierarchy.

C. The Hierarchy of Finance and the Elasticity of Law

In a world of relative certainty and ample liquidity, one could be forgiven for thinking that the financial system was essentially flat. Flat in the sense that we would observe relatively tight credit spreads between financial claims issued by public and private borrowers of varying degrees of creditworthiness. And flat in the sense that many privately issued financial claims would be viewed as effective substitutes for both fiat money and sovereign debt and, thus, widely used as collateral within, for example, derivatives and wholesale funding markets. Indeed, as Gary Gorton, Andrew Metrick and others have noted, this is precisely what we observed in the heady days leading up to the global financial crisis.⁸⁵

In times of uncertainty and illiquidity, however, the financial system reveals its inherent hierarchy.⁸⁶ During such periods of market turmoil, private market participants may of course intervene to provide liquidity.⁸⁷ It was private market participants, for example, that intervened to rescue the hedge fund Long-Term Capital Management in 1998.⁸⁸ Market partici-

83. See Rachel Harvey, *The Legal Construction of Global Foreign Exchange Markets*, 41 J. COMP. ECON. 343 (2013); Perry Mehrling, *Essential Hybridity: A Money View of Law and Finance for Foreign Exchange*, 41 J. COMP. ECON. 355 (2013); Pistor, *supra* note 46, at 25.

84. Pistor, *supra* note 46, at 26.

85. See Gary Gorton & Guillermo Ordonez, *Collateral Crises*, 104 AM. ECON. REV. 343 (2014); Gary Gorton & Andrew Metrick, *Securitized Banking and the Run on Repo*, 104 J. FIN. ECON. 425 (2012); Gary Gorton, *Information, Liquidity, and the (Ongoing) Panic of 2007*, 99 AM. ECON. REV. 567 (2009).

86. Pistor, *supra* note 46, at 15.

87. See generally Walter Engert, Jack Selody & Carolyn Wilkins, *Financial Market Turmoil and Central Bank Intervention*, BANK OF CAN. FIN. SYS. REV. 71 (2008), http://www.bankofcanada.ca/2008/?profile_post=walter-engert&post_type%5B0%5D=post&post_type%5B1%5D=page.

88. Although, even here, the Federal Reserve played an important role in coordinating the private bailout. See ROGER LOWENSTEIN, *WHEN GENIUS FAILED: THE RISE AND FALL*

pants will only intervene, however, where they perceive it to be in their best interests to do so, and only up to the point where their own survival is at stake.⁸⁹ As Perry Mehrling has observed, this suggests that the only true lender of last resort is a market participant with no survival constraint and a theoretically unlimited supply of liquidity in the form of high powered money.⁹⁰ Ultimately, there are very few market participants—namely, sovereign states that both control their own currency and are able to issue debt in that currency—that can perform this function.⁹¹

The inherent hierarchy of finance can be observed at both the domestic and international level. At the international level, the importance of the U.S. dollar within global financial markets and its *de facto* status as the world's reserve currency put the U.S. and its central bank, the Federal Reserve, at the apex of the hierarchy.⁹² Immediately beneath the U.S. are a select group of jurisdictions, including the Eurozone, U.K., Japan, Brazil, Canada, and Switzerland, whose central banks have established swap lines with the Federal Reserve designed to ensure sufficient U.S. dollar liquidity during periods of market turmoil.⁹³ At the domestic level, meanwhile, it is clear from the recent crisis that central banks do not stand prepared to provide liquidity support to *all* market participants on the same terms. The Federal Reserve's initial response to the crisis, for example, was to provide support for the primary dealers responsible for making markets in U.S. sovereign debt.⁹⁴ Only later did the Fed extend support to other market participants.⁹⁵ This decision reflected the harsh reality that, in the event of a crisis, the probability that a market participant will receive liquidity or other support from the lender of last resort would be a function of its position relative to the apex of the financial system.⁹⁶

This hierarchy has important implications in terms of the *elasticity* of the contracts, private rules, and public laws to which these market participants are subject. As Pistor explains, elasticity in this context can be understood as a measure of the probability that the rights and obligations arising under these legal constructions will be strictly enforced in the con-

OF LONG-TERM CAPITAL MANAGEMENT 161 (2000); Franklin Edwards, *Hedge Funds and the Collapse of Long-Term Capital Management*, 13 J. ECON. PERSP. 189 (1999); Myron Scholes, *Crisis and Risk Management*, 90 AM. ECON. REV. 17 (2000).

89. *Id.*

90. PERRY MEHLING, *THE NEW LOMBARD STREET: HOW THE FED BECAME THE DEALER OF LAST RESORT* (2011). High powered money includes bank reserves and fiat money held by the public, the terms and issuance of which are directly controlled by central banks.

91. Pistor, *supra* note 46, at 15.

92. MEHLING, *supra* note 90.

93. For further information about these swap lines, see *Central Bank Liquidity Swap Lines*, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, available at www.federalreserve.gov/newsevents/reform_swaplines.htm. In effect, these swap lines enable the central banks in these jurisdictions to provide U.S. dollars to domestic banks so that they could, in turn, fund their U.S. dollar liabilities.

94. Pistor, *supra* note 46, at 16.

95. Even then, the Federal Reserve still prioritized those market participants active in U.S. sovereign debt markets. *Id.* at 16-17.

96. *Id.*

text of an unfolding crisis.⁹⁷ The lower the probability, the more elastic the law.⁹⁸ At the apex of the system, the law is often relatively elastic. Indeed, this is frequently by design; statutory incompleteness is often used as a ‘safety valve’ to ensure that public authorities have the legal flexibility needed to respond to unforeseen circumstances. The absence of detailed legislative frameworks governing the activities of central banks in many jurisdictions, for example, enables them to pursue a policy of ‘constructive ambiguity’ with regard to the provision of lender of last resort facilities.⁹⁹ Simultaneously, these frameworks typically also confer upon central banks considerable discretion to undertake extraordinary measures in the interest of maintaining financial stability.¹⁰⁰

In many other cases, however, this elasticity is an *ex post*—essentially improvised—response to the threat of financial instability. The decision of the Federal Reserve and U.S. Treasury Department to rescue AIG, for example, was motivated in large part by the systemic importance of AIG’s counterparties, including Goldman Sachs, Deutsche Bank, and Société Générale.¹⁰¹ Crucially, the rescue thus included measures that had the economic effect of releasing these counterparties from their outstanding obligations arising from *billions* of dollars of CDS contracts—obligations that they had freely contracted to assume.¹⁰² Juxtaposed against the fate of tens of thousands of U.S. homeowners in the wake of the crisis, this outcome brings the inherent hierarchy of finance into sharp relief. It also raises important issues surrounding the potential tradeoffs between the maintenance of financial stability and the rule of law.

D. Law as a Source of Financial Instability

As described above, the most important contributions of conventional law and finance scholarship flow from its insights into how the law and legal institutions can help generate credible commitments and thereby support financial development. Far less appreciated, however, is the fact that the law can also be an important source of financial instability.¹⁰³ First, in a world of incomplete contracting, contractual rights and obligations can be a source of structural rigidity.¹⁰⁴ It is the contractual rights of deposi-

97. *Id.*

98. *Id.*

99. See Xavier Freixas, *Optimal Bailout Policy, Conditionality and Constructive Ambiguity*, (Ctr. for Econ. Pol’y Research, Working Paper No. 400, 1999). This constructive ambiguity theoretically enables central banks to ameliorate the moral hazard problems generated by the (implicit) promise of state support.

100. See, e.g., Federal Reserve Act, 12 U.S.C. § 226 (2014).

101. See CONGRESSIONAL OVERSIGHT PANEL, *June Oversight Report: The AIG Rescue, Its Impact on Markets, and the Government Exit Strategy* (2010) [hereinafter CONGRESSIONAL OVERSIGHT PANEL].

102. This included purchasing collateralized debt obligations (CDOs) from AIG’s counterparties at face value in exchange for the termination of the CDS contracts which AIG had written on these CDOs. *Id.* at 102.

103. See Pistor, *supra* note 46, at 12.

104. See Kathryn Judge, *Fragmentation Nodes: A Study in Financial Innovation, Complexity and Systemic Risk*, 64 STAN. L. REV. 657 (2012); Gorton & Metrick, *supra* note 85.

tors to withdraw their money on demand, for example, which generates the risk of destabilizing bank runs.¹⁰⁵ Similarly, it was the contractual rights of AIG's CDS counterparties to demand that the insurer post collateral upon the occurrence of certain specified triggering events—e.g., a credit rating downgrade of the relevant reference obligations or of AIG itself—which, together with a corresponding run by its securities lending counterparties, put such severe pressure on AIG's liquidity.¹⁰⁶ Notably, the quality of the law in this context is positively correlated with instability; the easier it is for a market participant to enforce their contractual rights, the less likely they will be willing to renegotiate them in light of changing circumstances, and the more likely instability will occur as a result. Accordingly, while it may be in the rational self-interest of individual market participants to exercise these rights, this decision—especially when replicated across a large number of market participants—can have broader destabilizing effects.¹⁰⁷

Second, as described above, changes in public law and regulation can spur private contractual innovation. This innovation—often referred to as regulatory arbitrage—is a product of the competitive forces which drive a modern market economy.¹⁰⁸ These forces compel market participants to identify and pursue arbitrage strategies designed to mitigate the private costs of public regulatory intervention. Perhaps most importantly, they compel market participants to contract around regulation that is designed to ensure that these market participants internalize any negative externalities generated by their activities. Broadly speaking, these strategies involve either: (1) developing new contractual structures which reduce the impact of this regulation or (2) shifting activities to financial markets or institutions subject to less burdensome regulatory regimes. In effect, these strategies seek to exploit inconsistencies between the *economic* substance of a contractual structure and its *legal* or *regulatory* treatment.¹⁰⁹

Crucially, where these strategies prove successful, the same competitive forces that provided the impetus for this regulatory arbitrage also incentivize other market participants to *imitate* it. Market participants may thus pursue highly correlated arbitrage strategies, thereby driving capital and risk into potentially less developed, poorly regulated segments of the financial system. Where the markets and institutions into which this capital and risk are channeled are also vulnerable to uncertainty and liquidity shocks, the law can thus be understood as an endogenous source of potential instability.

105. Itay Goldstein & Ady Pauzner, *Demand-Deposit Contracts and the Probability of Bank Runs*, 60 J. FIN. 1293, 1293–94 (2005).

106. CONGRESSIONAL OVERSIGHT PANEL, *supra* note 101, at 62–63.

107. Pistor, *supra* note 46, at 11–13.

108. Pistor, *supra* note 30, at 7, citing HYMAN MINSKY, *STABILIZING AN UNSTABLE ECONOMY* 234 (1986). These same competitive forces, however, can also be influential in shaping the structure of the hybrid financial systems that exist in countries such as China.

109. See Victor Fleischer, *Regulatory Arbitrage*, 89 TEX. L. REV. 227, 229 (2011).

Figure 1: Comparing LTF with the Neo-classical “Reductionist” View

	Neo-classical	LTF
Key assumptions	- Low information costs - No uncertainty - No liquidity constraints	- High information costs - Fundamental uncertainty - Liquidity constraints
Market environment	- Self-stabilizing	- Not self-stabilizing
Market segment	- Equity, private debt	- Derivatives, structured finance, wholesale funding, public debt
Relationship between law and finance	- Law as <i>exogenous</i> to finance - Law as a source of credible commitments	- Law as <i>endogenous</i> to finance - Law as a source of credible commitments - Law as a source of potential financial instability through contractual rigidity and correlated regulatory arbitrage

Together with more conventional accounts, LTF's four core propositions provide us with a potentially useful theoretical framework for exploring the complex, dynamic, and interdependent relationship between law and finance. Ultimately, however, the only real acid test for LTF is whether these propositions can help us better understand the interactions between law and finance in the real world. Perhaps most importantly, what can LTF tell us about the behavior of market participants? What can it tell us about the determinants of the constantly evolving structure of the financial system, or about the sources of potential instability? This Article explores these important questions through the lens of a single case study: the emergence, meteoric rise, and potential risks of WMPs.

III. WMPs: A Case Study in Financial Innovation and Instability

Any attempt to understand the emergence of China's shadow banking system must necessarily begin with an examination of its formal - i.e. licensed - banking system. Indeed, as we shall see, it is the structure and regulation of this formal banking system that has been the principal catalyst behind the emergence and growth of the market for WMPs.

A. The Chinese Banking System: A Brief Overview

Since 1978, the Chinese banking system has evolved from a wholly state-owned system to one in which various categories of state-owned and private sector banks coexist and, increasingly, compete with one another for business (see Figure 2). The first category consists of three wholly state-owned banks: Agricultural Development Bank of China, China Development Bank, and China Exim Bank. These so-called 'policy' banks

operate under explicit mandates from the Chinese government. The mandate of the Agricultural Development Bank of China, for example, is to support the development of agriculture in rural areas.¹¹⁰ In furtherance of these mandates, policy banks are typically called upon to provide medium to long-term financing for large public infrastructure projects such as the Three Gorges Dam.¹¹¹ These policy banks report directly to China's State Council, which, in turn, appoints each bank's officers and directors and plays an influential role in setting operational priorities.¹¹² These policy banks also rely on the Chinese government for funding in the form of both direct borrowing from the central bank—the People's Bank of China (PBOC)—and the provision of implicit and explicit government guarantees on their publicly issued debt.¹¹³

The second category of banks is comprised of five partially state-owned 'commercial' banks (SOCBs): Agricultural Bank of China, Bank of China, Bank of Communications, China Construction Bank, and Industrial and Commercial Bank of China.¹¹⁴ The Chinese government holds a majority equity stake in four of these five SOCBs.¹¹⁵ Simultaneously, however, these institutions have also issued a fraction of their outstanding equity to the public.¹¹⁶ The shares representing this equity are typically listed and traded on both mainland exchanges in Shanghai or Shenzhen (which list 'A' Class shares) and the Hong Kong Stock Exchange (which lists 'H' Class shares).¹¹⁷ As of October 2014, these five SOCBs had an aggregate market capitalization of approximately RMB4.3 trillion (\$USD700 billion).¹¹⁸

Ownership structure aside, the governance structure of SOCBs is in many respects functionally similar to that of the policy banks. The activities of each SOCB are overseen by a board of directors, the members of

110. See *Mission and Purpose*, AGRICULTURAL DEV. BANK OF CHINA (Sept. 16, 2005), http://www.adbc.com.cn/templates/T_secondEN/index.aspx?nodeid=87&page=ContentPage&contentid=5941.

111. Fredrik Andersson et al., *Lending for Growth? An Analysis of State-Owned Banks in China* 6 (Lund U. Dep't of Econ., Working Paper 2013); *The Three Gorges Dam*, CHINA DEVELOPMENT BANK, available at <http://www.cdb.com.cn/english/NewsInfo.asp?NewsId=280>.

112. MARTIN, *supra* note 4, at 2.

113. For example, for the fiscal year 2012, Agricultural Development Bank of China funded 13% of its liabilities—or RMB272 billion (\$USD44.6 billion)—through borrowings from the PBOC. Annual Report, PEOPLE'S BANK OF CHINA (2012) [hereinafter PBOC Annual Report].

114. MARTIN, *supra* note 4, at 3.

115. As of May 2009, the Chinese state owned 70.7% of the shares of Industrial & Commercial Bank of China, 57.13% of the shares of China Construction Bank, 83.13% of the shares of Agricultural Bank of China, 67.53% of the shares of the Bank of China, and 26.52% of the shares of Bank of Communications. *Id.*

116. This process, known in China as 'equitization', began in 2005 and was designed to promote a more 'profit-oriented' focus amongst the management of SOCBs. *Id.* at 3-4.

117. The difference between 'A' and 'H' Class shares is effectively twofold. 'A' Class shares are denominated in renminbi and can only be sold to Chinese investors and qualified foreign institutional investors. 'H' Class shares, in contrast, are denominated in Hong Kong dollars and can be sold to overseas investors.

118. *Financial Times* Markets Data (accessed October 10, 2014).

which include both representatives appointed by major shareholders—including, importantly, the Chinese government—and senior officers.¹¹⁹ The board of directors and senior officers are then monitored by a board of supervisors, which is made up of representatives appointed by the Central Organization Department of the Chinese Communist Party, labor unions, and major shareholders.¹²⁰ The Chinese Communist Party and government thus exercise considerable influence over the appointment and career paths of senior officers, directors, and supervisory board members.¹²¹

This influence raises important questions about whether SOCBs are run on a commercial basis or as instruments of government policy. A number of observers have argued that these quasi-public institutions are vulnerable to political interference.¹²² These observers point to the fact that commercial banks are explicitly required to conduct their business “in accordance with the needs of the national economic and social development and under the guidance of the industrial policies of the State.”¹²³ As described in greater detail below, they are also subject to PBOC-issued ‘window guidance.’¹²⁴ Other observers, in contrast, argue that SOCBs are fully autonomous commercial enterprises.¹²⁵ PBOC Governor Zhou Xiaochuan, for example, stated in 2010 that “all financial institutions [with the exception of policy banks] operate on a fully commercial basis, and an important sign of their autonomy is [their ability] to independently price their products and services.”¹²⁶ Whatever one makes of these arguments, it seems reasonable to suggest that SOCBs at the very least blur the line between the state and private enterprise.

119. MARTIN, *supra* note 4, at 26–27.

120. See Katharina Pistor, *The Governance of China’s Finance*, in CAPITALIZING CHINA 35, 44–45 (Joseph P.H. Fan and Randall Morck ed., 2012).

121. *Id.* at 44–45; see also MARTIN, *supra* note 4, at 26–27.

122. See Robert Cull & Lixin Colin Xu, *Who Gets Credit? The Behavior of Bureaucrats and State Banks in Allocating Credit to Chinese State-Owned Enterprises*, 71 J. DEV. ECON. 533, 535–540 (2003).

123. National People’s Congress, Database of Laws and Regulations, Law of the People’s Republic of China on Commercial Banks, Art. 39 (1995), http://www.npc.gov.cn/englishnpc/Law/2007-12/12/content_1383716.htm.

124. See *infra* Section IV.

125. See, e.g., Memorandum from Christian Marsh to Paul Piquado, Dep’t of Commerce, Issues and Decision Memorandum for Final Results of Countervailing Duty Administrative Review: Certain Oil Country Tubular Goods from the People’s Republic of China (Aug. 7, 2013), available at <http://enforcement.trade.gov/frn/summary/prc/2013-19733-1.pdf>.

126. Zhou Xiaochuan, *A Few Thoughts on Mark-based Interest Rate Reform*, THE PEOPLE’S BANK OF CHINA (Jan. 4, 2011), http://www.pbc.gov.cn/publish/english/955/2011/20110130101631093294254/20110130101631093294254_.html.

**Figure 2: Assets and Market Share of Chinese Banks by Category
(as at the end of 2011)**

Category	Asset Value (100m RMB)	Market Share (%)
Policy banks	93,133	8.22
SOCBs	536,336	47.35
City commercial banks	99,845	8.81
Rural commercial banks, rural cooperative banks and rural credit cooperatives	128,599	11.34
Joint-stock commercial banks	183,794	16.22
Foreign banking subsidiaries	21,535	1.90
Other banking institutions	69,603	6.14

Source: CBRC Annual Report (2011) at 119.¹²⁷

The five SOCBs dominate lending within China's formal banking system; together, they represent approximately 47.3% of total banking assets as of 2011.¹²⁸ This system is, however, also home to a diverse range of other banking institutions. These institutions include a small number of fully private banks, including twelve joint-stock commercial banks and forty locally incorporated subsidiaries of foreign banking institutions.¹²⁹ They also include so-called 'city commercial' banks—banks that are typically created by provincial or municipal authorities to finance local projects or programs—along with village and township banks, rural commercial banks, rural cooperative associations, and rural credit cooperatives. As of 2011, the China Banking Regulatory Commission (CBRC) reported that there were 144 city commercial banks, 349 village and township banks, 212 rural commercial banks, 190 rural cooperative banks, and 2,265 rural credit cooperatives operating in China.¹³⁰ Over time, many of these smaller, local banks have made the transition from wholly state-owned institutions to joint-stock companies with varying degrees of private sector ownership.¹³¹

Operating in parallel with China's formal banking system is a large and vibrant shadow banking system. The term 'shadow banking' is often used to describe financial markets and institutions that perform credit, maturity, or liquidity transformation outside the formal banking system.¹³² Under this definition, the Chinese shadow banking system can be thought to include a diverse range of 'non-bank' markets and market participants, from trust companies, brokerage firms, and LGFVs, to informal

127. Regrettably, both the PBOC and CBRC only make these figures available on a sporadic basis.

128. CBRC Annual Report, *supra* note 8, at 24.

129. *Id.*

130. *Id.*

131. MARTIN, *supra* note 4, at 4.

132. See Pozsar et al., *supra* note 10, at 4-5.

lenders, loan sharks, and even pawn shops.¹³³ The breadth of this definition, however, undermines its utility as the basis for examining the economic function, structure, and regulation of *specific* markets and institutions. It also implicitly assumes, often incorrectly, that the formal and shadow banking systems are not highly interconnected.

Perry Mehrling and others have advanced a somewhat narrower— if in many respects complementary— definition of shadow banking as money market funding of capital market lending.¹³⁴ Amongst other benefits, this definition makes room for the possibility that the ownership structures, operations, and funding models of formal and shadow banking systems may be intricately intertwined. By explicitly linking funding with lending, this definition also highlights the important relationship between funding and market liquidity examined in Section II. Except as otherwise indicated, our examination of the functions, structure, and potential risks of WMPs will therefore proceed on the basis of this narrower definition.

Estimates of the size of the Chinese shadow banking system, broadly defined, vary significantly, with recent figures ranging from \$USD2.2 trillion to \$USD4.8 trillion.¹³⁵ This variance is attributable, at least in part, to the relative opacity of many of the markets and institutions that make up this system.¹³⁶ Indeed, perhaps the only thing that we know with any certainty is that this system has experienced rapid growth in the wake of the global financial crisis. Standard & Poor's, for example, recently estimated that non-bank credit intermediation in China has grown at an annualized rate of 34% since 2010.¹³⁷ The salient question is thus: what is driving this dramatic growth? This question takes us to the very heart of our inquiry.

B. Bank Regulation in China

At first glance, the regulatory framework governing China's formal banking system resembles those commonly found in more advanced economies. The CBRC is responsible for the prudential regulation and supervision of Chinese banks. Its responsibilities include: authorizing and licensing the establishment of banks; supervising their compliance with capital, liquidity, and other regulatory requirements; ensuring that they have put in place and maintain adequate internal systems, processes, and

133. See Li, *supra* note 11, at 4.

134. See Perry Mehrling et al., *Bagehot was a Shadow Banker: Shadow Banking, Central Banking, and the Future of Global Finance*, 2, (Dec. 2013), available at <http://ssrn.com/abstract=2232016>.

135. Li, *supra* note 11, at 1 (reporting estimates of various financial institutions between June 2012 and January 2013). At the top end of these estimates, this would put the shadow banking system at roughly one third the size of the formal banking system.

136. Different surveys also employ different definitions of what constitutes the shadow banking system. See *id.*

137. Standard & Poor's, *Will Shadow Banking Destabilise China's Financial System?*, FINANCEASIA, April 10, 2013, <http://www.financeasia.com/News/339168.will-shadow-banking-destabilise-china8217s-financial-system.aspx>.

controls; and conducting periodic asset quality reviews and stress tests.¹³⁸ One of the centerpieces of the CBRC's prudential regime is a relatively conservative maximum loan-to-deposit ratio of 75%.¹³⁹ Notably, however, unlike in many other countries, deposits are not currently covered by an explicit deposit insurance scheme.¹⁴⁰ At the same time, though, the Chinese government has historically stepped up to provide full compensation to depositors of failed banks.¹⁴¹

As in many other countries, China's central bank—the PBOC—also plays an important role in the regulation of the formal banking system. As a preliminary matter, the PBOC is responsible for setting reserve requirements for regulated banks. Reserve requirements prescribe a minimum fraction of deposits that banks must hold in the form of cash, as opposed to loans, marketable securities, or other financial assets. These requirements can thus be understood as a tool of both *monetary* policy (enabling the central bank to adjust the supply of money in circulation) and *prudential* policy (enabling them to ensure that banks maintain sufficient cash on hand to satisfy their short-term liabilities to depositors and other creditors). Unlike most of its counterparts, the PBOC has adopted a dynamic, differentiated system of reserve requirements, with different banks subject to different ratios on the basis of their size, systemic importance, loan growth, capital adequacy, and other prudential measures.¹⁴² These requirements are then adjusted on a quarterly, and in some cases monthly, basis in response to changes in these measures.¹⁴³ The PBOC is also

138. See *About the CBRC*, CBRC, www.cbrc.gov.cn (last visited February 21, 2015). In October 2013, for example, the Basel Committee on Banking Supervision (BCBS) deemed the CBRC's capital rules were deemed compliant with Basel III. *China's Basel III Graded 'Compliant'*, CBRC, October 10, 2013, <http://www.cbrc.gov.cn/chinese/home/docView/18760385FBA4860BE9DB191EA44B433.html>. Simultaneously, of course, as is the case in many other jurisdictions, it is difficult to measure the quality or intensity of the CBRC's supervision.

139. National People's Congress, Database of Laws and Regulations, Law of the People's Republic of China on Commercial Banks, Art. 39(2) (1995), http://www.npc.gov.cn/englishnpc/Law/2007-12/12/content_1383716.htm. The CBRC has recently announced its intention to relax this ratio for banks operating within the Shanghai Free-Trade Zone. See Richard Silk, *Shanghai 'Free-Trade Zone' Opens*, WALL ST. JOURNAL, September 29, 2013, <http://www.wsj.com/articles/SB10001424052702303918804579104970567894460>.

140. The PBOC has, however, stated for some time that the establishment of an explicit deposit insurance scheme is a top priority. Financial Stability Analysis Group of the People's Bank of China, *China: Financial Stability Report 2013*, PEOPLE'S BANK OF CHINA 217 (2013), http://www.pbc.gov.cn/publish/english/959/2013/20130813151434349656712/20130813151434349656712_.html; Li, *supra* note 11, at 5. See William Kazer, *China Signals Move on Deposit Insurance*, WALL ST. JOURNAL, June 7, 2013, <http://www.wsj.com/articles/SB10001424127887324069104578531100407148648>.

141. See Michael Faure & Jiye Hu, *Towards a Deposit Guarantee Insurance in China? A Law and Economics Perspective*, 1 CHINESE J. COMP. L. 256, 263–65 (2013).

142. For further information regarding the PBOC's relatively complex reserve requirement regime, see Guonan Ma et al., *China's Evolving Reserve Requirements 3* (Bank for International Settlements, Working Paper No. 360, 2011), available at <http://www.bis.org/publ/work360.htm>.

143. *Id.* at 4. The PBOC thus adjusts reserve requirements far more frequently than its counterparts in other jurisdictions. This is tied to the fact that, unlike many other

responsible for setting and adjusting the so-called ‘discount’ (or ‘bank’) rate. The discount rate represents the rate of interest at which banks may borrow cash from the central bank—typically on a secured basis—in order to meet their short-term liquidity needs. Finally, the PBOC is also responsible for providing liquidity and other support to distressed banks in its capacity as lender of last resort.

In addition to these conventional tools of monetary and micro-prudential policy, the PBOC has historically utilized two decidedly more unconventional mechanisms. The first mechanism revolves around a series of benchmark interest rates, established by the PBOC, to which the deposit and lending rates of banks have historically been tethered. Figure 3 sets out the benchmark rates for loans and time deposits as of December 31, 2012.¹⁴⁴

**Figure 3: PBOC Benchmark Loan and Deposit Rates
(as of December 31, 2012)**

	3 Mo.	6 Mo.	1 year	2 years	3 years	5 years
Loans	5.60	6.00	6.15	6.15	6.15	6.40
Deposits	2.60	2.80	3.00	3.75	4.25	4.75

Sources: PBOC Annual Report (2012) at 171.

Until recently, Chinese banks were required to offer savings and credit products within relatively tight bands around these benchmarks.¹⁴⁵ Thus, for example, as of December 31, 2012, banks were not permitted to underwrite loans for less than 70% of the applicable benchmark rate.¹⁴⁶ Interest on deposits, meanwhile, was capped at 110%.¹⁴⁷ These benchmarks thus served to lock in a minimum spread—typically in the neighborhood of 3% on one year funds¹⁴⁸—between deposit and lending rates, thereby effectively guaranteeing banks a profit on their carry trade.¹⁴⁹ Over time, however, this system of floors and ceilings has been gradually relaxed as part of

jurisdictions, the PBOC uses adjustments to these requirements explicitly for the purposes of influencing credit growth. See *id.*

144. The PBOC also sets rates for short-term loans to financial institutions, demand deposits, and small USD deposits. See PBOC Annual Report, *supra* note 114, at 171.

145. *Id.* at 27-28

146. *Id.*

147. *Id.*

148. This 3% figure does not incorporate the discretion of individual banks to charge/pay rates within the permitted bands. In general, the ceiling on deposit rates is considered binding as actual rates tend to cluster around the benchmark. See Dong He & Honglin Wang, *Dual-Track Interest Rates and the Conduct of Monetary Policy in China*, 23 CHINA ECON. REV. 928, 943 (2012). It is considerably more difficult to determine whether the floor on lending rates is equally binding.

149. Guonan Ma, *Who Pays China's Bank Restructuring Bill?*, 6 ASIAN ECON. PAPERS 46, 50-52 (2007). In a nutshell, the carry trade refers to the strategy of borrowing at a given rate of interest for the purpose of investing in higher yielding assets of a similar duration.

China's ongoing transition to a market-based interest rate regime.¹⁵⁰ This culminated with the July 2013 announcement that the PBOC would remove the floor on lending rates—thus leaving in place only a ceiling on the interest rates banks are permitted to pay depositors.¹⁵¹

The second unconventional policy mechanism utilized by the PBOC is so-called 'window guidance.' Issued as part of the PBOC Quarterly Monetary Policy Report, this 'guidance' is in effect a system of informal quotas that prescribe both the desired level of credit growth and the sectors of the real economy to which this credit should (and should not) be channeled. Historically, these quotas have often been allocated to individual banks.¹⁵² In 2013, for example, it was reported that the four largest SOCBs were collectively allocated over RMB2.9 trillion (\$USD473 billion) in new credit.¹⁵³ While the means by which the PBOC enforces compliance with these quotas is not entirely clear, the influence of the Chinese Communist Party over the career paths of senior bankers can be seen as a potentially potent sanctioning mechanism. Simultaneously, however, at least at the aggregate level, the PBOC has not always been particularly successful in enforcing compliance. In 2009, for example, the PBOC's aggregate quota of RMB4.6 trillion was exceeded by RMB5 trillion—more than double its original target.¹⁵⁴ As with PBOC's system of benchmark deposit and lending rates, Chinese officials have also taken great pains in recent years to signal a more relaxed stance towards the enforcement of these quotas, as part of China's transition to a more market-based interest rate regime.¹⁵⁵

C. The Origins, Basic Mechanics, and Legal Structure of WMPs

The growth of the Chinese shadow banking system, and of WMPs in particular, in the wake of the global financial crisis is a direct consequence of the structure and regulation of the formal banking system. The catalyst for this growth can be traced back to November 2008—specifically, the Chinese government's announcement of a RMB4 trillion (\$USD586 billion) stimulus package designed to insulate China's economy from the effects of

150. ORGANISATION FOR ECONOMIC CO-OP AND DEVELOPMENT, OECD ECONOMIC SURVEYS: CHINA 12 (2010), available at <http://browse.oecdbookshop.org/oecd/pdfs/product/1010061e.pdf>.

151. See David Barboza, *China Eases Bank Loan Rules, in a Step Toward Market Driven Economy*, N.Y. TIMES, July 19, 2013, http://www.nytimes.com/2013/07/20/business/global/china-liberalizes-lending-rates.html?_r=0. Additionally, the PBOC previously removed the floor on deposit rates and ceiling on lending rates.

152. Although, unlike the aggregate quotas, the allocations to individual banks are typically shrouded in secrecy.

153. See *China PBOC Sets 2013 Credit Quota for Big 4 Banks at Nearly CNY3 Trillion - Report*, EUROINVESTOR, Jan. 18, 2013, <http://www.euroinvestor.com/news/2013/01/18/china-pboc-sets-2013-credit-quota-for-big-4-banks-at-nearly-cny3-trillion-report/12179821>.

154. See China Monetary Policy Report Quarter 4, PEOPLE'S BANK OF CHINA (2009) [hereinafter PBOC Policy Report]. This divergence between targeted and actual credit growth was attributable, at least in part, to the RMB4 trillion stimulus package introduced in November 2008. See *infra* Section IV.

155. See MARTIN, *supra* note 4, at 10; Zhou, *supra* note 126.

the global slowdown brought on by the financial crisis.¹⁵⁶ This stimulus had the desired effect, with the amount of new credit increasing by 92% over just one year from approximately RMB5 trillion in 2008 to approximately RMB9.6 trillion in 2009.¹⁵⁷ Simultaneously, however, this rapid credit growth placed enormous strain on Chinese banks, raising concerns about the quality of the loans they had underwritten and, ultimately, the stability of the banks themselves.¹⁵⁸ In response to these concerns, the PBOC raised reserve requirements twelve times over a period of eighteen months, eventually reaching a high of 21.5% for the largest banks in June 2011.¹⁵⁹ The PBOC also reportedly used window guidance and other mechanisms to channel capital away from the sectors of the economy—including commercial real estate development—that it perceived to be at a risk of overheating.¹⁶⁰

By increasing the fraction of deposits that banks were required to hold in cash, the PBOC's changes to its reserve requirements constrained the ability of banks to use their balance sheets as a source of credit growth.¹⁶¹ The PBOC's window guidance, meanwhile, deterred banks from lending to sectors of the economy experiencing high levels of growth and returns.¹⁶² And as we have already seen, the PBOC's ceiling on deposit rates prevented banks from offering market-based returns on time deposits and other savings products. Indeed, as the Federal Reserve Bank of San Francisco has observed, deposit accounts at Chinese banks yielded negative real returns for most of the period between 2008 and 2012.¹⁶³ This, in turn, provided would-be depositors with powerful incentives to seek out higher yielding investment products. Taken together, the constraints on the supply of

156. See David Barboza, *China Unveils \$586 billion Stimulus Plan*, N.Y. TIMES, Nov. 10, 2008, <http://www.nytimes.com/2008/11/10/world/asia/10iht-10china.17673270.html>.

157. PBOC Policy Report, *supra* note 154.

158. See, e.g., Reuters, *Moody's Sees Much Bigger Local Debt in China*, N.Y. TIMES, July 5, 2011, <http://www.nytimes.com/2011/07/06/business/global/06iht-yuan06.html>.

159. Li, *supra* note 11, at 1; Ma et al., *supra* note 142, at 3. By way of comparison, the current reserve ratio prescribed by the U.S. Federal Reserve is 10% for net transaction accounts of more than \$USD89 million.

160. See *China Banks Halt New Credit to Developers This Year*, REUTERS, Nov. 14, 2010, <http://www.reuters.com/article/2010/11/14/china-property-loans-idUSTOE6AD00N20101114>. See also *China's Shadow Banks: The Credit Kulaks*, THE ECONOMIST, June 1, 2013, <http://www.economist.com/news/finance-and-economics/21578668-growth-wealth-management-products-reflects-deeper-financial-distortions>; Chen Long, *Why Did Chinese Shadow Banking Surge After 2009?*, INSTITUTE FOR NEW ECONOMIC THINKING (May 28, 2013), <http://ineteconomics.org/%5Btermalias-raw%5D/why-did-chinese-shadow-banking-surge-after-2009>.

161. Jamil Anderlini & Josh Noble, *China Cuts Reserve Ratio for Small Banks*, FIN. TIMES, June 9, 2014, <http://www.ft.com/intl/cms/s/0/25592974-efd2-11e3-bee7-00144feabdc0.html?siteedition=intl#axzz3lbb5XRx>.

162. For a discussion of these trends in a broader macroeconomic context, see INT'L MONETARY FUND COUNTRY REPORT NO. 12/195, PEOPLE'S REPUBLIC OF CHINA (2012), available at <http://www.imf.org/external/pubs/ft/scr/2012/cr12195.pdf>.

163. See Li, *supra* note 11, at 1. Again, this divergence between nominal (benchmarked) and real interest rates was attributable, at least in part, to the inflationary impact of the 2008 stimulus package.

credit within the formal banking system, the pent-up demand for credit in the real economy, and the thirst for yield amongst investors—each the product of regulatory intervention—set the stage for the growth of China's shadow banking system and, ultimately, the rise of WMPs.

WMPs are a form of collective investment vehicle that raises large pools of capital from multiple investors in exchange for the issuance of financial claims.¹⁶⁴ These claims come in two basic varieties. The first variety creates a contractual obligation on the part of WMPs—or third party guarantors—to return investors' principal upon the expiry of a specified term.¹⁶⁵ The second variety, in contrast, contemplates no such obligation, thus leaving investors theoretically exposed to the loss of their entire investment.¹⁶⁶ The Federal Reserve Bank of San Francisco has estimated that approximately 37% of bank-issued WMPs are effectively principal guaranteed.¹⁶⁷ If these estimates are accurate, then roughly 63% of WMPs do not contractually guarantee the return of investors' principal.

All WMPs are marketed to investors on the basis of a specified—typically floating—rate of return on their investment. The average annualized rate of return is reportedly in the range of 5%.¹⁶⁸ However, there are numerous reports of products offering returns in excess of 7–8%.¹⁶⁹ Notably, these returns are not necessarily linked to the cash flows generated by the assets in which the capital accumulated by WMPs is invested. Nor, in

164. The minimum threshold for investment is typically in the neighborhood of RMB50,000–100,000 (\$USD8,000–16,000). At the same time, new entrants such as online retailer Alibaba have begun offering products with effectively no minimum thresholds. See Simon Rabinovitch, *Treasure Piles Up for Alibaba as Depositors Desert China's Banks*, FIN. TIMES, Dec. 20, 2013, <http://www.ft.com/intl/cms/s/0/58dfd7ce-63d8-11e3-98e2-00144feabdc0.html#axzz3Hfr8MsfI>.

165. See Li, *supra* note 11, at 3.

166. See *id.* Simultaneously, of course, even investors in principal-guaranteed WMPs are still exposed to the credit risk of the guarantor. Indeed, it is not entirely clear whether or to what extent principal guarantees—which are themselves often provided by small, private firms—effectively reduce risks for investors. Rabinovitch, *supra* note 164.

167. This includes products that offer either fixed or minimum guaranteed returns. See Li, *supra* note 11, at 3.

168. See Fitch: *WMP Issuance by Chinese Banks Stabilising*, REUTERS, June 10, 2013, <http://www.reuters.com/article/2013/06/10/fitch-wmp-issuance-by-chinese-banks-stab-idUSFit66030020130610>; Qizheng Mao, *Measuring Off-Balance-Sheet Wealth Management Business of Commercial Banks: The Case in China*, IFC Bulletin No. 36 (Feb. 2013), available at <http://www.bis.org/ifc/publ/ifcb36d.pdf>; DONG TAO & WEISHIN DENG, CREDIT SUISSE, ECONOMIC RESEARCH REPORT: CHINA: SHADOW BANKING - ROAD TO HEIGHTENED RISKS (2013), available at https://doc.research-and-analytics.csfb.com/docView?language=ENG&format=PDF&document_id=1010517251&source_id=emcmt&serialid=VLRQ4TgNxWzk%2ftvHinuua2HrCBNc0syIwcyInvEMe0%3d.

169. See Simon Rabinovitch, *Uncertain Foundations*, FIN. TIMES, Dec. 2, 2012, <http://www.ft.com/intl/cms/s/2/7070ccdc-3ade-11e2-bb32-00144feabdc0.htm>; Henry Sender, *Finance: Money for Nothing*, FIN. TIMES, July 11, 2013, <http://www.ft.com/intl/cms/s/0/40ca3e9e-e40e-11e2-b35b-00144feabdc0.html#axzz3JH9k2qvH>; Kelvin Soh & Michael Flaherty, *Special Report - China's Answer to Subprime Bets: The 'Golden Elephant'*, REUTERS, Aug. 5, 2012, <http://www.reuters.com/article/2012/08/06/us-china-banks-idUSBRE87501T20120806>.

the vast majority of cases, are these returns contractually guaranteed.¹⁷⁰

The term structure of WMPs varies from as short as a matter of days to as long as five years. The majority of products, however, are issued for terms of between one and three months.¹⁷¹ The assets in which WMPs invest, meanwhile, are often of a much longer duration. These assets can include relatively liquid investments such as equities, corporate bonds, or money market funds. Crucially, however, they can also include highly illiquid investments such as loans to SMEs and LGFVs, along with investments in private equity, trust companies, and commercial real estate.¹⁷² There have also been reports of WMPs raising capital to invest in more 'exotic' assets such as car dealerships, pop concerts, and even ham sales.¹⁷³ Ultimately, however, it has historically been extremely difficult for investors to determine the precise nature of the assets in which WMPs invest.¹⁷⁴ An informal survey of over 50 WMPs conducted by *The Financial Times*, for example, found that only one of the surveyed products disclosed its target investments.¹⁷⁵ To make matters worse, the capital raised by WMPs is often pooled with capital from other products, thus rendering the underlying investments even more opaque.¹⁷⁶ This opacity has led to concerns that investors do not understand the risks associated with investments in these products.¹⁷⁷ Figure 4 depicts the stylized anatomy of a WMP.

170. The Federal Reserve Bank of San Francisco, for example, has estimated that only about 4% of bank-issued WMPs contractually guarantee a minimum rate of return. Li, *supra* note 11, at 3.

171. *Id.* at 3; TAO & DENG, *supra* note 168, at 5; *Value of Wealth Management Products Issued by Banks in 13Q3 Tops CNY 15 Trn*, CHINA SCOPE FINANCIAL, Oct. 22, 2013.

172. Li, *supra* note 11, at 2.

173. See Kelvin Soh & Michael Flaherty, *Analysis: Too Big To Fail? China's Wealth Management Products Stir Debate*, REUTERS, Dec. 19, 2012, <http://www.reuters.com/article/2012/12/19/us-china-investment-wealth-idUSBRE8BI1GV20121219>.

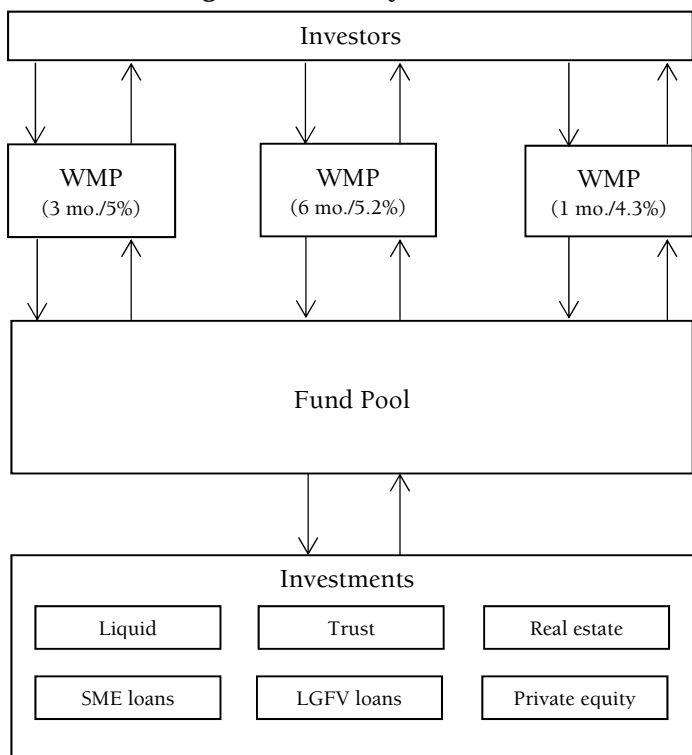
174. As described below, the CBRC has recently taken steps to enhance the transparency of WMPs.

175. Rabinovitch, *supra* note 169.

176. See TAO & DENG, *supra* note 168, at 17.

177. See, e.g., Simon Rabinovitch, *China Investment Products Draw Complaints*, FIN. TIMES, Dec. 27, 2012, <http://www.ft.com/intl/cms/s/0/53c75f8e-5004-11e2-a231-00144feab49a.html?siteedition=intl#axzz3SQjHo6P>. See also Li, *supra* note 11; TAO & DENG, *supra* note 168.

Figure 4: Anatomy of a WMP



WMPs are structured and marketed by trust companies, insurance companies, brokerage firms, and, most importantly, banks.¹⁷⁸ Indeed, banks frequently partner with trust companies or brokerage firms to structure and market these products to investors. These partnerships enable trust companies and brokerage firms to utilize banks' often vast branch networks as a distribution channel for their products.¹⁷⁹ They also enable banks to utilize trust or broker-structured products as a means of repackaging and removing assets from their balance sheets.¹⁸⁰

The first WMP was offered by China Everbright Bank in 2004.¹⁸¹ It was not until 2008-2009, however, that WMPs emerged as an important source of financing and investment. According to the Fitch Ratings, the total outstanding volume of bank-issued WMPs grew from just over RMB2 trillion (\$USD328 billion) in 2009 to approximately RMB13 trillion

178. The discussion which follows focuses largely on WMPs structured and/or marketed by banks. For a discussion of the structure of non-bank WMPs, see TAO & DENG, *supra* note 168, at 16-18.

179. See TAO & DENG, *supra* note 168, at 13.

180. TAO & DENG, *supra* note 168, at 16; *China's Shadow Banks: The Credit Kulaks*, *supra* note 160.

181. Mao, *supra* note 168, at 2. The appearance of WMPs coincided with the CBRC's decision to permit banks to engage in renminbi-denominated wealth management business.

(\$USD2.12 trillion) as of May 2013.¹⁸² Of this total, Fitch estimates that approximately 51% have been issued by SOCBs, 36% by joint-stock commercial banks, and 13% by city commercial and rural banks.¹⁸³ It estimates the number of WMPs outstanding to be in the range of 13,500, with gross issuance of new products approaching 115 per day.¹⁸⁴

The dramatic growth of WMPs can be attributed to several factors. First, WMPs are not legally characterized as deposits and are, accordingly, exempt from the PBOC's ceiling on deposit rates.¹⁸⁵ This enables banks and other intermediaries to market WMPs to investors as higher yielding substitutes for conventional term deposits and other savings products.¹⁸⁶ Second, WMPs give significant benefits to the banks that structure and market them. Perhaps most importantly, they provide a means of shifting unwanted assets off bank balance sheets.¹⁸⁷ Thus, for example, a bank can use one or more WMPs to raise capital in a fund pool (see Figure 3) and then use this capital to purchase its own unwanted loans or other assets. Along a similar vein, by originating investments off-balance-sheet, WMPs enable banks to circumvent the PBOC's credit quotas, freeing them up to extend more credit and to then direct this credit to high growth sectors of the economy.

Simultaneously, the term structure of WMPs is often designed to ensure ostensible compliance with both the CBRC's maximum loan-to-deposit ratio and the PBOC's reserve requirements.¹⁸⁸ Importantly, compliance with these requirements is typically verified by regulators on a monthly or quarterly basis.¹⁸⁹ By ensuring that WMPs mature and that the funds are automatically deposited in investors' savings accounts just prior to the relevant verification dates, banks can thus generate the appearance of technical compliance while in reality evading the substantive spirit of these requirements and obscuring their true liquidity position and levels of maturity transformation.

The emergence and growth of the market for WMPs poses a number of potentially significant risks. As described above, the opacity of many of these products, particularly their underlying investment portfolios, raises

182. FITCH RATINGS, *supra* note 17.

183. *Id.*

184. *Id.* Others, meanwhile, have estimated the total number of WMPs outstanding at somewhere between 20,000-30,000.

185. See generally Moran Zhang, *China's Wealth Management Products (WMPs) Lure Investors with Higher Yields*, INT'L BUS. TIMES, Jan. 17, 2014, <http://www.ibtimes.com/chinas-wealth-management-products-wmps-lure-investors-higher-yields-charts-1543709>.

186. See TAO & DENG, *supra* note 168, at 9. It has been estimated that approximately 70% of WMPs are purchased by households. Mao, *supra* note 168, at 74.

187. FITCH RATINGS, *supra* note 17. See also TAO & DENG, *supra* note 168, at 5. As of January 1, 2013, an entity that controls one or more other entities is required to present consolidated financial statements. See *Consolidated Financial Statements No. 10*, INTERNATIONAL FINANCIAL REPORTING STANDARD (2011). As of writing, however, the convergence of China's Accounting Standards for Business Enterprises with IFRS No. 10 - and thus its potential impact on WMPs - remains unclear.

188. See *China's Shadow Banks: The Credit Kulaks*, *supra* note 160. See also Li, *supra* note 11.

189. See Li, *supra* note 11.

clear investor protection concerns. Compounding matters, WMPs are often marketed to retail investors as ‘low risk’ investments that are functionally equivalent to deposit accounts.¹⁹⁰ This perception is no doubt bolstered by the central role of banks in the marketing of these products, coupled with the widespread belief that—despite the absence of an explicit deposit guarantee scheme—the Chinese government will stand behind them.¹⁹¹ The opacity of WMPs, combined with their heterogeneity, also undermines the ability of the CBRC and PBOC to identify and evaluate the probability and likely impact of potential risks.¹⁹² Perhaps most importantly in this regard, the use of WMPs as off-balance-sheet financing vehicles undercuts the reliability of financial reporting requirements as a means of evaluating the financial health and stability of Chinese banks.

Arguably the most significant risk, however, stems from the potential maturity and liquidity mismatches between WMPs’ assets and liabilities. As described above, many of the assets in which WMPs invest are relatively illiquid credit instruments such as loans to SMEs, local governments, trust companies, and commercial real estate developers.¹⁹³ Moreover, these assets may not generate sufficient cash flows in the short-term to be able to repay WMPs’ liabilities to investors upon maturity.¹⁹⁴ To refinance these assets, therefore, WMPs typically rely on funds available in the broader fund pool. Crucially, these funds are themselves often raised from the issuance of new WMPs.¹⁹⁵ Banks also rely on wholesale funding—e.g., repo—markets. In this very important respect, the funding liquidity of WMPs hinges on the continued availability of short-term refinancing in the form of either subsequent WMPs or interbank borrowing.¹⁹⁶ In the event that such refinancing became materially more expensive—or even altogether unavailable—WMPs would thus potentially be forced to dispose of illiquid assets to fund their obligations to investors. This, in turn, can be seen as generating a direct link between the funding liquidity of WMPs and the

190. TAO & DENG, *supra* note 168, at 3.

191. See Li, *supra* note 11, at 3; *China’s Shadow Banks: The Credit Kulaks*, *supra* note 160. This perception and its implications are discussed in greater detail in Section V(b).

192. See Mao, *supra* note 168.

193. Fitch estimates that as of early 2013, WMP fund pools held approximately RMB3.5 trillion (USD579 billion) in trust companies. It also estimated that, while only 16% of WMPs explicitly contained loans and/or discounted bills, many WMPs invested in a wide variety of credit assets “disguised” as other assets. See FITCH RATINGS, *supra* note 17. Ultimately, of course, given the opacity of many WMPs, it is difficult to determine precisely what proportion of overall assets are invested in these illiquid claims.

194. See Li, *supra* note 11, at 2.

195. This includes funds that are effectively “rolled over” by investors from one WMP to another.

196. Indeed, this characteristic has prompted several observers to compare WMPs with so-called ‘Ponzi’ schemes. See Xiao Gang, *Regulating Shadow Banking*, CHINA DAILY, Oct. 12, 2012, http://www.chinadaily.com.cn/opinion/2012-10/12/content_15812305.htm; Kate Mackenzie, *Chinese Banks Weapons of Mass Ponzi*, FTALPHAVILLE BLOG, Aug. 8, 2012, <http://ftalphaville.ft.com/2012/08/08/1111011/chinese-banks-weapons-of-mass-ponzi/>; George Magnus, *Markets Insight: China’s Ponzi Credit Boom Faces Crunch*, FIN. TIMES, June 24, 2013, <http://www.ft.com/cms/s/0/db5c83dc-da67-11e2-8062-00144feab7de.html#axzz3JpNXsC5l>.

market liquidity of these underlying assets. As examined in greater detail in Section V, these maturity and liquidity mismatches thus leave WMPs vulnerable to destabilizing runs triggered by the convergence of fundamental uncertainty and liquidity constraints.

Chinese regulators have recently taken a number of steps to address the risks posed by WMPs.¹⁹⁷ On March 25, 2013, the CBRC issued a series of rules designed to ensure, *inter alia*, that bank-issued WMPs are linked to specific underlying investments, that they disclose certain information about these investments to investors, and that their investments in certain prescribed classes of illiquid assets do not exceed 35% of total assets under management.¹⁹⁸ In October 2013, the CBRC launched a pilot program designed to counteract the public perception that WMPs offer guaranteed returns.¹⁹⁹ It has also been reported that, beginning in 2014, the CBRC will require banks to report detailed information about their WMPs to regulators.²⁰⁰ The State Council, meanwhile, has also weighed in on the matter, calling for an overarching regulatory framework governing the shadowing banking system and for greater coordination between the PBOC and CBRC.²⁰¹ At present, however, it is still far from clear what this new framework might look like, let alone what impact it is likely to have on the market for WMPs.

If properly implemented, the CBRC's initiatives should theoretically enhance transparency for investors.²⁰² They will also make it easier for regulators to identify and evaluate potential risks. Whether they will also address the prudential risks generated by the fragile capital structure of WMPs, however, remains to be seen. Moreover, there is still a great deal regulators simply do not know about this complex and evolving market. Nor, importantly, are market participants likely to stand still as these regulatory changes are implemented.

197. See *Sale of Wealth Management Products by Commercial Banks - CBRC Tightens Regulation*, LINKLATERS, October 18, 2011, <http://www.linklaters.com/Insights/AsiaNews/LinkstoChina/Pages/Sale-Wealth-Management-Products-Commercial-Banks-CBRC-Tightens-Regulation.aspx>.

198. See *CBRC Tightening up the Administration on Wealth Management Business by Commercial Banks*, LINKLATERS, May 3, 2013, <http://www.linklaters.com/Insights/AsiaNews/LinkstoChina/Pages/CBRC-Tightening-Administration-Wealth-Management-Business-Commercial-Banks.aspx>.

199. See *Wealth Management Products' Yield 'Not Guaranteed'*, CHINA DAILY, Oct. 11, 2013, http://www.chinadaily.com.cn/bizchina/2013-10/11/content_17023678.htm.

200. See Weihao Cao & Gabriel Wildau, *China Regulator Orders More Disclosure on Shadow Banking Products - Report*, REUTERS, Nov. 22, 2013, <http://www.reuters.com/article/2013/11/22/us-china-banks-regulations-idUSBRE9ALOB20131122>.

201. See Lingling Wei & Bob Davis, *Regulators at Odds on Reining In China's Shadow Lending*, WALL ST. JOURNAL, Jan. 14, 2014, http://online.wsj.com/news/articles/SB10001424052702303819704579320054102965402?mod=Newsreel_3. See also Simon Rabinovitch, *China Draws Up New Rules to Curb Shadow Banking*, FIN. TIMES, Jan. 6, 2014, <http://www.ft.com/intl/cms/s/0/cbfc9e1a-76a0-11e3-a253-00144feabdc0.html>.

202. Whether investors are likely to take advantage of this greater transparency is another matter, examined in greater detail below.

IV. Here Be Dragons: The Law and Finance of WMPs

LTF is an inductive theory. It seeks to identify patterns from observable facts and then use these patterns as the basis for constructing theoretical frameworks.²⁰³ In contrast with the physical sciences, however, these frameworks should not be viewed as principles of universal application. Indeed, in the realm of social phenomena, *ceteris* are almost never *paribus*. Rather, these frameworks should be viewed as maps, with their value ultimately derived from their ability to help us make sense of the often interdependent relationships within complex social systems. With this objective in mind, this section explores two important questions. First, what can LTF tell us about the emergence, growth, and potential risks of WMPs? And second, what can WMPs tell us about the potential insights—and limits—of LTF?

A. The Legal Construction of WMPs

China has always represented something of a puzzle from the perspective of conventional law and finance scholarship. On the one hand, consistent with this scholarship's central prediction, the relatively poor quality of China's investor protection laws and background enforcement institutions is reflected in its relatively underdeveloped public equity and debt markets.²⁰⁴ On the other hand, however, despite these apparent drawbacks, the Chinese economy has enjoyed over three decades of almost unprecedented growth.²⁰⁵ Franklin Allen, Jun Qian, and Meijun Qian have suggested that at least part of the answer to this puzzle resides in the role of relationship and reputation-based enforcement mechanisms as effective substitutes for strong laws and legal institutions.²⁰⁶ Ultimately, however, while these mechanisms might play an important role within certain segments of the Chinese shadow banking system—e.g., local government financing and informal lending—they fail to provide a comprehensive explanation for the existence or widespread use of financial instruments such as WMPs, which, ostensibly at least, rely on the formal legal system for their validation and enforcement.

LTF, in contrast, views the emergence and growth of WMPs not as a product of weak laws and legal institutions, but of *strong* ones. In the Chinese context, these institutions include both the PBOC and CBRC.²⁰⁷ These institutions write, monitor, and enforce market participants' compliance with formal regulatory mechanisms such as reserve requirements, benchmark deposit rates, and loan-to-deposit ratios. They also seek to regulate the behavior of market participants via less formal—but potentially

203. Pistor, *supra* note 46, at 7.

204. Allen et al., *supra* note 21.

205. The Chinese economy has enjoyed such growth even after adjusting for population and purchasing power parity. See *id.* at 59.

206. *Id.* at 58–61.

207. While not legally constituted in the same way, these institutions also include the Communist Party machinery to which these public bodies are ultimately accountable.

no less influential—policy mechanisms such as window guidance.²⁰⁸ Together, these mechanisms impose significant opportunity and other costs on market participants, constraining their ability to offer market rates of interest, the amount of leverage they can employ, and the asset classes in which they can invest. The stronger these laws and legal institutions, therefore, the more powerful the incentives of market participants to find innovative ways of contracting around them.

Viewed from this perspective, the emergence and growth of WMPs is best understood as a private contractual response to changes in the constraints imposed by various forms of public regulatory intervention. Put differently, WMPs are designed to occupy the negative legal space created by the existence of public regulatory intervention elsewhere within the financial system. Indeed, one would be hard pressed to make sense of the legal structure of WMPs without referring to the regulatory regime governing Chinese banks. The use of legally separate fund pools, for example, appears principally motivated by the desire to ensure both that: (1) the relevant liabilities are not characterized as deposits subject to the PBOC's ceiling on deposit rates, and (2) the assets in which WMPs invest are not consolidated on bank balance sheets or subject to the PBOC's credit quotas. As described above, these fund pools also enable banks to repay investors out of the proceeds obtained from the issuance of new WMPs. The term structure of these products, meanwhile, is often designed to game both the PBOC's reserve requirements and the CBRC's minimum loan-to-deposit ratio. Where combined with a principal guarantee, the economic substance of a WMP thus closely resembles that of a time deposit, without being subject to the same restrictive regulatory treatment. The emergence of WMPs is thus a product of the dynamic, structurally interdependent relationship between public law and regulation and private contractual structures. Thus, as Chinese regulators take action to close existing loopholes and address the risks posed by WMPs, we would expect to observe further rounds of contractual innovation.

At this point, it is worth noting that there are a number of interesting and important parallels between WMPs and another significant financial innovation: U.S. money market funds (MMFs). MMFs are open-ended collective investment schemes that invest primarily in short-term money market instruments. MMFs trace their origin to amendments to the Federal Reserve Act, which were introduced during the Great Depression.²⁰⁹ These amendments prohibited commercial banks from paying interest on demand deposits and authorized the Federal Reserve to establish interest rate ceilings on time and savings deposits of less than \$USD10,000.²¹⁰ These ceilings, introduced in 1934 in the form of Federal Reserve Regula-

208. As described above, the Communist Party and State Council also exercise considerable influence over the appointment of senior officers, directors, and supervisory board members of regulated banks. See *infra* Section IV(a). This, in turn, represents another informal mechanism for influencing the behavior of market participants.

209. See Banking Act of 1933, Pub. L. 73-66, § 11(b), 48 Stat. 162 (1933).

210. Gilbert, *supra* note 78, at 22.

tion Q, were designed to incentivize smaller rural banks to extend credit within their local communities, rather than to hold large balances with larger money center banks.²¹¹

From their introduction until the mid-1960s, the ceilings imposed under Regulation Q were generally above market rates of interest, and, accordingly, had little practical impact from the perspective of depositors.²¹² During the high inflation of the mid-to-late 1970s, however, Regulation Q became a binding constraint on the ability of commercial banks and thrifts to offer depositors market rates of interest.²¹³ MMFs emerged to exploit the resulting gap in the marketplace. Timothy Cook and Jeremy Duffield estimate that there were no more than a small handful of MMFs in the U.S. in 1974; by 1975, however, there were approximately 35 MMFs with assets of approximately \$USD4 billion, and by 1979, MMFs were attracting inflows of over \$2 billion *per month*.²¹⁴ The U.S. Congress responded by passing the Monetary Control Act of 1980,²¹⁵ with the objective of gradually phasing out the interest rate ceilings imposed under Regulation Q.²¹⁶

The parallels between MMFs and WMPs are striking. First, the initial demand for MMFs, like WMPs, can be attributed to the imposition of regulatory ceilings on the rates of interest which banks were permitted to pay depositors.²¹⁷ Second, in both cases, these ceilings were imposed in an attempt to influence the supply of credit to the real economy. (As an aside, these first two parallels highlight the fact that financial repression is not just a developing world problem.) Third, during periods of high inflation, these ceilings spurred *legal* innovation designed to circumvent the regulatory regimes governing the formal banking system, thereby satisfying the pent-up demand for higher yielding substitutes to conventional savings products.

All this is not to suggest that understanding WMPs, MMFs, or any other form of financial innovation as legal constructions fully explains the complex dynamics of these markets. Indeed, many important questions remain unanswered. Is it really the case, for example, that investors rely exclusively on their contractual rights—enforced via the formal legal system—to ensure that WMPs pay out as promised? Moreover, if the relevant laws and legal institutions are so strong, why do Chinese regulators con-

211. *Id.* at 22. These ceilings were also designed to increase bank profits and thereby disincentivize them from acquiring riskier assets that might undermine their financial health. *Id.* at 23.

212. Indeed, when market rates briefly fell below the ceiling in 1957, and again in 1962, the Federal Reserve simply raised the ceiling. *Id.* at 26.

213. *Id.* Regulation Q was expanded to include thrifts in 1966.

214. Cook & Duffield, *supra* note 78, at 15.

215. Monetary Control Act of 1980, Pub. L. 96-221, 94 Stat. 132 (1980).

216. For a more detailed timeline of the phase out of Regulation Q, see Gilbert, *supra* note 78, at 31.

217. This is not to suggest that MMFs do not hold out other potential benefits (e.g. diversification, economies of scale, or lower trading costs). Ultimately, however, if diversification was the primary driver of innovation in this context, it is difficult to explain why these products did not appear far earlier.

tinue to permit banks to use WMPs as a form of off-balance-sheet financing? Both of these questions are examined in greater detail below. For the moment, however, it is important simply to understand the role that the law played in both spurring the emergence of WMPs and dictating their legal structure. As we shall see, it is this structure that is vulnerable to the convergence of fundamental uncertainty and liquidity constraints and thus is a potential source of financial instability.

B. The Essential Hybridity of WMPs

To understand how WMPs might become a source of financial instability, we must first examine their deeply embedded hybridity. At first glance, utilizing a case study drawn from the Chinese financial system to highlight the essential hybridity of finance might seem like a particularly brazen attempt to pick some extremely low hanging fruit. As we have seen, the Chinese state has historically played an important role in determining the cost of capital and identifying those sectors of the economy to which this capital should be allocated. State-owned financial institutions are also the dominant providers of credit to the Chinese economy. At the same time, however, over the course of the past thirty-five years, Chinese policy-makers have undertaken an ambitious set of reforms designed to incrementally liberalize China's financial system.²¹⁸ These reforms have included the establishment of the Shanghai and Shenzhen stock exchanges, the permitted entry of foreign-qualified financial institutions, the partial equitization of China's SOCBs, and the gradual relaxation of its managed interest and exchange rate regimes. China is thus an archetypal example of a 'hybrid' financial system, combining features of both a centralized 'command-and-control' and a liberalized 'market-oriented' model.

The hybridity of WMPs, however, ultimately manifests itself in a far more subtle way. As described above, there are two basic varieties of WMPs: those which guarantee the return of investors' principal (representing approximately 37% of the market), and those which do not (representing the other 63%).²¹⁹ WMPs are also issued and guaranteed by financial institutions with varying degrees of creditworthiness, and backed by assets of varying levels of quality.²²⁰ Curiously, however, despite these obvious differences in terms of their contractual entitlements and underlying risks, significant anecdotal evidence exists to suggest that investors have not always clearly differentiated between these ostensibly heterogeneous products.²²¹

218. See, e.g., Franklin Allen, Jun Qian, Meijun Qian & Mengxin Zhao, *A Review of China's Financial System and Initiatives for the Future*, in CHINA'S EMERGING FINANCIAL MARKETS (James Barth, John Tatom, and Gleen Yago eds., 2009); John Macmillan & Barry Naughton, *How to Reform a Planned Economy: Lessons from China*, 8 OX. REV. ECON. POL. 130 (1992).

219. See *supra* text accompanying notes 165-66.

220. That is, if they are backed by any assets at all. See *supra* notes 173, 197, and accompanying text.

221. See *Wealth Products Threaten China Banks on Ponzi-Scheme Risk*, BLOOMBERG, July 16, 2013, <http://www.bloomberg.com/news/2013-07-15/wealth-products-threaten->

One potential explanation for this apparent disconnect resides in the widespread public perception that, should a WMP ‘fail,’²²² the Chinese government would intervene—in the interests of maintaining social stability—to ensure that the bank that structured and marketed the product compensated investors.²²³ This perception is partly a product of the influential role of the government in the ownership and governance structures of SOCBs and many other financial institutions. The government also has a reputation for bailing out banks in financial distress.²²⁴ Thus, as one analyst has put it: “Investors don’t care about the underlying [assets]. They think everything is backed by the government.”²²⁵ Insofar as this perception is accurate, of course, such public intervention would effectively reprioritize the claims of WMP investors vis-à-vis a bank’s other creditors.²²⁶ Indeed, even if this perception is not accurate, it seems that the shadow of such intervention has already had the effect of minimizing the importance of formal contractual entitlements as the basis for investor decision-making and, potentially, the pricing of these products. In this respect, the legal construction of WMPs can be seen as very much in ten-

china-banks-on-ponzi-scheme-risk.html; Soh & Flaherty, *supra* note 169; *Wealth Management Products Yield ‘Not Guaranteed,’* *supra* note 199. Unfortunately, the size of the market, the contractual heterogeneity of the products, and the historical lack of product-level transparency make a more rigorous empirical examination of this issue difficult at this point in time. One potentially significant upshot of the proposed registration and reporting requirements, therefore, is that they would enable us to determine with greater certainty how investors are pricing the risks associated with ostensibly different products.

222. What constitutes ‘failure’ in this context is of course an interesting and important question. Is it the failure of a WMP to pay out the marketed rate of return (irrespective of whether investors have a contractual entitlement to receive it)? Or is it, more narrowly, the failure of a WMP to perform its contractual obligations?

223. See Li, *supra* note 11. This perception is frequently reflected in news reports about WMPs. See, e.g., *Danger and Opportunity*, CHINA ECON. REV., Feb. 6, 2013, <http://www.chinaeconomicreview.com/danger-opportunity>; Gabriel Wildau, *Chinese Bank Wealth Management Products Boom - Report*, REUTERS, July 16, 2012, <http://uk.reuters.com/assets/print?aid=UKL4E8IG1U920120716>; *Wealth Products Threaten China Banks on Ponzi-Scheme Risk*, *supra* note 222; Sender, *supra* note 169; Soh & Flaherty, *supra* note 169. Charlene Chu of Fitch Ratings, meanwhile, offers a slightly different take on the pressures on banks to make investors whole: “Our view is that banks have very limited room to impose losses on investors if the products go bad, in large part because the disclosure is poor. In many cases, the precise assets are never disclosed, so the bank has no way to prove to investors that the assets are non-performing.” Naomi Rovnik, *The Huge and Growing Subprime Debt Time-bomb Sitting Inside China’s Banks*, QUARTZ, Nov. 1, 2012, <http://qz.com/22190/chinese-banks-are-a-good-investment-again-their-subprime-debt-exposure-is-getting-bigger/>. Along a similar vein, consistent with Allen, Qian, and Qian’s thesis, banks might also look to make investors whole for reputational reasons. See generally Allen et al., *supra* note 21.

224. Perhaps most prominently, the government undertook a RMB1.4 trillion bailout in 1999–2000 to repackage and remove non-performing loans from the balance sheets of the Agricultural Bank of China, Bank of China, China Construction Bank, and Industrial & Commercial Bank of China. A similar bailout was undertaken in 2004–2005. For an overview of these bailouts, see MARTIN, *supra* note 4, at 29–31.

225. Sender, *supra* note 169.

226. This assumes, of course, that the state will not bail out *all* of a bank’s creditors.

sion with their essential hybridity. Importantly, this hybridity also serves to mask these markets' inherent hierarchy.

C. The Inherent Hierarchy of WMPs

In a world where the vast majority of WMPs pay out as expected—i.e. where failures are infrequent and uncorrelated—any implicit government backstop would be highly credible.²²⁷ We might expect the credibility of this backstop, in turn, to be reflected in relatively tight spreads vis-à-vis the expected rates of return on different products. At the same time, individual banks might be driven by reputational or other considerations to compensate investors in failed products. Importantly, these implicit public and private guarantees would introduce the possibility that investors might be repaid some or all of their principal—if perhaps not their expected returns—irrespective of the risks they had originally contracted to assume. Viewed from this perspective, these implicit guarantees would thus appear to be inconsistent with one of LTF's core propositions. Specifically, insofar as we view the retail investors who purchase the majority of WMPs as residing at the periphery of the financial system, the existence of these implicit backstops would seem to contradict the assertion that the law is more elastic at the system's apex.

It is in a world where the failure of WMPs is *correlated*, however, that the inherent hierarchy of finance is likely to reveal itself. At USD2.13 trillion, WMPs represent almost 10% of the total assets in the Chinese banking system and approximately 26% of China's 2012 GDP.²²⁸ Given China's relatively low debt-to-GDP ratio, it is perhaps likely that the Chinese government could credibly commit at this point in time to provide large scale liquidity and other support in the event of widespread disruption within the market for WMPs. Should this market continue to increase in both size and interconnectedness, however, there will inevitably reach a point at which neither market participants nor the state can credibly commit to backstop all of the relevant financial claims. Should this tipping point be reached, of course, hard choices would need to be made about which market participants to protect and which to leave exposed to market forces and, potentially, to let fail.

227. Interestingly, a small number of WMPs have actually 'failed'. These include a RMB160 million product created by Zhongding Wealth Investment Centre and marketed by Huaxia Bank, which failed to repay investors both their principal and the marketed returns upon its maturity in December 2012. Investors in the Huaxia product were eventually repaid their principal by the product's guarantor. See Daniel Ren, *Guarantor Repays Principal on Failed Huaxia Product*, SOUTH CHINA MORNING POST, Jan. 23, 2013, <http://www.scmp.com/print/business/banking-finance/article/1133906/guarantor-repays-principal-failed-huaxia-product>.

228. *Bulletin on the Preliminary Verification Data of GDP in 2012*, NATIONAL BUREAU OF STATISTICS OF CHINA, (Sept. 2, 2013), http://www.stats.gov.cn/english/pressrelease/201309/t20130903_454864.html; Michelle Caruso-Cabrera, *Why China May Be Facing A US-Style Credit Crunch*, CNBC BUS. INSIDER, Dec. 19, 2012, <http://www.businessinsider.com/china-faces-a-us-style-credit-crunch-2012-12>.

So who, then, is likely to get a seat on the lifeboat? Given its majority ownership stakes, the Chinese government would almost certainly intervene to support SOCBs and, by extension, investors in WMPs structured and marketed by these institutions. Less clear, however, is whether the government would have either the capacity or incentives to support, for example, the private joint-stock commercial banks which ultimately represent a far less important source of public and private financing (see Figure 2).²²⁹ Indeed, this may be particularly problematic given that it is precisely these mid-tier, joint-stock commercial banks which are most heavily reliant on WMPs as a source of financing.²³⁰ It is similarly unclear whether the government could intervene to support China's vast network of city commercial banks, rural banks, and cooperatives.²³¹ The banking system itself, meanwhile, would seem likely to support its more economically and politically powerful counterparties—namely, other SOEs and financial institutions. We would thus expect to observe a discernable pattern—a pecking order—during periods of market turmoil, with the market participants closest to the center of China's economic and political system most likely to see their survival constraints relaxed through public or private intervention.

D. WMPs as a Source of Financial Instability

We are thus left with an important question: why might the failure of WMPs be highly correlated? It is here that the interaction of public law and regulation and private contractual structures in creating the conditions for and triggering financial instability is most clearly evident. As described above, the driving force behind the emergence and growth of the market for WMPs has been the desire to circumvent the reserve requirements, credit quotas, minimum loan-to-deposit ratio, and ceiling on deposit rates imposed on regulated banks. This desire is reflected in a common legal and economic structure characterized by the use of legally separate fund pools as off-balance sheet financing vehicles and the resulting reliance on wholesale funding and the issuance of new WMPs as sources of funding liquidity.²³² It is also reflected in the fact that many WMPs channel investors' capital into relatively illiquid asset classes such as loans and commercial real estate. In this way, the law can be understood as having incentivized market participants to both utilize a common legal and eco-

229. We might expect foreign banking subsidiaries, meanwhile, to be even less likely to receive state support.

230. Fitch, for example, estimates that as of Q1 2013 the WMPs structured and marketed by joint-stock commercial banks represented approximately 25-30% of their total deposits. The equivalent figures for SOCBs, the top 30 city commercial banks and rural banks, in contrast, were in the range of 10-15%. FITCH RATINGS, *supra* note 17.

231. On the one hand, like joint-stock commercial banks, these other institutions make up a relatively small proportion of the overall market. See *supra* Figure 2. On the other hand, however, agriculture, and by extension rural financial institutions, have often enjoyed considerable protection from the Chinese government.

232. See *supra* notes 192-193 and accompanying text.

conomic structure and pursue what may ultimately be highly correlated investment strategies.

Crucially, the legal and economic structure of WMPs renders these products particularly vulnerable to changes in market confidence. In states of the world where investors have a high level of confidence that WMPs will be able to meet their obligations, we would expect them to continue to invest in these products in large numbers and, upon maturity, reinvest (or ‘rollover’) some or all of their capital into new WMPs.²³³ In contrast, in states of the world where there exists a material degree of uncertainty—whether regarding the value of the assets underlying these products, the creditworthiness of their implicit or explicit guarantors, or the health of the financial system more generally—we would expect investors to respond by demanding a higher yield on new WMPs. We would also expect counterparties within wholesale funding markets to demand higher haircuts on posted collateral.²³⁴ Where this uncertainty was sufficiently acute, meanwhile, we would expect investors and counterparties to exercise their *legal* prerogative and refuse to rollover their capital into new WMPs/repurchase agreements, thereby precipitating the withdrawal of liquidity from the marketplace. Viewed from this perspective, WMPs are thus susceptible to the same crises of confidence that reside at the heart of both traditional bank runs and the run on wholesale funding markets that was at the epicenter of the recent financial crisis.²³⁵

The withdrawal of liquidity from these markets would put significant pressure on the funding liquidity of existing WMPs. The banks that sponsored these products, in turn, would face a limited number of options for relieving this pressure. First, they could liquidate assets in the relevant fund pools. As we have seen, however, a significant proportion of these assets may be in the form of illiquid, hard to value investments in commercial real estate, private equity, and loans to SMEs and local governments.²³⁶ Where banks seek to liquidate more marketable securities, meanwhile, correlated selling by a large number of WMPs all facing the same liquidity pressures could conceivably have a destabilizing impact on prices.²³⁷ It might also generate a pernicious negative feedback loop between funding and market liquidity. Second, sponsoring banks might be compelled—either by contractual guarantees or reputational considerations—to step in and compensate investors. This, of course, would shift these liabilities back on to bank balance sheets, thereby raising potential concerns about the liquidity and perhaps even the solvency of these institu-

233. This is assuming, of course, that the applicable regulatory regime remains static and that more desirable substitutes do not emerge.

234. See Gary Gorton & Andrew Metrick, *Haircuts*, 92 *FED. RES. BANK ST. LOUIS REV.* 507, 510 (2010).

235. See Diamond & Rajan, *supra* note 20. See also Gorton & Metrick, *supra* note 85, at 433.

236. See Li, *supra* note 11, at 2.

237. In this respect, it bears emphasizing that the market for WMPs is roughly two-thirds the combined market capitalization of the Shanghai and Shenzhen stock exchanges.

tions. Finally, sponsoring banks could let WMPs fail. These failures, however, might then trigger a form of ‘informational contagion’²³⁸ as investors withdraw from markets and institutions viewed as utilizing similar legal and economic structures or pursuing similar investment strategies. There are thus no shortage of ways in which a disruption within WMP and wholesale funding markets could ultimately lead to broader financial instability.

Ultimately, of course, it is not the case that even widespread disruption within WMP or wholesale funding markets would inevitably lead to broader financial instability. First, as described above, the Chinese government will, in many states of the world, possess the resources— if not always the incentives— to provide liquidity and other support to these markets and institutions. Second, one might reasonably question whether such disruption is likely to have an adverse impact on the liquidity or solvency of sponsoring banks. Perhaps most importantly, insofar as the liquidity withdrawn from these markets is simply deposited in investors’ bank accounts, this would actually seem to *bolster* the balance sheets of these institutions. As *The Economist* put it: “The result would be a run to the banks, not a run on them.”²³⁹ A potential problem nevertheless arises, however, once we consider the inherent hierarchy of the Chinese financial system. Specifically, investors and counterparties may rationally respond to uncertainty by shifting deposits from banks perceived to be less likely to receive state support— many of which, as we have seen, rely disproportionately on WMPs as a source of short-term funding— to those banks, namely SOCBs, that are perceived to be the mostly likely to survive widespread market disruption. In the event such a shift takes place, the net effect would be the large-scale withdrawal of liquidity from the periphery of the Chinese financial system.

So what can we take away from this examination of the law and finance of WMPs? First, WMPs are not an innovation born of unconstrained market forces, but of the largely artificial demand generated by the restrictive regulatory regime governing Chinese banks.

Second, the Chinese state plays an important— if often implicit— role in backstopping these markets. As financial crises past and present clearly illustrate, this role is not unique to ‘socialist’ economies. Rather, this hybridity is an essential feature of modern financial systems. This hybridity, in turn, has the effect of obscuring the inherent hierarchy of these systems during periods of relative stability. During periods of acute uncertainty, however, this hierarchy is likely to reassert itself, thereby leaving the periphery of the Chinese financial system exposed to potential instability.

Importantly, this examination also offers us two potentially valuable insights into the relationship between the core propositions of LTF. First, it

238. See Viral V. Acharya & Tanju Yorulmazer, *Information Contagion and Bank Herding*, 40 J. MONEY, CREDIT AND BANKING 215 (2008).

239. *China’s Shadow Banks: The Credit Kulaks*, *supra* note 160.

points to a possible tension between the legal construction of financial markets and their essential hybridity. Specifically, as evidenced by the relatively narrow spreads between ostensibly different WMPs, it suggests that implicit government backstops may undermine the relevance of formal contractual terms as the basis for investor decision-making. Second, it points to the fact that it is precisely this hybridity that enables us to relax the survival constraints of market participants—and thus, practically speaking, the full force of both public regulation and private contractual commitments—with a view to preventing or containing financial instability.²⁴⁰ Viewed from this perspective, the key question then becomes one of how to design institutional arrangements—‘safety valves’—that serve this purpose while simultaneously minimizing the prospect of moral hazard.

Lastly, we might ask ourselves whether we need LTF to generate any of these insights. Technically speaking, of course, the answer is clearly no. For example, we might view WMPs as simply a form of regulatory arbitrage that exploits the inherent incompleteness of the regulatory regime governing Chinese banks.²⁴¹ We might similarly view the potential for financial instability arising from the widespread use of WMPs as little more than a specific instance of the more general coordination problem afflicting banks, wholesale funding markets, and other fragile markets and institutions.²⁴² And yet it is both curious and lamentable that these more conventional frameworks were not widely used by scholars or policymakers during the run-up to the financial crisis to warn us of the gathering storm. One of the most important reasons for this was, ultimately, that prevailing theoretical frameworks implicitly discounted the importance of uncertainty, liquidity, and the endogenous role of the law in both shaping the structure of the financial system and contributing to the build-up of systemic risk. Viewed in this light, the value derived from examining this case study through the lens of LTF stems from the fact that it places these variables front and center.

V. Policy Implications

This is not a conventional policy Article. It does not advocate the adoption of a specific policy prescription that would assist Chinese regulators in ameliorating the risks generated by the widespread use of WMPs. The reasons for this are twofold. First, WMPs perform a number of economically useful functions, including both providing investors with a market-based rate of return on their savings and channeling these savings into the real economy. In an environment where state intervention distorts market signals, WMPs can also be seen as providing market participants with valuable information about the private cost of capital.²⁴³ At present,

240. Ultimately, this second insight is essentially the inverse of the first.

241. See Fleischer, *supra* note 109.

242. See Diamond & Dybvig, *supra* note 20; Gorton & Metrick, *supra* note 85.

243. In this respect, WMPs can actually be viewed as a useful element of China's transition to a market-based interest rate regime. See Tri Vi Dang, Honglin Wang, Aidan

there is simply insufficient evidence to determine whether the risks that WMPs pose to investors and to the broader financial stability outweigh these important benefits. Indeed, these benefits likely explain why the Chinese government has not intervened more quickly or forcefully to regulate this market. Second, and perhaps more importantly, the dynamic, structurally interdependent relationship between law and finance would almost inevitably lead to the emergence of new financial markets and institutions designed to circumvent these policies. Articulating policy prescriptions in response to each new round of financial innovation thus would be to chase Alice down the proverbial rabbit hole.

Nevertheless, there are a number of important policy implications that flow from our examination of the relationship between law and finance in the Chinese shadow banking industry. As a preliminary matter, this exploration suggests that the CBRC's proposed disclosure rules, while perhaps necessary as an exercise in political optics, are unlikely to have the desired effect. From an investor protection standpoint, prospective purchasers are unlikely to possess powerful incentives to read and understand the relevant disclosure so long as they perceive these products as being backed by an implicit government guarantee. From a financial stability standpoint, meanwhile, the proposed disclosure rules and asset restrictions—limiting the proportion of certain illiquid assets to 35% of total assets under management—will likely be ineffective at preventing the withdrawal of liquidity during periods of acute market uncertainty. Even after these reforms are implemented, WMPs will still be permitted to invest a significant proportion of their capital in illiquid, hard-to-value assets. The resulting opacity—combined with the sheer number of products, their heterogeneity, and the complex balance sheets of the banks and other institutions that sponsor them—suggest that this market will still be vulnerable to instability triggered by the convergence of fundamental uncertainty and liquidity constraints.

This inherent potential for financial instability, in turn, highlights the important role of central banks in providing backstop liquidity.²⁴⁴ It is this central bank liquidity, after all, that relaxes market participants' liquidity—and thus survival—constraints during periods of uncertainty. This observation has important implications in terms of the PBOC's current strategy for attempting to rein in the growth of WMPs. In June 2013, the PBOC made the controversial decision not to intervene to provide liquidity support to the Chinese money market following a spike in interbank lending rates.²⁴⁵ This decision was widely interpreted as the PBOC's attempt

Yao, *Chinese Shadow Banking: Bank-Centric Misperceptions* (Hong Kong Inst. for Monetary Research, Working Paper No. 22, 2014).

244. This liquidity can be provided in the form of open market operations, transactions within the repo market, or targeted support to individual financial institutions.

245. See George Magnus, *China's Ponzi Credit Boom Faces Crunch*, FIN. TIMES, June 24, 2013, <http://www.ft.com/intl/cms/s/0/db5c83dc-da67-11e2-8062-00144feab7de.html#axzz3ItARZWZR>; Simon Rabinovitch, *PBoC Dashes Hopes of China Liquidity Boost*, FIN. TIMES, June 20, 2013, <http://www.ft.com/cms/s/0/d244210c-d8ae-11e2-a6cf-00144feab7de.html#axzz3ItARZWZR>.

to fire a warning shot across the bow of commercial banks regarding the risks arising from an over-reliance on short-term credit— including WMPs— as a source of financing.²⁴⁶ It may have also been designed as a ‘real time’ stress test, enabling the PBOC to identify the banks most vulnerable to a potential liquidity crisis.

Whatever the underlying rationale, the effect of this strategy was to exacerbate uncertainty within an already uncertain marketplace. Interbank borrowing costs— as measured by seven-day repo rates— peaked at 11.62% on June 20, or roughly three times higher than their historical average.²⁴⁷ The benchmark Shanghai Composite Index fell by over 13% in June, and by almost 9% the week of June 17–24 alone.²⁴⁸ Remarkably, the PBOC pursued a similar strategy in October and again in December 2013, each time with broadly similar (if somewhat less pronounced) effects.²⁴⁹ In the end, the lesson from these experiments in brinkmanship seems abundantly clear: any ambiguity surrounding the provision of central bank liquidity during periods of market turmoil carries with it a significant risk of instability.²⁵⁰

As the provision of central bank liquidity becomes more certain, of course, so too does the threat of moral hazard. Indeed, this is essentially the problem that the PBOC was attempting to ameliorate by withdrawing its support for the interbank market. Given the stakes, however, the optimal strategy is not to take away the punch bowl once the party gets out of hand; rather, it is to promote greater sobriety by ensuring that all of the parts of the financial system that perform economically equivalent functions are, to the fullest extent possible, subject to functionally equivalent

246. See *Properly Adjust Liquidity and Maintain the Stability of the Money Market*, PEOPLE'S BANK OF CHINA (June 26, 2013), available at http://www.pbc.gov.cn/image_public/UserFiles/english/upload/File/%E5%90%88%E7%90%86%E8%B0%83%E8%8A%82%E6%B5%81%E5%8A%A8%E6%80%A7.pdf. See also Simon Rabinovitch, *PBoC Plays Hard Ball over Cash Crunch*, FIN. TIMES, June 24, 2013, <http://www.ft.com/intl/cms/s/0/fd8e8f4c-dc86-11e2-8853-00144feab7de.html#axzz3ItARZWZR>; Lingling Wei & Bob Davis, *Inside China's Bank-Rate Missteps*, WALL ST. JOURNAL, July 2, 2013, <http://online.wsj.com/articles/SB10001424127887324251504578579292237914344>.

247. Wei & Davis, *supra* note 247.

248. SSE Composite Index, YAHOO FIN. (last visited Nov. 14, 2014), <http://finance.yahoo.com/q/hp?s=000001.SS&a=05&b=1&c=2013&d=05&e=30&f=2013&g=d>.

249. See Jamil Anderlini, *China Rates Stable But Concerns Remain*, FIN. TIMES, Dec. 26, 2013, <http://www.ft.com/intl/cms/s/0/f854192a-6e1c-11e3-86ef-00144feabdc0.html#axzz3ItARZWZR>.

250. It is debatable at this point whether the PBOC has in fact learned this crucial lesson. On the one hand, the PBOC intervened in both October and December 2013 to provide liquidity in response to a spike in interbank lending rates. On the other hand, however, it has continued its policy of occasionally refraining from engaging in open market operations as a means of curbing banks' reliance on short term credit. See Simon Rabinovitch, *Anxiety over China Liquidity Levels Lingers*, FIN. TIMES, Oct. 25, 2013, <http://www.ft.com/intl/cms/s/0/1db74a22-3d2e-11e3-86ef-00144feab7de.html#axzz3ItARZWZR>; Simon Rabinovitch, *PBoC Acts to Ease China Cash Crunch Fears*, FIN. TIMES, Dec. 19, 2013, <http://www.ft.com/intl/cms/s/0/5162c822-6896-11e3-996a-00144feabdc0.html#axzz3ItARZWZR>.

forms of prudential regulation.²⁵¹ Whether such functional equivalence is possible as a practical matter is an important and contested question. This contestability, however, does not detract from the essential role of central banks as lenders and dealers of last resort. Once again, the key question becomes how to design institutional safety valves which effectively balance the competing interests of giving central banks the flexibility to perform their vital function as crisis ‘fire fighters’ while simultaneously incentivizing market participants not to play with fire.

Finally, this examination provides us with a deeper understanding of the potential sources of financial instability. Perhaps most importantly, it suggests that the financial markets and institutions that emerge in response to changes in public law and regulation—especially those laws and regulations designed to constrain socially excessive risk-taking—merit heightened regulatory scrutiny.²⁵² It is the law that spurs these innovations, and the law that drives market participants to use them to channel risk into potentially fragile parts of the financial system. Accordingly, just as lawyers looking to understand the economic structure of financial transactions have long been told to ‘follow the money,’ policymakers looking to understand the structure of the financial system, its determinants, and potential sources of instability would be well advised to ‘follow the law.’ This, in turn, would enable regulators to be more proactive in identifying potential risks and taking meaningful preventative action to ensure that these new markets and institutions are sufficiently resilient to shocks precipitated by the convergence of fundamental uncertainty and liquidity constraints.

Conclusion

Almost twenty years after LLSV published their groundbreaking and controversial research, our understanding of the relationship between law and finance is still in its theoretical infancy. Today, few would argue that strong laws and legal institutions do not help generate credible commitments and thereby promote financial development.²⁵³ Ultimately, however, this observation is little more than a useful starting point, a foundation for exploring the complex, dynamic, and structurally interdependent relationship between law and finance in the real world. This Article has used LTF to explore this relationship in the context of the Chinese shadow banking system and, specifically, the market for WMPs. This

251. There is also a potentially important role for other forms of regulatory intervention including, *inter alia*, remuneration requirements, civil and criminal liability, and structural separation. In China, we might also look to informal enforcement via the Communist Party’s influence over the career trajectory of senior bankers as a means of constraining moral hazard. Lamentably, the relative merits and drawbacks of these and other forms of regulatory intervention are beyond the scope of this Article.

252. Imagine, for example, what might have been if regulators had more closely monitored the securitization structures that emerged as a response to the implementation of Basel II? See Jones, *supra* note 79, at 49.

253. Pistor, *supra* note 46, at 2.

emerging theory provides us with a useful framework for understanding the legal construction of WMPs, their essential hybridity and inherent hierarchy, and the risks they pose to financial instability. More broadly, examining WMPs through the lens of LTF highlights the fact that, far from simply representing the ‘rules of the game,’ the law is also often the board, the game pieces, and the dice.

Simultaneously, this Article raises far more questions than it provides answers. As a preliminary matter, there is ample scope for further empirical research into the detailed legal structure of WMPs, how variations in this structure across different products influence price and, as a corollary, the nature and extent of the Chinese state’s implicit backstop of these products. There is also the question of how WMPs will evolve in response to new regulatory requirements. Finally, there are important questions surrounding how to design functionally equivalent regulatory regimes for different markets and institutions and, on the assumption that it is neither feasible nor desirable for these regimes to eliminate all risk from within the financial system, the regulatory safety valves that define the circumstances in which central banks may intervene in the interests of maintaining financial stability. We conclude, therefore, where we began— with a great many dragons left to slay.

