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So Now Who is Special? Business Model Shifts Among Firms that Borrow to Lend

Jose M. Gabilondo

College of Law, Florida International University, jose.gabilondo@fiu.edu

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So Now Who is Special?: Business Model Shifts Among Firms That Borrow to Lend

1. INTRODUCTION

This essay analyzes the new credit market in terms of alternative business models for financial intermediation, competition between these models, and their evolution in response to open market dynamics. Viewing the financial economy in terms of business models makes it easier to understand why credit has contracted and why the traditional tools of monetary, credit, and banking policy have not revived lending. A business model is a set of propositions that, in miniature, states a firm's economic logic and the rationale for its structure.¹ I focus on business models for financial intermediaries like banks and insurance companies because these firms play a key role in the economy.² They direct funds between savers and consumers based on the holding preferences of market participants for risk, term, and liquidity.³ This makes them the circulatory system of the economy and an

¹ See Christian Nielsen & Per Nikolaj Bukh, What Constitutes a Business Model: The Perception of Financial Analysts 1–21 (Aalborg Univ., Dep't of Bus. Studies, Working Paper No. 4, 2008) (describing a business model as a "company's way of competing, whether it concerns being unique or being the most cost-efficient company in the industry"); Bruce Rasmussen, Business Models and the Theory of the Firm 1–11 (Pharm. Indus. Project Working Paper Series, Working Paper No. 32, 2007) (noting that a business model is "designed to answer a series of questions essential to any business—who are the customers, what do they value, how that value can be delivered to the customer at the appropriate cost and how the business deploys its assets"); Michael Rappa, Business Models on the Web, DIGITAL ENTERPRISE, http://digitalenterprise.org/models/models.html (last visited Feb. 1, 2009) (defining a business model as the "method of doing business by which a company can sustain itself—that is, generate revenue"); see also infra Part II.

² See James F. Groth, Can Regulators Force Bank Holding Companies to Bail Out Their Failing Subsidiaries?—An Analysis of the Federal Reserve Board’s Source-of-Strength Doctrine, 86 NW. U. L. Rev. 112, 121 (1991) (noting Congressional recognition of the need to regulate banks because of the important role they play in the United States).

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interface between the real economy, which produces real goods and services, and the financial economy, which traffics in intangible claims like money and debt.

After explaining the concept of a business model, I examine an ongoing tension between two dominant approaches used by financial intermediaries: the originate-to-distribute ("OTD") model and portfolio lending. The current financial crisis is forcing managers to rethink basic assumptions about their business lines; among financial firms, much of this deliberation deals with the conflict between these two business models. The business models of financial firms face two special constraints that I then address: the dyadic relationship to federal financial regulators and the challenge of new liquidity dynamics in the credit market. I make two points about these constraints. First, when trying to stabilize financial markets, the federal government targeted the way that these firms finance themselves, most recently, reflecting that their borrowing patterns—both those of banks and non-bank financial institutions—have systemic consequences requiring federal involvement. Second, these business models adapted to the liquidity trends in the new credit market by investing more heavily in secondary credit markets, which then grew in importance and impact. Rather than reaching any normative conclusions, the point of my essay is to suggest a conceptual approach to better understanding causation in credit markets.

II. DUELING BUSINESS MODELS FOR FINANCIAL INTERMEDIARIES

A business model approach is more common in business than in legal studies, although the approach has some conceptual advantages. It recognizes that all firms can be expressed in terms of a reductionist value proposition that distinguishes between essential and incidental features of a firm. It is also a prism for understanding the intersection of open market trends, regulation, and managerial decisions, much as Coase's analysis of the firm illustrated the intersection between efficiencies and firm structure. My discussion here draws on Henry Chesbrough's

4. See id. at 885 (noting that financial intermediaries provide several services, such as underwriting, which bridge corporations in search of capital).
5. See infra Part II.
7. See infra Part III.
8. See infra Part III.A.
9. See infra Part III.B.
12. See Ronald H. Coase, The Nature of the Firm, 4 ECONOMICA 386, 390–98 (showing that the structure of the firm reflects its attempt to economize on transaction costs). Coase also examines the relationship between
research on business models for technological innovation. Although he focuses on the role of technology, his definition of a business model helps to explain both the business models for financial intermediaries and the market models on which regulators rely when intervening in financial markets.

According to Chesbrough's paradigm, a business model carries out certain logical functions for a firm with an output (which can take any form, including a good or a service). First, it must articulate a "value proposition" that explains how end users derive value from the firm's product. Second, the business model must situate the firm as part of a wider market structure by locating the firm in a "value chain" from manufacture to distribution of the firm's output and by envisioning a "value network" of suppliers and customers that allows the firm to distinguish between allies and competitors. Finally, it must estimate the cost structure and desired profit spreads, identify the target market segment, and articulate a strategy that distinguishes the firm from its competitors. If a business model meets these requirements, then it has performed its cardinal function: "to create a heuristic, a simplified cognitive map, from the technical domain of inputs to the social domain of outputs." 

The firm's business model helps it to negotiate uncertainty by filtering information, ruling out certain strategic possibilities, and moving the firm toward other strategic choices. At the core of the model is a "dominant logic" that distills "the prevailing wisdom within the company about how the world works and how the firm competes in this world to make money." The downside is that a firm that has long relied on a particular business model can get stuck in it such that opportunities to adapt are lost. I would add that a business model includes explicit state-

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transaction costs and a firm's size or structure. Id. I accept this proposition as a general property of business models.

13. See Chesbrough, supra note 11, at 63–91. In particular, I rely on his discussion of the cognitive implications for managers and employees of business models. Id. at 68–71.

14. See id. at 64–65 (outlining six "functions" of a business model).

15. See id. at 63–64.

16. Id. at 65.

17. Id. at 64–65.

18. Id.

19. Id. at 69.

20. See id. at 70. As Chesbrough points out: Constructing a business model requires managers to deal with significant complexity and ambiguity. We know from earlier research that managers cannot—and do not—exhaustively evaluate every alternative when they confront such situations. Instead, they apply cognitive filters to reduce this complexity to manageable levels. Managers include information that fits within the logic of their current business model and filter out information at variance with that model.

Id. (internal citation omitted).

21. Id.

22. See id. at 71. It involves the commercial equivalent of hubris: [T]he model that will be applied to a new opportunity will bear a strong resemblance to the established business model already in use. And the more successful the current business model has been over time, the stronger its influence over how to commercialize the new opportunity that arises. . . .

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ments ("Our firm sells credit default swaps.") as well as implicit propositions whose value may emerge by accident, for example, the unintentional way in which an early World Bank foreign exchange transaction helped to create the modern swaps market.\textsuperscript{23} Or it may be a stranger to the firm who sees its latent value, as did the corporate raiders of the 1980s who harvested the excess cash held by takeover targets.\textsuperscript{24}

Chesbrough's approach maps well onto financial firms. These firms' value propositions are readily identified and compared because each one relates to a financial service that is relatively easy to quantify.\textsuperscript{25} For purposes of this essay, these propositions express the financial value that consumers derive from credit. The value is easily measured by its interest cost, non-interest loan terms that create a burden or benefit to the borrower, and the transaction costs of applying for credit and servicing the relationship with the lender.\textsuperscript{26} Because cash and credit are fungible, financial firms must distinguish themselves competitively other than just by differentiating products.\textsuperscript{27} Using Chesbrough's model, the most dramatic changes for firms in the credit market have been in the value chain because securitization, the growth of secondary markets, and the rise of non-bank lenders dramatically

\textsuperscript{[T]}he more successful the firm has been with its business model, the more wedded to the model it will be as new opportunities arise.

\textit{Id.}


\textsuperscript{24.} See Christina M. Sautter, \textit{Shopping During Extended Store Hours: From No Shops to Go-Shops}, 73 \textit{BROOK. L. REV.} 525, 527 (2007) (distinguishing between the hostile transactions of the 1980s led by "corporate raiders" and modern "strategic buyers"); Martin Lipton & Paul K. Rowe, \textit{Pills, Polls, and Professors: A Reply to Professor Gilson}, 27 \textit{DELOI. J. CORP. L.} 1, 5 (2002) (noting that the goals of the hostile takeovers of the 1980s was to "bust up" the pieces of the corporation and turn a quick profit).

\textsuperscript{25.} See CHESBROUGH, supra note 11, at 65. Chesbrough introduces a metaphor using vitamins and pain relievers to demonstrate what he means by value propositions:

\begin{quote}
We all know that vitamins are good for us and that we should take them. Most of us, though, do not take vitamins on a regular basis, and whatever benefits vitamins provide do not seem to be greatly missed in the short term. People therefore pay relatively little for vitamins. In contrast, people know when they need a pain reliever. And they know that they need it now, not later. They can also tell quite readily whether the reliever is working. People will be willing to pay a great deal more for a pain reliever than they pay for a vitamin. In this context, the pain reliever provides a much stronger value proposition than does a vitamin . . .
\end{quote}

\textit{Id.}

\textsuperscript{26.} See Geoffrey C. Hazard, Jr., \textit{Imputed Conflicts of Interest in International Law Practice}, 30 \textit{OKLA. CITY U. L. REV.} 489, 498 (2005) (noting that in loan transactions, both the borrower and lender stand to benefit); Rienhold Niebuhr, \textit{Beware the Dotted Line: Foreclosure Rescue Fraud in Maryland and the Growing Effort to Combat It}, 37 \textit{UL. BALT. L. REV.} 113, 139 n.193 (2007) (noting that the secondary mortgage increases benefits for borrowers by increasing access to credit).

changed the nature of how credit was originated, distributed, and liquidated. Indeed, the ongoing shaking-out in part reflects the notion that financial firms are still figuring out where they stand in the new credit market.

One of the most elegant formulations of the business model for commercial banks is set out in Federal Reserve official Jerry Corrigan’s classic 1982 speech, “Are Banks Special?” The question mattered because commercial banks enjoyed privileged access to liquidity and capital facilities, all posing the risk of cost to the public fisc. Corrigan’s formulation clearly illustrates the value propositions that banks offer and how they fit into their value chains and networks.

Corrigan identified three special features about banks that justified their special federal rights to funding and liquidity support. First, banks offered transaction accounts used by consumers and other firms to settle payments. Second, banks could be counted on to provide backup liquidity to individuals and other firms under most circumstances, although the cost of this liquidity would reflect both the borrower’s risk and the cost of money prevailing at the time of the loan. Third, banks were special because the Federal Reserve relied on them to implement monetary policy by acting through the balance sheets of the bank. For Corrigan, these three features helped to explain why banks had special rights. I would add to these features a fourth classic function of banking—the job of increasing the supply of long-term and fixed-rate credit available to borrowers, which a bank can do by borrowing at shorter terms and at both fixed and floating terms and then professionally managing the risks of term and rate mismatches on its balance sheet. These four aspects—transaction accounts, backup liquidity, monetary policy, and

28. See Julia Patterson Forrester, Still Mortgaging the American Dream: Predatory Lending, Preemption, and Federally Supported Lenders, 74 U. Cin. L. Rev. 1303, 1323–29 (2006) (detailing the changes to the mortgage market brought about by the development of securitization); see also Chesbrough, supra note 11, at 66–67 (discussing the importance of a business’s value chain).


31. Id.

32. See id.

33. See id.

34. Id.

35. Id.

36. Id.

37. See id.

maturity transformation—define the traditional business model for depository institutions.

Even as Corrigan was delivering his speech, trends in the credit market were making banks seem less special.39 One such trend was the shift on the part of banks from portfolio lending to the OTD model of underwriting.40 Historically, a portfolio lender evaluated a prospective borrower’s creditworthiness, keeping in mind that if the lender made the loan it would reside on the lender’s balance sheet through maturity, until early payment or, heaven forbid, borrower default.41 Securitization of the loan (another name for the OTD model) allows the bank to make the loan and immediately sell it for a time- and risk-discounted cash present value.42 Securitization spread from housing finance to other credit sectors, changing the business of banking; as a result, a system in which relationships between the borrower and lender may have counted for something became a more anonymous enterprise built on transaction fees rather than long-term relationships and renewed continually by secondary market demand for commoditized credit products.43

Ostensibly, the OTD model affected only the asset-side of an originating bank: pooling and selling whole loans sped up the cash collection cycle, adding liquidity to the bank’s balance sheet.44 This acceleration of the cash cycle, though, had implications for the bank’s liabilities too, because the bank needed to fund a growing volume of loan disbursements, often with short turnaround.45 Shorter turnarounds meant more individual financing transactions for a bank and for shorter terms.46

This compression exposed the bank to its own credit and liquidity risks, but the magnificent baggage of federal safety and soundness rules set up a comprehensive system of reporting (call reports), examinations, prudential standards, and the abil-

39. See Fed. Reserve Bank of Minneapolis, 1982 Annual Report, at app. tbl. 1 (1982), available at http://www.minneapolisfed.org/pubs/ar/ar1982b.cfm. This table was referenced in Corrigan’s speech in supra note 30. As the data indicates, commercial banks experienced a gain in the credit market until 1979, after which their credit market share began to decrease slightly. Id.
41. See generally Sarah Landis, Thrifts Enjoyed Strong Second Quarter Due to Adjustable-Rate Mortgage Loans, Wall St. J., July 31, 2000, at B11F (referring to thrifts as portfolio lenders and defining them as lenders who keep the loans they originate on their own balance sheets); Jack Guttentag, The Mortgage Crisis is One of Confidence, Wash. Post, Jan. 5, 2008, at F03 (discussing the history of portfolio lenders as a system that had a strong presence in housing finance until the bank crisis of the 1980s that has since strengthened its underwriting requirements).
43. See id. at 1122 (noting that many other types of receivables, in addition to mortgages, were securitized).
45. See id.
46. Id. at 371 (noting that “the number of securitization transactions has rapidly increased”).

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ity to intervene and take over an insured depository institution that posed risks to itself, its borrowers, the federal government, or the financial system more broadly.47

A second trend, related to the explosive growth of secondary credit markets fed by the OTD model, was the rise of uninsured non-bank financial institutions like investment banks or mutual funds.48 They began to offer transaction accounts which competed with federally-insured checking accounts.49 In addition to, in effect, receiving customer deposits, these non-bank lenders also began to extend credit such that during the thirty-year period ending in 1998, the share of credit provided by banks dropped from 43% to 26% while that of non-bank lenders increased from 30% to 48%.50 Not surprisingly, a credit rating agency announced that a new “credit paradigm” had emerged, one in which even firms like hedge funds had become an important source of credit.51 The impact of these non-bank lenders on the financial system as a whole came into focus during the current crisis.52 The crisis also called into question whether traditional banks still provided backup liquidity (the second special feature of the depository business model) because, in the hour of truth when credit lines were sought to be drawn, many traditional banks struggled to honor underwriting commitments.53

Unlike commercial banks, non-bank lenders lacked experience with portfolio lending, and hence floundered in the new credit market.54 Thus, part of what contributed to the current financial crisis is that amateurs got in over their heads in the technical business of portfolio lending.55 For example, E*Trade, the third largest


49. See id. at 239–40 (noting that certain accounts available at non-bank institutions offered some of the same transactional advantages of traditional bank accounts).


51. FITCH REPORTING, HEDGE FUNDS: THE CREDIT MARKET’S NEW PARADIGM 7 (2007) (“The growing role of hedge funds in the credit markets without question has introduced greater [funding and market] liquidity in the near term. Of concern would be an ill-timed event that led to a sudden reversal of this liquidity across multiple segments of the credit markets.”).


53. See, e.g., Eric Dash, Investor Safe Haven Becomes a Concern, N.Y. TIMES, Nov. 14, 2007, at C1 (discussing asset-backed commercial paper and the concern that, following an issuer’s default, securities may not be able to be sold for full value).

54. See Roubini, supra note 52 (referring to the demise of the shadow banking system and the causes thereof).

55. Formerly, banks borrowed at shorter terms and lent at longer ones, making longer term credit available to credit consumers and, in so doing, bearing funding liquidity risk from mismatches in their payables and receivables. See Lacker, supra note 38. Indeed, this was part of the function of banking: “The fundamental role of banks in facilitating the maturity transformation of short-term deposits into long-term loans makes banks
online brokerage firm, nearly declared bankruptcy in January 2008 because of losses in its loan portfolio, which held mortgage-backed securities. In the prior years, E*Trade had come to derive as much as 58% of its revenues from its loan portfolio, rather than from its traditional brokerage business. And this was part of a wider trend. Between 2000 and 2007, several major investment banks increased their investments from (risky) proprietary trading while their profit margins declined on less risky, fee-based businesses like underwriting, brokerage, and financial advisory services.

Because they operate beyond the limits of the official regulatory system, non-bank financial institutions came to be known as the shadow banking sector. These shadow banks made it harder to track the credit supply and to understand how the financial economy linked to the real economy. While regulators had stumbled their way through the OTD model, they knew less about the way these shadow banks operated and made no provisions to manage the systemic risk created by the nouveau portfolio lenders. At last, even that guardian of ancien régime of the commercial bank—the Federal Reserve—admitted that these shadow banks needed to be studied, in part because they might interfere with the implementation of monetary policy, one of the three features that Corrigan had said made banks special.

inherently vulnerable to liquidity risk, the risk that demands for repayment outstrip [sic] the capacity to raise new liabilities or liquefy assets. BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT'L SETTLEMENTS, LIQUIDITY RISK: MANAGEMENT AND SUPERVISORY CHALLENGES 2 (2008). This is less true of commercial banks insofar as they originate to distribute and more true of other financial firms that have begun to originate and trade credit. See supra notes 41–43 and accompanying text.

57. Id.
58. Id. (contending that E"Trade's story is common among its Wall Street counterparts).
60. This is what is meant by the shadow banking system:
A very large amount of credit was being created outside the banking system. All of the central banks and the other authorities probably did underestimate that and the market itself has been surprised to discover how much these instruments were being used to generate credit outside the banking system.

Credit conditions were much looser than the authorities had believed.

Sean O'Grady et al., Credit Crunch One Year On, THE INDEP., Aug. 5, 2008, at 38 (quoting Sir Howard Davies in group interview on the anniversary of the credit crunch with financial cognoscenti) (internal quotation marks omitted).

63. See, e.g., Ben S. Bernanke, Chairman, Fed. Reserve, Address at The Credit Channel of Monetary Policy in the Twenty-first Century Conference: The Financial Accelerator and the Credit Channel (June 15, 2007), available at http://www.federalreserve.gov/newsevents/speech/bernanke20080615a.htm. Bernanke encouraged academics to study non-bank lenders in the credit market, noting that "[n]onbank lenders may well be subject to the same forces" to which banks are in the credit channel. Id.
At the same time that the traditional business model for banking has faced these centrifugal pressures, it has also been reinforced by one important trend: the decision by some major investment banks to organize as bank holding companies under the Bank Holding Company Act of 1956\textsuperscript{64} rather than as investment banks, as did Goldman Sachs and Morgan Stanley in 2008.\textsuperscript{65} As investment banks, Goldman and Morgan Stanley had been regulated by the Securities and Exchange Commission (SEC).\textsuperscript{66} Electing bank holding company status means that these firms must now conform to an invasive federal system of oversight.\textsuperscript{67} Part of what made the prospect of Federal Reserve oversight more tolerable was that, as bank holding companies, Goldman and Morgan would gain regular access to the special funding and liquidity resources formerly available only to depository institutions, including the power to raise FDIC-insured deposits from customers and to access the Federal Reserve's borrowing programs.\textsuperscript{68} The election also suggests that the business of commercial banking has changed, converging towards investment banking enough that it could make business sense for these two firms to ease into a substantially different legal form.\textsuperscript{69} And as the Federal Reserve absorbs these new registrants, it too will retool its own conceptual resources, finally getting a chance to answer some questions that banking regulators have had for some time about capital markets.\textsuperscript{70}


\textsuperscript{65} See Jon Hilsenrath et al., Goldman, Morgan Scrap Wall Street Model, Become Banks in Bid to Ride Out Crisis; End of Traditional Investment Banking, as Storied Firms Face Closer Supervision and Stringent New Capital Requirements, WALL ST. J., Sept. 22, 2008, at Al.


\textsuperscript{67} See Hilsenrath, supra note 65 ("The Federal Reserve will regulate the parent companies, the Comptroller of the Currency will oversee the national bank charters, and the Federal Deposit Insurance Corp. will likely play a bigger role because the companies are expected to seek much higher volumes of federally backed deposits.").

\textsuperscript{68} Michael J. de la Merced et al., As Goldman and Morgan Shift, a Wall St. Era Ends, N.Y. TIMES BLOG: DEALBOOK, http://dealbook.blogs.nytimes.com/2008/09/21/goldman-morgan-to-become-bank-holding-companies (Sept. 21, 2001, 9:35 pm). The Federal Reserve will also benefit from the conversion of investment banks to bank holding companies. For instance, although it had already emerged as the dominant regulator of financial markets, attracting these two high status registrants added to its cachet. Fed Now Will Regulate Goldman, Morgan as Banking Firms, L.A. TIMES BLOG: MONEY & Co., http://latimesblog.latimes.com/money_co/2008/09/now-wall-street.html (Sept. 21, 2008, 20:42 PST) ("The shift by Goldman and Morgan to banking-company status gives Federal Reserve Chairman Ben S. Bernanke far more power over Wall Street . . . ."). It will now also learn more about segments of the capital markets that had formerly been more of the purview of the SEC. Kara Scannell, SEC, Fed Stake Turf on Oversight; Both Regulators Want to Expand Wall Street Role, WALL ST. J., Jul. 25, 2008, at C3 (explaining the Fed’s desire to expand its regulatory role to investment banks traditionally regulated by the SEC).


\textsuperscript{70} See, e.g., U.S. GOV’T ACCOUNTABILITY OFFICE, RISK-BASED CAPITAL: BANK REGULATORS NEED TO IMPROVE TRANSPARENCY AND OVERCOME IMPEDIMENTS TO FINALIZING THE PROPOSED BASEL II FRAMEWORK
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Periods of financial crisis and market restructuring like the current one put business models to the test. Competitive pressure makes managers think more carefully about their background practices, encouraging conscientious managers to articulate and defend the dominant logic of the firm’s practices or to consider a new approach. Because a business model must reconcile the firm’s strategic goals with the wider market, it requires ongoing adjustment to remain a faithful account of a firm. So far, my discussion has emphasized the changes that have gone on “inside” financial firms. What is also useful about a business model approach for financial firms is that it situates the firm in its dialectical relationship to its regulators and to the market at large, themes to which I now turn.

III. HOW BUSINESS MODELS CONTENT WITH MARKET LIQUIDITY AND REGULATION

Business models for financial firms also face special constraints. First, financial markets are heavily regulated, mostly by a panoply of federal commissions, but also by state banking, securities, and insurance authorities. Second, how financial firms finance themselves is a fundamental aspect of their operations, more so than with manufacturing or non-financial services firms for whom cash and credit are not the principal input. I attach a schematic to express the relationships between decision-making by financial firms, the liquidity dynamics of the credit market,

6–7 (2007) (discussing unresolved questions banking regulators face regarding implementation of Basel II capital market risk requirements).


73. See, e.g., Carlos Ruiz de la Torre, Towards the Digital Music Distribution Age: Business Model Adjustments and Legislative Proposals to Improve Legal Downloading Services and Counter Piracy, 8 VAND. J. ENT. & TECH. L. 503, 504–05 (2006) (discussing how business models for music downloading services changed in response to anti-piracy activities of the music industry and statutory developments).

74. See supra Part II.

75. See infra Part III.


77. Cf. Tobias Adrian & Hyun Song Shin, Liquidity and Leverage 3 (Fed. Reserve Bank of N.Y., Staff Report No. 328, 2008), available at http://www.newyorkfed.org/research/staff_reports/sr328.pdf (introducing the concept of “leveraged financial intermediaries” and arguing that they manage their balance sheet in ways that intensify the boom and bust of the leverage cycle).
and the behavior of federal financial regulators. I see two themes as particularly important: the feedback loop between regulatory interventions and the capital structure of financial firms, and the feedback loop between business models and the liquidity dynamics of the financial market.

A. The Feedback Loop Between Regulatory Intervention and Firm Capital Structure

Crucially, a business model also addresses how a firm is to be financed, i.e., the strategy to be pursued for building and managing the right-hand side of its balance sheet with some combination of borrowing (debt) or selling of ownership interests (shares).

Financing matters for all firms, but the financial structure of banks and other financial firms (how they raise and use debt and equity capital) is particularly relevant because it is through this structure—particularly its liabilities—that financial intermediaries carry out their role of accumulating funds and directing these funds to end users, like consumers looking for a mortgage or a company seeking to finance a buyout. Credit goes to economist Hyman Minsky for emphasizing that the liability structures of financial institutions are, perhaps, the key driver in the overall financial system. Indeed, liquidity is both the input and output for financial intermediaries, unlike manufacturing or service firms that convert cash and credit into other goods or services. The same principle is reflected in federal

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78. See infra App. A. I used this schematic to organize a presentation at the University of Maryland School of Law Journal of Business & Technology Law’s Symposium: The Subprime Meltdown: Causes, Consequences, and Solutions. Please contact the author to receive an electronic version of the schematic.

79. See infra Part III.A.—B.

80. A balance sheet is a point-in-time snapshot of a firm’s economic structure, broken down into assets, liabilities, and equity. See Eugene F. Brigham & Joel F. Houston, Fundamentals of Financial Management 37–39 (10th ed. 2004) (describing the elements and structure of a balance sheet). Shown on the left side of the balance sheet, assets are the firm’s claims against others, typically listed by declining liquidity. See id. at 37. Shown at the top of the right side of the balance sheet, liabilities are third parties’ credit claims against the firm, typically listed by maturity and relative priority. See id. The difference between assets and liabilities is the owners’ account—shareholder’s equity. See id. at 38. It appears below the liabilities and estimates the residue that would be left for the owners in a hypothetical liquidation after satisfaction of creditors’ claims (by convention, then, assets equals the sum of liabilities and owners’ accounts). See id. The firm’s balance sheet also includes the assets and liabilities of any other entity controlled by the firm. See, e.g., Goldman Sachs Group, Inc., Annual Report (Form 10-K), at 110 (Jan. 28, 2008) (demonstrating a balance sheet entitled “The Goldman Sachs Group, Inc. and Subsidiaries, Consolidated Statement of Financial Condition”). A widely used example of a balance sheet can be found on the SEC’s annual 10K form. See, e.g., id.

81. See Adrian & Shin, supra note 77, at 3 (explaining how banks use liabilities to obtain additional capital to lend).

82. See generally Hyman P. Minsky, Stabilizing an Unstable Economy (1986). Although trained as a macroeconomist, Minsky’s emphasis on the liabilities of financial firms situates him closer to institutional studies of firms: “We must develop economic institutions that constrain and control liability structures, particularly of financial institutions and of production processes that require massive capital investment.” Id. at 5 (emphasis added); see also José Gabiondo, Leveraged Liquidity: Bear Raids and Junk Loans in the New Credit Market 6 (FIU Legal Stud. Research Paper Series, Research Paper No. 08-01, 2008), available at http://ssrn.com/abstract=1141955 (interpreting Minsky’s classification of liabilities as a framework for entity and market liquidity risk).

83. Financial intermediation means that banks and other firms that borrow to lend act as the middleman between the ultimate sources and the ultimate uses of funds. Gary Gorton & Andrew Winton, Wharton
banking regulation, which has always recognized that how banks finance themselves bears directly on the products that they will offer others and, thus, on their ability to survive.\textsuperscript{84} For that reason, federal rules limit the type and absolute amount of leveraging a bank can undertake by imposing regulatory capital requirements.\textsuperscript{85}

Since the New Deal, federal law enforced a strict separation between the commercial banking and securities business models.\textsuperscript{86} Commercial banks and some specialized credit institutions like thrifts were able to help finance themselves by taking federally-insured customer deposits.\textsuperscript{87} The federal government took an active interest in these depository institutions and sheltered them from open competition by protecting their franchise rights and offering financial resources through

\textsuperscript{84} See GORTON \& WINTON, supra note 83, at 97 (documenting various changes to federal law regarding bank capital requirements).

\textsuperscript{85} See Gregory C. Menefee, Comment, Securities Activities Under the Glass-Steagall Act, 35 EMORY L.J. 463, 471–73 (1986) (discussing the risks of combining commercial banking with investment banking and reasons why Congress required the two activities be separated).

exclusive non-market facilities like the Federal Reserve's discount window.88 In exchange for these special funding rights, depository institutions refrained from certain lines of business, notably securities underwriting, market-making, and speculation.89 To conduct those riskier activities, a depository institution had to organize as an investment bank.90 As an investment bank, it would still be regulated—by the SEC rather than by federal banking authorities—but investment banks received no preferential treatment when it came to their funding and liquidity.91

Enterprising firms (and accommodating regulators, notably the Comptroller of the Currency) found ways to finesse the separation between commercial and investment banking.92 Commercial banks, for example, staked out a profitable business line as counterparties for clients by writing financial derivatives, instruments that bore at least a passing resemblance to those regulated by the SEC.93 These cross-over business lines, though, took place on the margin because the statutory divide between commercial and investment banking survived legal, regulatory, and policy challenges.94 This is not to say that markets respected the dividing line, given that practices like securitization and the rise of secondary markets for credit helped to blur the line between the conventional credit underwriting that had been the purview of banking agencies and the capital markets regulated by the SEC.95

88. See, e.g., 12 U.S.C. § 347b(a) (allowing Federal Reserve banks to make loans to member banks at the prevailing Federal Reserve discount rate).
89. Depository institutions did not "trade" their special treatment by promising not to engage in investment bank activities; they were prohibited from doing so by law. See Glass-Steagall Act of 1933, Pub. L. No. 73-66, 48 Stat. 162 (codified as amended in scattered sections of 12 U.S.C).
91. In contrast to depository institutions which received significant preferential treatment. See supra note 90 and accompanying text.
93. Eugene A. Ludwig, Remarks before the Inst. of Int'l Bankers, reprinted in International Securities Markets app. 8 at 384, 385 (Practising L. Inst., 1994) (discussing the use of swaps, "a tool to change their floating rate obligations into fixed rate obligations and vice versa[,]" by banks as a means of intermediation); James J. Baechle, Expansion of Bank Securities Activities, in Banking Law and Regulation 241, 254–64 (Practising L. Inst., 1987) (reviewing several rulings that "permit[] non-bank subsidiaries of a bank holding companies [sic] to engage in securities placement and underwriting activities provided the subsidiaries are not in violation of section 20 of the Glass-Steagall Act"); see also Sec. Indus. Ass'n v. Bd. of Governors of the Fed. Reserve Sys., 807 F.2d 1052 (D.C. Cir. 1986) (finding that commercial banks do not violate the Glass-Steagall Act by placing commercial papers as such actions are not the same as selling securities).
95. See Stephen J. Costino, Swimming in New Waters: Bank Participation in Securitized Loan Pools, 66 UMKC L. Rev. 543, 546 (1997) (explaining the beginnings of commercial bank securitization of home mort-
In 1999, Congress abolished many of the major parts of the divide between commercial and investment banking with the Gramm-Leach-Bliley Act, making it possible for financial firms to organize themselves in conglomerates that more closely resembled the universal banking that had prevailed in firms like the House of Morgan before the New Deal. This wave of deregulation coincided with other trends that would combine to fuel the credit cycle that had begun before the Gramm-Leach-Bliley Act and that would not contract until the summer of 2007. The stage had been set for the shifts in business models that are the focus of this essay.

From the perspective of a lender, assets include loans made to customers, since these loans are financial claims of the lender against the customer who has a contractual duty to provide the lender with value. As the financial condition of many customers declined, the financial quality of these loan assets also declined. To boost sagging values, the government might have propped them up, as Chairman Bernanke had suggested when arguing for buying them from the banks at a dramatically higher price that reflected their hypothetical long-term value rather than their value as marked-to-market. Instead, regulators opted to intervene in how

97. See RON CHERNOW, THE HOUSE OF MORGAN: AN AMERICAN BANKING DYNASTY AND THE RISE OF MODERN FINANCE (2001). The operative part of a business model is strategic, involving a wager about future outcomes that hang in the balance. See, e.g., Rob Garver, Bank of America is First to Seek Approval to Move Insurance Unit to HQ City, AM. BANKER, Dec. 29, 1999, at 2 ("Bank of America’s move may simply have been the one that made sense from a management perspective."). It was a strategic view about future outcomes that led Citigroup and Travelers Insurance to merge in 1998, a view that assumed that it would be profitable to combine banking and insurance businesses because of a scope efficiency. But see Sean P. Cover, Citibank-Travelers Merger was a Big Mistake, TREASURY BUS., Jan. 12, 2009, available at http://treasurybusiness.com/2009/01/12/citibank-travelers-merger-was-a-big-mistake (stating that the merger was intended to create an "international financial powerhouse" but that the results never materialized).
101. See Rachel Beck, Risks Abound with Fed-backed Bear Stearns’ Loan, TULSA WORLD, Apr. 6, 2008, at E5. Bernanke has even gone as far as to say that if the government were to buy the sagging assets in a calculated way, eventually the government would make a profit on the venture. Id.
banks finance themselves (as reflected on the right-hand side of their balance sheet).\(^\text{102}\) This illustrates how federal responses to the credit crisis have emphasized adjustments to the capital structure of financial firms rather than to their asset portfolios.\(^\text{103}\) This has involved both liability financing at preferred rates with and without recourse, equity investment through preferred stock, and investment in stock options of these recapitalized financial firms.\(^\text{104}\) In effect, these interventions amounted to a partial recapitalization of the financial sector, although the Emergency Economic Stabilization Act of 2008 ("Stabilization Act") was marketed to Main Street as a benefit for the average consumer.\(^\text{105}\)

At first, regulators responded to the financial crisis as in the past by making debt more cheaply available through the discount window and other loan facilities.\(^\text{106}\) The cost of debt financing was cheapened by lowering interest rates (which the Federal Reserve did seven times between September 18, 2007 and April 30, 2008) for federal funds and discount window borrowing, facilities that directly benefit only the bank members of the Federal Reserve.\(^\text{107}\) Cheap debt financing was also extended to investment banks.\(^\text{108}\) Cheap equity capital was also made available to financial firms using the statutory authority conferred to the Treasury and the Federal Reserve under the Stabilization Act, which created the Troubled Assets Relief

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104. See Fed's Toolkit, supra note 103.

105. See Henry M. Paulson, Jr., Sec'y, U.S. Dep't of Treasury, Testimony Before the Senate Banking Committee on Turmoil in US Credit Markets: Recent Actions Regarding Government Sponsored Entities, Investment Banks and other Financial Institutions, (Sept. 23, 2008), available at http://www.treas.gov/press/releases/hpl153.htm. Secretary Paulson indicated that the Act was a "bold approach [that] will cost American families far less than the alternative" and that the "troubled asset purchase program on its own is the single most effective thing we can do to help homeowners, the American people and stimulate our economy." Id.

106. See Bernanke, supra note 102 (indicating that at first the federal government tried to ease the credit crunch by lowering the discount and federal fund rates); Fed's Toolkit, supra note 103 (giving a timeline of the different activities federal regulatory agencies have implemented to ameliorate the crisis).


108. See Allan Sloan, On the Brink of Disaster, FORTUNE, Apr. 14, 2008, at 78, 82 (analyzing federal regulatory responses to the credit crisis). The Federal Reserve added three new credit facilities after the effects of the credit crunch beginning in 2007 became more serious:

The three newbies—the term auction lending facility, the primary-dealer credit facility, and the term securities lending facility—total more than half-a-trillion dollars, with more if needed. Much of this money is available not only to commercial banks [Fed members], but also to investment banks, which normally aren't allowed to borrow from the Fed.

Id.
Program ("TARP"). When lobbying for TARP, the Treasury and its allies had said—as memorialized in the statutory title—that appropriated funds would shore up the value of bank assets, that way stabilizing the firms and, indirectly, the credit market. No asset purchases had materialized, though, by the end of 2008 because the administration had decided to use TARP funds to buy preferred stock and options in financial institutions. This about-face came as a surprise for many and is part of the reason why oversight reports by the Government Accountability Office and the Congressional Oversight Panel have criticized TARP.

As of December 16, 2008, the U.S. Department of the Treasury had spent about $170 billion on preferred stock and options in financial institutions. At first, these institutions had squawked at the terms demanded by Treasury as a condition to buying preferred shares; these protests, though, seem disingenuous given how badly these banks needed to de-leverage and how much more favorable than market terms the Treasury's conditions were. Indeed, the preferred stock issued to the Treasury reassured the bondholders of these firms and the chastened credit rating agencies that were standing ready (too late, it would seem) to downgrade the credit ratings of these firms. Without the Treasury infusion, some or much of the com-

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110. See Press Release, U.S. Dep't of the Treasury, Interim Assistant Secretary for Financial Stability Neel Kashkari Review of the Financial Market Crisis and the Troubled Assets Relief Program, HP 1349 (Jan. 13, 2009), available at http://www.ustreas.gov/press/releases/hp1349.htm (hereinafter Treasury Review) (explaining that when asking Congress for the TARP funding, the Treasury "focused on a two part plan: one, our initial, market-based plan to purchase illiquid mortgage assets as a means to attract private capital to the financial system, and two, providing sufficient flexibility to deal with any individual contingencies that arose.").
111. See U.S. Dep't of the Treasury, TRANSACTION REPORT, CAPITAL PURCHASE PROGRAM (2008), available at http://www.ustreas.gov/initiatives/eesa/docs/CPPTransactionReportDec16.pdf [hereinafter Transaction Report]; see also Treasury Review, supra note 110 (explaining that the original plan to purchase mortgage assets was changed to "[p]urchasing equity in healthy banks around the country [because it] would be a faster and more direct way to inject much-needed capital into the system and restore confidence compared with asset purchases.").
113. See Transaction Report, supra note 111.
mon stock value (the residuary value) of these firms would have evaporated, as it had already begun to do.  

Besides, the preferred stock gave the Treasury virtually none of the voting and governance benefits that come with common stock.

B. The Feedback Loop Between Market Liquidity and Firm Asset and Liability Structure

The second important feedback loop is that between the liquidity dynamics in the open market and the liquidity management practices of financial firms, because liquidity became important during this crisis and because these market liquidity dynamics were relatively new and quite potent in both the primary and secondary credit markets. Even loan origination in the primary market reflected the tug of secondary market liquidity because it lulled lenders away from rigorous underwriting standards to the extent that an originating lender expected that the loan could be dumped in the secondary market. As it turned out, these great expectations about secondary markets were justified on the boom-side of the credit cycle (that is when Ponzi schemes work), but not as the bubble was bursting. These expectations also got a boost from credit default swaps issued by investment-grade firms (notably American Insurance Group ("AIG"), but there were others). Originating lenders and investors that had purchased structured credit

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119. Christopher E. Ware & Laura Gramling Perez, Main Street Meets Wall Street: The Mortgage Meltdown, Wis. L. Rev., Dec. 2008, at 1, 10, available at http://www.wisbar.org/AM/Template.cfm?Section=Wisconsin_Lawyer&template=/CM/ContentDisplay.cfm&contentid=68942 ("At its worst, securitization shifts default risk away from those who can best assess it, encourages lenders (and the brokers they hire) to write risky loans, and leads to fraud.").

120. See id. at 9-11 (arguing that the housing boom and bust occurred when the "securitization process began to work in reverse").

121. See Steven L. Schwarz, Systemic Risk, 97 Geo. L.J. 193, 220-21 (2008). Schwarz defines a credit-default swap as an agreement under which one party agrees, in exchange for receiving a fee paid by a second party, to assume the credit risk of certain debt obligations of a specified borrower or other obligor. If a 'credit event' (for example, default or bankruptcy) occurs in respect of that obligor, the first party will either (i) pay the
products in the secondary market used these swaps to insure the value of their credit exposures. So long as the swaps counterparty had an acceptable credit rating, swaps buyers could carry these credit exposures at their par value rather than at a marked-to-market discount that reflected ongoing deterioration in the borrower's credit. In this way, swaps postponed the day of reckoning. Adding uncertainty to the picture were indeterminate amounts of liquidity in relatively unregulated firms, such as sovereign wealth funds and hedge funds. These liquidity pools intensified financial euphoria by making it seem that markets were, indeed, "awash" with capital. Also, overheated secondary markets encouraged the mistaken idea that robust secondary trading of a firm's debt (a form of market liquidity) was a proxy for the firm's own liquidity, i.e., its ongoing ability to timely meet its obligations to make maturing payments.

And this market liquidity encouraged firms to borrow more heavily than before because liquid trading markets meant easier credit for firms. After all, financial firms' lenders also over-relied on secondary market euphoria when underwriting questionable credits. Deep market liquidity may also have encouraged firms to over-value some of their financial assets, because the upside of a bubble can produce financial "contagion" in terms of distorting asset values upward, just as the

second party an amount calculated by reference to post-default value of the debt obligations or (ii) buy the debt obligations (or other eligible debt obligations of the obligor) for their full face value from the second party.

Id. (internal citation omitted).

122. Id. (claiming that a credit-default swap is the "most widely used derivative instrument" for the purpose of decreasing investor risk).

123. See, e.g., Robert O'Harrow Jr. & Brady Dennis, The Beautiful Machine, Wash. Post, Dec. 29, 2008, at A1 (stating that AIG's AAA credit rating "sent a resounding signal to clients that they could always sleep well at night, that AIG was in no danger of failing"); John C. Hull & Alan White, Valuing Credit Default Swaps I: No Counterparty Default Risk 3 (NYU Working Paper No. FIN-00-021, 2000), available at http://ssrn.com/abstract=1295226 (stating that swaps buyers have "the right to sell a particular bond issued by the [seller] for its par value when a credit event occurs").

124. See, e.g., Mathew Phillips, The Monster that Ate Wall Street, Newsweek, Oct. 6, 2008, at 46 ("Since credit default swaps are privately negotiated contracts between two parties and aren’t regulated by the government, there’s no central reporting mechanism to determine their value.").

125. See, e.g., Stephen Labaton, Agency’s ’04 Rule Let Banks Pile Up New Debt, and Risk, N.Y. Times, Oct. 3, 2008, at A1 (observing how changes to the SEC’s regulation of Wall Street allowed investment institutions to “unshackle billions of dollars held in reserve as a cushion against losses on their investments").


128. Cf. Binyamin Appelbaum & Ellen Nakashima, Banking Regulator Played Advocate Over Enforcer, Wash. Post, Nov. 23, 2008, at A1 (finding that, encouraged by the housing boom, lenders were providing loans to previously unqualified buyers).
downside can distort values downward. On the asset side of the firm’s balance sheet, escalating asset values in liquid secondary market trading made it easier for financial firms to “assume away” the possibility that the bubble would ever burst, encouraging the growth of financial products created from complex mathematical finance models that had never been tested in a significant market downturn.

As firms adjusted their business practices to account for market liquidity, regulators also began to experiment with their own interventions on behalf of financial stability. From the very beginning, these interventions sought to restore market liquidity, a tacit admission to the fact that, after the OTD model and the rise of non-bank financial institutions, whether the credit trading market was sufficiently liquid was as much a regulatory concern as the safety and soundness of particular institutions. That is, regulators would protect not only firms that were too big to fail, but also market mechanisms that were too important to become locked-up. So the Federal Reserve targeted neuralgic liquidity points, including AIG, whose large portfolio of credit default swaps supported the assets of banks that could afford no more sagging. Another liquidity pressure point was the guarantee of money market mutual funds that, along with commercial paper and repurchase agreements, had always been a citadel of market liquidity. So, it would seem that many non-bank financial institutions were now “special.”

Granted, the Federal Reserve did not reach this conclusion easily. At first, it stuck to its familiar pattern of cutting interest rates and sounding a cautious note about

129. Cf. Laura E. Kodres & Matthew Pritsker, A Rational Expectations Model of Financial Contagion, 52 J. Fin. 769, 770 (2002) (“[P]rice changes in one market are perceived as having implications for the values of assets in other markets, causing their prices to change as well.”).


133. Id.


135. Investopedia.com, Introduction to Money Market Mutual Funds, http://www.investopedia.com/articles/mutualfund/04/081104.asp (last visited Feb. 1, 2009) (“Money market mutual funds offer ultimate safety and liquidity. This means that investors will have an expected sum of cash at the very moment that they need it.”).
future rate cuts to avoid inflationary expectations.\textsuperscript{136} When these rate cuts had little effect, the Federal Reserve took a big step by letting an investment bank tap the discount window, albeit through a Federal Reserve member bank conduit.\textsuperscript{137} Only when this unconventional use of the discount window failed to restore much confidence in the credit market did federal regulators join ranks to call for a more radical intervention.\textsuperscript{138} It came in the form of the Stabilization Act,\textsuperscript{139} which, other than authorizing the public borrowing needed to finance the Act's authorities, said little about how the appropriated funds would be used, suggesting that economic theory was to take a back seat to transactional pragmatism.\textsuperscript{140} If the markets could be stabilized (at virtually any fiscal cost, it seemed), the theory behind the interventions would follow.

\textbf{IV. IMPLICATIONS}

As the financial crisis continues to unfold (and, eventually, resolve), many explanatory frameworks will compete for the attention of academics and regulators.\textsuperscript{141} Here, I have argued that a business model approach helps to extract insight from the evolving structure of financial firms and to situate questions about regulatory policy in the dynamic context of actual commercial practices.\textsuperscript{142} Because it puts firm structure in the context of interdependent variables, this approach emphasizes how these variables influence each other in reciprocal fashion: the firm acts strategically in the market, which comes to reflect the aggregate of firm action; yet market constraints frame (and limit) the firm’s strategic freedom of action.\textsuperscript{143}

The variable that I emphasized was liquidity but the analysis could include other factors too, for example the participation of foreign lenders and borrowers in a local credit market.\textsuperscript{144} I focused on how these firms finance themselves because it is through their borrowing, in particular, that financial intermediaries serve their so-

\begin{itemize}
\item \textsuperscript{140} Id. See also Letter from Group of Economists to Congress (Sept. 24, 2008), available at http://faculty.chicagogsb.edu/john.cochraneresearch/Papers/mortgage_protest.htm (protesting the ambiguity of the bailout bill).
\item \textsuperscript{141} See supra Part I.
\item \textsuperscript{142} See supra Part II.
\item \textsuperscript{143} See supra Part II.
\item \textsuperscript{144} See supra Part II.B.
\end{itemize}
cial role of brokering the flow of funds.\textsuperscript{145} Whether or not this brokering goes on will probably determine whether banks are still special and whether non-bank firms come to be viewed as special too.\textsuperscript{146} Although the jury is still out on this question as far as any major reform of banking law, the Federal Reserve and the Treasury have been treating a wider range of firms than before as special financial intermediaries.\textsuperscript{147} In time, though, regulators too will have to stabilize their responses.\textsuperscript{148} When the dust has settled, a new conceptual model of the credit market will have emerged, one that restates the business of banking.

\textsuperscript{145} See supra Part III.A.
\textsuperscript{146} See supra Part II.
\textsuperscript{147} See supra Parts II.–III.
\textsuperscript{148} See supra Part III.A.
So Now Who is Special?

APPENDIX A