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REFORMING THE SHORT-TERM FUNDING MARKETS

Morgan Ricks

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Harvard Law School
Cambridge, MA 02138

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Reforming the Short-Term Funding Markets

Morgan Ricks*

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Abstract

Traditionally, governments have established licensing requirements for the issuance of important classes of monetary instruments—namely, deposit obligations and bank notes. Their issuance has been a legal *privilege*. This article proposes a similar legal regime for other short-term IOUs, which present similar problems. The approach would be functional rather than formalistic. The article sketches a prototype of such a regulatory system. In addition, the article offers a critical analysis of current reform initiatives pertaining to the short-term funding markets. It finds reasons to doubt that they will be effective. It proposes an alternative, coordinated regulatory approach that could be implemented under current U.S. law.

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Introduction

A coherent regulatory approach to the short-term funding markets has yet to emerge. Instead, recent reform initiatives have proceeded in a piecemeal and fragmentary fashion. There is a real danger that recent and pending reforms, even if pursued vigilantly, will prove to be inadequate.

This paper outlines a proposal for a *unified* regulatory approach to the short-term funding markets.¹ The proposal—referred to herein as “licensed money”—would address these markets as a class, on a functional basis. Under the licensed money system, regulators would establish the terms and conditions under which financial institutions would be permitted to rely heavily on short-term funding. In other words, the issuance of short-term IOUs (with certain exceptions) would become a legal *privilege* rather than a legal right.

This is, of course, the traditional regulatory approach to the issuance of important classes of monetary instruments. Governments have routinely established licensing requirements for the issuance of deposit obligations and, previously, bank notes. Indeed, their issuance has virtually always been a legal privilege. The licensed money system would adopt this basic approach for other short-term funding instruments. The regime would be functional rather than formalistic.

This paper will present the licensed money approach in a strong form and a weak form. The strong form would require new legislation. It is presented here as a prototype, in order to clarify objectives. The weak form could be implemented under existing U.S. law, but it would be less effective.

The core elements of the regime can be described succinctly. Under the proposed system, financial firms would be required to obtain a license in order to issue significant quantities of *money-claims*.² Licenses would be granted on an entity-by-entity basis. To qualify for a license, an entity would need to abide by portfolio constraints and capital requirements. It would also submit to supervision. In addition, licensed entities would pay ongoing, risk-based fees to the monetary authority. Essentially, these charges would be “commitment fees” for access to public liquidity support. The monetary authority would place a cap on the quantity of money-claims that licensed entities could issue, and it would adjust this cap in the conduct of monetary policy. In the event of insolvency, licensed entities would enter a special resolution regime that would enable regulatory authorities to honor money-claims while impairing or extinguishing other debt and equity claims.

¹ This article draws on prior work by the author. *See* Ricks (2011a, 2011b, 2012).

² The term “money-claim” is used herein as a generic reference to very short-term, fixed-principal IOUs, excluding trade credit. This term raises a number of definitional issues, which are discussed in Part III below.

Entities *without* licenses would be free from this regulatory system. Crucially, however, unlicensed entities would be precluded from relying heavily on short-term funding. In practical terms, they would be required to “term out” their funding structures: They would finance themselves in the debt and equity capital markets, not the money markets. This financing structure would make unlicensed entities much more resistant to sudden liquidity crises. In the event of failure, unlicensed entities would enter ordinary bankruptcy proceedings. Arguably, they could credibly be made ineligible for public liquidity support.

In its strong form, the licensed money approach would constitute a unified regime for the issuance of monetary instruments. It would subsume the existing U.S. deposit-banking system; there would be no distinct regime for issuers of deposit obligations. Instead, there would be a single regulatory system for the issuance of money-claims, of which deposits are just one variety. Licensed entities would be required to abide by a uniform set of terms and conditions. In effect, these licensed entities would be engaged in a partnership with the state for the issuance of the broad money supply.

What types of entities would be eligible for licenses? Here, the regime’s portfolio limitations would play the decisive role. Licensed entities would be largely confined to diversified portfolios of credit assets (loans and bonds), just as deposit-issuing entities are so confined under current law.³ Regulators would seek to limit licensed entities’ exposures to speculative credits. The precise contours of these limitations would be determined by the monetary authority through a calibration analysis described in Part III below.

Importantly, certain business models would clearly be ineligible for licenses. For example, securities dealers (market-making investment banks) would not come close to meeting the regime’s portfolio restrictions. Such entities would therefore be precluded from relying heavily on short-term funding. To be clear, the regime would not necessarily prohibit *affiliations* between licensed and unlicensed entities. For example, a securities dealer and a licensed money-claim issuer might be owned by a single holding company, subject to appropriate restrictions on affiliate transactions. However, the dealer entity would be required to term out. Other business models, such as hedge funds, money market mutual funds, and investment conduits, would also be affected by the licensed money approach. These topics are discussed in Part III.

It should be apparent that the licensed money system bears some resemblance to the existing U.S. deposit-banking regime. The critical distinction is that the licensed money system

³ The licensed money system should not be understood as a form of “narrow banking.” That term refers to proposals that would significantly narrow the range of assets in which deposit-issuing entities may invest. *See, e.g.,* Litan (1987). By contrast, the licensed money regime’s portfolio constraints would not *necessarily* be any more restrictive than those currently applicable to deposit-issuing entities (which are described in Part III). More fundamentally, unlike narrow banking proposals, the licensed money system would require a license for the issuance of *non-deposit* money-claims.

acknowledges the monetary characteristics of short-term IOUs that are not styled as “deposits.”⁴ Like deposit liabilities, these other short-term IOUs have shown themselves to be susceptible to damaging liquidity crises.⁵ The proposed regime would therefore abandon our current regulatory system’s formalistic and anachronistic focus on deposit liabilities. It would embrace a modern, functional conception of “moneyness.”

The licensed money approach would make possible a substantial simplification of our existing financial regulatory architecture. It would bring the broad money supply—the universe of cash and equivalent instruments⁶—under the more direct control of the monetary authority. It would establish the perimeter of money creation and facilitate the conduct of monetary policy. And it would substantially reduce the risk of systemic liquidity crises. The proposal would also have certain drawbacks, which are discussed below.

This paper has five parts. Part I provides a brief overview of the dollar-denominated short-term funding markets. These markets were at the center of the recent financial crisis. Part II examines recent and pending reforms pertaining to these markets. It finds reasons to doubt that they will succeed. Part III describes the licensed money approach in its strong form and addresses some objections. Part IV describes the weak form—a coordinated approach that would be feasible under current U.S. law. Part V discusses further implications and conclusions.

I. The Short-Term Funding Markets: An Overview

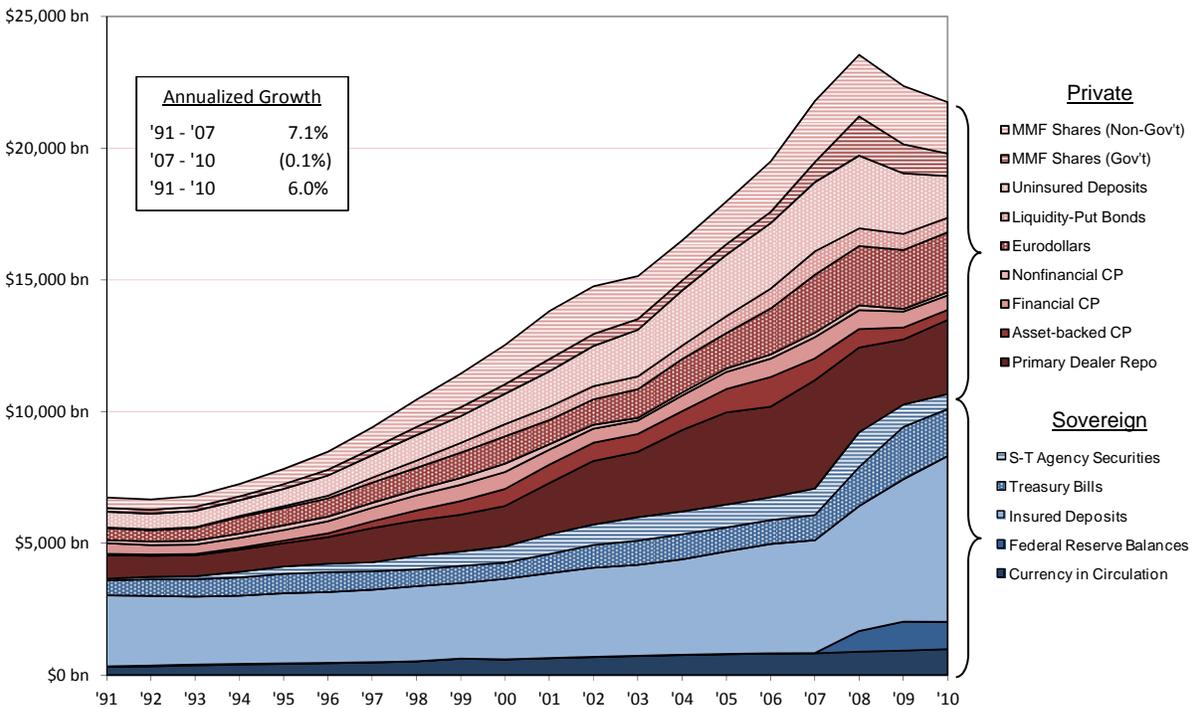
This Part provides an overview of the market for U.S. dollar-denominated money-claims—often referred to as the “funding markets,” the “cash markets,” or the “money markets.” The following figure depicts the evolution of these markets over the past two decades:

⁴ For a discussion of these monetary characteristics, see Ricks (2011a). *See also* Greenwood, Hanson, and Stein (2012).

⁵ This is one way of expressing the “shadow banking” problem. The seminal account is Gorton (2010). This paper departs somewhat from the shadow banking literature in that it places much less emphasis on the composition of the asset side of the balance sheet. Short-term liabilities are predominantly used to fund credit portfolios; whether those portfolios consist of *securitized* credit is treated as incidental here.

⁶ Under generally accepted accounting principles, the term “cash equivalents” refers to “short-term, highly liquid investments that are both: (a) Readily convertible to known amounts of cash [and] (b) So near their maturity that they present insignificant risk of changes in value because of changes in interest rates.” STATEMENT OF CASH FLOWS, Statement of Fin. Accounting Standards No. 95, § 6 (Fin. Accounting Standards Bd. 1987).

Figure 1: Gross Money-Claims Outstanding⁷



In this figure, the top nine series represent *private* money-claims, in that the issuer (promisor) is a private firm, not a public institution. The bottom five series are *sovereign* money-claims, meaning that the federal government is either issuer or guarantor. All of these instruments are short-term, fixed-principal, dollar-denominated IOUs. The figure depicts the supply of broad money: the universe of cash and equivalent contracts.

As the figure shows, the market for dollar-denominated money-claims is huge, exceeding \$20 trillion on a gross basis. It should be emphasized that this is a *gross* figure: Every distinct money-claim contract is counted. That is to say, the figure does not subtract those money-claims that are held by issuers of money-claims. So, for example, the figure includes money market mutual fund (MMF) shares, even though MMF portfolios consist mostly of other instruments that appear in the figure.⁸ Unfortunately, the data required to calculate a net figure is not

⁷ Sources detailed in Appendix A. The figure shows U.S. dollar-denominated short-term IOUs with original maturities of one year or less. In certain instances—particularly Eurodollars—extrapolation was required due to the absence of reliable data. (Extrapolation methodologies are described in the appendix.) This figure uses a one-year maturity cutoff, following market convention for the “money market.” However, these instruments are heavily concentrated at the short end of the range. A large majority mature inside of one month, and probably a majority mature within one *week*. “Liquidity-Put Bonds” refers to auction-rate securities, variable-rate demand notes, and tender option bonds. The other categories are self-explanatory.

⁸ A net figure would exclude MMF shares as double counting. It is worth pointing out, however, that MMFs are not simply pass-through vehicles. They are engaged in maturity transformation. They issue demandable IOUs, whereas the weighted average maturity of their assets may be as high as 60 days. So their shares are in fact distinct money-claims.

available. At any rate, this market is extremely large, whether considered on a gross or a net basis.

It is useful to look separately at the private and sovereign components of the money-claim universe:

Figure 2: Gross Money-Claims Outstanding – Private

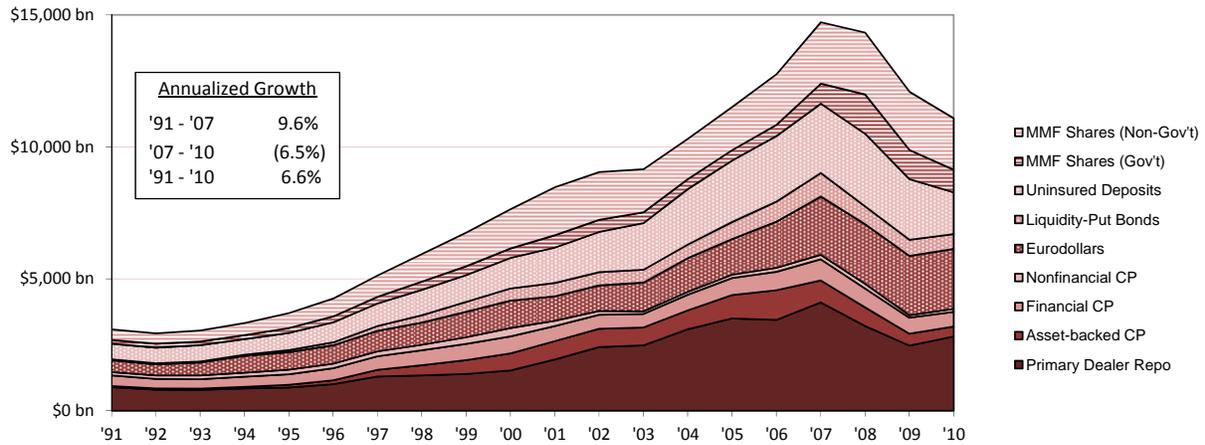
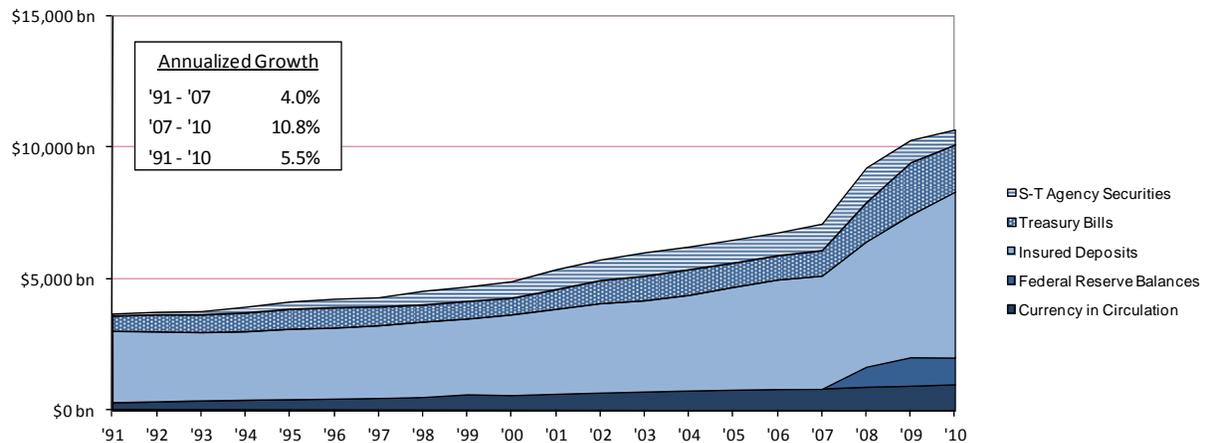


Figure 3: Gross Money-Claims Outstanding – Sovereign

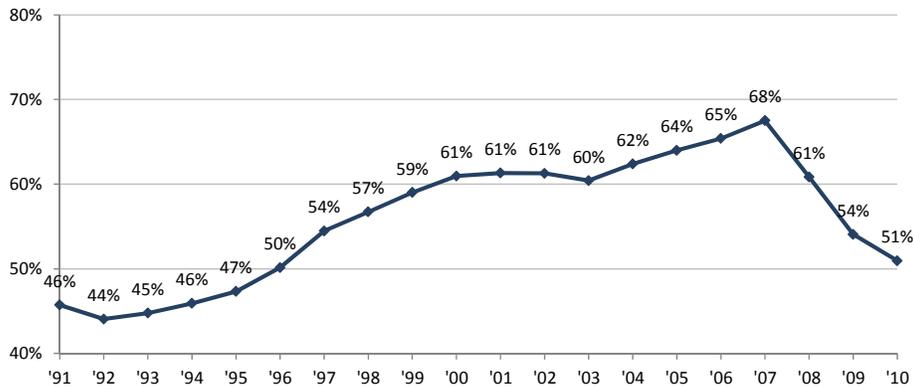


Over the 1991 to 2007 period, private money-claims grew at an annualized rate of 9.6%, far outstripping the 4.0% growth rate of sovereign money-claims over the same period. This trend reversed itself in 2008 with the government’s intervention during the financial crisis. Interestingly, most of the crisis-related growth in sovereign money-claims came not from the Federal Reserve’s balance sheet expansion, but rather from emergency increases in deposit

insurance coverage.⁹ Still, as shown in Figure 1, the post-crisis growth in sovereign money-claims was insufficient to offset the massive contraction in private money-claims over the same period.

During the years preceding the crisis, private money-claims came to represent a steadily increasing share of the total. The following figure illustrates this trend and its sudden reversal with the onset of the crisis:

Figure 4: Gross Money-Claims Outstanding – Private / Total

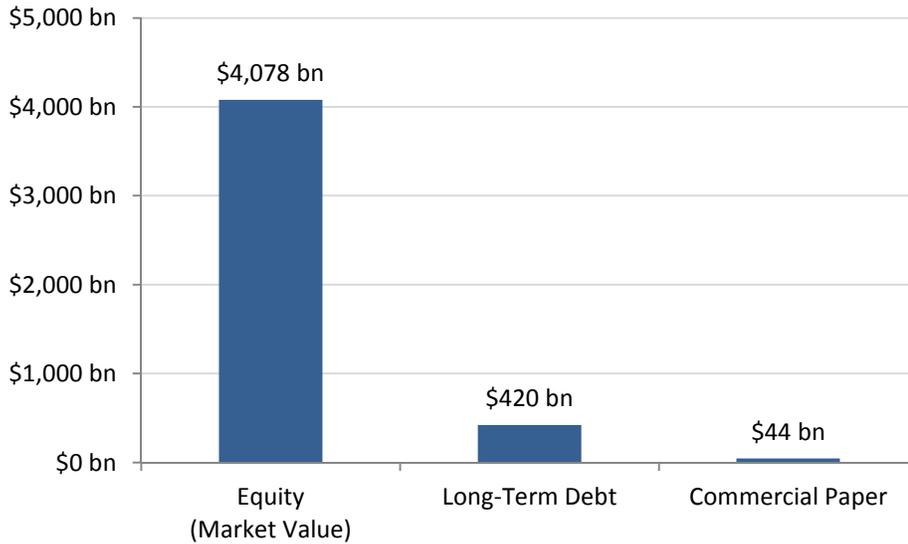


By 2007 private money-claims had come to represent 68% of the total, up from 46% at the start of the period. This shift can be understood as an increasing privatization of the broad money supply.

The figures above highlight another surprising fact: the trivial size of the *nonfinancial* commercial paper market. It is commonly supposed that the short-term funding markets consist largely of commercial paper issued by real-economy firms to finance their working capital. This view is mistaken. The short-term funding markets are dominated by financial and sovereign issuers, not commercial or industrial ones. To underscore this point, the following figure shows selected sources of financing for the twenty-five largest *nonfinancial* U.S. public companies:

⁹ This increased coverage was attributable to two policy measures: first, the increase in the deposit insurance cap from \$100,000 to \$250,000 under the Emergency Economic Stabilization Act of 2008, Pub.L. No. 110-343, § 136; and second, the FDIC’s emergency Transaction Account Guarantee program, which temporarily removed the deposit insurance cap for noninterest-bearing demand deposit obligations.

Figure 5: Selected Sources of Financing for the Top 25 U.S. Nonfinancial Public Companies¹⁰



It is evident that commercial paper is not a significant source of financing for corporate America today.

The short-term funding markets were at the epicenter of the recent financial crisis. Liquidity crises arose in virtually every category of privately issued money-claim. Furthermore, as shown in the following table, almost every category of private money-claim was targeted with emergency stabilization programs in 2008:

¹⁰ Source: Company 10-K filings; Bloomberg. The figure reflects the twenty-five largest nonfinancial public companies as measured by equity market capitalization. General Electric is excluded on account of its very large financial operations (GE Capital). Equity market values are as of year-end 2011.

Table 1: The Policy Response to the Financial Crisis

<i>Private Money-Claim Category</i>		<i>Emergency Policy Measures</i>
Money market mutual fund shares	▶	MMF Guarantee (Treasury) Money Market Investor Funding Facility (Fed)
Uninsured Deposits	▶	Transaction Account Guarantee (FDIC) Term Auction Facility (Fed) Deposit insurance limit increase (EESA ¹¹)
Liquidity-Put Bonds	▶	N/A
Eurodollars	▶	Central Bank Liquidity Swaps (Fed)
Financial Commercial Paper Nonfinancial Commercial Paper	▶	Temporary Liquidity Guarantee Program (FDIC) Commercial Paper Funding Facility (Fed)
Asset-Backed Commercial Paper	▶	ABCP MMF Liquidity Facility (Fed)
Primary Dealer Repo	▶	Primary Dealer Credit Facility (Fed) Term Securities Lending Facility (Fed)

In addition, the key emergency policy measures that are not reflected in this table—TARP capital infusions and the FDIC’s massive debt guarantee program for longer-term debt—were primarily employed to stabilize diversified financial firms that rely heavily on short-term funding. It is no exaggeration to say that practically the *entire* emergency policy response to the recent crisis was aimed at stabilizing the short-term funding markets.

II. Shortcomings of Recent and Pending Reforms

While the short-term funding markets played a central role in the recent financial crisis, they were not a major focus of the Dodd-Frank Act.¹² Nevertheless, in the aftermath of the crisis, several reform initiatives have been undertaken in this area by regulators in the United States and abroad. These include:

¹¹ Emergency Economic Stabilization Act of 2008, Pub.L. No. 110-343, § 136.

¹² Pub. L. No. 111-203, 124 Stat. 1376 (2010).

1. *SEC MMF Reforms*. In 2010, the SEC adopted updated standards for MMFs, including new portfolio constraints.¹³ More recently, the SEC has been considering fundamental structural reforms for MMFs, such as capital requirements, redemption holdbacks, and a floating share price.
2. *Basel III Liquidity Standards*. The Basel Committee has adopted new liquidity standards for internationally active banks.¹⁴ These are scheduled to take effect in the coming years. Essentially, these standards require covered firms to hold liquid asset buffers against certain short-term liabilities.
3. *FRBNY Repo Reforms*. In 2009, the Federal Reserve Bank of New York (FRBNY) organized the Tri-Party Repo Task Force, a private sector group whose purpose is to consider and adopt industry reforms in the tri-party repo market. The task force has issued a series of recommendations.¹⁵

Each of these initiatives represents a concrete effort by regulators to reduce instability in the short-term funding markets. However, there are at least four reasons to doubt that these and similar measures will be very effective.

First, their coverage of the short-term funding markets is far from complete. As noted in Part I above, the recent crisis witnessed panics in virtually *every* area of the short-term funding markets—including conduit (ABCP) financing, short-term bilateral repo, Eurodollar obligations, prime brokerage free credit balances, finance company commercial paper (e.g., GE Capital), liquidity-put bonds, securities lending programs, and, in some cases, uninsured deposit obligations. Each of these markets is addressed only indirectly, or not at all, by existing reform initiatives. Furthermore, the short-term funding markets obviously are not static. They should be expected to evolve in unforeseen ways in order to exploit gaps in regulatory coverage.

Second, the initiatives listed above are largely uncoordinated and, in fact, may work at cross-purposes. Consider the tension between the FRBNY’s tri-party repo initiatives and the SEC’s MMF reforms. The repo task force report observes that “[d]ealers should lengthen and stagger the maturity profile of their financing” and “mak[e] greater use of term [repo] funding where available”¹⁶—in other words, shift from short-term to longer-term repo funding. The SEC’s reforms, by contrast, preclude MMFs from allocating more than five percent of their assets to “illiquid” securities, which are defined as securities “that cannot be sold or disposed of

¹³ See U.S. Sec. & Exch. Comm’n, *Money Market Fund Reform*, Final Rule, 75 Fed. Reg. 10060 (Mar. 4, 2010).

¹⁴ See BCBS (2010).

¹⁵ See Tri-Party Repo Task Force (2010).

¹⁶ Tri-Party Repo Task Force (2010).

in the ordinary course of business within seven calendar days” at approximately carrying value.¹⁷ In short, while the largest repo *issuers* are being pressured to *lengthen* repo maturities, the largest repo *investors* are being required to *shorten* their portfolios. The tension between these divergent regulatory objectives has already given rise to regulatory arbitrage. Large financial firms have begun issuing longer-term repo to special purpose conduits, which in turn issue overnight commercial paper to MMFs and other cash investors. According to a leading market specialist in this area, these new vehicles represent a form of “maturity arbitrage”:

[B]roker-dealers ... are encouraged by regulators to use term repos to improve funding stability. Term repos typically have maturities greater than seven days and are now considered “illiquid” securities by [the SEC’s new MMF rules].... The [new] structure essentially allows the [money market] funds to hold the same term repo positions concealed as commercial paper, such that they do not receive the illiquid designation.¹⁸

To the extent that uncoordinated regulatory policies allow this form of regulatory arbitrage to happen, they are likely to be self-defeating.

Third, even within their spheres of coverage, the initiatives listed above may be of limited effectiveness. Both the Basel III liquidity reforms and the SEC’s 2010 MMF reforms rely critically on the ability of regulators to identify *ex ante* those categories of financial assets that will remain highly marketable during a liquidity crisis. Needless to say, this presents a daunting challenge. It is noteworthy that the presence of high-quality collateral has not always proved successful in preventing runs on individual issuers. Indeed, the repo task force has acknowledged that, during the recent crisis, repo issuers “did not sufficiently appreciate the sensitivity of many [repo investors] to counterparty concerns even in the presence of high-quality collateral.”¹⁹ In a similar vein, in the aftermath of the Bear Stearns collapse, then-SEC Chairman Christopher Cox noted that the agency had failed to appreciate “the possibility that secured funding, even that backed by high-quality collateral such as U.S. Treasury and agency securities, could become unavailable.”²⁰ This experience suggests that a narrow focus on liquid collateral may be misguided.²¹

Fourth, and finally, it appears unlikely that these reforms will be adopted at anything approaching the originally contemplated level of stringency. While the SEC has successfully

¹⁷ 17 C.F.R. 270.2a-7(a)(19).

¹⁸ Pan (2011).

¹⁹ Tri-Party Repo Task Force (2010).

²⁰ Cox (2008).

²¹ This discussion is reminiscent Keynes (1936), who wrote: “Of the maxims of orthodox finance, none, surely, is more anti-social than the fetish of liquidity, the doctrine that it is a positive virtue on the part of investment institutions to concentrate their resources upon the holding of ‘liquid’ securities. It forgets that there is no such thing as liquidity of investment for the community as a whole” (p. 155).

implemented its 2010 MMF reforms, Chairman Mary Schapiro has insisted that those reforms were “just a first step”²² and that money funds “remain susceptible to runs” and are “living on borrowed time.”²³ Nevertheless, recent press reports cast serious doubt on whether structural MMF reforms are likely to be forthcoming, given political and industry opposition.²⁴ Likewise, the FRBNY’s tri-party repo reform initiative appears to have stalled. In a recent statement, the FRBNY observed that “significant obstacles arose in the industry’s work last year,” that “the systemic risk associated with this market remains unchanged,” and that the task force “has not proved to be an effective mechanism” for reform implementation.²⁵ Finally, on the international front, the new Basel III liquidity standards are encountering obstacles too. According to a recent news report:

Policy makers and regulators in the European Union are weighing whether to permit banks to hold a broader variety of assets to meet new [liquidity] standards.... Leading banks in France, Germany, Spain and the U.K. are now pushing regulators to allow a wider range of assets—everything from gold to blue-chip stocks to mortgage-backed securities—to satisfy the buffers....

There are signs that the banks’ pleas are gaining traction with some officials. European regulators and central bankers say they have grown increasingly worried in recent weeks that overly stringent liquidity requirements could force banks to rapidly shrink by constraining their lending, a development that could harm the Continent’s fragile economies.²⁶

In short, all of the major pending reform initiatives pertaining to the short-term funding markets are facing strong headwinds.

These four considerations cast doubt on the likely efficacy of recent and pending reforms in this area. Compounding the problem is a parallel legal development: the significant curtailment of the freestanding legal powers available to the federal government to respond to a liquidity crisis. Specifically, the Federal Reserve’s workhorse lender-of-last-resort authority, Section 13(3) of the Federal Reserve Act,²⁷ has been stripped of its political independence: Its usage now requires executive branch approval.²⁸ Similarly, the FDIC’s power to implement

²² Schapiro (2012).

²³ Andrew Ackerman, *SEC Chairman Amplifies Call for Money-Market Revamp*, WALL ST. J., Feb. 24, 2012.

²⁴ See, e.g., Kirsten Grind, *Money Funds’ Battle Royal*, WALL ST. J., April 26, 2012.

²⁵ FRBNY (2012).

²⁶ David Enrich, *EU Banks: Give Us Leeway on Assets*, WALL ST. J., Feb. 2, 2012, at C1.

²⁷ 12 U.S.C. § 343.

²⁸ See Dodd-Frank Act § 1101(a) (amending Section 13(3) of the Federal Reserve Act). The provision also includes a new “broad-based eligibility” requirement for 13(3) programs, but it is not clear that this poses much of a constraint. Only the *eligibility* must be broad-based.

emergency guarantee programs—an integral part of the crisis response in 2008 and 2009—now requires a joint resolution of Congress.²⁹ Furthermore, the Treasury Department’s authority to guarantee money market mutual funds has been terminated.³⁰ These legislative developments appear to have meaningfully impaired the ability of the federal government to respond promptly and forcefully in the event of a future panic in the short-term funding markets.

The new Orderly Liquidation Authority (OLA), a centerpiece of the Dodd-Frank Act, was intended in part to supplant these other emergency powers. Unfortunately, however, OLA is not a credible tool for addressing a panic in the short-term funding markets. In particular, it does not provide a reliable funding mechanism to calm the markets by honoring the runnable obligations of failed firms. Remarkably, the Federal Reserve is explicitly prohibited from providing liquidity support to a firm in OLA.³¹ Funding must come from Treasury, at the executive branch’s discretion. Treasury’s borrowings to fund a resolution are subject to the federal debt ceiling, potentially requiring an act of Congress.³² Thus OLA is subject to very significant political and execution risks. In short, OLA does not offer short-term claimants a compelling reason *not* to run during a liquidity event.³³

It is a sobering fact that, more than four years after the fall of Bear Stearns, the fragility of the short-term funding markets remains largely unaddressed. These markets remain susceptible to destabilizing panics, yet the regulatory response has been fragmented and appears to be flagging. There is a compelling need for a systematic approach in this area.

III. The Licensed Money Approach: A Prototype

This Part presents a model for a unified regulatory approach to the short-term funding markets. Only a high-level sketch is provided. As with any regulatory system, a number of challenging definitional and implementation issues would need to be addressed in practice. For purposes of exposition, such details are omitted here.

²⁹ Dodd-Frank Act § 1105(c)(1).

³⁰ Emergency Economic Stabilization Act of 2008, Pub.L. No. 110-343, § 131(b), 122 Stat. 3765, 3797 (to be codified at 12 U.S.C. § 5236) (“The Secretary is prohibited from using the Exchange Stabilization Fund for the establishment of any future guaranty programs for the United States money market mutual fund industry.”).

³¹ Dodd-Frank Act § 1101(a)(6) (amending Section 13(3) of the Federal Reserve Act).

³² Dodd-Frank Act § 210(n)(5). In this regard, it is noteworthy that the largest U.S. financial firms individually issue *hundreds* of billions of dollars in runnable liabilities.

³³ Indeed, short-term claimants that receive so-called “additional payments” within OLA are subject to a clawback if the FDIC ultimately loses money in the resolution. Dodd-Frank Act § 210(o)(1)(D)(i). This provision gives claimants further incentives to run before OLA is triggered.

In this Part, the licensed money approach is presented in its strong form, which would require new legislation. It is intended as an idealized model. The next Part will present a weak form, which could be implemented under existing law but would be less effective.

Licensing. The critical legal innovation of the licensed money system would be to make the issuance of money-claims a legal *privilege* rather than a legal right. The legal status of money-claim issuance would resemble that of deposit issuance under current law.³⁴ Regulators would establish the criteria of eligibility to issue money-claims. Licenses would be granted on an entity-by-entity basis. Logically, a legal privilege entails a prohibition: Entities without licenses would be legally disallowed from issuing money-claims, subject to certain exceptions (discussed below). There would be no distinct regime for deposit-issuing entities; deposits are just a type of money-claim. Instead, there would be a single legal regime for the issuance of monetary instruments.

Definition of “money-claim.” For this system to be workable, an adequate regulatory definition of “money-claim” would be essential. As with most regulatory definitions, an element of arbitrariness would be unavoidable. The definition should capture fixed-principal IOUs with original maturities that are within a specified term, most likely one year.³⁵ Debt instruments with embedded put options exercisable within one year, such as auction rate securities, would also be included. The money-claim definition would exclude IOUs issued in exchange for *bona fide* goods or services (trade credit). That is, the definition would apply only if both legs of the transaction were financial instruments. Clearly, as with other important regulatory definitions—like “capital,” “swap,” “security,” “proprietary trading,” and “taxable income”—a number of technical and anti-evasion issues would need to be addressed. It is worth noting that the Basel Committee’s new liquidity standards raise similar challenges. Those standards rely on a regulatory definition of “stable funding,” which consists of “liabilities with effective maturities of one year or greater.”³⁶ This is the mirror image of the money-claim definition.

³⁴ See, e.g., N.Y. BANKING LAW § 131 (“No corporation, domestic or foreign, other than a national bank or a federal reserve bank, unless expressly authorized by the laws of this state, shall employ any part of its property, or be in any way interested in any fund which shall be employed for the purpose of receiving deposits . . .”). See also CAL. FIN. CODE § 354 (“It shall be unlawful for any person . . . or . . . business entity . . . to engage in or transact commercial banking business . . . within this state except by means of a corporation duly organized for that purpose.”); *id.* § 105.2 (defining “commercial banking business” to include “the business of soliciting, receiving, or accepting of money or its equivalent on deposit as a regular business . . .”).

³⁵ A one-year maturity is the conventional outer range for the “money market.” As noted below, it is also the maturity that the Basel Committee has selected for its definition of “stable funding” under its new liquidity standards. See BCBS (2010). In addition, empirical studies suggest that the vast majority of the “moneyness” premium that attaches to short-term debt securities appears at maturities under one year. See Greenwood, Hanson & Stein (2010).

³⁶ BCBS (2010).

Exemptions. The regime would exempt *de minimis* issuers. For example, a blanket exemption might be granted to issuers with only a small number of distinct money-claimants, perhaps five or ten. The rationale for this exemption is that the business model at issue—the fractional reserve model—depends crucially on the law of large numbers. An exemption might also be crafted for *nonfinancial* commercial paper issuers, so long as that market remained quite small in size (as it is today). On the other hand, such an exemption would add definitional complexity to the regime.

Basic structure. Turning from these threshold issues, we now consider the regime’s core features. At a high level, the licensed money system would be a component of the broader legal-institutional structure of the monetary system. Licensed issuers would be engaged in a partnership with the state for the issuance of monetary instruments. The monetary authority would set a cap on the quantity of money-claims that these entities would be allowed to issue. Essentially, licensed entities would own tradable permits for money creation, just as reserve requirements currently function as tradable permits for the issuance of reservable deposit liabilities.³⁷ The cap would be adjusted periodically by the monetary authority as dictated by its macroeconomic policy mandate.

Portfolio constraints and capital requirements. Licensed entities would be confined to diversified portfolios of relatively high-quality credit assets. (How these would be determined is described under “calibration” below.) These portfolio constraints would be the key eligibility criteria for the regime. Any entity not complying would be ineligible for a license. The portfolio constraints would be similar to—perhaps even identical with—the longstanding portfolio constraints that govern deposit-issuing entities under current U.S. law. For example, with some narrow exceptions, deposit-banks today are legally prohibited from owning equity securities, investing directly in real estate, and buying bonds that are below investment-grade quality.³⁸ They must also comply with sweeping diversification requirements, which cap exposures to a single borrower at approximately 1.5% of assets.³⁹ The licensed money regime would adopt a

³⁷ See Federal Reserve Act § 19(b), 12 U.S.C. § 461(b) (reserve requirements). Stein (2012) observes that central bank reserves function as “tradable permits for money creation.” He analogizes reserve requirements to a cap-and-trade system:

All of this may sound a bit like science fiction; we don’t observe cap-and-trade regulation of banks in the real world. However if banks’ short-term liabilities are subject to reserve requirements, it turns out that monetary policy can be used as a mechanism for implementing the cap-and-trade approach. When the central bank injects reserves into the system, it effectively increases the number of permits for private money creation.

³⁸ See 12 U.S.C. § 24 (corporate powers of national banks); 12 U.S.C. § 29 (power of national banks to hold real property); 12 C.F.R. § 1.3 (permissible investment securities for national banks). See also OCC (2012) (describing activities permissible for a national bank). These restrictions apply to federally chartered banks, but similar restrictions apply to state chartered banks.

³⁹ Specifically, total loans and extensions of credit by a national bank to a single borrower may not exceed 15% of the bank’s total *capital* (sum of Tier 1 Tier 2), subject to certain exceptions. See 12 U.S.C. § 84(a). Assuming for

similar strategy. The aim would be to confine licensed entities to diversified portfolios of senior claims on third parties—to constrain the aggregate volatility of the asset side of the balance sheet. Derivatives would be permissible only for hedging.⁴⁰ Portfolio constraints would be coupled with capital requirements to provide a cushion against losses. Together, these risk constraints would reduce licensed entities’ insolvency risk. A supervisory regime would monitor compliance.

Liquidity support and fees. Licensed entities would be eligible for public liquidity support, which might be either discretionary (like the lender of last resort) or guaranteed *ex ante* (like deposit insurance). In connection with this privilege, all licensed entities would be required to pay ongoing, risk-based fees to the monetary authority. In effect, these would be “commitment fees” for an undrawn line of public credit. The monetary authority would seek to charge each issuer an actuarially fair rate for this commitment. These fees would be analogous to the FDIC’s current risk-based deposit insurance assessments.⁴¹ Their pricing would primarily be a function of the individual issuer’s portfolio quality and capital level. In the absence of these charges, licensed issuers would enjoy subsidized funding costs arising from the prospect of public support.

Calibration. A key virtue of the licensed money system is that the above-mentioned tools—portfolio constraints, capital requirements, and risk-based fees—can be calibrated under a unified framework. The monetary authority would start by determining the desired supply of money-claims, as dictated by its macroeconomic policy mandate. The *raison d’être* of the licensed money regime would be to efficiently generate this desired supply. Excessively stringent risk constraints would defeat this purpose. In particular, too-narrow portfolio constraints would leave the regime with insufficient investment opportunities to accommodate the desired level of money-claim issuance. Capital requirements present a similar issue: The higher the capital requirement, the lower the quantity of money-claims that the system can generate (given any set of eligible investments).⁴² Accordingly, the monetary authority would aim to select the combination of portfolio constraints and capital requirements that both (i) accommodated its desired supply of money-claims and (ii) minimized its expected risk of loss. Finally, the monetary authority would calibrate the risk-based fee for each issuer, which would

simplicity that the bank’s capital is equal to 10% of its assets, this borrowing limit translates into 1.5% of the bank’s assets. The 15% limit may be increased to 25% if the incremental exposure is fully secured by readily marketable collateral.

⁴⁰ This derivatives restriction would be analogous to the so-called “derivatives push-out” provision of Dodd-Frank. *See* Dodd-Frank Act § 716.

⁴¹ The FDIC’s rate schedule currently ranges from 2.5 to 45 basis points annually, depending on the insured institution’s risk characteristics. These assessment rates are applied to the insured institution’s tangible assets. *See* 12 C.F.R. § 327.10.

⁴² For example, if \$10 trillion of financial assets fell within the portfolio constraints, then, as a matter of accounting, a 10% capital requirement would imply a maximum of \$9 trillion in money-claim issuance.

be a function of the entity's portfolio risk and capital level. Thus, the regime's core components are calibrated within a single framework, dictated by the regime's policy objective.

Resolution. The resolution regime for licensed entities would resemble the existing U.S. resolution regime for deposit-issuing entities. Most importantly, it would permit the money-claims of insolvent issuers to be honored seamlessly in resolution while other debt and equity claims were impaired or extinguished. In basic terms, the resolution regime would be designed to *decouple* the impairment of an issuer's longer-term financing from its money-claims. Such a decoupling is not feasible in bankruptcy proceedings. If the resolution authority incurred a loss in resolving a licensed entity, the deficiency could be recovered through assessments on other licensed entities.

Unlicensed entities. With narrow exceptions, entities without licenses would be legally disallowed from relying on money-claim funding—again, just as entities without bank charters are now disallowed from relying on deposit funding. Unlicensed entities would be required to finance themselves in the longer-term (capital) markets, not the short-term funding markets. Arguably, such “termed-out” entities are amenable to ordinary bankruptcy proceedings.⁴³ They can default without incident—particularly if the licensed money system succeeds in stabilizing the short-term funding markets. Accordingly, entities outside the licensed perimeter would be ineligible for public support and would enter bankruptcy in the event of insolvency. By the same token, there would be less need to regulate these unlicensed entities for financial stability purposes.

Without question, the licensed money system would necessitate major changes in the liability profiles of large segments of the existing financial sector. Many business models that today rely heavily on short-term funding, such as securities dealers, some hedge funds, and commercial paper conduits, would be required to term out their funding unless they qualified for a *de minimis* exception. This requirement would have significant effects on the profitability of these institutions. It is possible that some of these costs would ultimately be borne by consumers and businesses through increased borrowing rates. It merits emphasis, however, that licensed entities would be just one set of participants in a much larger credit market. Mutual funds, insurance companies, hedge funds, pension funds, finance companies, and dealer firms would continue to be the predominant credit investors. Such firms, however, would generally be disallowed from issuing money-claims. The size of the licensed money system would be determined by its monetary purpose.

Money market funds. MMFs present a unique case and are worthy of special mention. Their “shares” are money-claims. Consequently, these entities would be required to join the

⁴³ The successful 2009 prepackaged bankruptcy of CIT Group—a very large (and mostly term-funded) finance company—is the best example.

licensed money system. While their asset portfolios would certainly meet the regime’s portfolio standards, MMFs would also need to abide by the regime’s capital requirements and risk-based fees. These requirements would probably render MMFs unprofitable. It is therefore unlikely that the MMF business model would be viable under a licensed money system. Consumers and institutions that today own MMF shares would instead own comparable money-claims issued by licensed entities.

Affiliations. The licensed money proposal is agnostic on “affiliations,” i.e., the question of what types of activities may be conducted under a single holding company. Arguably, the topic of affiliations has been vastly overemphasized in the theory and practice of financial regulation. The licensed money system is not an affiliations regime; it relates to the *substantive* regulation of maturity transformation. The regime would not necessarily prohibit affiliations between licensed and unlicensed entities, but only the licensed entities would be allowed to fund short. The system would include appropriate restrictions on affiliate transactions, as under current law.⁴⁴

International coordination. The discussion so far has neglected cross-border considerations. The licensed money system would be rendered ineffective if foreign-domiciled entities were able to issue large quantities of dollar-denominated money-claims outside the perimeter of the regime. This phenomenon, of course, exists today. Foreign banks issue Eurodollar obligations—typically to U.S.-based cash parkers—and invest the proceeds back into the U.S. credit markets. This is classic fractional-reserve banking. It involves the issuance of monetary instruments denominated in dollars. However, it takes place outside the reach of U.S. monetary authorities. During the recent crisis, the panic in the Eurodollar market prompted a massive policy response from the Federal Reserve, peaking at a staggering \$580 billion in U.S. dollar funding to *foreign* institutions via liquidity swaps with foreign central banks.⁴⁵

For the licensed money regime to work, this form of avoidance would need to be addressed. To this end, a new international accord would be needed—perhaps a “Basel money-claim accord” to complement the existing Basel capital accord. The terms of this accord would be fairly straightforward. States would agree to prevent domestic entities from issuing money-claims denominated in nondomestic currencies. Essentially, the Eurocurrency markets⁴⁶ would cease to exist in their current form. To be clear, the accord would not prevent, say, a German bank from owning a *U.S.-domiciled* issuer of dollar money-claims (which would be subject to the U.S. licensed money regime). The German bank could therefore offer dollar money-claims

⁴⁴ See Federal Reserve Act § 23A, 12 U.S.C. § 371c; Federal Reserve Act § 23B, 12 U.S.C. § 371c-1.

⁴⁵ The original crisis-related liquidity swaps expired in February 2010, but they were revived in May 2010 in response to renewed strains in the Eurodollar markets.

⁴⁶ This term refers to deposit liabilities that are denominated in nondomestic currencies, irrespective of where the issuer is domiciled. The “euro” prefix is misleading.

to its own clients. In effect, the international accord would acknowledge money creation as a sovereign prerogative.

Other considerations. Finally, it is important to acknowledge the moral hazard costs of the regime. The fact that the monetary authority may honor money-claims *ex post*—even if that commitment is only implicit and discretionary—gives rise to moral hazard incentives. These incentives generate costly resource misallocation.

There are two main responses to this objection. First, this objection applies to *any* financial regulatory regime in which public support is possible. Indeed, one of the core aims of the licensed money system is to credibly confine public support to a discrete set of licensed entities. That set of entities should be no larger than necessary to accomplish the system’s monetary purpose. Second, the institutional design of the licensed money regime is *precisely* intended to mitigate the effects of moral hazard. In particular, the risk-based fees aim to recapture the subsidies that arise from the prospect of public support. Obviously, if the monetary authority could price these fees perfectly, then the moral hazard costs of the regime would be zero. Because it cannot, the regime incorporates portfolio constraints and capital requirements to reduce the risk of loss and the associated resource misallocation.

More generally, it is true that the licensed money regime requires the monetary authority to make difficult appraisals of value. Any deficiencies in its appraisals will result in resource misallocation and social costs. This, however, is true of any government intervention—from national defense, to infrastructure investment, to antitrust enforcement, and so on. All of these interventions require the government to make difficult appraisals of value, and any deficiencies in its appraisals will generate resource misallocation and social costs. The establishment of a well-functioning monetary system turns out to be no different. As always, the question is not whether the intervention is perfectly efficient, but rather how it compares to the realistic alternatives—including the *laissez-faire* alternative. The question is one of institutional design.

The licensed money approach represents a surgical response to a specific market failure: the vulnerability of the short-term funding markets to destabilizing liquidity crises that can damage the real economy.⁴⁷ The regime is designed to reduce the likelihood of these liquidity crises while both generating an adequate supply of money-claims and minimizing distortive subsidies. In effect, it would establish the broad money supply as a public good.

⁴⁷ For a discussion of this market failure and relevant literature, see Ricks (2011a, 2011b).

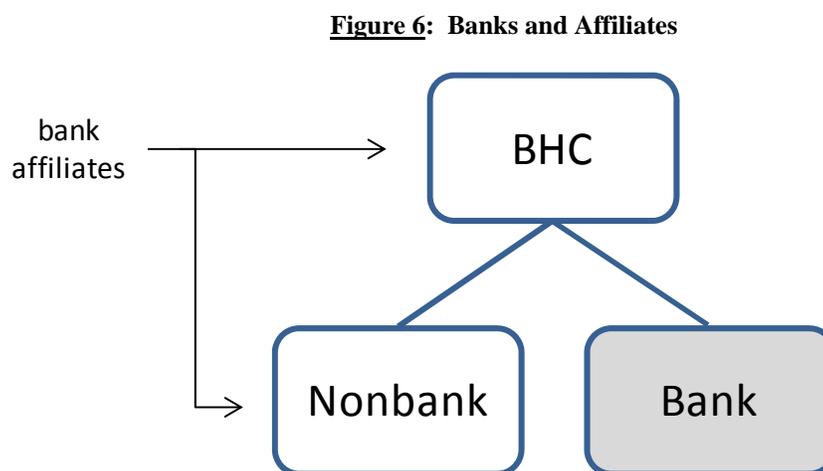
IV. Short-Term Funding Reforms: What’s Possible under Current Law?

The licensed money prototype described above would not be feasible under existing U.S. law. It would require new legislation. Nevertheless, regulators do have the legal authority to implement major reforms in this area—measures that extend far beyond the pending initiatives described in Part II above. If properly coordinated, such measures could meaningfully reduce the financial system’s vulnerability to liquidity crises. This Part describes how this might be done.

Before proceeding, it is helpful to introduce some basic definitions that may be unfamiliar to non-specialists:

- *Bank*. The term “bank” (or “deposit-bank”) is used here in its technical sense to refer to entities that are licensed to issue deposit obligations. “Nonbank” refers to any entity that is not a licensed issuer of deposits.
- *Bank holding company*. A “bank holding company” (BHC) is an entity that owns a bank. It is not itself a bank—it may not issue deposit liabilities. Every BHC has at least one bank subsidiary. Many BHCs also have one or more nonbank subsidiaries.
- *Bank affiliate*. The term “bank affiliate” applies to any nonbank that is part of a corporate group that includes a bank. All BHCs are bank affiliates. Nonbank subsidiaries of BHCs are also bank affiliates. Federal law imposes strict quantitative limits on transactions between banks and their affiliates.⁴⁸

The following picture depicts a typical structure:



⁴⁸ See Federal Reserve Act § 23A, 12 U.S.C. § 371c; Federal Reserve Act § 23B, 12 U.S.C. § 371c-1.

It is important to emphasize that bank *affiliates* may engage in many activities, such as securities dealing and underwriting, that would be impermissible for banks.⁴⁹ Goldman Sachs is a prominent example. As a corporate group, the firm has assets of \$900 billion. However, only \$100 billion of those assets are in the bank subsidiary. The other \$800 billion are in bank affiliates. The parent entity, The Goldman Sachs Group, Inc., is a bank holding company.

Part III of this paper observed that the licensed money proposal has a number of features in common with existing deposit-bank regulation. To recap: U.S. deposit-banks have the legal privilege of issuing money-claims styled as “deposits.” Nonbanks are legally prohibited from issuing deposit liabilities. These instruments serve a monetary function, and the monetary authority has the power to cap their issuance. For the most part, deposit-banks are confined to diversified portfolios of credit assets. Bank regulation seeks to minimize deposit-banks’ exposures to speculative credits. Deposit-banks are also subject to capital requirements and supervision. They have access to public support facilities, i.e., the discount window and deposit insurance, and they pay risk-based fees for the latter. In the event of failure, they enter a special resolution regime under which money-claims (insured deposits) are honored seamlessly while other claims are impaired or extinguished. Thus the basic components of the licensed money system are present.

If U.S. deposit-banks were the *sole* issuers of dollar money-claims, then a reasonable approximation of the licensed money system would be realized. Interestingly, this circumstance *de facto* prevailed in the United States between the advent of deposit insurance in 1933 and the explosion the modern money markets over the past two decades. Deposit-banks were the predominant issuers of dollar money-claims throughout this period. And it is noteworthy that this period was free from financial panics. Gary Gorton describes it as an unprecedented “Quiet Period” in U.S. banking.⁵⁰

This analysis suggests a possible regulatory strategy to approximate the licensed money system under current law. Simply put, regulators could seek to minimize the issuance of money-claims by entities that are not deposit-banks. This strategy might seem to raise the prospect of unduly limiting the supply of money-claims. Yet there is little reason to suppose that the U.S. deposit-banking system is incapable of issuing an adequate supply of monetary instruments. The very rationale for chartering deposit-banks in the first place is to generate this supply. Indeed, the issuance of such instruments is *precisely* the legal privilege that a banking charter is supposed to convey. Presumably, monetary institutions ought to be designed to accomplish monetary policy objectives. By imposing limits on short-term funding outside the deposit-

⁴⁹ See 12 U.S.C. § 24 (prohibiting national banks from securities dealing and underwriting, with narrow exceptions). U.S. deposit-banks are subject to strict portfolio constraints and activity restrictions, as noted in Part III above.

⁵⁰ Gorton (2010, p. 14).

banking system, regulators would bring monetary conditions under the more direct control of the central bank.

Suppose that regulators chose to pursue this strategy. Under current law, what limitations could be placed on nonbanks' reliance on short-term funding? Meaningful tools are available to regulators in this regard, but a unified and coordinated approach would be essential. The following discussion divides U.S. nonbank financial firms into four nonexclusive categories: (1) bank affiliates; (2) MMFs; (3) broker-dealers; and (4) other financial entities. For the first three categories, regulators have clear legal authorities to limit money-claim issuance. For the fourth category, the tools are far weaker—a serious defect in current law. Firms domiciled outside the United States are a special case and will be treated separately. This discussion ignores nonfinancial firms, which are currently responsible for only a trivial amount of money-claim issuance.

(1) Bank Affiliates

Under the BHC Act,⁵¹ the Federal Reserve is authorized to limit the activities of bank affiliates. Specifically, the Federal Reserve may order the termination of a bank affiliate's activity "whenever it has reasonable cause to believe that [the activity's] continuation ... constitutes a serious risk to the financial safety, soundness, or stability of a [bank] and is inconsistent with sound banking principles or with the purposes of" the BHC Act.⁵²

The Federal Reserve could reasonably conclude that deposit-banks are endangered by their affiliates' heavy reliance on short-term funding. The recent crisis provided evidence for this conclusion. Most prominently, liquidity stresses in Citigroup's nonbank subsidiaries appeared to prompt a run on its deposit-bank.⁵³ This extraordinary event alone may offer "reasonable cause" to believe that a bank affiliate's heavy reliance on wholesale short-term funding constitutes a "serious risk" to the bank's stability. This funding model might also be considered *per se* "inconsistent with sound banking principles" and with the BHC Act's purposes, which include protecting the stability of the financial system.⁵⁴ The Federal Reserve, then, has a substantial legal basis for imposing limits on short-term funding by bank affiliates. Notably, this category includes all the major Wall Street dealer firms.

In addition, the Dodd-Frank Act gives the Federal Reserve *explicit* powers to impose short-term funding limits on bank affiliates that are parts of *large* banking groups (with consolidated assets of at least \$50 billion). In particular, the Dodd-Frank Act allows but does not

⁵¹ Bank Holding Company Act of 1956, 12 U.S.C. § 1841 et seq.

⁵² 12 U.S.C. § 1844(d).

⁵³ See SIGTARP (2011).

⁵⁴ 12 U.S.C. § 1843(j)(2)(A), § 1843(k)(1), § 1844(c)(2)(A).

require the Federal Reserve to “prescribe a limit on the amount of short-term debt” issuable by large banking groups.⁵⁵ The Federal Reserve has so far declined to impose such limits.⁵⁶ Even so, this new authority remains available as a complement to the Federal Reserve’s preexisting regulatory powers over bank affiliates.

(2) Money Market Mutual Funds

MMFs fall under the SEC’s jurisdiction. Importantly, MMFs are allowed to operate under special exemptions from the standard rules that govern investment companies. Those special exemptions permit MMFs to value their assets at “amortized cost” and price their shares using “penny rounding.”⁵⁷ Other investment companies, by contrast, must follow mark-to-market valuation and round their shares to the nearest tenth of a cent.

The SEC established these special exemptions through its rulemaking powers under the Investment Company Act.⁵⁸ It has the legal authority to alter these exemptions or remove them altogether. As noted in Part II above, the SEC has considered requiring that MMFs float their net asset values, which would mean discarding both amortized cost and penny rounding. It has also considered imposing redemption holdbacks and capital requirements on MMFs. That the SEC has the legal authority to do so is unambiguous.

MMF industry representatives have suggested that such reforms would be fatal to their business model. If so, that outcome would be consistent with the goal of minimizing money-claim issuance by entities that are not deposit-banks. It would also take the SEC out of the monetary business, which arguably falls outside its mandate and core competency. Under a rational regulatory design, the issuance of monetary instruments would fall under the purview of the monetary and banking authorities.

⁵⁵ Dodd-Frank Act § 165(g).

⁵⁶ In its proposed rule implementing §165, the Federal Reserve states:

[T]he [Dodd-Frank] Act authorizes but does not require the Board to establish additional enhanced standards for covered companies relating to [, among other things,] short-term debt limits The Board is not proposing any of these supplemental standards at this time but continues to consider whether adopting any of these standards would be appropriate.

See Federal Reserve Board, *Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies*, Proposed Rule, 77 Fed. Reg. 594 (Jan. 5, 2012).

⁵⁷ See 17 C.F.R. § 270.2a-4 (definition of “current net asset value” for use in computing periodically the current price of a redeemable security); 17 C.F.R. § 270.22c-1 (pricing of redeemable securities for distribution, redemption and repurchase); 17 C.F.R. 270.2a-7(a)(20) (penny rounding).

⁵⁸ Rule 2a-7 was promulgated pursuant to the Investment Company Act § 6(c), 15 U.S.C. 80a-6(c); § 22(c), 15 U.S.C. 80a-22(c); and § 38(a), 15 U.S.C. 80a-37(a).

(3) Broker-Dealers

At present, the largest broker-dealers are bank affiliates. The Federal Reserve therefore has the authority to limit their short-term funding, as described above. Nevertheless, many broker-dealers are not bank affiliates. And broker-dealer activity could migrate away from BHCs over time. It is therefore important to ask whether a legal basis exists to limit short-term funding by broker-dealers that are *not* bank affiliates.

Such a basis does exist. In particular, the securities laws give the SEC the power to establish rules “as necessary or appropriate in the public interest or for the protection of investors to provide safeguards with respect to the financial responsibility and related practices of brokers and dealers”⁵⁹ Pursuant to this authority, the SEC has promulgated a net capital rule for broker-dealers.⁶⁰ According to the SEC, “[t]he principal purposes of the [net capital rule] are to protect customers and other market participants from broker-dealer failures and to enable those firms that fall below the minimum net capital requirements to liquidate in an orderly fashion”⁶¹

Under a similar rationale, the SEC could impose short-term funding limits on broker-dealers. Like the net capital rule, a short-term funding limit could be found to serve the purposes of protecting market participants and facilitating an orderly liquidation. Thus, current law affords regulators the ability to limit money-claim issuance by all broker-dealers, irrespective of whether they are bank affiliates.

(4) Other Financial Entities

Many U.S. financial firms do not fall into the preceding three categories. With respect to these firms, existing regulatory powers to limit short-term funding are far less potent. Unfortunately, this defect is serious. This fourth category encompasses a wide array of domestic money-claim issuers—finance companies, certain hedge funds, and unaffiliated ABCP conduits, for example. While *most* money-claims are currently issued by entities in the preceding three categories, this circumstance offers little grounds for comfort. The short-term funding markets are not static, and they should be expected to migrate away from regulatory constraints.

Regulators do have one new mechanism for imposing short-term funding limits on entities that fall into this fourth category. That is the so-called “systemic designation” authority under the Dodd-Frank Act.⁶² Under this provision, individual financial firms may be designated

⁵⁹ Exchange Act § 15(c)(3)(A).

⁶⁰ See 17 C.F.R. §240.15c3-1.

⁶¹ U.S. Sec. & Exch. Comm’n, *Alternative Net Capital Requirements for Broker-Dealers That Are Part of Consolidated Supervised Entities*, Final Rule, 69 Fed. Reg. 34428 (June 21, 2004). See also SEC (2012, p. 73).

⁶² Dodd-Frank Act § 113(a).

as systemically important and thereby brought under Federal Reserve supervision and regulation. Furthermore, the Dodd-Frank Act explicitly empowers the Federal Reserve to impose short-term funding limits on firms that are so designated, just as it can with large banking groups (as described above).⁶³

In theory, this systemic designation authority could be used to restrict large numbers of nonbank financial firms from issuing money-claims. In practice, however, this strategy is not realistic. A systemic designation of an individual firm is an extraordinary event. It requires a vote of two-thirds of the Financial Stability Oversight Council (FSOC)—a council with ten voting members, including the Treasury Secretary, the Federal Reserve chairman, and the heads of all the other major financial regulators. The Treasury Secretary must vote in the affirmative. To make a designation, the FSOC must find that the company’s “material financial distress” or its activities themselves “could pose a threat to the financial stability of the United States.”⁶⁴ Companies are entitled to notice and a hearing prior to being designated.⁶⁵ After designation, they are entitled to judicial review.⁶⁶

Clearly, this designation tool was not designed to impose generally applicable limitations on the financial industry. To date, the FSOC has made no systemic designations. It has released a final rule and interpretive guidance for the use of this authority.⁶⁷ At most, a handful of very large firms should be expected to qualify. It is therefore unlikely that this designation power could provide a workable tool to limit the issuance of money-claims by entities that fall within this fourth category. The absence of such a tool represents the largest single impediment to the effective regulation of the short-term funding markets under current U.S. law.

Designation of “Activities or Practices”

One additional legal authority is worthy of mention. The Dodd-Frank Act empowers the FSOC to issue recommendations to the primary financial regulatory agencies to apply new or heightened standards or safeguards for a “financial activity or practice.” In order to do so, the FSOC must find that the activity or practice “could create or increase the risk of significant liquidity, credit, or other problems spreading among bank holding companies and nonbank financial companies [or] financial markets of the United States”⁶⁸ The provision also confers

⁶³ Dodd-Frank Act § 165(g).

⁶⁴ Dodd-Frank Act § 113(a)(1). The “degree of reliance on short-term funding” is one of eleven factors that the FSOC must consider in making a designation. *Id.* § 113(a)(2).

⁶⁵ Dodd-Frank Act § 113(e).

⁶⁶ Dodd-Frank Act § 113(h).

⁶⁷ Financial Stability Oversight Council, *Authority to Require Supervision and Regulation of Certain Nonbank Financial Companies*, 77 Fed. Reg. 21,637 (Apr. 11, 2012) (to be codified at 12 C.F.R. pt. 1310).

⁶⁸ Dodd-Frank Act § 120. The primary financial regulatory agencies are the Federal Reserve, OCC, FDIC, SEC, CFTC, state insurance regulators, and FHFA. *See* Dodd-Frank Act § 2(12).

enforcement power: Each financial regulator may “enforce these standards ... with respect to those entities for which it is the primary financial regulatory agency.”⁶⁹

Pursuant to this authority, the FSOC could designate short-term funding as a “financial activity or practice” that creates significant liquidity risks. Importantly, however, such a designation would *not* confer upon regulators any enforcement powers over firms outside their respective jurisdictions. Consequently, this authority does not provide an answer for the fourth category above.

Even so, an “activity or practice” designation would be a big event, in at least three respects. First, it would provide a high-profile starting point for coordinated action on short-term funding by federal regulators. Second, it would consolidate and reinforce regulators’ legal authorities to impose short-term funding limits on entities that fall within their respective jurisdictions. Finally, because the FSOC is chaired by the Treasury Secretary, such a designation would bring with it a measure of political legitimacy. This last consideration is not insignificant. Imposing short-term funding limits on nonbanks would be a major regulatory intervention and would be costly for certain segments of the financial sector. Regulators might be hesitant to pursue this path absent some form of political mandate.

Concluding Observations on Existing Law

The foregoing discussion can be summarized as follows. Regulators have powerful tools at their disposal to impose short-term funding limits on major classes of nonbank financial firms—namely, bank affiliates, MMFs, and broker-dealers. At present, these categories cover the most important money-claim issuers in the U.S. financial system. However, financial markets are not static; the short-term funding markets should be expected to adapt in order to take advantage of regulatory gaps. Conceivably, the FSOC’s systemic designation power might then be invoked to bring individual issuers under the Federal Reserve’s regulatory jurisdiction. However, for the reasons cited above, this is not a promising avenue.

In short, existing law is an imperfect substitute for a generally applicable legal standard. In this regard, consider again the traditional regulatory approach to the issuance of monetary instruments. The issuance of deposit obligations and bank notes has practically always been a legal *privilege*. A privilege logically entails a prohibition: Entities without licenses have been prohibited from issuing these instruments. Under the traditional approach, then, the default rule is disallowance. The licensed money system would adopt this approach for money-claims on a functional basis.

Finally, the discussion in this Part was limited to U.S.-based entities. As noted in Part III, a comprehensive approach to the short-term funding markets would need to address nondomestic

⁶⁹ Dodd-Frank Act § 120(c).

issuers of dollar-denominated money-claims. Specifically, something like an international “money-claim accord” would be essential. Part III sketched the terms of such an accord. U.S. bank regulators might pursue such an accord through their participation in the Basel Committee. Of course, any such accord would confer no additional domestic enforcement powers on U.S. regulatory agencies.

V. Conclusion

Douglas Diamond, a leading economic theorist in this area, has said that “financial crises are always and everywhere about short-term debt.”⁷⁰ In a sense, the problem of short-term IOUs is *the* perennial problem for financial regulatory policy. Lawmakers have been wrestling with the money-claim problem for centuries.

The legal history is fascinating—and instructive for current policy. In his classic 1873 work, Walter Bagehot describes the legalities of money creation in eighteenth- and nineteenth-century England. In the early eighteenth century, Bagehot explains, Parliament granted the Bank of England the “privilege or power” of “exclusive banking.”⁷¹ It was indeed a legal privilege: Parliament made it unlawful for any other “body politic or corporate ... to take up any sum or sums of money on their bills or notes payable *on demand or at any less time than six months* from the borrowing thereof”⁷² Bagehot then observes that “*deposit* banking, in which no bills or promissory notes are issued, was not then known on a great scale, and was not called banking.”⁷³

This formal distinction (between bank notes and deposit obligations) would later become crucial. Parliament curtailed the Bank of England’s legal privileges outside of London in the 1820s, but the Bank still retained its privilege of “exclusive banking” in London. “And then it was seen,” writes Bagehot, “that the words I have quoted only forbid the issue of negotiable instruments, and not the receiving of money when no such instrument is given. Upon this construction . . . all our older joint stock banks were founded.”⁷⁴ The London financial system, then, adapted around a formal legal constraint. A substitute form of money-claim rose to prominence: the deposit liability.

⁷⁰ Quoted in Panel Discussion on Financial Regulation, Becker Friedman Institute, University of Chicago (Nov. 6, 2010), available at http://mfi.uchicago.edu/events/20101106_finregulation/.

⁷¹ Bagehot (1873, p. 97).

⁷² Bagehot (1873, pp. 97–98) (emphasis added). An exception was granted for partnerships not exceeding six persons.

⁷³ Bagehot (1873, p. 98) (emphasis added).

⁷⁴ Bagehot (1873, p. 99).

Incredibly, and famously, a similar sequence of events took place in the United States in the late nineteenth century. Congress attempted to federalize money creation in conjunction with the passage of the National Bank Act of 1864.⁷⁵ Fatefully, however, its chosen method to drive state banks out of existence was to impose a heavy tax the issuance of *bank notes* by institutions other than federally chartered banks.⁷⁶ What happened next should come as no surprise. Once the tax was enacted, state banks responded by replacing bank notes with deposit liabilities. Thus arose a classic instance of financial regulatory arbitrage in the United States.

In both of these cases, lawmakers failed to grasp the functional equivalence of two types of short-term IOUs: deposit obligations and bank notes. In fact, it was not until about the turn of the twentieth century that U.S. state legislatures began to recognize this functional equivalence. As noted by a U.S. National Monetary Commission study in 1911:

The increasing attention paid in recent years by the state legislatures to the regulation of the state banks ... is to be accounted for primarily by a *change of view as to the purpose of banking regulation*. The antebellum state-bank regulations were intended to secure the safety of the bank note. Although the *depositor* was protected by many of the regulations, this protection was purely incidental. The view that note-issuing banks alone required governmental regulation persisted for a considerable time after the passage of the national-bank act. Since the national banks had a monopoly of the issue of bank notes, the regulation of state banks was considered needless. As the importance of note issue as a banking function decreased, banking regulation, as seen in the national-bank act, began to be considered desirable as a protection to *depositors*.⁷⁷

The contemporary relevance is obvious. Today, of course, it is deposit obligations that are viewed as the quintessential monetary instrument. Since 1933, the issuance of deposit liabilities in the United States has taken place within something resembling a licensed money system. That system's dominant position in money-claim issuance from 1933 until close to the end of the twentieth century coincided with an unprecedented period of relative financial stability (despite some notable missteps). Over the past several decades, however, a variety of close substitutes for deposit obligations have arisen. These substitute markets exploded in the 1990s and 2000s—and unstable conditions resurfaced.

There are at least two possible interpretations of this history, one pessimistic and one optimistic. The pessimistic viewpoint is that the task of regulating the issuance of monetary instruments is a hopeless one: Markets will always generate close substitutes outside the

⁷⁵ National Bank Act of 1864, ch. 106, 13 Stat. 99 (codified as amended in scattered sections of 12 U.S.C.).

⁷⁶ See Act of March 3, 1865, ch. 78, 13 Stat. 484 (as amended by Act of February 8, 1875, ch. 36, 18 Stat. 311) (“[E]very person, firm, association other than a national bank association, and every corporation, State bank, or State banking association, shall pay a tax of ten per centum on the amount of their own notes used for circulation and paid out by them.”).

⁷⁷ Barnett (1911, pp. 11–12) (emphasis added).

perimeter of licensed money creation. The optimistic interpretation, on the other hand, is that a *functional* approach might succeed where a formalistic approach has failed. This task raises basic questions of legal-institutional design. Clearly, the licensed money proposal is predicated on this more optimistic point of view.

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Appendix A: Sources for Money-Claim Figures

Measure	Source	Notes
Currency in Circulation	Federal Reserve Bank of St. Louis – Economic Research Division (FRED)	Year-end data.
Federal Reserve Balances	FRED	Year-end data.
Treasury Bills	2011 Economic Report of the President – Table B-87	Year-end data.
Insured Deposits	Federal Deposit Insurance Corporation (FDIC) –2011Q1 Quarterly Banking Profile	Estimated Insured Deposits reported by the FDIC; Q4 data.
Short-Term Agency Securities	Bloomberg (GSE short-term borrowing); 2010 Annual Reports for Fannie Mae and Freddie Mac; FHLB Office of Finance Annual Reports (discount notes)	FHLB discount notes extrapolated prior to 1998 (as a constant proportion of GSE short term borrowings). Year-end data except for Freddie Mac 2010, whose short-term debt measure is an average balance.
Primary Dealer Repo	Treasury Department Financial Stability Oversight Council (FSOC) 2011 Annual Report Chart 5.2.43; Federal Reserve	Extrapolated prior to 1995 (as a constant proportion of financial CP). Q4 data.
Asset-Backed CP	Federal Reserve Data Download Program; FRED	Pre-2001 data reflects Federal Reserve’s old method; 1991 figure not available, so set equal to 1992; December data. 2001-2010 data reflects Fed’s new method; year-end data.
Financial CP	Federal Reserve Data Download Program; FRED	Pre-2001 data reflects the Fed’s old method; December data. 2001-2010 data reflects the Fed’s new method; year-end data.
Nonfinancial CP	Federal Reserve Data Download Program; FRED	Pre-2001 data reflects the Fed’s old method; December data. 2001-2010 data reflects the Fed’s new method; year-end data.
Eurodollars	FDIC 2011Q1 Quarterly Banking Report; McGuire & von Peter, <i>The US Dollar Shortage in Global Banking</i> , <i>BIS Quarterly Review</i> 54 (March 2009)	Sum of (i) FDIC’s reported foreign office deposits and (ii) McGuire and von Peter’s \$2.2 trillion eurodollar deposit estimate for 2007 extrapolated before and after 2007 (as a constant proportion of the FDIC’s reported foreign office deposits). Q4 data.
Government Money Market Mutual Funds	Investment Company Institute 2011 Investment Company Factbook	Year-end data.
Non-government Money Market Mutual Funds	Investment Company Institute 2011 Investment Company Factbook	Includes both the non-government and tax-exempt categories reported in the ICI Factbook; year-end data.
Liquidity-Put Bonds	FSOC 2011 Annual Report Chart	2005-2010 estimates are the sum of

Measure	Source	Notes
	5.2.42; Federal Reserve	the average amounts outstanding of Tender Option Bonds, Auction Rate Securities, and Variable Rate Demand Bonds; extrapolated prior to 2005 (as a constant proportion of ABCP). Year-end data.
Uninsured Deposits	FDIC 2011 Quarterly Banking Report	Calculated by subtracting Estimated Insured Deposits from Domestic Office Deposits. Q4 data.