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CLARIFYING THE SHADOW BANKING DEBATE: APPLICATION AND POLICY IMPLICATIONS

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In 1982, the Federal Reserve Bank of Minneapolis authored an annual report entitled, “Are Banks Special?” and in it made the then-novel observation that “market innovation has already produced services which are close substitutes for essential bank services.”¹ Twenty-five years later, the term “shadow banking” appeared at a Federal Reserve conference², and today, in discussions of macroprudential regulation, the term is ubiquitous — though academic and policy controversy remains.

Shadow banking is a central problem for financial regulatory policy. These activities were critical to the path of the financial crisis,³ and monitoring the risks associated with shadow

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¹ See E. Gerald Corrigan, *Are Banks Special?*, Federal Reserve Bank of Minneapolis, (January 1, 1983) available at: <https://www.minneapolisfed.org/publications/annual-reports/are-banks-special>.

² Paul McCulley, *Teton Reflections*, (September 2007) available at: <https://www.pimco.com/insights/economic-and-market-commentary/global-central-bank-focus/teton-reflections>.

³ Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, Ch. 2, p. 27, (February 2011) available at: <https://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>.

banking should form a core part of regulatory efforts. But shadow banking activities can occur anywhere in the financial system, creating a problem for officials whose regulatory perimeters are typically defined by institutional boundaries. At the same time, with a disciplined definition, the risks posed by shadow banking can be appropriately addressed.

There is a rich academic debate about the emergence of shadow banking around the world, particularly in the years prior to the financial crisis.⁴ Some of the primary drivers may include a surge in demand for highly liquid, seemingly safe assets and short-term funding,⁵ combined, to some degree, with regulatory arbitrage. Additional factors often cited are the rapid growth of capital markets and the advent of securitization.⁶ Shadow banking activities can play a positive social role in modern economies, for example, by expanding the availability of credit, helping drive financial innovation, and adding diversity to the financial system. The size and scope of shadow banking and the role that it currently plays in the financial system remain hotly contested.

This brief contains two parts. This paper will initially make two fundamental arguments: first, that policymakers should adopt a narrow definition of shadow banking, and second, that the analysis of shadow banking is a necessary part, but only a part, of the work required to understand and monitor the risks and frailties in an evolving financial system.

Agreeing on these two initial arguments will achieve two related and important goals for policymaking.

First, this paper will move the debate about “what is shadow banking?” away from an emotional argument fueled by the sense that “shadow banking” is a pejorative term, and instead towards an analytical, activities-based discussion about the elements of particular financial activities and whether those elements collectively pose similar risks as banking.

Second, this brief will elucidate the range of appropriate policy responses, acknowledging that the risks of financial activity have many forms and that the appropriate responses to those risks should also have many forms. This will help clarify the scope of the regulatory response to shadow banking since the financial crisis and provide a stronger basis for continuing and enhancing that policy framework in the future.

⁴ See, e.g., Morgan Ricks, *Shadow Banking and Financial Regulation*, Columbia Law and Economics Working Paper No. 370, (August 30, 2010) available at:

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1571290; Israel Cedillo, *The Historical Role of the European Shadow Banking System in the Development and Evolution of Our Monetary Institutions*, CITYPERC Working Paper Series No. 2013/05, (February 2, 2013) available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2220167.

⁵ See Daniel Tarullo, Board of Governors of the Federal Reserve System, Remarks at the Federal Reserve Bank of San Francisco Conference on Challenges in Global Finance: The Role of Asia, (June 12, 2012) available at: <https://www.federalreserve.gov/newsevents/speech/tarullo20120612a.htm>.

⁶ See Emiliios Avgouleas and Jay Cullen, EY Global Financial Services Institute, *Excessive leverage and bankers' incentives: refocusing the debate*, *The Journal of Financial Perspectives*, Vol. 3, Issue 1 (March 2015); Tobias Adrian, Adam Ashcraft, and Nicola Cetorelli, *Shadow Bank Monitoring*, Federal Reserve Bank of New York Staff Report No. 638, (September 2013) available at: https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr638.pdf.

Definition of Shadow Banking

To appropriately regulate shadow banking, one must properly define it. In 2007, the economist Paul McCulley defined shadow banking narrowly: “unregulated shadow banks fund themselves with un-insured commercial paper, which may or may not be backstopped by liquidity lines from real banks. Thus, the shadow banking system is particularly vulnerable to runs.”⁷ Since then, a number of definitions of shadow banking have expanded. Recently, the Financial Stability Board (FSB) defined it as “credit intermediation involving entities and activities (fully or partly) outside the regular banking system” or non-bank credit intermediation.⁸ The FSB has, however, also recognized the need to focus on a narrower measure of shadow banking that concentrates on specific risks.⁹

One way to help policymakers is to have a narrow definition of shadow banking, focusing on the elements within the academic understanding of the core risks of banking. Accordingly, the definition of shadow banking should start with an understanding of what banking is — and what it is not. Banking is often used to describe a variety of financial intermediation, from lending to investing to advisory work. The diversity of these meanings has obscured the public’s understanding. Investment banking is not “banking” by any traditional definition; private banking, similarly, is not “banking.” And as this paper will demonstrate, many financial activities conducted by non-banks do not meet the definition of shadow banking.

So what, then, is banking? Banking involves two critical activities: the creation of money-like (callable or short-term) liabilities and investment in risky (usually fixed income) assets. In their simplest form, banks accept demand deposits and lend them out in the form of longer-term loans. Because depositors can make calls at any point but banks’ assets can be illiquid, and because banking inherently involves leverage, banks are susceptible to runs, panics, and crises.¹⁰ Accordingly, in modern economies across the world, banking is also defined by being a highly regulated activity benefiting from a public backstop (either in the form of deposit insurance or access to a lender of last resort, or most likely both). For purposes of this paper, it suffices to say that banking, properly defined, presents a combination of risks in both its assets and its liabilities.

Once banking is understood as a highly regulated activity that combines activities in a way that creates the risk of runs, the definition of shadow banking is much easier to bring into focus. Shadow banking is the creation of money-like liabilities *together* with investment in risky (e.g., less liquid) assets but *without* prudential oversight or a government backstop. Put

⁷ Paul McCulley, *Teton Reflections* (September 2007) available at: <https://www.pimco.com/insights/economic-and-market-commentary/global-central-bank-focus/teton-reflections>.

⁸ FSB, *Transforming Shadow Banking Into Resilient Market-Based Finance*, available at: <http://www.fsb.org/what-we-do/policy-development/shadow-banking/>; see also The Economist, *How shadow banking works*, (February 1, 2016) available at: <http://www.economist.com/blogs/economist-explains/2016/02/economist-explains-0> (presenting a similar definition of shadow banking).

⁹ See FSB, *Global Shadow Banking Monitoring Report 2015*, p.7, (November 12, 2015) available at: <http://www.fsb.org/wp-content/uploads/global-shadow-banking-monitoring-report-2015.pdf> (further clarification on the narrower measure).

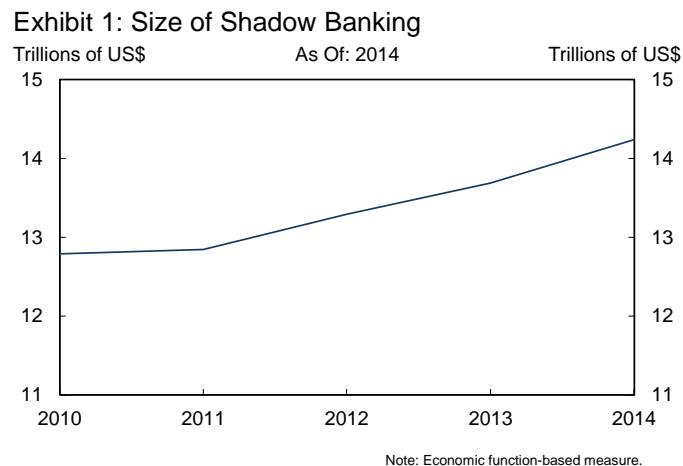
¹⁰ See Anil Kashyap, *Bank runs aren't madness: This model explained why*, (July 15, 2015) available at: <http://review.chicagobooth.edu/magazine/summer-2014/bank-runs-arent-madness-this-model-explained-why>.

this way, the policy focus on shadow banking can be both narrower and more forceful. Shadow banking is a natural focus of financial regulatory policy because it, like banking, is susceptible to runs, panics, and crises. But shadow banking is a difficult subject to tackle in financial regulatory policy because it occurs outside the banking sector and thus outside the prudential regulatory perimeter; consequently, it does not have the prudential oversight or the public backstops that have been developed to stabilize banking systems.

Importantly, this definition focuses on the *activity* of shadow banking rather than a focus on the regulatory perimeter or trying to ascertain whether a particular type of *entity* is a shadow bank. Shadow banking is simpler to analyze as an activity because this allows precision even when applying this definition to assess specific risks posed by an entity. For example, some entities may engage in shadow banking but those activities may not predominate their business models. Following are concrete examples of how this narrow definition can be applied analytically.

The Landscape of Shadow Banking, from the Crisis to Today

This paper can now offer a short version of this analytical exercise: to describe how certain activities fit this definition of shadow banking, outline the evolution of these activities since 2007, and describe the policy responses taken by the financial regulatory community. To set the overall landscape, the FSB's narrow measure of non-bank credit intermediation that could pose shadow banking risks shows evidence of growth in shadow banking assets in the United States (Exhibit 1).



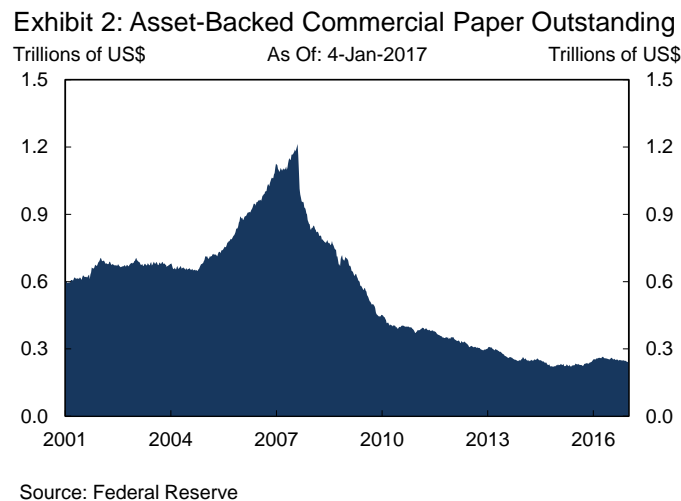
Source: Financial Stability Board

Applying this paper's definition can demystify claims about the size and growth of shadow banking. And, by zeroing in on core activities, one can better identify what has been done, where there is continued uncertainty, and highlight the need for continued vigilance and monitoring. It is important to note that the activities and entities set forth below are commonly cited in post-crisis discussions of shadow banking and are not intended to be an exhaustive list.

Structured investment vehicles and asset-backed commercial paper conduits: Structured investment vehicles (SIVs) are a structured product that raises capital and then

levers that capital by issuing short-term securities, such as commercial paper. They then use that money to buy longer-term securities, typically “structured” products, at higher margins. Importantly, SIVs were generally held off balance sheet of large banks and were widely regarded as risk-free due to the support of those institutions.¹¹ These activities clearly constituted shadow banking. Prior to the crisis, SIVs had approximately \$400 billion in assets,¹² but they are now are virtually non-existent in the United States.¹³

Asset-backed commercial paper (ABCP) is short-term debt with a fixed maturity of up to 270 days and is backed by a financial asset such as asset-backed securities, residential mortgages, commercial loans, and collateralized debt obligation. The combination of short-term liabilities and riskier assets conducted outside the regulatory perimeter puts this activity squarely within the narrow definition of shadow banking. Exhibit 2 shows that ABCP outstanding declined 80 percent from pre-crisis peaks of \$1.21 trillion to \$0.24 trillion at year-end 2016.¹⁴



The Dodd-Frank Act and other reforms implemented after the financial crisis helped bring parts of these off-balance sheet products under regulatory oversight and aligned the incentives of the sponsor with investors. Accounting changes required entities to bring SIVs onto their balance sheets, and there was a 100 percent net cash outflow hit under Basel III in the liquidity coverage ratio (LCR) calculation.¹⁵ ABCP was similarly affected under LCR

¹¹ See Zoltan Pozsar, Tobias Adrian, Adam Ashcraft, and Hayley Boesky, *Shadow Banking*, Federal Reserve Bank of New York Economic Policy Review, (December 2013) available at: <https://www.newyorkfed.org/medialibrary/media/research/epr/2013/0713adri.pdf>.

¹² Financial Crisis Inquiry Commission, *The Financial Crisis Inquiry Report: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States*, p. 252, (February 2011) available at: <https://www.gpo.gov/fdsys/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>.

¹³ Daniel Tarullo, Board of Governors of the Federal Reserve System, Remarks at Center for American Progress and Americans for Financial Reform Conference, (July 12, 2016) available at: <https://www.federalreserve.gov/newsevents/speech/tarullo20160712a.pdf>.

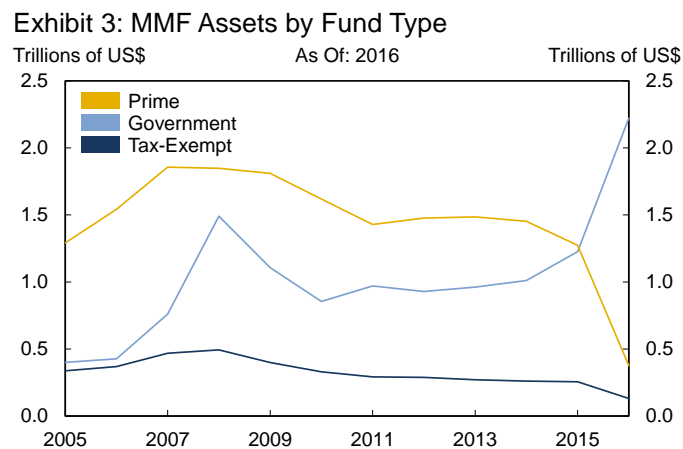
¹⁴ Federal Reserve, Commercial Paper Statistics for 2001 – 2016, available at: <https://www.federalreserve.gov/releases/CP/>.

¹⁵ Basel Committee on Banking Supervision, *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools*, (January 2013) available at: <http://www.bis.org/publ/bcbs238.pdf>.

calculations¹⁶ and also generally became subject to risk-retention requirements, under which the sponsors of the securitization were required to hold at least 5 percent of the credit risk in any asset that the securitizer sells to a third party.¹⁷

Money market funds: Money market funds (MMFs) typically invest in short-term debt securities, and their liabilities were perceived as close money substitutes before the crisis a classic example of the liability side of shadow banking. MMFs are also a good example of why defining shadow banking as an activity is crucial, because it depends on what a fund invests in, not the form of the entity itself. Prime MMFs held low-risk assets with high and variable liquidity but had no loss-absorbency capacity other than possible implicit sponsor support. As a result, when shocks hit during the crisis and one MMF “broke the buck,” these funds proved to be runnable. The MMF industry subsequently underwent significant reform.¹⁸ Among other rules, the SEC now requires institutional prime MMFs to have floating share values, or net asset values (NAV), so that investors can better perceive and monitor the risks of MMFs.¹⁹ Additionally, the SEC’s reforms allowed for or required liquidity fees and redemption restrictions (gates) to be applied to ensure a fund’s stability in periods of severe money market stress.²⁰

At the end of 2007, MMFs had \$3.1 trillion of assets, consisting mainly of government (\$0.76 trillion) and prime funds (\$1.86 trillion). At the end of 2016, after the implementation of the structural reforms, MMFs had almost \$2.7 trillion, composed mainly of government funds (\$2.2 trillion).



Source: ICI Fact Book

These flows in MMFs demonstrate the value that institutional investors were placing on MMFs for stability – that is, they valued the money-like characteristic of these funds.

¹⁶ *Id.*; see also Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, 79 Fed. Reg. 61439 (October 10, 2014).

¹⁷ See Dodd-Frank Act, Section 941.

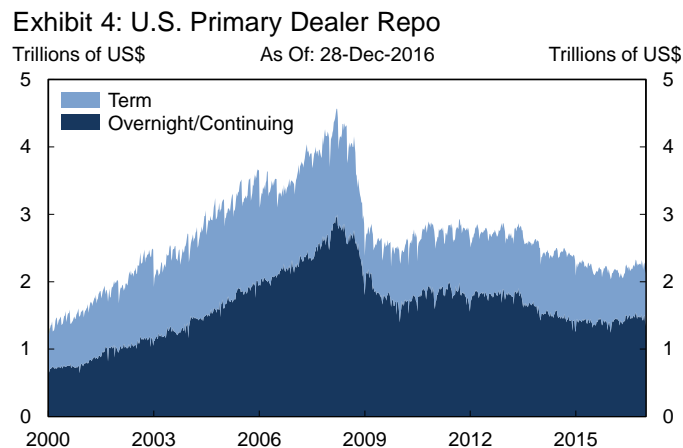
¹⁸ See SEC, Final Rule, *Money Market Fund Reform; Amendments to Form PF*, Release No. 33-9616, (May 1, 2014) available at: <https://www.sec.gov/rules/final/2014/33-9616.pdf>.

¹⁹ *Id.*

²⁰ *Id.*

The Office of Financial Research (OFR) has created an MMF monitor that tracks the investment portfolios of various MMFs, and the SEC publishes regular data on money markets.²¹ These new tools will help regulators and the public understand how investors in MMFs are shifting to private funds and other highly liquid short-term bond funds.

Repo and securities lending: A repurchase agreement (repo) is the sale of securities coupled with an agreement to repurchase the securities at a specified price at a later date. Securities lending agreements are collateralized loans and are economically similar to repo agreements. Typically the amount of the loan is less than the value of the collateral; the difference is the margin or “haircut.” The best data available on repo suggest that approximately 63 percent of this market is overnight, meaning that the transaction can be terminated at any time, and another 14 percent has a maturity of less than 30 days.²² As both repo and securities lending can create money-like liabilities with potential liquidity transformation outside the regulatory perimeter, they fit the definition of shadow banking. The crisis showed that repo liabilities under stress are runnable. Under stress, especially as the value of collateral declines, repo liabilities are also *procyclical*; that is, the borrower can face a “margin call,” or a requirement to either provide more collateral or partly repay the loan, which magnifies the impact of the shock. These transactions are good examples of why one should not think of “shadow banks” using an entity-based approach; entities that ostensibly are not shadow banks can engage in shadow banking *activities* through reliance on repo.



Source: Federal Reserve Bank of New York

As Exhibit 4 illustrates, in the wake of the breakdown in repo markets at the height of the crisis, there was a sharp drop in repo activity in the United States. And since 2013, repo levels have declined more gradually. The continued large size of the repo market suggests a real economic need for short-term financing in the financial system, and managing the liquidity risk associated with this activity has been a core objective of prudential regulators. For

²¹ OFR, U.S. Money Market Fund Monitor, available at: <https://www.financialresearch.gov/money-market-funds/>; SEC, Division of Investment Management, Money Market Fund Statistics, available at: <https://www.sec.gov/divisions/investment/mmf-statistics.shtml>.

²² See Federal Reserve Bank of New York, Primary Dealer Statistics for 2001-2016, available at: <https://www.newyorkfed.org/markets/gsds/search.html#>.

example, the LCR requires firms to hold a buffer of high-quality liquid assets when they use such securities financing transactions liabilities that mature in less than 30 days to fund many types of securities. In addition, U.S. bank capital rules require higher capital for firms that rely more on this type of financing. OFR has also been spearheading an effort, along with the Federal Reserve and SEC, to gather more insight into securities lending to help identify any further potential areas of risk.²³

Now that this paper has considered the activities that are typically agreed upon as shadow banking, the next step is to take a look at some entities where there is an active debate amongst the financial community.

Financial technology: Most financial technology (fintech) falls into two buckets: streamlining the back office or changing of the front-end user interface. For instance, online marketplace lending refers to the segment of the financial services industry that uses investment capital and data-driven online platforms to lend either directly or indirectly to consumers and small businesses. Online marketplace lenders make up a small but growing portion of the overall consumer and small business loan market.²⁴ In many cases, these loans are simply a migration from traditional financial institutions to these online lenders. But to determine if these activities are shadow banking, based on the definition laid out above, you need to look at the asset and liability structure of the entity and the type of activity it disintermediates. For instance, many of these companies are financed by equity and sell loans to third parties, and therefore do not create money-like liabilities. It remains to be seen whether other liability structures emerge as business models mature. In the United States and United Kingdom, the number of fintech start-ups has increased to over 4,000,²⁵ and investment in such companies in North America since 2011 has reached over \$24 billion.²⁶

Hedge funds: The hedge fund industry has seen significant growth in recent years, as shown in Exhibit 5. Industry-wide net assets under management totaled \$2.6 trillion as of the first quarter of 2016, exceeding peak levels from before the financial crisis. In most instances, these alternative investment managers would not satisfy the shadow banking definition, as they do not typically create money-like instruments. Additionally, hedge funds are often structured in a way that mitigates liquidity transformation (for example, by imposing stringent restrictions on investor redemptions). Some hedge funds also make direct loans to companies, a migration of activity from banks. But the fact that some hedge funds are competing with banks does not necessarily mean it would be considered shadow banking, because it does not feature the creation of money-like liabilities.

²³ OFR, Securities Lending Data Collection Pilot Project, available at:

<https://www.financialresearch.gov/data/securities-lending-data-collection-project/>.

²⁴ U.S. Department of Treasury, *Opportunities and Challenges in Online Marketplace Lending*, p. 11, (May 10, 2016) available at:

https://www.treasury.gov/connect/blog/Documents/Opportunities_and_Challenges_in_Online_Marketplace_Lending_white_paper.pdf.

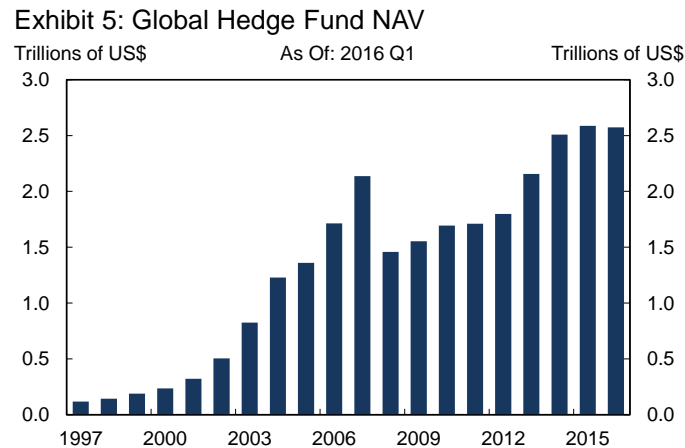
²⁵ Falguni Desai, Forbes, *The Fintech Boom and Bank Innovation*, (December 14, 2015) available at:

<http://www.forbes.com/sites/falgunidesai/2015/12/14/the-fintech-revolution/#2715e4857a0b502b478836da>.

²⁶ KPMG, *The Pulse of Fintech, Q3 2016*, 40, (November 16, 2016) available at:

<https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2016/11/the-pulse-of-fintech-q3-report.pdf>.

That said, this does not mean that hedge funds cannot still be engaged in shadow banking activities (for example, hedge funds relying heavily on repo), or, separately, that they do not pose risks. The Financial Stability Oversight Council (FSOC) has highlighted a number of key areas where additional data collection regarding hedge funds is needed to better to assess potential risks to financial stability.²⁷



Source: BarclayHedge

Collateralized debt obligations and collateralized loan obligations: In a collateralized debt obligation or collateralized loan obligation (CDO or CLO) transaction, a special-purpose entity issues bonds to investors in exchange for cash that the entity uses to purchase assets such as mortgage-backed securities, commercial real estate, and corporate loans. During the financial crisis, losses in these vehicles cascaded through the system, in part because CDOs and CLOs were used as collateral in repo transactions or were held by entities like broker-dealers that relied significantly on short-term financing. Today, these markets demonstrate an important distinction in the way risk can be mitigated. Securitizations involving tranching took a group of assets and created various layers with different degrees of credit risk and differing prioritization of claims. Similar to ABCP, under the Dodd-Frank Act, the sponsors of asset-backed securitizations like these CDOs and CLOs are now generally subject to risk-retention requirements.²⁸

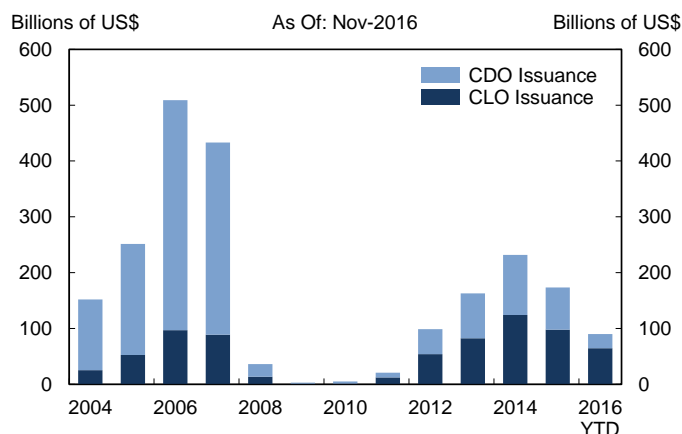
However, tranching is not the same as creating a term structure where certain liabilities are both short-term and very liquid. As an example, in repo markets, an entity could finance assets with low credit risk on a short-term basis, thus funding long-term corporate loans with short-term liabilities. In theory, this would satisfy this paper’s definition of shadow banking. Available data, however, suggest that this term structure is mostly not occurring; but it demonstrates why monitoring of repo markets and other asset classes is important.

Total U.S. issuance of CDOs and CLOs stood at \$433 billion in 2007 but fell to \$90 billion as of November 2016 (Exhibit 6).

²⁷ Jonah Crane, U.S. Department of Treasury, Remarks at FSOC Meeting, (November 16, 2016) available at: <https://www.treasury.gov/press-center/press-releases/Pages/jl0612.aspx>.

²⁸ See Dodd-Frank Act, Section 941.

Exhibit 6: CLO and CDO Issuance



Source: SIFMA, S&P LCD

Mutual funds: Mutual funds are one of the largest contributors to non-bank financial activity. Equity mutual funds invest in highly liquid stocks of companies and thus should generally not be considered shadow banking. Bond mutual funds have seen significant inflows over the past few years, making them important to consider in the context of the definition of shadow banking.²⁹ There are important differences between the valuation and redemption features of bond mutual funds and those of a fixed, short term liability (as discussed above for repo and ABCP). The FSOC has highlighted two primary liquidity and redemption risks related to mutual funds, particularly those holding less-liquid securities.³⁰ First, investors in such funds may believe that they can redeem their securities at any time without affecting the value of the underlying assets, regardless of the liquidity of those assets.³¹ Second, the fund’s redemption options and pricing methods may create a potential “first-mover advantage” if the costs of meeting redemptions are largely borne by remaining investors in the fund.³² Indeed, the SEC has adopted significant reforms to address the clearly identified risks and to improve risk monitoring of funds, including rules to help address liquidity concerns and the first-mover advantage.³³ Both of these risks are distinct from bank-like risks (e.g., the creation of money-like liabilities). While academic research highlights that bond funds are subject to the first-mover advantage, more work needs to be done to understand the dynamics of these risks.³⁴

²⁹ See Federal Reserve, Financial Accounts of the United States, Z.1., Third Quarter 2016, available at: <https://www.federalreserve.gov/releases/z1/current/z1.pdf>.

³⁰ FSOC, *Update on Review of Asset Management Products and Activities*, p. 4-5, (April 18, 2016), available at: <https://www.treasury.gov/initiatives/fsoc/news/Documents/FSOC%20Update%20on%20Review%20of%20Asset%20Management%20Products%20and%20Activities.pdf>.

³¹ *Id.*

³² *Id.* at 5.

³³ SEC, Final Rule, *Investment Company Liquidity Risk Management Programs*, Release No. 33-10233, (October 13, 2016) available at: <https://www.sec.gov/rules/final/2016/33-10233.pdf>; Final Rule, *Investment Company Reporting Modernization*, Release No. 33-10231, (October 13, 2016) available at: <https://www.sec.gov/rules/final/2016/33-10231.pdf>; Final Rule, *Investment Company Swing Pricing*, Release No. 33-10234, (October 13, 2016) available at: <https://www.sec.gov/rules/final/2016/33-10234.pdf>.

³⁴ See, e.g., Itay Goldstein, Jiang Hao, and David Ng, *Investor flows and fragility in corporate bond funds*, working paper, (November 2016) available at: <http://finance.wharton.upenn.edu/~itayg/Files/bondfunds->

Broker-dealers: Before the financial crisis, assessing whether a broker-dealer would be considered a shadow bank depended on the particular business model of the broker-dealer. Many of the larger broker-dealers were part of larger independent investment banks and relied on funding from unsecured short-term credit markets. Some of those firms failed, such as Bear Stearns and Lehman Brothers, while others such as Goldman Sachs and Morgan Stanley opted to become bank holding companies, which subjected them to prudential oversight. Under the Dodd-Frank Act, foreign banks with substantial U.S. assets generally must hold their broker-dealer and other U.S. subsidiaries under an intermediate holding company that falls under Federal Reserve supervision. The largest broker-dealers are still subsidiaries of bank holding companies, and broker-dealers not affiliated with banks are more likely to have an agency business, with smaller balance sheets and funding needs.

Although even broker-dealers that are subsidiaries of bank holding companies may satisfy this brief's definition of shadow banking by relying heavily on short-term funding to fund risky assets, these firms are now prudentially regulated. However, given their size and use of short-term funding, there is an ongoing debate about whether a public backstop for these broker-dealers is needed from a financial stability perspective.³⁵ This helps explain the continued focus of financial regulators on short-term funding and the academic interest on the extent of the backstop of the system.³⁶

Implications for Policymakers

A common refrain from regulated entities after the crisis was that firms understood the importance of regulation but were worried about the wrong kind of regulation. A clear and narrow definition of shadow banking has now allowed us to consider analytically whether particular activities constitute shadow banking and therefore pose concerns. But now the next step is to consider what the appropriate structure for policy development is.

When one contemplates prudential oversight of shadow banking activities, the regulatory focus must at least partly shift from regulating entities to regulating activities. That's because if regulating by entity, one must regulate all shadow banks, which, in a financial system that is constantly evolving, is impossible. Entity-based regulation is, in Paul Tucker's parlance, the "meat and drink of regulatory arbitrage."³⁷ Such an approach would require regulators to play whack-a-mole; every regulation will create incentives for activity to migrate to a different entity.

[forthcoming.pdf](#); Jeremy Stein, *Why Are Most Funds Open-End? Competition and the Limits of Arbitrage*, (July 2015) available at: <http://scholar.harvard.edu/files/stein/files/qje-2005.pdf?m=1360040296>.

³⁵ See, e.g., Timothy Geithner, *Are We Safer? The Case for Strengthening the Bagehot Arsenal*, (October 8, 2016) available at: <http://www.perjacobsson.org/lectures/100816.pdf>; Daniel Tarullo, Board of Governors of the Federal Reserve System, Remarks at the Americans for Financial Reform and Economic Policy Institute Conference, (November 22, 2013) available at:

<https://www.federalreserve.gov/newsevents/speech/tarullo20131122a.htm>; William Dudley, Federal Reserve Bank of New York, Remarks at the Federal Reserve Bank of Atlanta 2016 Financial Markets Conference, (May 1, 2016) available at:

<https://www.newyorkfed.org/newsevents/speeches/2016/dud160501>.

³⁶ See, e.g., Hal Scott, *Connectedness and Contagion: Protecting the Financial System from Panics*, MIT Press (May 2016).

³⁷ See Paul Tucker, *The objectives of financial stability policy* (September 28, 2016) available at: <http://voxeu.org/article/objectives-financial-stability-policy>.

In contrast, the narrow shadow banking definition described above allows, in a straightforward manner, the identification of activities that should be subject to regulation. If an activity meets this definition of shadow banking, then it poses similar risks as banking. In the United States, banking without appropriate oversight is not allowed. So, if something is shadow banking, policy must be implemented that helps mitigate these risks.

To do so, one can use a clear set of decision points. First, if the activity is situated in a well-defined entity, then policymakers can apply a well-developed bank-like regulatory framework – capital, liquidity, and supervision. For example, by changing accounting rules for off-balance sheet structures, much of the most dangerous forms of shadow banking were brought under regulatory supervision and subject to capital and liquidity requirements.

Second (and likely more important), if the activity is not in a well-defined entity, policymakers must either require the activity to change so that it is no longer bank-like, or regulate the overall market. For example, as a result of the SEC's structural reforms, institutional prime MMFs offer less money-like liabilities, a difference from those funds that ran in the crisis. But developing the policy tools that can effectively regulate an overall market remains an ongoing challenge. The conversation on repo, for example, now focuses on margin and haircut requirements. These are still being developed, and their final form remains unclear.

These policy choices were not always easy, and many argued that the choices made were inappropriate. But, importantly, they were made pursuant to a clear and bounded theory. Using this framework, one can clearly articulate when bank-like regulation should apply, and when it should not.

If something is not shadow banking that does not mean that the policy conversation ends there. Nor does it mean that the activity cannot still pose risks to financial stability. But it does mean that the policy conversation shifts dramatically. There are many other well-developed policy frameworks to handle the risks associated with such financial activities, including consumer protection, disclosure and transparency, incentive alignment, and risk-management requirements. These are the appropriate considerations for government analysis and monitoring as the financial system changes: What are the risks, and what policy response can be tailored to those risks?

For instance, more traditional term-funded securitizations, as noted above, present very different risks than when those same assets were funded through rolling short-term debt. In the Dodd-Frank Act, therefore, the broadly applicable rule for securitizations uses detailed disclosure (down to the asset level) and incentive alignment (through the risk-retention regime). The SEC's recent asset management rulemakings address the liquidity risks of mutual funds directly through a combination of disclosure and limitations on allowable assets. And to promote market discipline, they modernized the public reporting system for funds, so that investors can more easily analyze and monitor funds.

Conclusion

While the financial regulatory community has taken numerous steps to address identified risks, prudential regulation is ongoing. In a rapidly evolving financial system, shadow banking activities bear close monitoring; the crisis illustrated the consequences of a lack of regulation, supervision, and transparency. The answers to these questions are not always straightforward, but a narrow, activities-based definition of shadow banking helps policymakers move forward in determining the appropriate policy response, and helps the public understand the debate.