Peterson Institute for International Economics

Policy Brief

NUMBER PB13-14 MAY 2013

Shadow Deposits as a Source of Financial Instability: Lessons from the American Experience for China

Nicholas Borst

Nicholas Borst, *research associate and China program manager, has been with the Peterson Institute for International Economics since 2011. He also edits the Institute's China blog, China Economic Watch. Before joining the Institute, Borst was a consultant at the International Finance Corporation and the Multilateral Investment Guarantee Agency.*

The financial regulation architecture in both the United States and China developed during eras when retail deposits and bank loans were the primary mode of financial intermediation. The function of banks is to transform short-term deposits into long-term loans, while providing liquidity for depositors. Experience has taught regulators hard lessons that this activity must be subject to prudential safeguards, including reserve requirements, principal protection for depositors, and access to a lender of last resort. Without these protections, short-term deposits are subject to bank runs that can destabilize the entire financial system. Over the years, however, financial innovations have led to the buildup of short-term pools of funding outside the confines of these protections. These shadow deposits play a role similar to traditional deposits, taking short-term funds from individuals and businesses and providing credit to borrowers.

In the United States, shadow deposits take the form of money market mutual funds, deposit-like funds that are not protected by deposit insurance, lack capital buffers, and are offered by institutions without access to the lender of last resort. In China, shadow deposits are wealth management products, short-term financial products offered as an alternative to traditional savings deposits, most of which are principal unguaranteed and thus lack the implicit government support enjoyed by traditional deposits. In both countries the origin of shadow deposits was regulatory arbitrage, giving ordinary investors a way to bypass the restrictions placed on traditional deposits. The controlled interest rates on traditional deposits in both the United States and China fell below prevailing market rates. Shadow deposits emerged as a way to offer savers the convenience and perceived safety of a deposit while offering a higher interest rate than that earned on traditional deposits. They can offer these higher rates precisely because they are exempt from many of the costly safeguards put upon banks.

Shadow deposits have grown into an important source of funds in both the United States and China, particularly in the short-term financing markets. These deposits are also the component of the shadow banking system where ordinary investors are most likely to be involved. While money market mutual funds were thought for decades to be relatively safe and boring, the global financial crisis forever altered this perception. Relatively small losses in the commercial paper market precipitated a run on money market mutual funds, leading to investor losses and freezing short-term financing markets in the United States. The crisis revealed the inherent risks in shadow deposits as well as their role in increasing financial instability.

The more recent emergence of shadow deposits in China has been much more rapid and has coincided with a dramatic decline in the role of bank loans in new credit growth. In a few short years, wealth management products have grown from a small number of specialized financial products aimed at sophisticated investors to near universal availability at China's major banks with widespread participation by retail customers. Moral hazard is prevalent in the wealth management product market because even small-scale defaults have been averted through government intervention. A real crisis, therefore, has yet to test the market. US experience in regulating shadow deposits offers useful lessons for China to guide its own financial development in a healthier direction.

DEVELOPMENT OF MONEY MARKET MUTUAL FUNDS IN THE UNITED STATES

The first money market fund in the United States was created in 1971.[1] The catalyst for its creation was a mismatch between short-term interest rates and the controlled rate on savings deposits (figure 1). Due to inflation spikes during the 1970s, short-term market interest rates shot up significantly above the regulated level allowed on savings deposits. Savers thus had the opportunity to purchase low-risk assets such as US treasuries and earn a higher return than what was available on savings deposits. Investors began withdrawing funds from traditional deposits and moving into these higher-yielding money-like securities (Luttrell, Rosenblum, and Thies 2012). Money market funds emerged as a way to organize this behavior and offer this investment channel to small investors.

US experience in regulating shadow deposits offers useful lessons for China to guide its own financial development in a healthier direction.

Money market mutual funds were made possible by two Depression-era banking laws, the Glass-Steagall Act of 1933 and the McFadden Act of 1927. Regulation Q of the Glass-Steagall Act prohibited banks from paying interest on demand deposits and gave the Federal Reserve the power to set interest rate ceilings on time deposits. The rationale behind Regulation Q was that fierce competition for deposits amongst banks in the 1920s had led to bank failures during the Great Depression. By setting a maximum interest rate, banks would be prevented from promising unsustainably high interest rates to savers and making increasingly risky loans to preserve their net interest margins.

The McFadden Act was the other restriction placed on banks that allowed money market mutual funds to develop quickly. This federal legislation was initially passed to give national banks equal competitive footing with state banks. Prior to the act, some state banks were allowed branching rights within a state's borders while all national banks were prohibited from branching. To avoid these restrictions, many national banks began giving up their national charters and leaving the Federal Reserve System (Rajan and Ramcharan 2013). The McFadden Act tried to address this competitive disadvantage by forcing states to offer national banks the same branching rights as local banks. This put national banks on equal footing with state banks but also prevented interstate banking as most states had restrictions on it and national banks were now beholden to state banking rules (Neely 1994). The Bank Holding Company Act of 1956 further limited interstate banking by prohibiting bank holding companies headquartered in one state from acquiring a bank in another state.

Money market mutual funds, registered as investment companies under the Investment Company Act of 1940 and regulated by the Securities and Exchange Commission (SEC), were not subject to the same interest rate and interstate regulations as traditional banks. This regulatory gap paved the way for money market mutual funds to grow rapidly. Previously, the regulatory ceiling on deposit rates had not been much of an issue as it was typically set above the market rate on deposits and treasuries. The increase in short-term interest rates in the 1970s, however, changed this, and money began pouring into money market mutual funds. Without restrictions on interstate operations, once money market mutual funds began attracting funds away from traditional deposits they were able to grow quickly into nationwide enterprises.

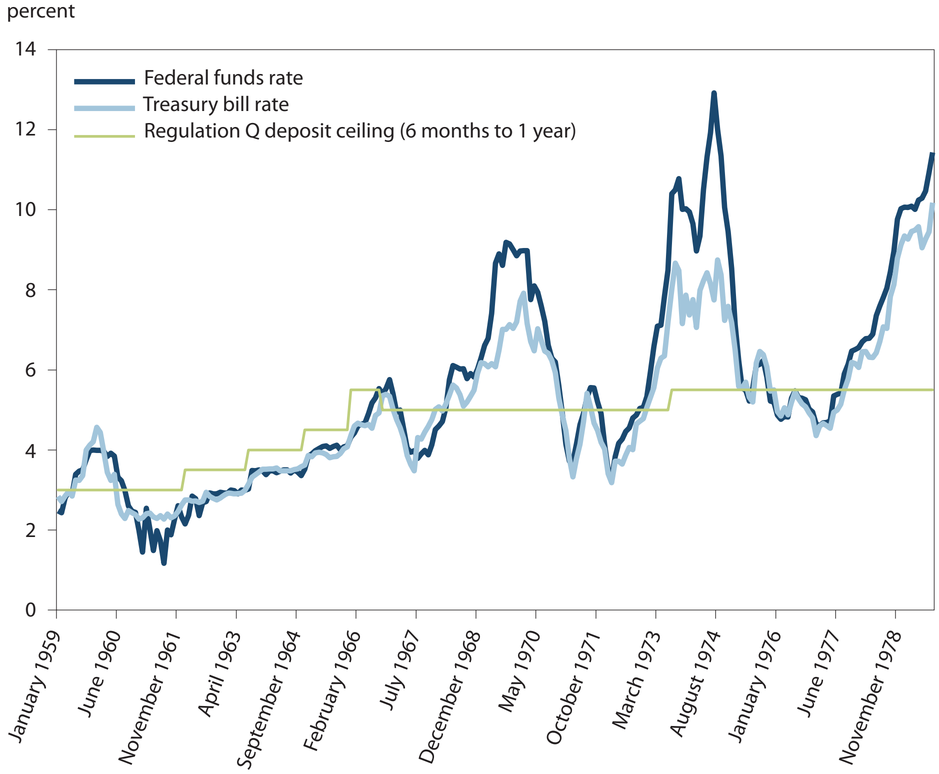
The regulatory restrictions that put banks at a disadvantage relative to money market funds were eventually lifted. The McFadden Act and Bank Holding Company Act were repealed by the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994. Regulation Q of the Glass-Steagall Act was eliminated by the Depository Institutions Deregulation and Monetary Control Act of 1980, which gradually lifted all interest rate controls on savings deposits by 1986. The Garn-St. Germain Depository Institutions Act of 1982 allowed banks to offer a true alternative to money market funds in the form of money market deposit accounts (Luttrell, Rosenblum, and Thies 2012).

Despite the lifting of interest rate and interstate banking restrictions, money market mutual funds continued to grow because of several regulatory advantages. First, money market mutual funds do not pay deposit insurance to the Federal Deposit Insurance Corporation (FDIC). Second, money market mutual funds are exempt from reserve requirements required by the Federal Reserve. Third, money market mutual funds have no capital requirements lowering their costs of funds relative to banks, which are required to maintain capital buffers. These advantages mean money market funds can pay higher rates to depositors than banks could offer on traditional deposits.

The peak value of total financial assets of money market mutual funds was $3.76 trillion in 2008, equivalent to 32 per-

1. The first money market mutual fund was the Reserve Primary Fund. Of note, this same fund would fail in 2008 and precipitate a general run on money market mutual funds.

Figure 1 US interest rate controls in the 1960s and 1970s



Sources: Federal Reserve Bank of St. Louis, Annual Statistical Digest–FRASER; International Monetary Fund, *International Financial Statistics*.

cent of the asset value of chartered depository institutions. As a percent of GDP, money market mutual funds peaked at 26 percent in 2008, declining to 17 percent in 2012 (figure 2). These funds eventually emerged as one of the most important sources of short-term financing in the American economy. Money market mutual funds accounted for an average of 35 percent of commercial paper market financing between 1992 and 2008 (Anderson and Gascon 2009). The three largest investors in money market mutual funds are households, funding corporations, and nonfinancial corporations, accounting for 42, 22, and 17 percent of the total in 2012, respectively.

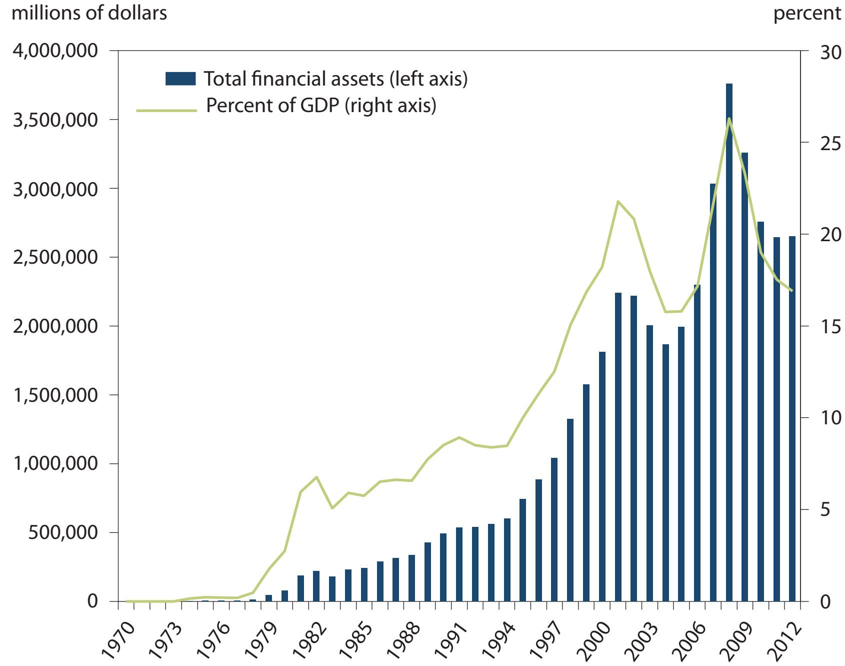
Money market mutual funds market themselves as deposit substitutes in order to attract risk-averse customers. In addition to offering bank-like conveniences like check writing, money market funds list a stable $1 per share net asset value. This stable net asset value provides depositors the illusion that there is no fluctuation in the value of their fund holdings. For the most part, this illusion has been consistent with reality. Even when money market mutual funds have run into trouble, sponsors have usually stepped in and injected funds to make investors whole. There have been only two notable incidents of money market funds "breaking the buck" (i.e., when the net value of a fund's assets falls below $1 per share).

The Community Bankers Mutual Fund became the first money market mutual fund to fail in 1994. The proximate cause of the failure was an investment in a government bond derivative with a floating rate.[2] When the Federal Reserve raised rates in 1994, the value of these notes plunged and the fund failed, returning only 94 cents on the dollar. The fund sponsor, Community Assets Management of Denver, was unable to secure the financing to bail the fund out. Due to the relatively small size of money market funds at that time and a strong underlying economy, the failure of the Community Bankers Mutual Fund was largely contained to the fund itself.

The second and most significant failure was the Reserve Primary Fund, the oldest money market mutual fund in the United States. Mounting difficulties in the mortgage markets set the stage for the fund's failure. In August 2007, BNP Paribas

2. Leslie Eaton, "New Caution About Money Market Funds," *New York Times*, September 29, 1994, www.nytimes.com/1994/09/29/business/new-caution-about-money-market-funds.html (accessed on March 7, 2013).

Figure 2 US money market funds total assets, 1970–2012



Sources: Federal Reserve; Bureau of Economic Analysis; author's calculations.

halted withdrawals from three funds invested in mortgage-backed securities and suspended calculation of their net asset values (Kacperczyk and Schnabl 2012). This sharply increased rates on asset-backed commercial paper, particularly relative to treasuries. Taking advantage of these higher rates, Reserve Primary Fund began to greatly increase its holdings of commercial paper, which was the riskiest asset class available to money market funds. When Lehman Brothers defaulted on its commercial paper in September 2008, the Reserve Primary Fund ran into trouble. Its holdings of Lehman's commercial paper accounted for 1 percent of its assets and the fund was forced to break the buck (Kacperczyk and Schnabl 2012).

The panic created by Reserve Primary Fund's failure quickly spread to other money market funds. Reminiscent of a bank run, there were rapid and large withdrawals from money market mutual funds, with $300 billion withdrawn from funds during the week of September 15, 2008 (Investment Company Institute 2009). Four days after the collapse of Lehman Brothers, the US Treasury was forced to announce ex post deposit insurance for all money market fund investments made prior to Lehman.[3] The turmoil in the money market funds led them to reduce their holding of commercial paper, which declined from 37 percent of all commercial paper outstanding in early 2008 to 32 percent after Lehman (Luttrell, Rosenblum, and Thies 2013). This caused chaos in the commercial paper market, and the Federal Reserve was required to establish the Commercial Paper Funding Facility (CPFF) to restore the market.

Money market mutual funds present a systemic risk to the US economy because they are vulnerable to runs. In order to compete with traditional bank deposits, money market funds must offer generous withdrawal provisions. Lacking the protections put in place on bank deposits while allowing rapid withdrawals is a dangerous combination. When a negative shock occurs, customers may quickly reassess the risk inherent in these uninsured deposit-like products and withdraw their funds. In 2008, this behavior quickly spread from the Reserve Primary Fund to unrelated money market funds. Large-scale withdrawals forced money market mutual funds to cease acquiring new assets and conduct fire sales of existing assets. Large-scale withdrawals from money market funds can freeze up the short-term financing markets, which rely on money market funds, thus creating a direct negative impact on the real economy.

The trouble money market mutual funds encountered in 2008 is interesting for several reasons. First, the Reserve Primary Fund was not engaging in illegal or even especially risky behavior. The fund was simply buying the highest-yielding securities it was allowed to invest in by regulators. Second, the relatively minor losses the Reserve Primary Fund suffered set

3. This guarantee expired in September 2009.

off a run not only on the fund itself but also on the entire money market mutual fund market, in contrast to the relatively limited fallout from the Community Bankers Mutual Fund in 1994. This seemingly disproportionate reaction by investors is explained by the increased size of money market funds relative to the economy in 2008 and the pervasive sense of economic and financial insecurity after the collapse of Lehman Brothers.

Efforts to reform money market funds have been modest thus far. In May 2010, the SEC amended the rules governing money market mutual funds to increase the minimum share of their portfolio that can be readily converted to cash, reduce the maximum weighted average maturity of portfolio holdings, increase credit quality requirements for portfolio holdings, require monthly disclosures of portfolio holdings, and map out an orderly liquidation process for funds (SEC 2010). At the time of this writing, more ambitious reforms like requiring money market funds to have a floating net asset value are still under debate amongst regulators and fiercely opposed by industry interests. The slow pace of reform is made more worrying by provisions in the Dodd-Frank financial reform bill that limit the ability of the Federal Reserve and US Treasury to create special funding facilities like the ones used to backstop money market mutual funds and the commercial paper market (Adrian and Ashcraft 2012).

DEVELOPMENT OF WEALTH MANAGEMENT PRODUCTS IN CHINA

Wealth management products, a relatively new financial innovation in China, package together a range of financial assets and sell them directly to retail and corporate customers. They are mostly short-term, and many overlap with the assets in which money market mutual funds invest, such as commercial paper, short-term bonds, interbank lending, and repurchase agreements. Unlike American money market mutual funds, some Chinese wealth management products also invest in riskier and less liquid assets, including loans, equities, and longer duration bonds.

Though structured somewhat differently, wealth management products are largely analogous to money market mutual funds. They are not quite as liquid as money market mutual funds because they are closed funds with definite maturities and are not checkable. However, a large majority of wealth management products are very short-term in nature. Around 66 percent of wealth management products have a maturity of less than three months. Only a very small percentage of wealth management products have a maturity of greater than one year. As a result wealth management products are still a relatively liquid investment for depositors, many of whom roll over their savings into multiple wealth management products during the course of a year. Banks try to structure these short-term products so that they expire before quarterly loan-to-deposit checks and thus count towards the bank's normal deposits.[4] In reality, however, these funds are no longer traditional deposits and instead resemble a revolving deposit alternative akin to a money market fund.

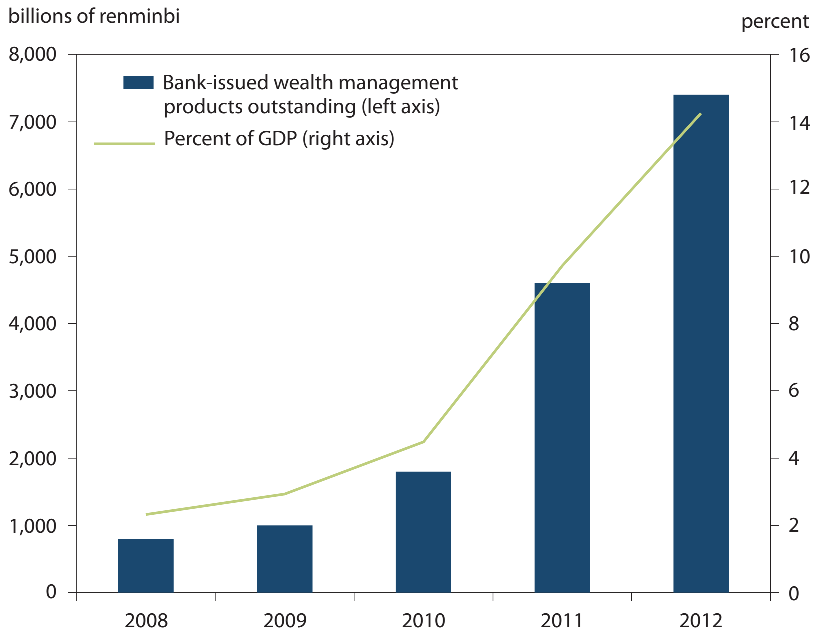
Like money market mutual funds, wealth management products fall outside government guarantees. China lacks a formal deposit insurance system like the United States. Traditional bank deposits, however, enjoy a strong implicit guarantee of government support. This was demonstrated during the late 1990s when large amounts of government funds were injected into the banking system after the nonperforming loan scare. It is widely believed that if a major bank were to get into trouble, the Chinese government would step in again to prevent depositors from losing their funds. Most wealth management products are structured in a manner that, at least in theory, excludes them from this type of direct support. Two-thirds of wealth management products are principal unguaranteed, meaning that the issuing bank bears no responsibility in the event of a product default. Eighty-five percent of wealth management products do not guarantee interest payment. Absent a circumstance in which wealth management product defaults threatened the entire financial system, these products are unlikely to receive government support. As a result, depositors investing in wealth management products face risk on both their return and principal, which does not exist for traditional bank deposits.

Chinese commercial banks began selling wealth management products in 2004. Initially, foreign currency–denominated wealth management products were the most popular, perhaps reflecting greater investment sophistication amongst foreign-currency holders. A total of 127 different wealth management products were issued in 2004 (Wind Information 2013). The boom began in earnest in 2008, with the issuance of renminbi-denominated wealth management products. The number of products issued that year reached 6,753, exceeding 32,000 by 2012.

The total amount of wealth management products outstanding has grown at a similarly impressive rate. As late as 2008, there may have been almost a trillion renminbi worth of bank-issued wealth management products outstanding. By the end of 2012, the amount outstanding had grown to over 7.1 trillion renminbi (figure 3). In addition, there are 1 trillion to 1.5 trillion renminbi in nonbank wealth management products

4. Structuring wealth management products in this manner helps banks meet their loan-to-deposit ratio, a prudential regulation put in place to make sure banks have adequate deposit reserves given the size of their loan book. The current ratio is set to 75 percent.

Figure 3 Bank-issued wealth management products in China, 2008–12



Source: Yan, Hung, and Kong (2013).

outstanding issued by trust companies and brokerages (Yan, Hung, and Kong 2013). Taken together, wealth management products are now equivalent to 17 percent of Chinese GDP, almost the exact share of money market mutual funds in the United States. While money market mutual funds in the United States have declined and leveled off after the crisis, Chinese wealth management products are still growing rapidly.

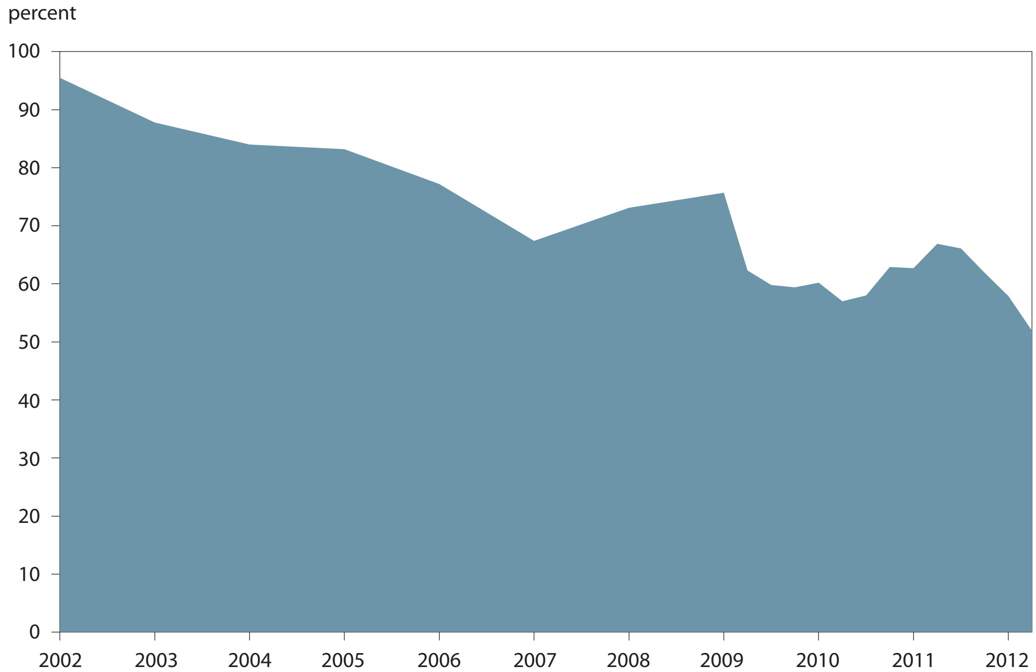
Wealth management products invest in a relatively diverse range of assets. According to Wind Information in 2012 bond market and money market products received 32 percent of wealth management product funds, and 21 percent were invested in bank deposits, which are often placed at other banks at negotiated interest rates. Another 30 percent of wealth management products funds go into credit products consisting of loans and other types of debt. This is the channel through which banks securitize loans and remove them from their balance sheets. Eleven percent of wealth management product funds are invested directly in equities. The rest fall into the "other" category made up of structured investments, trust companies and brokerage investments, and financial derivatives.

Over just a few years, wealth management products have become an important source of financing for the Chinese economy. In terms of assets, bank-issued wealth management products are now roughly equivalent to the trust and insurance sectors and more than twice as large as the mutual fund sector (Yan, Hung, and Kong 2013). The growth of wealth management products has contributed to the rapid decline of the share of traditional loans as a source of financing in the Chinese economy (Xia, Schwartz, and Herrero 2013). In 2002, bank loans accounted for 96 percent of all new financing in the Chinese economy.[5] By the first quarter of 2013, the loan share of financing had fallen to only 52 percent (figure 4).

Driving the rapid growth of wealth management products is a form of regulatory arbitrage to circumvent China's policy of low interest rates on deposits. The People's Bank of China sets a ceiling on the interest rate that can be paid on savings deposits. This policy grew out of the need to sterilize large amounts of foreign currency market intervention while keeping the banks profitable. The central bank uses renminbi to buy large amounts of foreign currency. To sterilize the inflationary impact of this intervention, the central bank continually raised the required reserve ratio, increasing the amount of funds banks had to deposit with the central bank. To compensate banks for putting so much cash into these low-yielding accounts, the central bank established a healthy

5. New credit in the Chinese economy is typically measured through the total social financing statistic released by the People's Bank of China. This statistic compiles net new credit extended through renminbi loans, foreign-currency loans, entrusted loans, trust loans, bank acceptances, corporate bonds, and equity issuances.

Figure 4 Traditional loans as a percent of total social financing in China, 2002–12



Sources: Wind Information database; author's calculations.

interest margin for banks by capping deposit rates and putting a floor on lending rates (Lardy 2008). The resulting interest rate structure has generated record profits for banks.

But the interest rate policy has not been as beneficial for depositors. For most of the past decade, the deposit rate has been below inflation, giving savers a negative real rate on their deposits. Unsurprisingly, Chinese savers have sought alternatives with higher returns. With a depressed stock market and capital controls, the main alternatives to traditional deposits are real estate investment and wealth management products. While real estate investments are large and illiquid, wealth management products give investors liquidity and a sense of security by putting their money in a deposit-like investment. Individual bank customers account for two-thirds of wealth management product purchasers.[6]

Chinese banks have moved quickly to grow their wealth management product businesses. With their hands tied on what interest rates they can offer depositors, banks can use wealth management products to attract and retain funds. In 2012, the average interest rate on three-month wealth management products issued by banks was around 150 basis points, a premium of more than 66 percent over the benchmark bank deposit rates compared to the three-month benchmark rate on savings deposits. For smaller city commercial banks, this spread can be even higher (figure 5). The higher interest rate offered on wealth management products is enough to keep many depositors from taking their money out, and banks can structure many of these products so that they expire in time to count towards the bank's loan-to-deposit ratio.

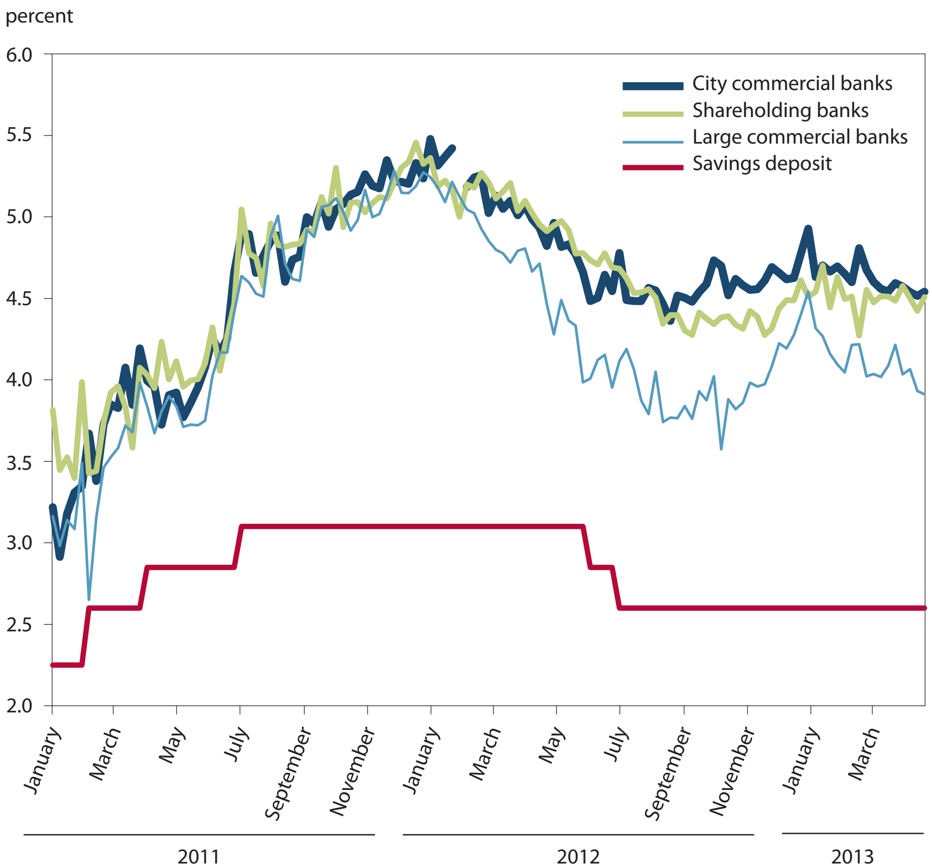
Chinese regulators have expressed mixed views about the growth of wealth management products. People's Bank of China Governor Zhou Xiaochuan has described the growth of shadow banking as a natural reaction to the traditional financial system's inability to meet the needs of the market.[7] This sentiment seems to apply to the development of wealth management products. Fang Xinghai, director general of the Shanghai Office of Financial Services, is quoted as saying that 99 percent of wealth management products are normal financial products and not a risk to the banking sector.[8] In stark contrast, China Securities Regulatory Commission Chairman Xiao Gang clearly

6. Dinny McMahon, "Important Clarity on a Controversial Chinese Bank Product," *Wall Street Journal,* April 25, 2013, http://blogs.wsj.com/chinarealtime/2013/04/25/important-clarity-on-a-controversial-chinese-bank-product.

7. "Shadow Banking: Hidden from View," *China Daily*, November 28, 2012, www.chinadaily.com.cn/bizchina/2012-11/28/content_16029112.htm.

8. Tom Orlik, "Shanghai Regulator: Wealth-Management Products Pose Little Risk," WSJ Blogs, *Wall Street Journal*, January 25, 2013, http://blogs.wsj.com/davos/2013/01/25/shanghai-regulator-wealth-management-products-pose-little-risk.

Figure 5 Spread between 3-month wealth management product return and deposit rate in China, 2011–13



Source: Wind Information database.

identified wealth management products as a form of shadow banking and described the issuing of new products to pay off maturing ones as reminiscent of a Ponzi scheme.[9]

The dominant regulatory view can be described as cautious optimism. Many Chinese regulators see real benefits in the development of a large wealth management product market. Reluctant or unable to move forward with interest rate liberalization, some regulators believe wealth management products offer a controlled experiment in liberalization. In this view, banks can grow their wealth management product businesses and become more adept at competing in a liberalized interest rate environment. If and when interest rate liberalization finally occurs, their experience with wealth management products will have prepared banks for these new challenges.

Even those regulators supporting wealth management products acknowledge risks in two key areas, investor education and unregulated securitization. Investor education is an issue because many purchasers of wealth management products have underestimated the potential risks. Most wealth management products are sold in banks, including many of the third-party products. Though China lacks a formal deposit insurance system like the FDIC, there is an implicit government guarantee for large commercial banks. Many investors assume that the wealth management products sold by these banks, even those issued by third parties and sold by the same banks, are protected from default by extension. As a result, moral hazard remains a pervasive problem throughout the wealth management product market. Though there have been regulatory moves to increase investor awareness of the risks in wealth management products, there is widespread acknowledgment that investor education is still deficient.

9. Xiao Gang, "Regulating Shadow Banking," *China Daily*, October 12, 2012, www.chinadaily.com.cn/opinion/2012-10/12/content_15812305.htm

Unregulated securitization is another risk area that most regulators acknowledge. Official levels of securitization in China are low. A pilot program that emerged in the mid-2000s was put on hold during the financial crisis only to be revived on a small scale in 2012. Outside the official program, Chinese banks constrained by lending quotas or weak deposit growth have turned to wealth management products as a way to boost lending. Wealth management products are used to facilitate the securitization of bank loan assets, often via the interbank market, taking them off banks' balance sheets and freeing up funds to make new loans. Trust companies also contribute to the unregulated securitization process. These companies use funds from wealth management products to purchase repackaged bank loans as well as extend credit on banks' behalf to third parties. This loan and trust product securitization activity accounts for around 25 percent of wealth management product investments (Ma, Cheng, and Wu 2013). As the China Banking Regulatory Commission (CBRC) has increasingly tightened regulations on bank-trust cooperation, this activity has spread from trust companies to securities and insurance companies. The incentive for unregulated securitization will remain as long as banks are constrained by their loan-to-deposit ratio and the scope for official securitization remains limited.

Even those regulators supporting wealth management products acknowledge risks in two key areas, investor education and unregulated securitization.

At an operational level, banking regulators have struggled to keep up with the rapid development of wealth management products. The CBRC's initial move towards regulating wealth management products was in 2005 with The Commercial Bank Individual Wealth Management Service Provisional Regulatory Measure.[10] Starting in 2010, there has been an almost continuous series of new regulatory announcements designed to quell emerging problems in the wealth management product market. Banks have been ordered to cut down excessively short-term wealth management products, particularly those under a month. Regulators have prohibited the inclusion of trust and entrusted loans in wealth management products. New rules have been issued requiring stricter disclosure of potential risks in wealth management products to investors. Banks have been banned from issuing wealth management products based on deposits in the interbank market. Trust companies, major recipients of wealth management product funds, have been banned from investing in guarantee companies, small loan companies, and pawn shops because of the greater risks associated with these organizations. Most recently the CBRC issued new rules limiting investments of wealth management products in assets not traded in the interbank market or the securities exchanges as well as limiting asset-pool-based wealth management products. These regulatory tweaks are all aimed at the moving target of a rapidly evolving wealth management product market.

LESSONS FOR CHINA FROM THE AMERICAN EXPERIENCE

In less than a decade, China has developed a shadow deposit system similar in scope and function to money market mutual funds in the United States. Wealth management products have emerged as an important source of short-term financing for the Chinese economy and are likely to continue to grow in coming years. Given the similarities, China can draw some lessons from the American experience to promote healthy development of its financial sector.

Highly Regulated Funds Can Still Get Into Trouble. Contrary to conventional wisdom, money market mutual funds in the United States did not run into problems because they were loosely regulated. Money market mutual funds were and continue to be highly circumscribed in terms of the assets they can purchase and their maximum exposure to individual borrowers. Before the global financial crisis, money market mutual funds were allowed to invest only in short-term securities rated in the two highest rating categories by nationally recognized statistical rating organizations. Investments with the second highest rating category were limited to 5 percent of a firm's total assets. Exposure to any individual borrower within this second tier was limited to 1 percent of a firm's total assets.[11] In comparison, Chinese wealth management products invest in a much wider and potentially more risky universe of assets, have a more severe maturity mismatch problem, and face higher exposure to individual borrowers.

The run on American money market mutual funds was precipitated by losses on highly rated commercial paper. Perversely, there actually can be a negative feedback loop whereby tighter

10. This regulatory measure was also significant because it very early on identified two of the key problems with wealth management products. The announcement instructs banks to not utilize wealth management products as a way to attract deposits and to take adequate measures to ensure investors are educated about risks. Unfortunately, both these problems continue to exist.

11. Following new SEC regulations released in 2010, money market mutual funds may now invest only 3 percent of their total assets in second-tier securities, and the maximum exposure to an individual borrower is limited to one-half of one percent.

regulations on what money market mutual funds invest in can lead fund managers to purchase the riskiest assets available to them in an effort to deliver high returns. If there are discrepancies between the risk rating of a security and its actual risk, a fund may be much more vulnerable than it outwardly appears.

Regulators may continue to restrict the universe of investments available to wealth management products, bringing them more in line with the investment restrictions money market mutual funds face. For example, the CBRC recently issued guidelines requiring that no more than 35 percent of a bank's wealth management products could be in nonstandard debt assets (i.e., untraded securities). These useful steps help reduce some of the liquidity risks facing wealth management products. This should, however, not lull policymakers into thinking that risks have been eliminated. A run on money market mutual funds occurred when a highly rated short-term corporate debt instrument defaulted. In retrospect, there were systemic problems with inaccurate ratings on financial products. The Chinese ratings industry is developing quickly, but there are still many deficiencies. Many enterprises are borrowing and issuing short-term debt that is riskier than their credit ratings suggest. Forcing wealth management products to buy highly rated securities to reduce risk is effective only to the extent that these securities are accurately rated. The harder regulators push in this area, the more incentive there will be for risky borrowers to game the ratings system in order to gain access to financing.

Wealth Management Products May Persist after Liberalization. Many analysts and regulators who cover wealth management products readily acknowledge that the growth of these products is driven by low interest rates on traditional deposits. Chinese savers are justifiably seeking returns higher than the negative real interest rates offered on normal savings deposits. The explosive growth of wealth management products is likely to persist as long as this dynamic remains in place.

Furthermore, even if China's interest rate policy is liberalized over the next several years, wealth management products may have achieved sufficient size and investor awareness that they will persist. In the United States, money market mutual funds continued to grow in size and importance after banking regulations on interest rates and interstate activity that allowed them to thrive were phased out. This was due to a combination of investor habit and the ability of these funds to continue offering returns higher than those available on traditional bank deposits. Money market mutual funds are able to provide these higher rates primarily via regulatory arbitrage as they are exempt from deposit insurance premiums, required reserves, and capital requirements.

As interest rate liberalization moves forward in China, wealth management products are likely to continue to find ways to justify their existence. China is currently in the midst of formulating a national deposit insurance system. If wealth management products are exempted, they will continue to have a competitive advantage over traditional deposits. Moreover, banks have an incentive to keep offering wealth management products in order to earn fees on product sales and price discriminate amongst depositors. These factors argue that wealth management products may become a permanent part of the Chinese financial system.

Shadow Deposits are Vulnerable to "Bank Runs." Before the global financial crisis, money market mutual funds were viewed as a relatively boring short-term financing pool. Investors put their savings into these funds and received a return slightly above the interest rate paid on savings deposits. Money market mutual funds invested in cash-like assets that were unlikely to become distressed.

The financial crisis revealed that during periods of economic and financial insecurity, relatively small losses in short-term financing pools can grow into the equivalent of a bank run in a short period of time. The Reserve Primary Fund took losses on its holdings of Lehman Brothers' commercial paper equivalent to 1 percent of its assets. When the fund started placing restrictions on redemptions, panic quickly spread to other money market mutual funds. Within the course of a week, $300 billion had left money market mutual funds, forcing a fire sale of assets and freezing up the commercial paper market. It took massive intervention by the US Treasury and the Federal Reserve to restore this critical short-term financing channel.

The short-term nature of most wealth management products in China makes them vulnerable to similar risks. A high-profile default of a wealth management product could precipitate large withdrawals as investors do not roll over into new products and move funds back into traditional deposits. The most high-profile near-default of a wealth management product involved a fraudulent product sold by a Huaxia Bank employee in Shanghai. After the investment failed, the government put strong pressure on Huaxia and the guarantee company Zhongfa to resolve the problem.[12] After initially denying any responsibility, the companies eventually returned the investors' principal but not interest. It is easy to imagine a scenario where investors are forced to suffer

12. Guarantee companies are firms that provide credit enhancement through guaranteeing part or all of a financial transaction. The credit guarantee industry is largely unregulated, and many guarantee companies are believed to be highly leveraged.

real losses, and investor sentiment regarding the safety of wealth management products shifts rapidly.

Investors failing to roll over their existing wealth management products into new ones would create the effect of large-scale withdrawals from the wealth management product market and put stress on the entire Chinese economy as companies and banks that rely on short-term financing find themselves without credit. Because wealth management products invest in more than just the money market, deleveraging could also impact the bond market, trust companies, brokerages, property developers, and local government financing companies, many of which rely on wealth management products for financing.

Some analysts argue that because funds withdrawn from wealth management products are likely to return to banks, the overall risk to the economy is negligible. This, however, ignores the lessons from American money market funds during the financial crisis. The money in money market funds did not exit the US financial system. In fact many depositors just transferred their savings from money market mutual funds that invested in commercial paper and treasuries to those that only invest in treasuries (Investment Company Institute 2009). However, because banks were not eager to jump into the short-term financing markets that were made dysfunctional by the withdrawal of money market mutual funds, credit in these markets froze. The money did not leave the system, but that did not prevent credit markets from freezing and imperiling the entire economy. Similarly, Chinese banks may not be eager to lend directly to those segments of the economy facing distress in the wake of a wealth management product withdrawal. The result could be disastrous for highly leveraged enterprises that rely on continued access to new financing.

CONCLUSION

The process of financial development is often a series of tradeoffs between policies that are ideal and policies that are politically feasible. In the United States, protective regulations put in place to safeguard banks after the Great Depression were slow to change in the face of an evolving financial system. As a result, nonbank financial institutions began offering money market mutual funds as a deposit substitute that paid a rate more in line with prevailing short-term interest rates. Policymakers eventually removed the constraints on deposit rates that prevented banks from competing effectively with money market mutual funds. However, money market mutual funds continued to retain regulatory advantages by being exempt from deposit insurance, reserve requirements, and capital requirements. Through stable net asset value reporting and periodic bailouts by fund sponsors, money market mutual funds were able to lull investors into thinking these products were boring, safe, and stable investment options. These funds grew to the point where they became too big to fail, requiring the US government to intervene with guarantees during the global financial crisis. Industry interests have fought reform attempts that would reduce the scale of moral hazard facing money market mutual funds.

In China, policymakers set a fixed interest rate spread at low levels to keep banks profitable and offset the heavy implicit tax forced on banks by the foreign exchange rate policy. To attract and retain depositors in spite of these low deposit rates, banks created short-term and liquid investment products called wealth management products that could offer higher rates.

Absent progress on financial-sector reform and stronger prudential regulation, shadow deposits in China will continue to grow as a source of potential financial instability.

Sold by banks or in banks via third parties, wealth management products have grown quickly in size and have begun to play a significant role in providing short-term financing in the Chinese economy. Many in China view the development of wealth management products as an alternative form of interest rate liberalization, given the slow progress on formal relaxing of interest rate controls. The development of wealth management products, however, is not without risk. Like money market mutual funds, wealth management products are shadow deposits, substitute financial products that fill the role of deposits without offering the same level of investor protection. As such, these financing pools are vulnerable to rapid retrenchment when financial difficulty forces investors to reevaluate the risk of these investments. Consequently, a source of potential financial instability has been created in the Chinese economy. As the pool of wealth management products continues to grow, regulators should assess whether the risks of this informal interest rate liberalization now outweigh the benefits.

The long-term solution to the problems associated with wealth management products is to move forward expeditiously with interest rate liberalization. Long an official government policy, the pace thus far of interest rate liberalization with respect to savings deposits has been glacial. Market-oriented deposit rates that offer depositors a positive real interest rate will help dampen the excessive recent growth of wealth management products. In the meantime, regulators should take steps to reduce the scale of moral hazard in the market. Specifically, all bank-issued wealth management products should be brought on balance sheet with appropriate levels of capital provisioning. Regardless of legal technicalities, principal unguaranteed wealth management products are likely to create bank liabilities in the event of widespread defaults. Therefore, allowing banks to issue these products without capital buffers is inadvisable. Forcing banks to provision for wealth management products will likely reduce the interest rate spread relative to savings deposits and incentivize bank-issued wealth management products to invest in higher-quality assets. The emergence of shadow deposits in China is recent and the pace of growth has outstripped what occurred in the United States. Absent progress on financial-sector reform and stronger prudential regulation, shadow deposits in China will continue to grow as a source of potential financial instability.

REFERENCES

Adrian, Tobias, and Adam B. Ashcraft. 2012. *Shadow Banking Regulation*. Federal Reserve Bank of New York Staff Report no. 559 (April). Available at www.newyorkfed.org/research/staff_reports/sr559.pdf (accessed on May 6, 2013).

Anderson, Richard G., and Charles S. Gascon. 2009. The Commercial Paper Market, the Fed, and the 2007-2009 Financial Crisis. *Federal Reserve Bank of St. Louis Review* 91, no. 6 (November/December): 589–612. Available at http://research.stlouisfed.org/publications/review/09/11/Anderson.pdf (accessed on March 7, 2013).

Investment Company Institute. 2009. *Report of the Money Market Working Group.* Submitted to the Board of Governors of the Investment Company Institute (March 17). Washington. Available at www.ici.org/pdf/ppr_09_mmwg.pdf (accessed on March 29, 2013).

Lardy, Nicholas R. 2008. *Financial Repression in China*. Policy Brief 08-8 (September). Washington: Peterson Institute for International Economics. Available at www.piie.com/publications/pb/pb08-8.pdf (accessed on May 21, 2013).

Luttrell, David, Harvey Rosenblum, and Jackson Thies. 2012. *Understanding the Risks Inherent in Shadow Banking: A Primer and Practical Lessons Learned.* DallasFed Staff Paper 18 (November). Federal Reserve Bank of Dallas. Available at www.dallasfed.org/assets/documents/research/staff/staff1203.pdf (accessed on May 21, 2013).

Kacperczyk, Marcin, and Philipp Schnabl. 2012. *How Safe Are Money Market Funds?* Working Paper. University of Minnesota. Available at www.carlsonschool.umn.edu/finance/conferences/documents/SchnablPaper.pdf (accessed on May 21, 2013).

Ma, Ning, Bowei Cheng, and Jessica Wu. 2013. *Casting a Light on Shadow Banking: Near-Term Growth; Long-Term Cap on Bank Valuations.* China: Banks. Goldman Sachs Equity Research. http://pg.jrj.com.cn/acc/Res/CN_RES/INDUS/2013/2/27/b6209c85-a04f-4f47-a417-e298c5a1b487.pdf (accessed on May 10, 2013).

Neely, Michelle Clark. 1994. Going Interstate: A New Dawn for U.S. Banking. *The Regional Economist* (July). Federal Reserve Bank of St. Louis. Available at www.stlouisfed.org/publications/re/articles/?id=1885 (accessed on March 7, 2013).

Rajan, Raghuram G., and Rodney Ramcharan. 2011. *Constituencies and Legislation: The Fight over the McFadden Act of 1927.* NBER Working Paper 17266 (August). Cambridge, MA: National Bureau of Economic Research. Available at www.nber.org/papers/w17266 (accessed on March 7, 2013).

SEC (Securities and Exchange Commission). 2010. 17 CFR Parts 270 and 274–Money Market Fund Reform. Available at www.sec.gov/rules/final/2010/ic-29132.pdf (accessed on March 8, 2013).

Wind Information. 2013. *2012 Bank Wealth Management Product Market Report*. Accessed via database on March 20, 2013.

Xia, Le, Stephen Schwartz, and Alicia Garcia Herrero. 2013. *An Update on China's Shadow Banking Activity: Have the Risks Increased?* Banking Watch–China (March 8). Hong Kong: BBVA Research, Banco Bilbao Vizcaya Argentaria. Available at http://serviciodeestudios.bbva.com/KETD/fbin/mult/130308_ChinaBankingWatch_shadowbanking_EN_tcm348-379589.pdf?ts=652013 (accessed on March 20, 2013).

Yan, May, Sean Hung, and Mimi Kong. 2013. *Containing China's Wealth Management Market: Where Will the Funds Flow?* Barclays Capital. Available via subscription at https://live.barcap.com/PRC/servlets/dv.search?contentPubID=FC1932255&bcllink=decode (accessed on March 15, 2013).