Global

Shadow Banking Implications for Financial Stability

Inside This Report

Notable Statistics

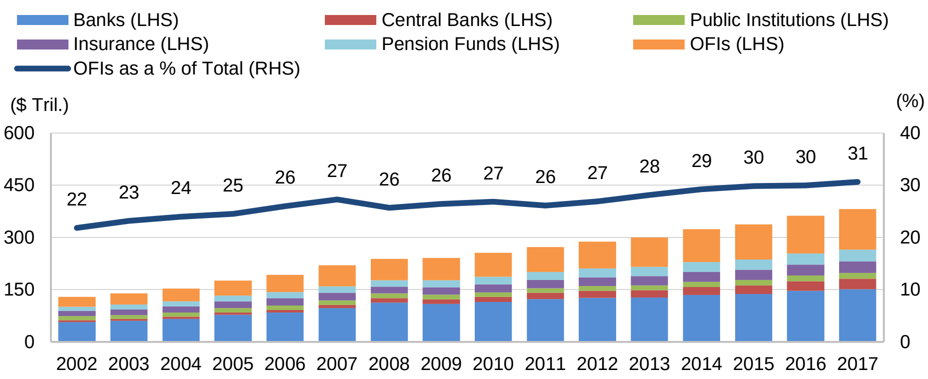
- **Global shadow banking assets** were $52 trillion as of fiscal year-end 2017, according to the Financial Stability Board, up 8.5% year over year and representing 13.5% of total financial assets.
- **Funds** represented $36.7 trillion, or 71.2% of total shadow banking assets.
- **The U.S.** had $14.9 trillion, or 28.9%, of global shadow banking assets, roughly flat since 2010, versus an 8.3% global compound annual growth rate over the same time period.
- **China** had $8.3 trillion of shadow banking assets, reflecting a compound annual growth rate of 58.1% since 2010.
- **Banks'** exposure to other financial intermediaries was 5.5% of total bank assets, while banks' funding from other financial intermediaries was 5.7% of total bank assets.

What To Watch For

- **Second-order effects** on financial stability, such as redemption pressure at open end funds, leading to broader asset price volatility.
- **Funding constraints** if faced with rising interest rates or economic uncertainty,
- **Interconnectedness with banks**, most notably in China.
- Potential reverberations from recent defaults and funding pressures in **India**.
- **Regulatory efforts** to control shadow banking risks without creating an outsized effect on credit availability.

Global Financial Intermediation Trends

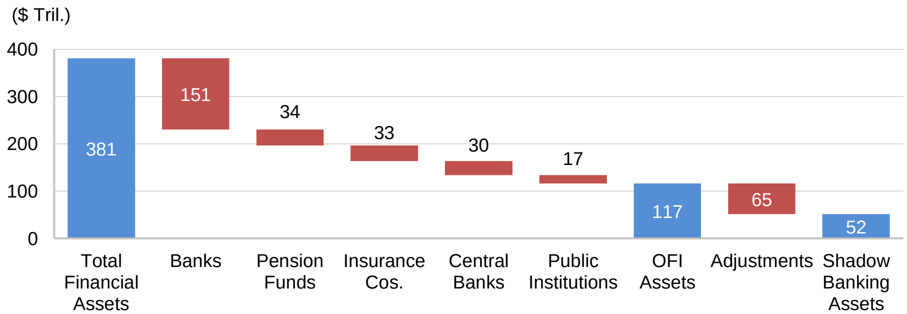
Global Financial Assets by Intermediary Type



OFIs – Other Financial Intermediaries.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

From Global Total Financial Assets to Shadow Banking Assets

(YE17)

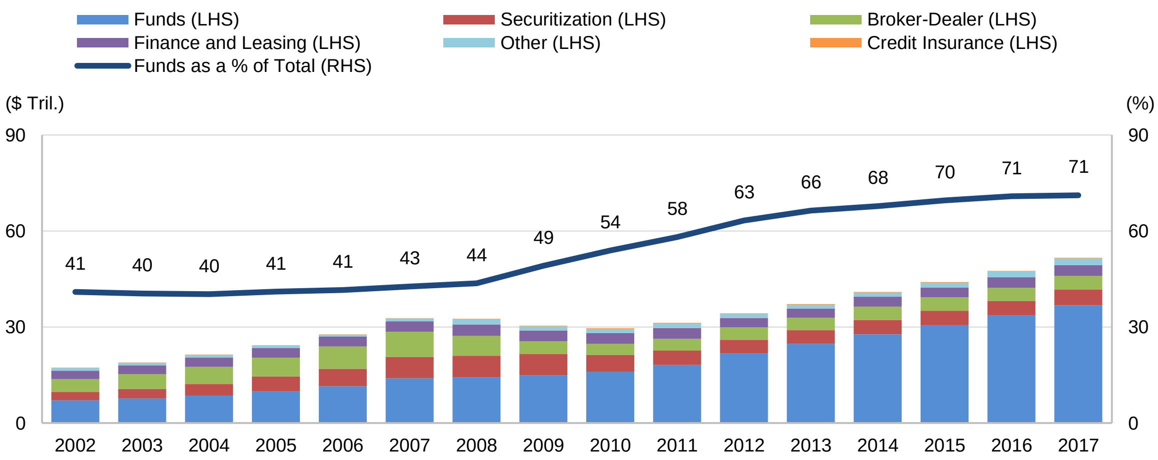


OFI – Other Financial Intermediaries. Adjustments – Include consolidated banking activities, non-credit intermediation and other statistical residual defined by the FSB as "the difference between total OFI financial assets and the sum of all known subsectors therein."
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

- **Risk Still Within System:** While banks' fundamental credit profiles have generally improved post-crisis, a number of their previous activities are now conducted by shadow banks, meaning the risk has not left the overall financial system.
- **Shadow Banking Defined:** Fitch Ratings defines shadow banking as credit intermediation or liquidity transformation conducted by entities other than banks, central banks, public institutions, insurance companies or pension funds. This closely aligns with the Financial Stability Board's (FSB) framework as outlined in its 'Global Monitoring Report on Non-Bank Financial Intermediation 2018', which covers 29 jurisdictions and over 80% of global GDP. Fitch considers the FSB data among the most comprehensive available, albeit with some key data limitations and a reporting lag of approximately 13 months.
- **Shadow Banking's Indirect Impact:** Banks have modest direct exposure to shadow banks, but shadow banking stress could indirectly influence the financial system through other forms of market connectedness or asset price volatility.
- **Bringing (Some) Light to the Shadows:** Led by the FSB, regulatory bodies are increasing their scrutiny of shadow banking given its rapid post-crisis growth, limited transparency and modest regulation. That said, regulators must balance this against their desire to maintain credit availability, particularly for the under-banked.

Shadow Banking Activity by Economic Function

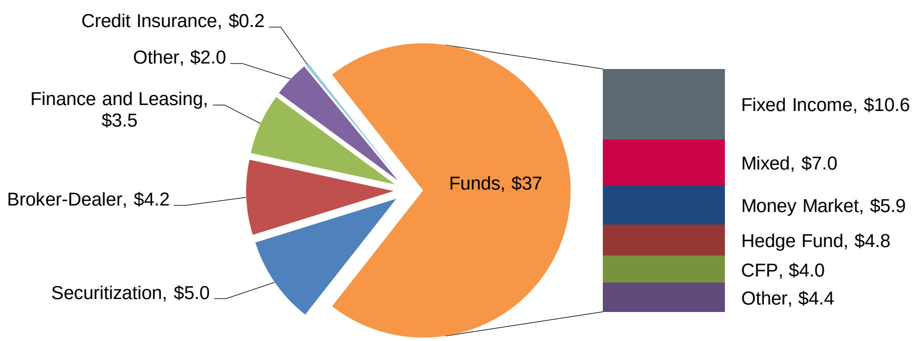
Global Shadow Banking Growth by Economic Function



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Shadow Banking by Economic Function

($Tril., YE2017)



CFP – Consigned financial planning.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

- **Broad and Narrow Measures Increasing:** The FSB reports a broad measure of Other Financial Intermediaries (OFIs) and a narrow measure of shadow banking (Non-Bank Financial Intermediaries), both of which have been increasing, particularly post-crisis. On the broad measure presented on page one, OFI assets were $116.6 trillion, as of fiscal year-end (YE) 2017, up 7.6% year over year, and representing 30.6% of total global financial assets as of the same date. On the narrow measure presented on page two, assets of non-bank financial intermediaries were $52 trillion, as of YE17, up 8.5% year over year and representing 13.5% of total global financial assets as of the same date. To arrive at the narrow measure from the broad measure, assets from banks and other traditional financial intermediaries are excluded, as are other activities not viewed as posing risks to financial stability, and an FSB-defined "statistical residual".

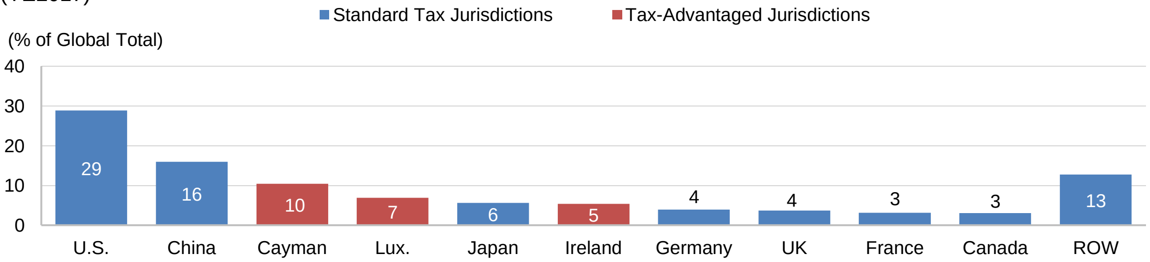
- **Funds Are Largest Contributor:** Collective investment vehicles conducting credit intermediation or maturity/liquidity transformation, such as open-end fixed income funds, money market funds and credit hedge funds, were the largest contributor to the FSB's narrow measure of shadow banking growth, representing $36.7 trillion, or 71.2%, of total shadow banking assets as of YE17. By comparison, as of YE08, the percentage of shadow banking activities attributable to funds was 43.6%.

- **Potential Knock-On Effects:** Fitch believes that the inherent redemption risk of open-end funds could pressure asset prices in the event of runs, particularly if the underlying assets are less liquid and/or material leverage is employed. Under such a scenario, banks and other non-bank financial institutions could be exposed as a result of market value declines in similarly held collateral, short-term funding reliance on open-end funds or other counterparty exposure to such funds. Other investment funds/companies could similarly be affected to the extent that they hold similar collateral, while investment managers could be affected directly (due to reduced assets under management and fee generation) and indirectly (due to reputational damage and/or litigation). In terms of second- and third-order effects, non-financial corporate entities could be affected as a result of reduced financing availability, particularly if they are more highly levered, while sovereign ratings could be affected under extreme stress scenarios.

Shadow Banking Activity by Country

Shadow Banking by Country

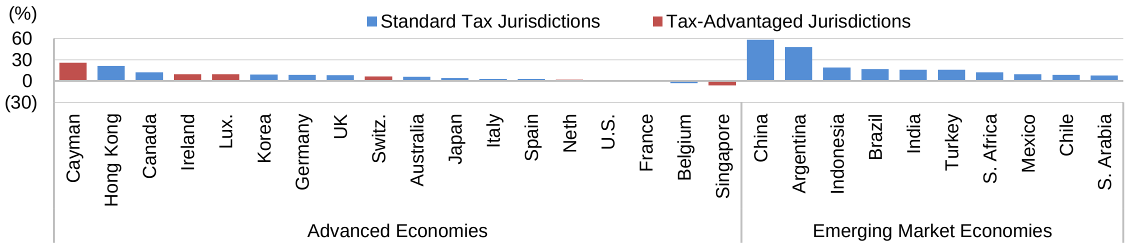
(YE2017)



ROW – Rest of the world.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

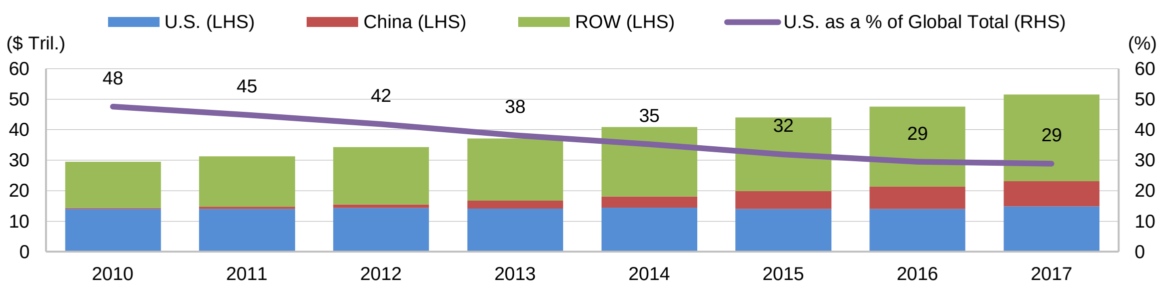
Shadow Banking Growth By Country

(Exchange Rate-Adjusted Compound Annual Growth Rate, 2010–2017)



Note: Russia (not presented) grew at a compound annual growth rate of 241.3% but represented only 0.2% of global shadow banking assets as of fiscal 2017.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Shadow Banking by Country

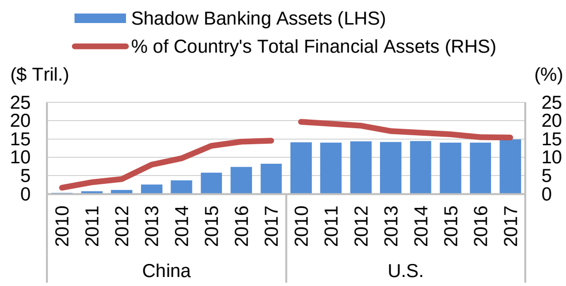


ROW – Rest of the world.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

- **Post-Crisis Growth Tailwinds:** Global shadow banking growth post-crisis has been fueled by increased bank regulation, low interest rates, a generally-benign economic backdrop, the rise of financial technology and increasingly supportive government policies to promote economic development and credit availability.
- **U.S. Has Largest, But Declining Share:** The U.S. is home to the largest shadow banking market in the world, representing $14.9 trillion as of YE17 according to the FSB. That said, U.S. shadow banking assets have only grown at a compound annual growth rate (CAGR) of 0.8% since YE10, versus a global CAGR of 8.3%. This may be explained by the relative maturity of the U.S. shadow banking market versus global peers, the reduction in certain shadow banking activities which were more prevalent pre-crisis and/or certain previous domestic activities moving off-shore. As a result of slowing domestic shadow banking growth, the U.S. share of global shadow banking assets was down to 28.9% as of YE17 from 47.6% as of YE10.
- **Market Development and Tax Status Drive Size:** There is typically a high correlation between the size of a given country's shadow banking assets and its overall financial market development. Attributes such as deep/liquid capital markets, consistently enforced financial legislation and well-defined creditor protections can be more supportive for the growth of non-bank financial intermediation. More favorable tax jurisdictions also tend to attract more shadow banking assets, including the Cayman Islands (10.4% of global shadow banking assets as of YE17), Luxembourg (6.9%) and Ireland (5.4%).
- **Emerging Markets Generally Small, But Growing Rapidly:** Shadow banking growth rates in emerging market economies have been higher than developed market peers, driven primarily by country-specific market development and the fact that these countries started from smaller absolute asset bases. Among emerging market economies, China is the only country that is large both in terms of the notional size of its shadow banking assets and the rate at which these assets are growing.

Shadow Banking in China

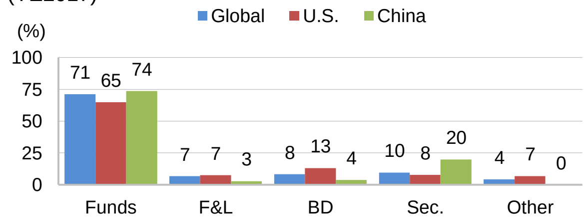
Shadow Banking Growth by Country



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

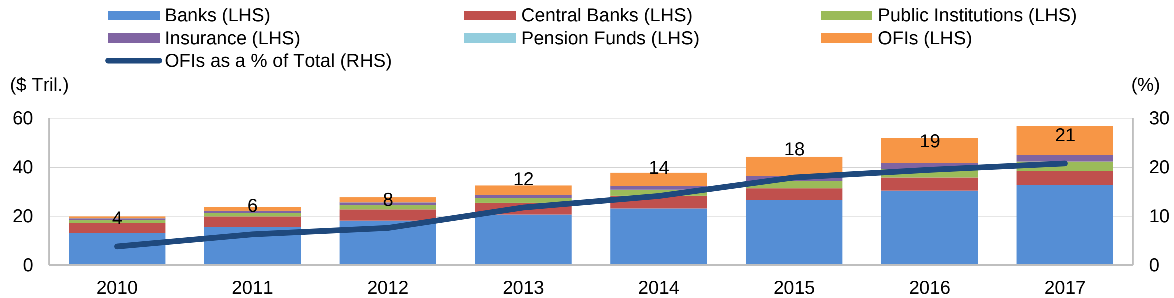
Shadow Banking Activity by Economic Function

(YE2017)



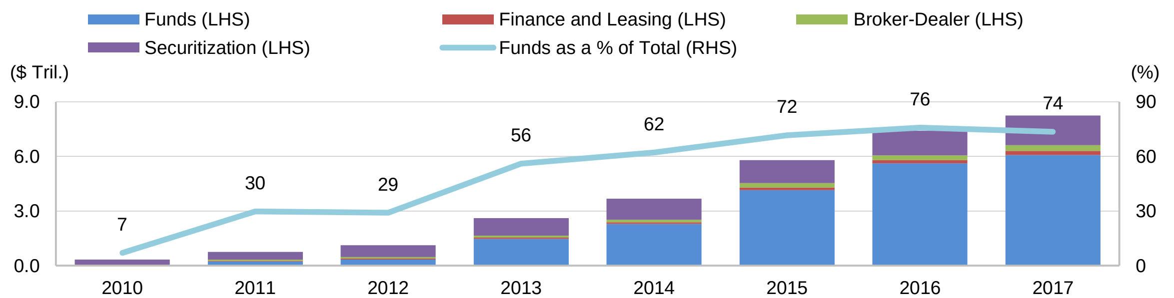
F&L – Finance and leasing. BD – Broker-dealer. Sec – Securitization.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Chinese Financial Assets by Intermediary Type



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Chinese Shadow Banking by Economic Function

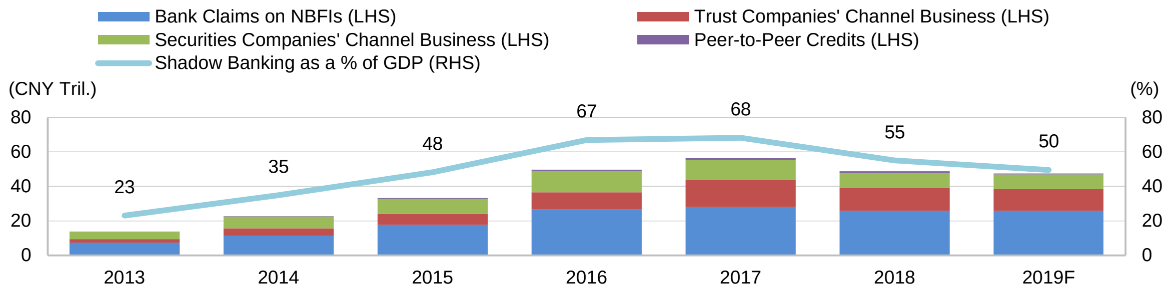


Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

- **China's Ascension Continues:** As of YE17, China had $8.3 trillion of shadow banking assets according to the FSB, ranking second only to the U.S. When compared to total financial assets within the country, China's shadow banking assets were 14.5%, roughly in line with the U.S., where shadow banking assets represented 15.4% of total financial assets as of YE17. Shadow banking activity by economic function was also generally in line with global peers. That said, China's faster shadow banking growth rate, the different forms of shadow banking exposure and lower transparency relative to other large markets suggest potentially elevated risk in Fitch's opinion.
- **Interconnectedness with Chinese Banks:** Fitch views China's shadow-banking sector as more systemic and complex than other, more developed markets, with the extent of interconnectivity and risk creating significant potential risk for Chinese banks. Unlike the U.S., where non-bank financial institutions tend to be dominant shadow-banking participants, banks are a key component of China's shadow-banking ecosystem. While the shadow banking products in China may be less complex than in the U.S., evolving implicit/explicit guarantees in China make it more difficult to pinpoint who bears the ultimate investment risk. Smaller Chinese banks, relying on the interbank market and shadow banking for liquidity, face higher funding costs as a result of increased regulation, while larger banks with stronger deposit franchises and higher capitalization levels are relatively better insulated.
- **Increased Domestic Regulatory Scrutiny:** China's regulators have responded to rapid shadow banking growth with increased oversight, particularly with respect to wealth management and trust products, the origination of which, have begun to level off after years of rapid growth. The increased regulation is aimed at improved transparency and disclosure in order to reduce contagion risks within the system, rather than reducing the scale of shadow banking, which could disrupt the stability and liquidity of the financial system. Chinese regulators appear committed to continuing to contain shadow banking growth, but they face a delicate balancing act in trying to do so without impacting Chinese banks, access to credit for the domestic economy or financial markets more broadly. The true test of regulators' resolve will be their willingness to continue dealing with shadow banking risks when faced with broader economic headwinds.

Shadow Banking in China (continued)

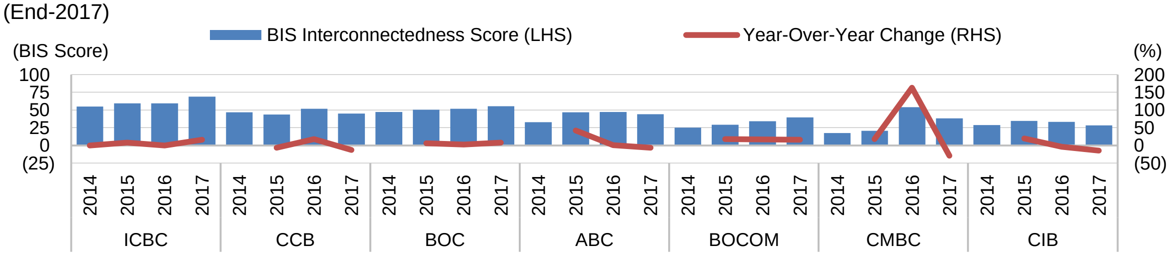
Chinese Shadow Banking Relative to GDP



NBFIs – Non-bank financial institutions. F – Forecast.
Source: Fitch Ratings, Asset Management Association of China, China Trustee Association, PBOC, Wang Dai Zhi Jia, NBS.

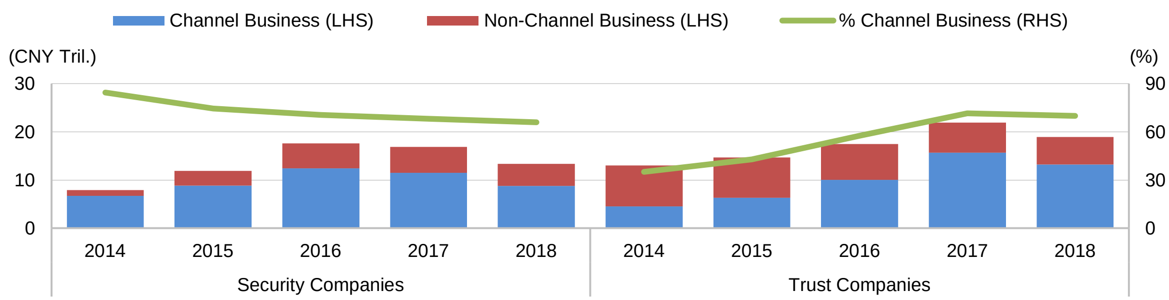
Major Chinese Banks' G-SIB Interconnectedness Scores

(End-2017)



G-SIB - Global systemically important bank. BIS - Bank for International Settlements. Note: A bank's interconnectedness score is defined as the sum of its intra-financial system assets, intra-system liabilities and securities outstanding, multiplied by a 20% risk-weighting.
Source: Fitch Ratings, BIS, banks.

Chinese Security and Trust Companies' Use of Channel Business



Source: Fitch Ratings, Asset Management Association of China, China Trustee Association.

- **Various Actions Implemented:** Steps taken by Chinese regulators to slow shadow banking growth have included suspension of new licenses, increased product transparency, interest rate caps, compliance requirements and funding restrictions. Regulators have also sought to tighten asset managers' business activities where they serve as credit conduits for funds provided by banks to avoid regulatory supervision, and crack down on irregular peer-to-peer lending platforms.

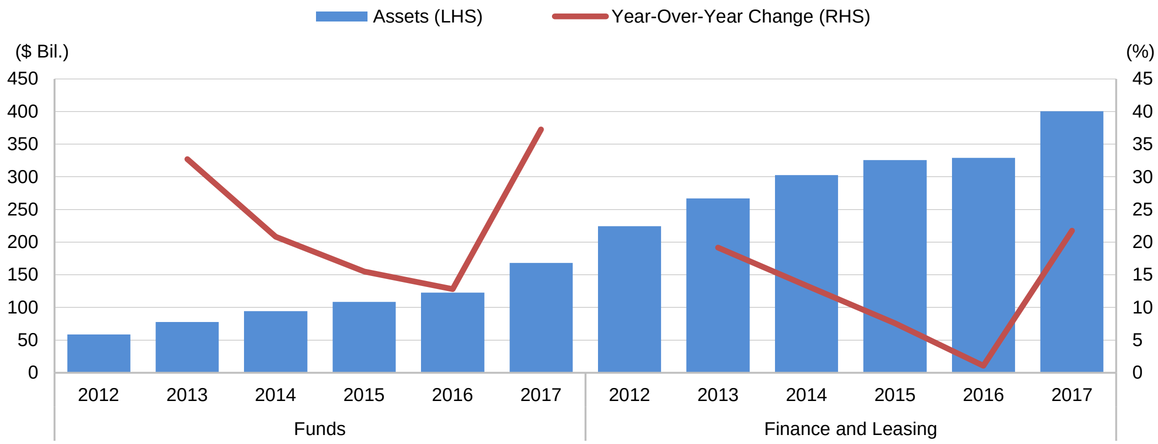
- **Regulatory Steps Taking Hold:** Initial indications suggest that recent steps taken by Chinese regulators have in fact slowed shadow banking growth within the country. This can be observed directly, in terms of shadow banking balances relative to nominal domestic GDP, and indirectly, in terms of the interconnectedness scores that most major Chinese banks have reported under the Basel capital framework. Fitch estimates that shadow-banking assets declined to approximately 55% of nominal domestic GDP in 2018 from 68% in 2017. Some reclassification of bank exposures may have also contributed to the decline.

- **Side Effect of Constrained Funding:** The steps taken by Chinese regulators had the unsurprising side-effect of constraining funding and liquidity availability, particularly for private-sector enterprises already facing pressures related to trade tensions with the U.S. Fitch expects funding conditions to improve following a modest softening of regulators' stance in the second half of 2018, but funding access is likely to remain challenging in light of the overall policy direction to contain financial systemic risk.

- **Further Modest Decline Expected in 2019:** Fitch expects Chinese shadow banking assets relative to nominal domestic GDP to contract further in 2019, declining to approximately 50%. In addition, Chinese banks, subject to their own capital adequacy constraints, are expected to continue to bring off-balance-sheet exposures back on to their balance sheets, helping to better manage the system-wide effects.

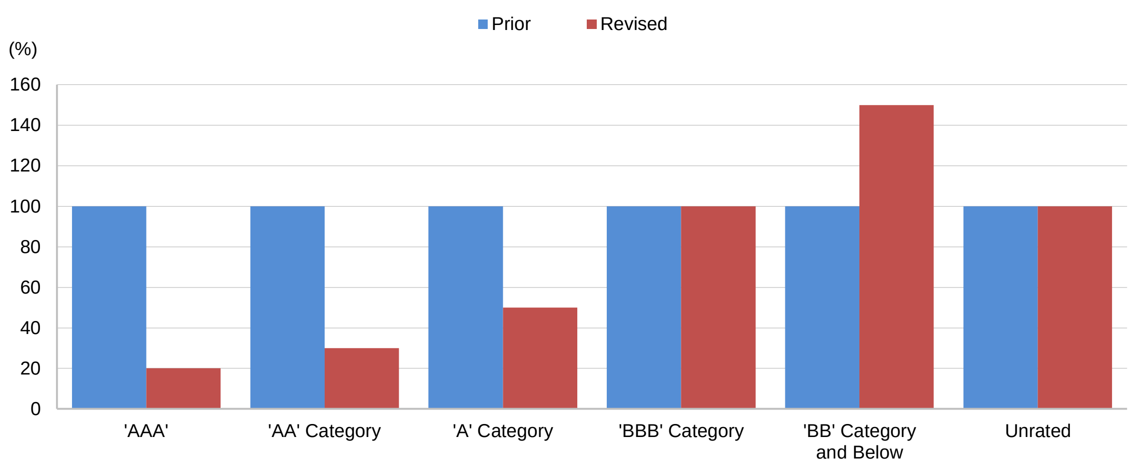
Shadow Banking in India

Indian Fund and Finance and Leasing Growth



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Capital Risk Weightings for Indian Banks' Exposure to Finance Companies

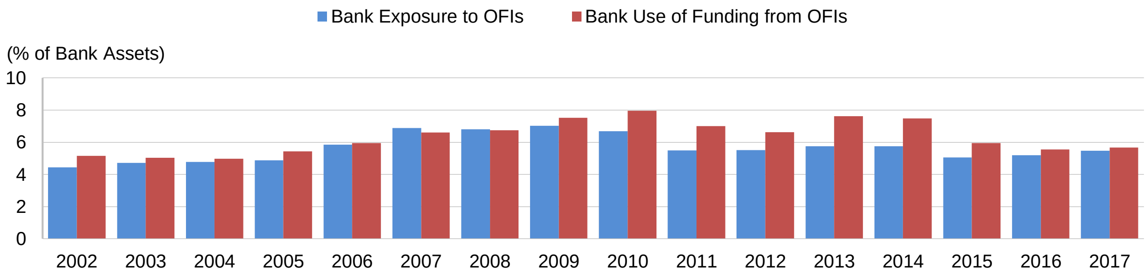


Note: Risk weightings are based on national scale credit ratings as opposed to international scale credit ratings.
Source: Fitch Ratings, Reserve Bank of India.

- **Benign Top-Level Statistics:** India's shadow banking assets were fairly small by international standards, ranking 17th globally at $571.7 billion as of YE17 according to the FSB. Shadow banking assets as a percent of total financial assets within the country were 14.3%, consistent with the global percentage of 13.7%.
- **Rapid Growth:** Despite these modest indicators, the Indian shadow banking system has grown rapidly over the last decade, with a particular spike in 2017 driven by finance companies providing asset finance and home loans and funds investing in infrastructure loans. Non-bank growth has been fueled by accommodative funding markets following demonetization, which saw liquidity flow to money market funds and banks, while many Indian public-sector banks were capital-constrained due to their own asset quality issues. Prolonged rapid growth across the sector brings into focus the relative vulnerability of non-bank financial institutions' business models, particularly related to risk management and funding and liquidity.
- **Recent Flash Point:** Indian shadow banking's rapid growth and reliance on short-term funding sources bubbled over in 2018, most evident by the default of Indian infrastructure finance company Infrastructure Leasing & Financial Services Ltd. in Sept. 2018. This translated into to higher borrowing costs and/or reduced market access for other non-bank financial institutions leading domestic regulators to re-examine liquidity norms for the sector and prod banks to increase their lending to, and asset purchases from, such entities. Fitch believes these dynamics will weigh on growth prospects for the sector and likely lead to industry consolidation.
- **Tiered Bank Risk Weightings Introduced:** Another part of the Reserve Bank of India's response to these events was to introduce tiered risk weightings for banks' lending exposure to non-bank financial institutions, as a function of the credit risk profiles of the borrowers. The revised framework, and in particular the lower capital charges for higher quality finance companies, could improve financing availability for finance companies, although banks have been taking a fairly cautious stances towards the sector more recently.

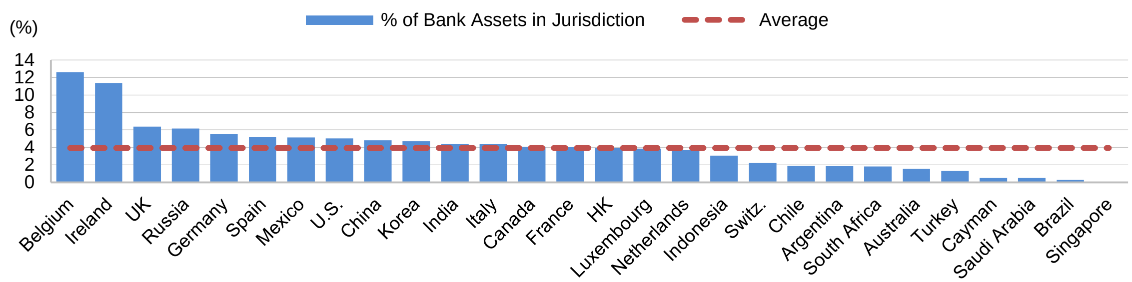
Global Bank Exposure to Shadow Banks

Global Bank Exposure to Other Financial Intermediaries



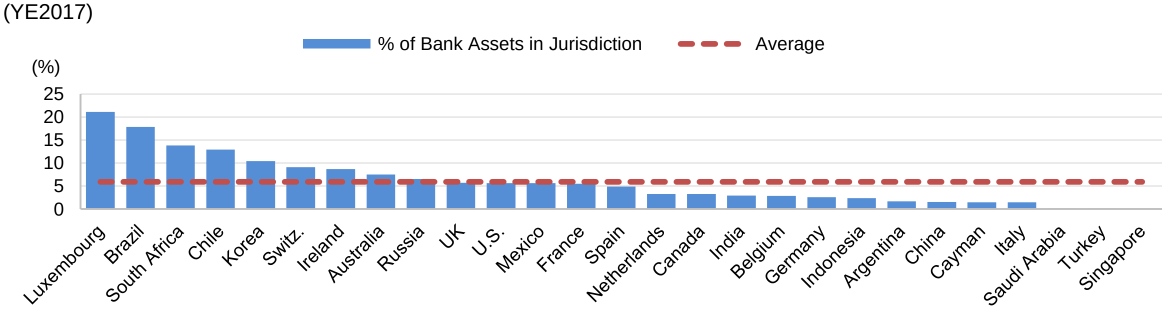
OFI – Other Financial Intermediaries.
Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Bank Exposure to Other Financial Intermediaries by Country
(YE2017)



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Bank Use of Funding from Other Financial Intermediaries by Country
(YE2017)

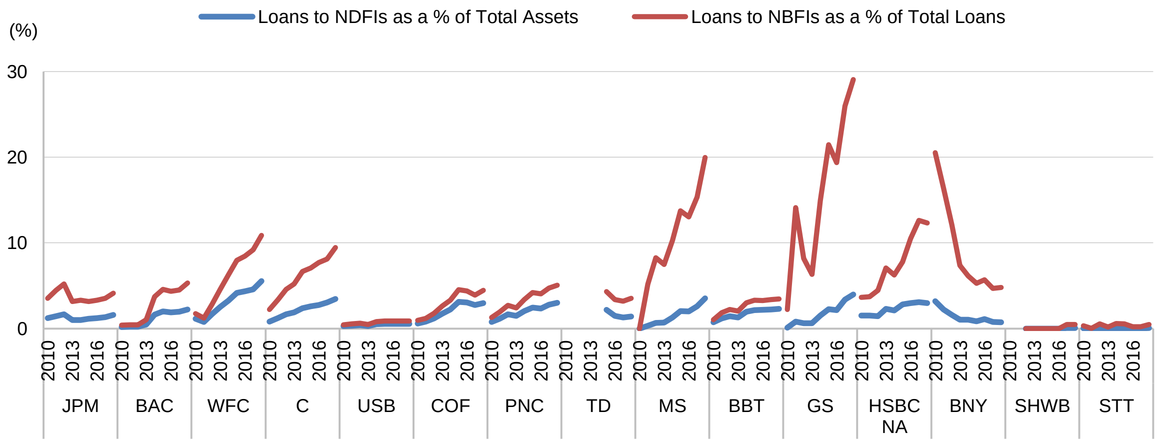


Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

- **Manageable Bank Exposure:** On average, banks continue to have manageable direct exposure to OFIs, both in terms of lending to and borrowing from such entities. Aggregate credit and funding interconnectedness between banks and OFIs as of YE17 approximated pre-crisis levels, after several years of decline. For example, banks' claims on OFI assets were $8.1 trillion according to the FSB, or 5.5% of total bank assets as of YE17, while banks' funding from OFIs was $8.4 trillion, or 5.7% of total bank assets.
- **Greater Variability at Country-Level:** While the global averages are informative, they also mask variability at the country-specific (not to mention bank-specific) level, which may be driven by differences in capital markets development, retail branch network penetration and/or tax jurisdiction, among other factors.
- **Potential Data Skews:** Fitch also notes that country-specific bank exposure to, and funding reliance on, OFIs may be skewed by banks conducting certain isolated activities out of tax-advantaged jurisdictions, international banks establishing regional hubs and/or bank-licensed financial market infrastructure companies.
- **Western European Banks More Active Lenders:** Five of the six largest countries, in terms of their banks' exposure to OFIs as of YE17, were Western European. Fitch believes this is partly attributable to the capital markets framework in this region, where bank wholesale funding is predominant and efforts to expand capital markets, such as the European Commission's capital markets union initiative, remain in development.
- **Mixed Group of Banks More Reliant on OFI Funding:** Countries whose banks had an above-average reliance on OFIs as a source of funding at YE17 came from both developed and emerging market economies across a mix of regions. Emerging market countries such as Brazil, South Africa and Chile had banks with above average reliance on funding from OFIs.

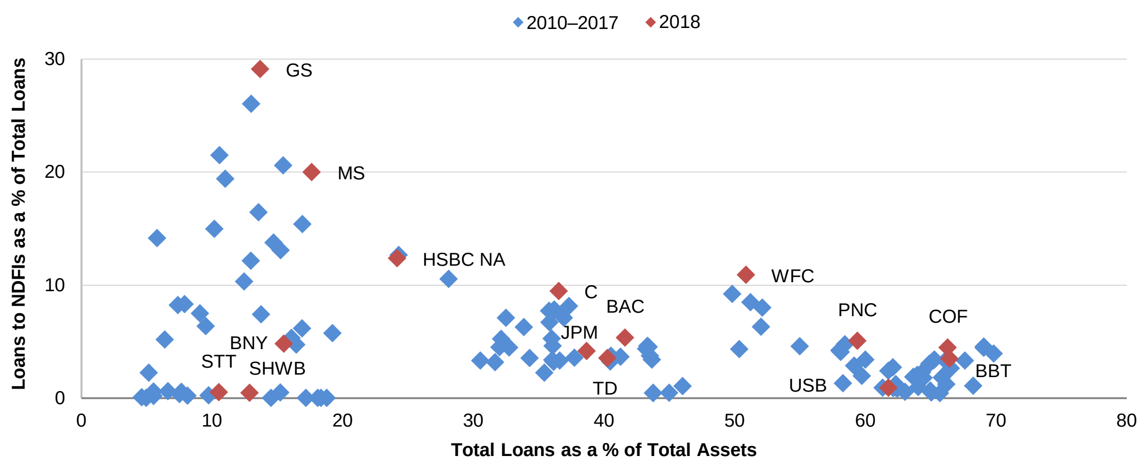
U.S. Bank Exposure to Shadow Banks

Top 15 U.S. Banks' Loans to Non-Depository Financial Institutions
(2010–2018)



Note: Based on the 15 largest U.S. banks, by total assets, as of year-end 2018.
Source: Fitch Ratings, U.S. Federal Reserve.

Top 15 U.S. Banks' Loans to Non-Depository Financial Institutions



NDFIs – Non-depository financial institutions. Note: Based on the 15 largest U.S. banks, by total assets, as of year-end 2018.
Source: Fitch Ratings, U.S. Federal Reserve.

- **Bank-Specific Disclosures in U.S.:** Due to more robust and consistent financial reporting available in the U.S., a relatively clearer picture of individual banks' lending exposure to non-depository financial institutions can be obtained. While the data indicates notable growth in loans to non-depository financial institutions since 2010, exposures remain very low as a percent of banks' total assets.

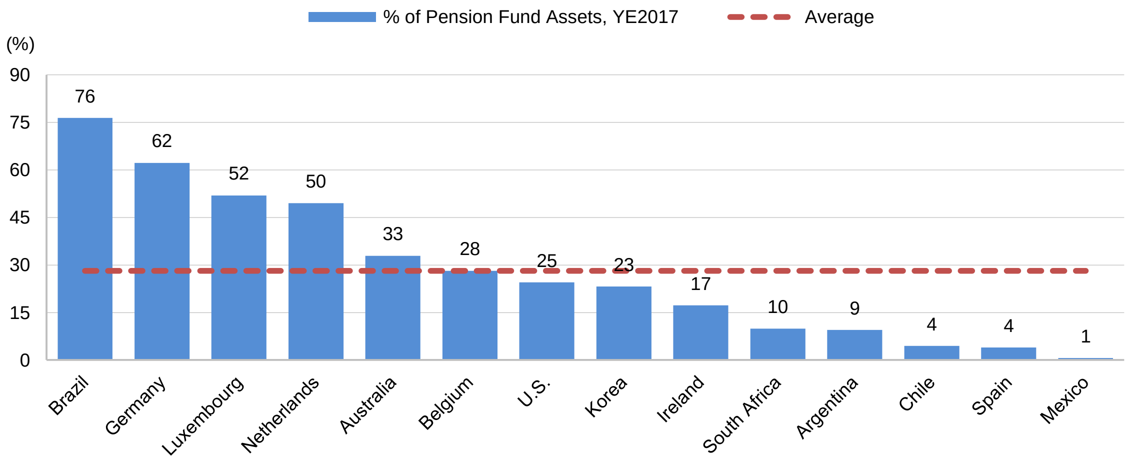
- **Goldman Sachs and Morgan Stanley Have Higher Percentage Exposure:** Among the top 15 U.S. banks by asset size, Fitch notes that banks for which traditional lending is not their core activity, such as The Goldman Sachs Group, Inc. and Morgan Stanley, tend to have a greater proportion of loans to non-depository financial institutions as a percentage of their total loan portfolios. Fitch believes this may be attributable, in part, to warehouse financing, prime brokerage and private equity sponsor finance activities which are not offset by the same magnitude of traditional corporate lending as more broadly diversified bank lenders. Nevertheless, total loans as a percent of total assets remain very manageable for these institutions.

- **Traditional Lenders Have Higher Dollar Exposure, Led by Wells Fargo:** At the other end of the spectrum, large U.S. banks for which lending is a core business activity tend to have higher absolute levels of lending exposure to non-depository financial institutions, but it represents a smaller percentage of their total loans and total assets. For example, Wells Fargo Corporation had $104.9 billion of loans to non-depository financial institutions at YE18, although this only represented 10.9% of its total loans and 5.5% of its total assets.

- **Various Lender Protections Cited:** Large U.S. banks have publicly cited multiple loan attributes which they believe serve as mitigants to their exposure to non-depository financial institutions. For example, loans may represent asset-based financing and be secured by other forms of collateral. Loans may also include advance rates which offer a degree of cushion against valuation declines. Lending to funds can be mitigated to the extent it is used to facilitate orderly redemptions rather than leverage returns, particularly when complemented with effective liquidity management policies at the fund level.

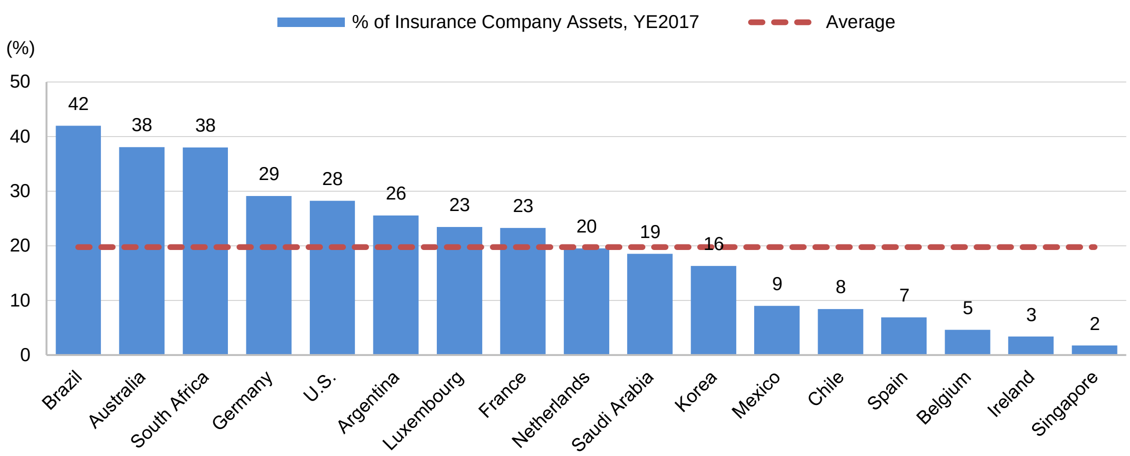
Pension Fund and Insurance Company Exposure to Shadow Banks

Pension Fund Exposure to Other Financial Intermediaries by Country



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

Insurance Company Exposure to Other Financial Intermediaries by Country



Source: Fitch Ratings, FSB's 'Global Monitoring Report on Non-Bank Financial Intermediation 2018'.

- **Pension Funds More Exposed Than Insurance Companies:** Pension funds and insurance companies have exposure to OFIs primarily through their investment portfolios and general accounts, respectively. For pension funds globally, exposure to OFIs averaged 28.2% of pension fund assets at YE17 according to the FSB. For insurance companies globally, exposure to OFIs averaged 19.8% of total insurance assets.
- **Shift to Fund Investments from Direct Lending:** The FSB indicates that pension fund and insurance company exposure to OFIs is increasingly tilted towards fund investments rather than direct lending exposure to OFIs. This could adversely impact investment recovery prospects (to the extent that fund investments have less secured collateral relative to direct lending exposure) and/or asset price volatility (as a result of redemptions by other investors in such funds).
- **Brazil, Germany High on Both Measures:** Brazil's pension funds and insurance companies had the highest exposures to OFIs as a percent of their total assets. Germany's pension funds had the second highest exposure to OFIs as a percent of pension fund assets, while Germany's insurance companies had the fourth highest exposure to OFIs as a percent of insurance company assets. U.S. pension funds had slightly below average exposure, while U.S. insurance companies had slightly above average exposure.
- **Long-Term Investment Horizons Reduce Market Risk:** In addition to their direct exposures to OFIs, pension funds and insurance companies remain exposed to broader asset price volatility that may be triggered by forced selling of similarly-held collateral by open-end funds. Positively, both pension funds and insurance companies typically benefit from having long-lived liabilities which allow them to have longer-term investment horizons which may provide some latitude to ride out temporary market price volatility without having to sell assets and crystalize losses.

Shadow Banking Outlook

Three Key Risk Drivers: Three shadow banking developments which would increase Fitch's concern in 2019 and beyond are further rapid growth, credit quality deterioration and funding and liquidity pressures.

Further rapid growth, particularly in the face of the currently competitive underwriting environment, would suggest that shadow banks are taking outsized or less transparent risks, potentially beyond their core areas of competency. Credit quality deterioration against the currently-benign economic backdrop in most developed economies would also be of concern. In 2006 through early 2008, for example, financial pressures felt by certain shadow banking entities proved to be a pre-cursor for broader market stress. Finally, funding and liquidity pressures stemming from reduced financing availability, more onerous financing terms or mismatches between asset liquidity and liability maturities could impact shadow banks' viability, even if the underlying assets are still performing. Forced asset sales, such as from open-end funds, could have knock-on effects on the broader financial system, particularly if the underlying assets are less liquid and/or material leverage is employed.

Measured Regulatory Evolution: Fitch expects shadow banking to continue to attract incremental regulatory scrutiny at both the country-specific and international levels, as the sector continues to grow in size and potential systemic importance. That said, Fitch believes more meaningful regulation of shadow banking will be confined to specific countries (such as China or India) or sub-sectors (such as consumer finance), unless and until a marketwide shock emanating from shadow banking causes regulators to consider a more comprehensive regulatory framework.

Regulation thereafter could include increased transparency and financial reporting, greater risk participation to improve alignment of interest, and limitations on asset/liability mismatches. Still, the magnitude of these constraints would need to be balanced against regulators' desire to maintain credit availability, particularly for the under-banked.

Related Research

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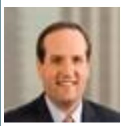	**Global** Nathan Flanders + 1 212 908-0827 nathan.flanders@fitchratings.com		**EMEA** Christian Kuendig +44 203 530-1399 christian.kuendig@fitchratings.com
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