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Financial Risks and Responses Under the New Normal

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Financial Risks and Responses Under the New Normal

1. Abstract

As financial risks take shape, it is vital to accurately identify and effectively respond to these risks. The Chinese financial system specifically faces four major types of risks: credit risks, asset bubble risks, foreign exchange/foreign exchange reserve risks, and liquidity risks, as well as systematic risks thus triggered. In this paper, we probe into the formation and interaction of these risks and make concrete suggestions on how to boost the real economy, deleverage, and reduce bubble risks based on global cases, expert interviews, literature review, and BCG's experience working with governments and businesses worldwide. In reference to the U.S. macro prudential regulatory system, we also suggest China regulate and prevent systemic risks through strong legislation, information communication, as well as better organizational structures and stronger state responsibilities.

- Credit risks: Credit grows too quickly with allocation failure, leading to credit risks

The Chinese economy features high leverage, excessive growth of loans, and imbalanced allocation of credit resources. Credit transfers—directly or indirectly—the operational risks of the state-owned part of the real economy to the financial system via shadow banking. In particular, massive overcapacities and redundant construction projects by local governments threaten the financial system's ability to pay, build up credit risks, and thus lead to liquidity risks.

- Asset bubble risks: Ample liquidity that flows out of the real economy, together with shadow banking, blows the asset bubble

Monetary policy creates ample liquidity for economic growth, but credit resources are not allocated to the real economy where the return on investment is too low. Instead, the surplus money leaves the real economy for the real estate and stock markets. Shadow banking and financial innovations aloof from the real economy result

in money circulating only within the financial system, which blows the asset bubble even bigger. Since the high-risk asset bubble is not sustainable, breaking the bubble will add to credit risks and cause liquidity risks.

- **External risks:** The expectation of a weaker Chinese yuan aggregates risks for foreign exchange reserves

As the foreign exchange rate fluctuates due to the U.S. Federal Reserve's exit from quantitative easing (QE) and the appreciation and rate hike of the U.S. dollar, the Chinese financial system will have to deal with capital outflow, falling asset prices, and growing pressure on Chinese enterprises to pay back the principal and interest. In particular, the anticipated depreciation of the Chinese yuan is squeezing the liquidity space at home and propelling some liquidity premiums to return to an average level. Once the liquidity expectation hits a turning point and the asset price experiences a quick fix, the asset bubble will burst, causing liquidity risks.

- **Liquidity risks:** Multiple uncertainties lead to liquidity risks

Credit, asset bubble, and external risks all may lead to liquidity risks. While credit and foreign exchange reserve risks are generally controllable, precaution is necessary against the hard-to-estimate loss from the asset bubble burst caused by shadow banking. The damages by the asset bubble burst cannot be overestimated: it might trigger liquidity risks, worsen the credit environment, be a catalyst for massive bursts of bad debt earlier than expected, and increase panic capital flight, which will drain liquidity.

- **Systematic risks:** Systematic risks may be triggered by any or all of the above four interconnected risks

Any of the abovementioned four types of financial risks may trigger systemic risks, and under the New Normal, financial risks are embedded and intertwined with each other. Any risk at a link of the capital flow chain will lead to a series of more devastating risks, affecting stakeholders such as local governments, enterprises, financial institutions, and individual investors. We believe that while credit risks are generally controllable, deleveraging permits no delay. It is crucial to closely watch asset bubble risks, be more alert towards external risks, monitor and analyze liquidity risks, and take precautions against systematic risks.

The weak real economy is the root cause for all the above risks. Therefore, a fundamental prescription to preventing financial risks is boosting the real economy and actively responding to the New Normal by various means. In the short and medium run, China should focus on bringing down credit risks by deleveraging in order to

resolve the debt crisis, optimize credit allocation, and revitalize the real economy. In the medium and long run, China may draw experience from the United States, to improve its macro prudential regulatory system in order to prevent systematic risks and avoid a hard landing.

- Active response: Boost the real economy by various means

Faced with the reality of slowing economic growth, China should recognize that the old path leads only to a dead end. The viable path forward is accelerated shift of the economic growth model, vigorous economic restructuring, industrial upgrading, and developing new economic growth drivers. To this end, we suggest: 1) reducing government intervention, 2) continuing to advance the mixed-ownership reform in state-owned enterprises (SOEs), 3) improving market entry rules and fallback policies, 4) reducing tax burdens, and 5) breaking financial constraints.

- Active precautions: Learn from the U.S. government's deleveraging in the crisis, reduce the "existing" leverage and keep the "incremental" leverage under control

Following the outbreak of the financial crisis in 2008, the U.S. government cut leverage by reducing "numerators" and expanding "denominators," achieving desired effects. Drawing from the United States experience, we suggest: 1) the corporate sector should cut overcapacities and deleverage at the same time, 2) the financial sector should take active precautions against systematic risks, 3) differentiate good "existing" leverages from bad ones and tighten macro prudential regulation, and 4) the government should control the "incremental" leverage and stick to the bottom line in bailout.

- Better regulation: Learn from the United States and improve the macro prudential regulatory system

Precautions must be taken because once triggered, systematic risks are devastating to the whole financial system or even the entire economy. Drawing experience from the U.S. government in its prevention of systematic risks in the post-crisis era, we have the following suggestions for China's macro prudential regulatory system: 1) constructing a legal framework, 2) strengthening regulatory functions and allowing for statutory mandates and administrative power, 3) maintaining full transparency, 4) conducting multi-dimensional analysis and surveillance, 5) having sound governance and organizational structures, and 6) laying the basis for effective operation of an inter-departmental committee.

2. Reality Check: Financial Risks Under the New Normal

2.1 Multiple Challenges: New Normal for the Chinese Economy

Overall economic growth is slowing and the three engines in the “old normal” are losing momentum.

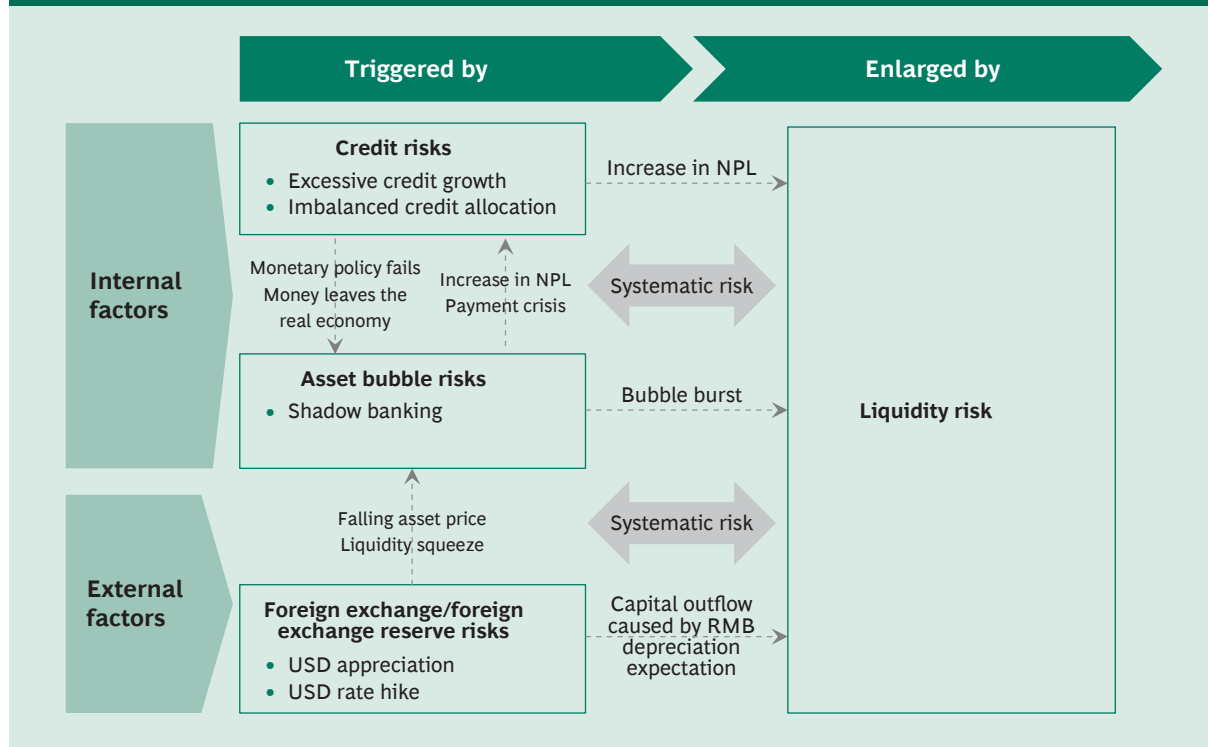
- **Economic growth is moving from high-speed to medium-to-high speed.** China’s GDP growth has been falling year by year, from 7.9% in 2012 to 6.7% in 2016, the lowest since 1990. Despite the slowing momentum, the absolute rate of around 7% is still remarkable.
- **High economic growth driven by production factors and investment is hard to sustain and calls for transformation.** The three engines driving economic growth in the past are now losing momentum. First, as export growth continues to slow, the contribution of net exports to GDP has shrunk considerably. Chinese exports are losing its comparative edge from demographic dividends and cheap labor, when the call for “reverse globalization” is getting louder in global trade. Secondly, consumption plays a limited role in boosting economic growth. Though consumption has exceeded investment and contributed the most to GDP, it is the result of economic growth and urbanization, not the driving force. Last but not least, investment growth is also slowing. China has far exceeded other major economies in terms of the domestic investment-to-GDP ratio, and has only limited space for boosting economic growth further through investment. In the past five years, investment on fixed assets has also declined. Although government-led investment can prop up demand in the short term, it will cause overcapacities, a crowding-out effect, and economic volatility in the long run. In comparison, China lacks private investment with sufficient size and vitality.

China is already on the road to transforming its economic growth model. At the same time, internal and external uncertainties accumulated in the old growth model are becoming more explicit. As new risks are taking shape, it is vital to accurately identify and effectively prevent them.

2.2 Combined Effects of Internal and External Factors: Financial Risks Under the New Normal

In China’s financial system, there are mainly four kinds of risks: credit risks, asset bubble risks, foreign exchange/foreign exchange reserve risks, and liquidity risks. These risks are

Exhibit 1. Financial Risks Under the New Normal



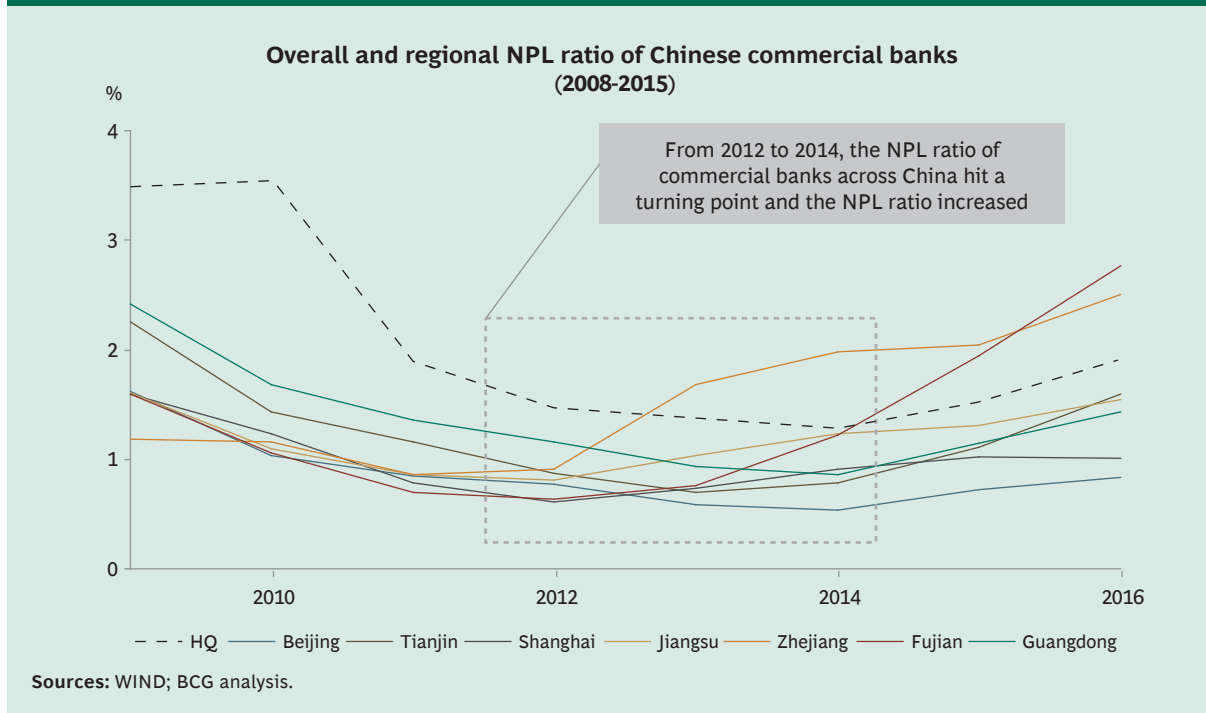
interconnected, which means the outbreak of any one is likely to trigger additional systematic risks. (See Exhibit 1.) We believe that while credit risks are generally controllable, deleveraging is a pressing task that must not be delayed. In order to prevent systemic risks, it is necessary to have close surveillance on asset bubble risks, be on the alert for external risks, and monitor and analyze focused liquidity risks.

2.2.1 Credit Risks: Excessive Growth and Allocation Failure of Credit Lead to Credit Risks

The Chinese economy is highly leveraged on the whole, loan volume is growing too quickly, and the allocation structure is rather problematic with excessive growth in loans and prominent structural problems. Most loans go to the real estate and other industries that are highly polluting and energy consuming. As to borrowers, SOEs are running with an excessively high leverage ratio and local governments are borrowing at a quicker pace, but the overall loan volume is still controllable.

Since the Asian Financial Crisis in 1997, China's monetary policy has been "prudent" and "loose" for most of the time. The ample money supply injects vitality into the real

Exhibit 2. Overall and Regional NPL Ratios of Chinese Commercial Banks

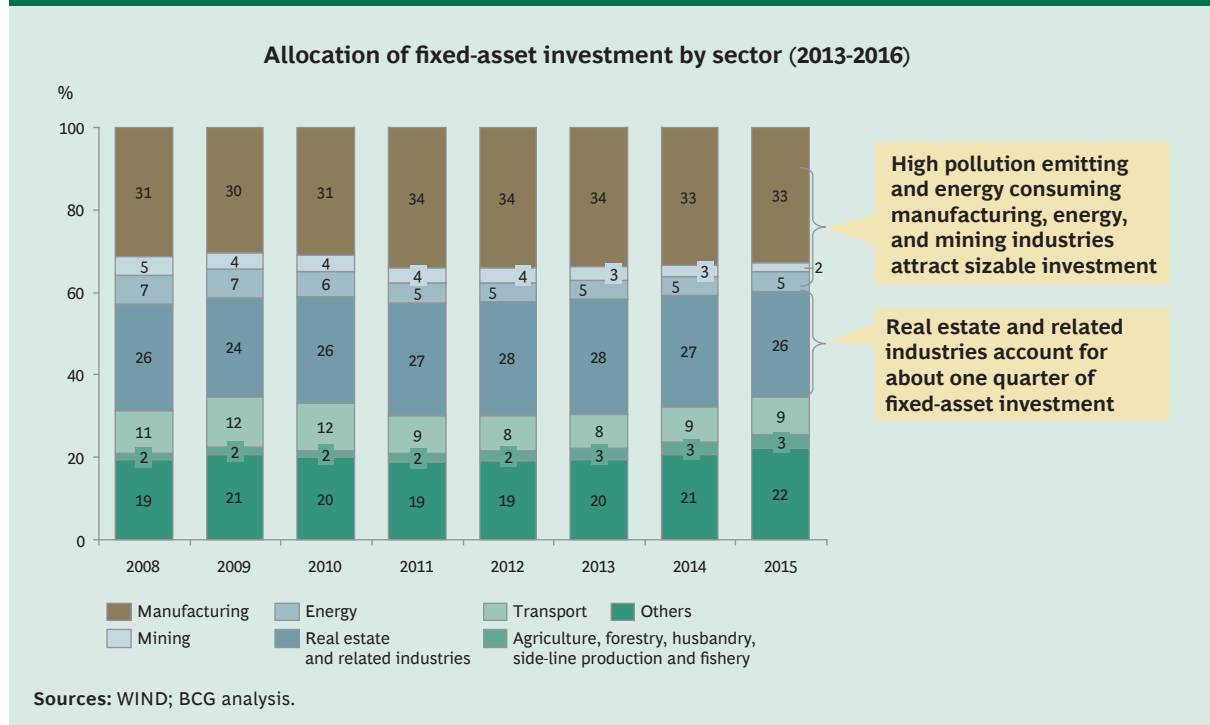


economy. However, the 2008 subprime mortgage crisis was a heavy blow to China's macro economy, and the four-trillion-yuan economic stimulus package in response achieved mixed outcomes. The real economy continues to trend downward, the NPL ratio is rising in banks and credit risks are mounting. (See Exhibit 2.)

The Chinese economy is highly leveraged on the whole. By the end of 2016, China had registered a total debt-to-GDP (debt) ratio of 261%, which is higher than the 250% in the United States at the same time. China's overall leverage ratio is rising at an astonishing pace. It took 30 years for the United States debt ratio to climb from 150% to 250%, but only 10 years for China. At the same time, China is troubled with prominent structural problems with its leverage. Nearly half of new debts go to property development or development of industries such as iron & steel, cement industries. Taking incremental aggregate financing to the real economy as an example, we estimate that the real estate industry and industries such as construction, iron & steel and cement industries take up more than one third of the total¹. (See Exhibit 3.)

As to borrowers, the leverage ratios of residents and local governments are still safe, but the ratio of state-owned enterprises deserve attention. By the end of 2015 in China, leverage ratios (debt ratio) of the financial sector, the residential sector, and government de-

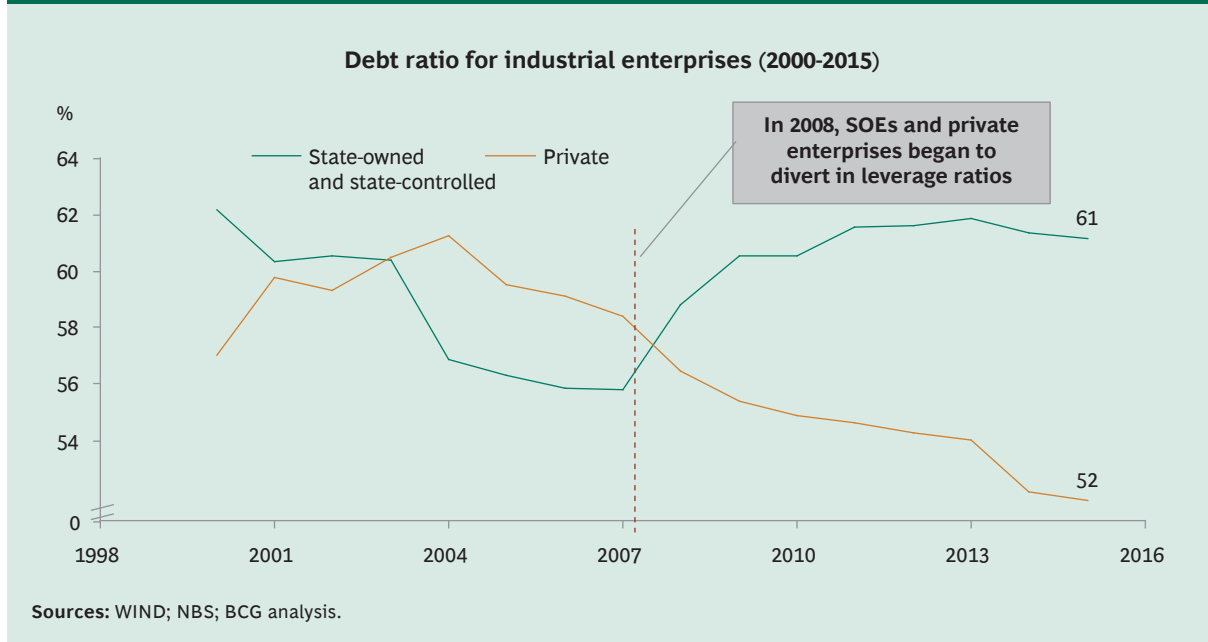
Exhibit 3. Most Investment Is in Real Estate and Highly Polluting and Energy Consuming Industries



partments including local financing vehicles and the non-financial corporate sector were 21%, 40%, 57% and 156%, respectively. (See Exhibit 4.) The government's debt liability totaled RMB 26.7 trillion, or 39.4% of the GDP, up from 37.7% in 2014, but still below the international standard of 60%². Specifically, the debt ratio of local governments was 89.2%. Although the ratio is lower than the international alert level³, its rapid increase deserves precautions. Meanwhile, the leverage ratio of SOEs continues to rise, making them highly leveraged players. In 2015, the total debt of Chinese non-financial enterprises were about RMB 105.6 trillion, with leverage ratio at 156%, which is 1.6 times that in Japan and 2.2 times that in the United States. Particularly, SOEs had RMB 79 trillion in debts, accounting for about 75% of the total. It is then obvious that highly leveraged enterprises in China are mainly non-financial SOEs.

Large SOEs and local governments have been the main beneficiaries of the proactive fiscal policy, the prudent and loose monetary policy, the four-trillion-yuan economic stimulus package rolled out in 2008, and the plan to revitalize ten major industries. Nearly 70% of the four trillion yuan was raised by local governments and the plan to revitalize ten major industries clearly favors SOEs. Credit has directly or indirectly transferred the operational risks with the state-owned real economy to banks and non-bank financial institutions (via

Exhibit 4. Debt Ratio for Industrial Enterprises



shadow banking). In particular, massive overcapacities and redundant local government construction projects will threaten the financial system's ability to pay, magnify credit risks, and thus lead to liquidity risks.

2.2.2 Asset Bubble Risks: Ample Liquidity that Flows Out of the Real Economy, Together with Shadow Banking, Blows the Asset Bubble

Monetary policy creates ample liquidity for economic growth, but credit resources are not allocated to the real economy where the return on investment is too low. The surplus money leaves the real economy for the higher-yielding real estate and stock markets. Shadow banking and financial innovations aloof from the real economy result in money circulating only within the financial system, thus building up the asset bubble.

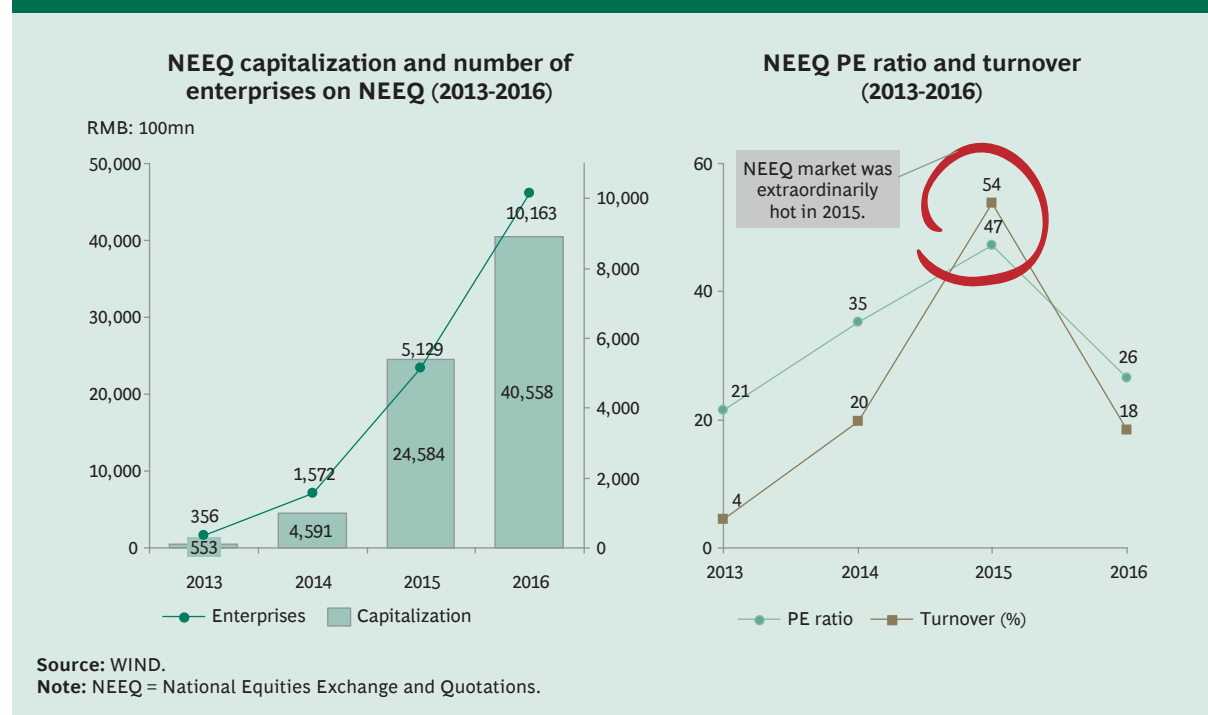
The prudent, loose monetary policy in China has created ample liquidity for economic growth. From 2006 to 2016, China's M2 increased from RMB 34.6 trillion to RMB 155 trillion, at the annualized growth rate of about 13%, equivalent to 70% of the M2 of the United States, Japan and Europe combined. However, the overall return rate was lowered by the weak real economy and had little appeal to social capital. Hence, the surplus money turns to the booming real estate and stock markets. The flooding of capital drove up the prices of real estate and stocks and led to the asset bubble. Take the credit supply

structure in the trust industry as an example. According to the data for Q3 of 2016, the trust industry invested primarily in five sectors, and over 70% of the money went to real estate, infrastructure construction, financial institutions and the securities market⁴. The real estate market and the stock market continued to surge and the average price-to-earnings (PE) ratio of the NEEQ-traded companies (National Equities Exchange and Quotations, a trading platform for shares of small and medium-sized unlisted companies) hit 47, much higher than the average ratio 15 in the U.S. stock market. (See Exhibit 5.)

Shadow banking plays a key role in luring money away from the real economy. In recent years, shadow banking has been growing rapidly in size. Horizontally, it is like a link connecting financial institutions, keeping money circulating within the financial system, and lengthening the capital chain through complex arrangements. Vertically, it leverages up by issuing bonds or employing other financing instruments to absorb a large sum of money and then invest it into the real estate and stock markets.

Maturity mismatch causes liquidity squeeze. Maturity mismatch allows banks and non-banking financial institutions to borrow short-term liabilities and lend them to long-term projects, e.g. investing short-term financing products into long-term projects whose

Exhibit 5. NEEQ Capitalization Continues to Grow with an Average PE Ratio Growth Burst in 2015



returns are difficult to be cashed in the short term, thus leading to liquidity squeeze.

In addition, financial innovations aloof from the real economy contribute to the rapid growth of the asset bubble. Packaging and splitting of asset returns are a good example. Generally, high-yield assets tend to have high risks and less appeal to capital. In recent years, however, the packaging and splitting of asset returns has become increasingly common. Once an asset's value is recognized, it takes only a short while to structuralize the asset and form a chain involving multiple stakeholders. Structuralizing lures a lot of money to invest in high-risk assets and accelerates the formation of the asset bubble. It is against such background that the market becomes hugely enthusiastic about non-standard products (such as money market funds and interbank deposits) and stocks (such as securities investment trusts, marginal lending, tranching products, etc.).

The high-risk asset bubble will not last long and liquidity risks will arise in the course of reducing the bubble. Since the real economy yields poor returns, high-risk assets do not have a solid foundation for the price hike. The asset bubble has accelerated the deviation of asset prices from fundamentals. When the asset price hike is closely followed by bubble reduction, a liquidity crisis might be likely.

2.2.3 External Risks: The Expectation of a Weaker Chinese Yuan Aggregates Foreign Exchange Reserve Risks

As the foreign exchange rate fluctuates due to the U.S. Federal Reserve's exit from quantitative easing (QE) and the appreciation and rate hike of the U.S. dollar, the Chinese foreign system will have to deal with capital outflow, falling asset prices, and growing pressure on Chinese companies to pay back the principal and interest.

First, the growing expectation for a weaker Chinese yuan will drive capital out of the country. The USD to RMB exchange rate is about to rise above 7 and the expectation for the yuan's depreciation is intensifying. In January 2017, China's foreign exchange reserve fell below USD three trillion.

Secondly, the asset prices (e.g. property prices) at home, which are already high, face risks of a quick plunge. Overseas loans borrowed by financial institutions and enterprises when the international interest rate was low and yuan was strong might cause rapid deleveraging and asset price adjustments when liquidity tightens globally.

Last but not least, Chinese enterprises that borrow from overseas have more pressure to pay back the principal and interest, especially real estate enterprises as the

major borrowers. The exchange rate fluctuation will, in turn, build up the credit and asset bubble risks in China.

On the whole, foreign exchange reserve risks are small in China, because the country still has relatively tight control over foreign exchange, as well as a foreign exchange reserve of nearly USD three trillion and the annual trade surplus of about USD 500 billion. However, it is noteworthy that the expectation for the yuan's depreciation is squeezing the space for ample liquidity at home and causing some liquidity premiums to return to the average level. Once the liquidity expectation is passively responded by the market or even hits the turning point, the market will naturally go for the value center, which will be reflected in the quick fix of the asset price, leading to the collapse of the asset bubble and triggering liquidity risks.

2.2.4 Liquidity Risks: Multiple Uncertainties Lead to Liquidity Risks

The above analysis shows that credit, asset bubble, and external risks may all lead to liquidity risks. However, the overall risk is still controllable in China, as most of the credit assets have collaterals, and the government will pay back as a last resort for most lending to state-owned enterprises. In 2016, the outstanding balance of RMB loans to the real economy (non-financial enterprises and individuals) took up 67.4% of the aggregate financing to the real economy. Specifically, about 60% of the lending to individuals were home mortgage loans and over 70% of non-financial enterprises loans were to SOEs, implicitly guaranteed by the government. The foreign exchange reserve risks are more uncertain. Despite capital outflow caused by the expectation for a weaker yuan, the risks are still controllable thanks to China's foreign exchange control system. It should be noted that shadow banking is difficult to track or supervise because of its complicated transaction structures/process and diverse underlying assets. It is therefore hard to accurately estimate the damages that might be caused by asset bubble risks. The damages cannot be overestimated, though: it might trigger liquidity risks, worsen the credit environment, touch off massive bursts of bad debt earlier than expected, and increase panic capital flight which will drain liquidity.

2.2.5 Systemic Risks: The Four Major Types of Risks May Trigger Additional Systemic Risks

Under the New Normal, because of overlapped risk takers and transmission chains and the combined effect of internal and external factors, financial risks caused by economic structural conflicts are very likely to resonate with each other and trigger additional systematic risks, which could be devastating as a whole.

So far, financial risks under the New Normal are concentrated in overcapacities, local government debts and financial risks in the real estate market. Acute deterioration of any type of risk will lead to a liquidity squeeze of the financial system, and therefore trigger systemic risks. This can happen especially when overcapacities, local government debts and the real estate, as well as shadow banking and liquidity risks caused by foreign exchange reserve flight lead to liquidity risk outburst. All the risks are the embedded and intertwined, so a break in the capital flow chain will certainly trigger systemic risks, and affect multiple stakeholders including local governments, enterprises, financial institutions, and individual investors. Take the real estate sector for example. Real estate loans and real estate mortgage loans comprise of nearly 40% of all loans granted by major banking financial institutions, and nearly 80% of collaterals in the banking industry are real estate. An enormous amount of money raised from residents and non-financial institutions via trust, insurance, securities, and funds also goes to the real estate sector. Therefore, either the lowering of home sale prices caused by capital flight or the collapse of the real estate bubble triggered by the broken capital chain will expose nearly 40% of banking assets to risks, which will then affect all links of the capital chain, devastating the whole financial system.

3. Active Response, Precautions and Better Regulation

The weak real economy is the root cause for all the above risks. Therefore, to prevent financial risks from the beginning, it is imperative to boost the real economy. In the short and medium run, China should focus on solving credit risks by deleveraging in order to resolve the debt crisis, optimize credit allocation, and revitalize the real economy. In the medium and long run, China may draw experience from the United States, improving its macro prudential regulatory system to prevent systematic risks and avoid a hard landing.

3.1 Active Response: Boost the Real Economy by Various Means

Faced with the reality of slowing economic growth, China should turn to accelerate the transformation of the economic growth model, vigorously adjust the economic structure, promote industrial upgrading, and develop new economic growth engines.

On the demand side, economic growth driven by the old three engines faces bottlenecks. In particular, money supply and government-led investments have failed to achieve the desired effect in boosting the economy.

On the supply side, the slowing economy is primarily attributable to diminishing demographic dividends, inefficient supply of capital, and the lack of innovation. As to labor, it is unrealistic to fully tap the potential through education or training in the short term. It is more feasible, however, to make significant progress in the short and medium term by tackling the current conflict between supply and demand of capital. To this end, we suggest:

- **Reducing government intervention.** The purpose is to create a market-oriented external environment with a level playing field and allow businesses to flourish. There are mainly three kinds of measures: (1) promoting sector competition and improving efficiency through market-oriented development; (2) reducing direct government intervention with pricing or subsidies; (3) delegating the review and approval power to lower levels and giving the business and decision-making power back to enterprises.
- **Continuing to advance the mixed-ownership reform on SOEs.** First, based on the negative list mechanism, the government should advance pilot projects such as opening up certain sectors, encouraging private investment, and urging SOEs to adopt market-oriented business models. It should also improve operating efficiency and motivate SOEs to compete in the market to strengthen the competitiveness of giant national SOEs and foster specialized local SOEs. Secondly, market-oriented governance structures and incentive mechanisms should be adopted so as to solve the distribution problem with surplus value from innovations and stimulate entrepreneurship.
- **Refining entry rules and fallback policies.** The government should specify and strictly implement industry entry rules and have dynamic monitoring. For instance, strict compliance with environmental protection standards will effectively eliminate overcapacities and new low-end supply from local backward enterprises. Additionally, the government should provide fallback during the reform, policy and financial support for employee settlement, asset disposal, and industrial transformation and upgrading.
- **Reducing tax burdens.** The purpose is to cut the overall costs for enterprises and create conditions for them to re-invest and innovate. Measures to be taken include: lowering taxes on enterprises; reducing taxes on individuals; and cutting unnecessary fiscal expenses for the fiscal budget to be balanced after tax reduction.
- **Breaking financial constraints.** The purpose is to enhance financing availability and the efficiency of financial services for the real economy. Generally speaking, the market-oriented reform underway in China can help create an open, inclusive and innovative financial market, help enterprises break financial constraints, and make

financing easier and cheaper for small- and medium-sized enterprises (SMEs). Meanwhile, it should be noted that government intervention still exists, the capital market needs to be further developed, and prevailing rigid payments twist market prices and risks. This all undermines the efficiency of resource allocation in the financial market. In the short and medium term, the government should continue market-oriented reforms in the financial sector, strictly implement entry rules, regulate the financial market, encourage the development of financial institutions of various ownerships and types, establish a multi-tiered capital market, restore distorted market prices, withdraw itself from market intervention with frequent but small moves, and break away from the dual mismatch between financial resources and demands through market-oriented development.

- **Facilitating SMEs to get financed.** As the most dynamic and innovative participants of the real economy, SMEs are troubled by high financing costs and lack of means to get financed, which constraints the efficiency of the entire economic structure. Fiscally, the Chinese government can draw lessons from the United States experience by establishing SBA for SMEs and providing multiple types of financing guarantees for SMEs on various government levels. This will lower the financing costs. In terms of policies, the government can provide financial inclusion and preferential tax policies to fully motivate the local borrowers. Positive and rational guidance through regulation is also necessary for private financing. Input from multiple levels of the government should be considered in order to maximize the combined effects.

3.2 Active Precautions: Learn from the U.S. Government's Deleveraging During the Financial Crisis, Reduce the “Existing” Leverage and Control the “Incremental” Leverage

In general, deleveraging and reducing the bubble is an inevitable path for China to rebuild its economic vitality, and also a necessary approach to prevent financial risks. The ultimate goal is to effectively lower the possibility of systemic financial risk and promote economic restructuring. Too slow or aggressive moves, in contrast, may trigger credit financial risks, which can bring about losses that are hard to afford.

Following the financial crisis in 2008, the U.S. government successfully deleveraged by reducing the “numerator” of debt write-downs, debt payments, and government takeover of debts and troubled assets, and simultaneously increasing the “denominator” by raising the actual economic output or increasing the nominal output in the name of inflation.

- **The residential sector.** The residential sector was deleveraged primarily by reducing debts and increasing savings. Debts were greatly decreased with the default of more than two thirds of home mortgage loans, and the near-zero interest rate also eased the pressure to repay the remaining loans. Meanwhile, consumption loans were reduced and savings were increased for deleveraging.
- **The non-financial corporate sector.** “Zombie enterprises” and non-performing loans (NPLs) were spun off mainly via bankruptcy and debt restructuring in the corporate sector. At the same time, more investment was made after tax cuts to improve the balance sheet. The corporate investment amount, aggregate financial assets, and the net purchase of financial assets by non-financial enterprises have continued to rise since the crisis. The U.S. stock exchange reacted positively to the three rounds of QE policies, and the wealth accumulated in the booming equities market accelerates the deleveraging process in the corporate sector.
- **The financial sector.** Deleveraging in the financial sector is realized in the following two ways. First, the outstanding debt balance is reduced and capital increased by bankruptcy, restructuring, debt write-down, and the M&A of nonperforming assets. At the onset of the crisis, the financial sector resorted to the market for deleveraging. As the crisis spread and deepened, the government stepped in, actively propelling troubled financial institutions to restructuring and supporting the M&A of local banks. Second, the government reformed the financial system to strengthen regulation and eliminate shadow banking. The U.S. Congress passed the Dodd-Frank Wall Street Reform and *Consumer Protection Act* in 2010 and set up the Financial Stability Oversight Council (FSOC) with comprehensive oversight over everything in the financial market, from institution operation to the transactions of derivatives, which effectively keeping the leverage ratio under control.
- **The public sector.** With the strategy of “transferring leverage,” the U.S. government promoted deleveraging in the financial and residential sectors and transferring debt risks to the federal government. After the crisis broke out, the federal government rolled out rescue measures including economic recovery and bailout plans for troubled assets, etc., which significantly increased government spending to stimulate economic recovery.

Deleveraging in the United States is characterized by⁵: (1) High degree of government intervention, (2) Deleveraging by shifting leverage among sectors, (3) Making use of the market mechanism, (4) Using the U.S. dollar’s international status, and (5) Expanding the “denominator” by stimulating the real economy and increasing the supply. However, it also has shortcomings and potential dangers worth mentioning. First, the deleveraging

simultaneously involves nearly all players in the private sector, mutually reinforcing the interaction between deleveraging in the financial sector and that in the residential and non-financial sectors, which might prolong economic recession. Secondly, the massive deleveraging in a relatively short period of time will cause liquidity shortage in the market. In particular, when a lot of financial institutions sell financial assets at the same time, the price of major assets will dive and liquidity in the financial market will tighten. Thirdly, the enormous government spending in the crisis and the remarkable growth of the Federal Reserve's balance sheet are unsustainable, and the government has a long way to go towards smooth and steady deleveraging itself.

Drawing from the U.S. experience, we suggest:

- **The corporate sector should cut overcapacities and deleverage at the same time.** China should vigorously conduct bankruptcy liquidation, merger and restructuring of zombie enterprises to eliminate overcapacities and debt, and promote deleveraging in a market-oriented manner.
- **The financial sector should take precautions against systematic risks, differentiate good “existing” leverages from bad ones, and tighten macro prudential regulation.** While reducing existing leverages, attention must be paid to avoiding systematic risks. Good “existing” leverages shall be distinguished from bad ones to optimize the credit structure. For the banking sector, deleveraging can be advanced through macro prudential policies such as the Macro Prudential Assessment (MPA).
 - **Prevent systematic risks.** Considering the sizable number of zombie enterprises in China, a strong push for many into bankruptcy simultaneously might trigger a massive outbreak of NPLs in the banking sector, threatening macroeconomic and financial stability. As SOEs account for a considerable part of zombie companies facing bankruptcy and liquidation, the government should properly prepare for the loss incurred from liquidations to prevent systematic risks.
 - **Distinguish good leverages from bad ones.** Banks may manage credit by imposing quotas on certain sectors and categorize enterprises into different lists. Liquidation may be a barrier for companies that face temporary liquidity squeeze/insolvency, but these companies will go back to normal operations after debts are repaid gradually from their daily operating revenue. For zombie companies, however, liquidation should be accelerated to free credit resources as soon as possible.
 - **Strengthen macro prudential regulation.** The People's Bank of China (PBOC)

should continue to improve the macro prudential system, implement policies including MPAs, regulate banking services, promote deleveraging in the financial sector, and make sure that banks maintain capital adequacy ratio as required, to limit excessive credit and prevent financial risks.

- **The government should keep the “incremental” leverage under control and stick to the bottom line in bailout.** A core issue in deleveraging is properly formulating policies to allocate costs among enterprises, banks and governments, and reasonably and smoothly eliminate zombie enterprises while keeping costs affordable to all three parties. Generally, there are three approaches to be considered:
 - **The government stays outside, leaving bankruptcy liquidation to market-based means.** When bank loss is limited and controllable, deleveraging should be done in a market-based way and the government should not interfere. However, when zombie enterprises bring huge risk exposures that might trigger turmoil in the banking sector and then threaten the country’s economic and financial stability, the government must bail them out promptly.
 - **The government and financial institutions provide subsidies or subsidized credit to enterprises with resilience, allowing them to recover gradually.** In every stage, the government and banks provide proper subsidies to enterprises that repair their balance sheet with their own operating revenue, and the losses are shared among all three parties. On the whole, the solution allows gradual recovery of enterprises instead of immediate liquidation, and spreads the costs evenly in every stage, so the government, enterprises and banks each bear limited and affordable loss.
 - **The government provides fallback and bears all the loss of liquidated enterprises.** This is good for smooth liquidations, in particular the stability of the banking sector, but will add to the fiscal burden. It will also lead to moral hazards that distort the risk appetite of market participants, and might lead to more serious problems with zombie enterprises in the future. To avoid such negative consequences from moral hazards, the government must be prudent in covering part or all of the liquidation cost, promptly determine its share of cost, and tighten supervision over zombie enterprises and banks, so as to prevent systematic risks and more serious problems with zombie enterprises.
- **The fiscal policy should closely coordinate with the monetary policy.** Deleveraging also requires close coordination between fiscal and monetary policies. The loss from deleveraging in non-financial enterprises needs to be shared properly among

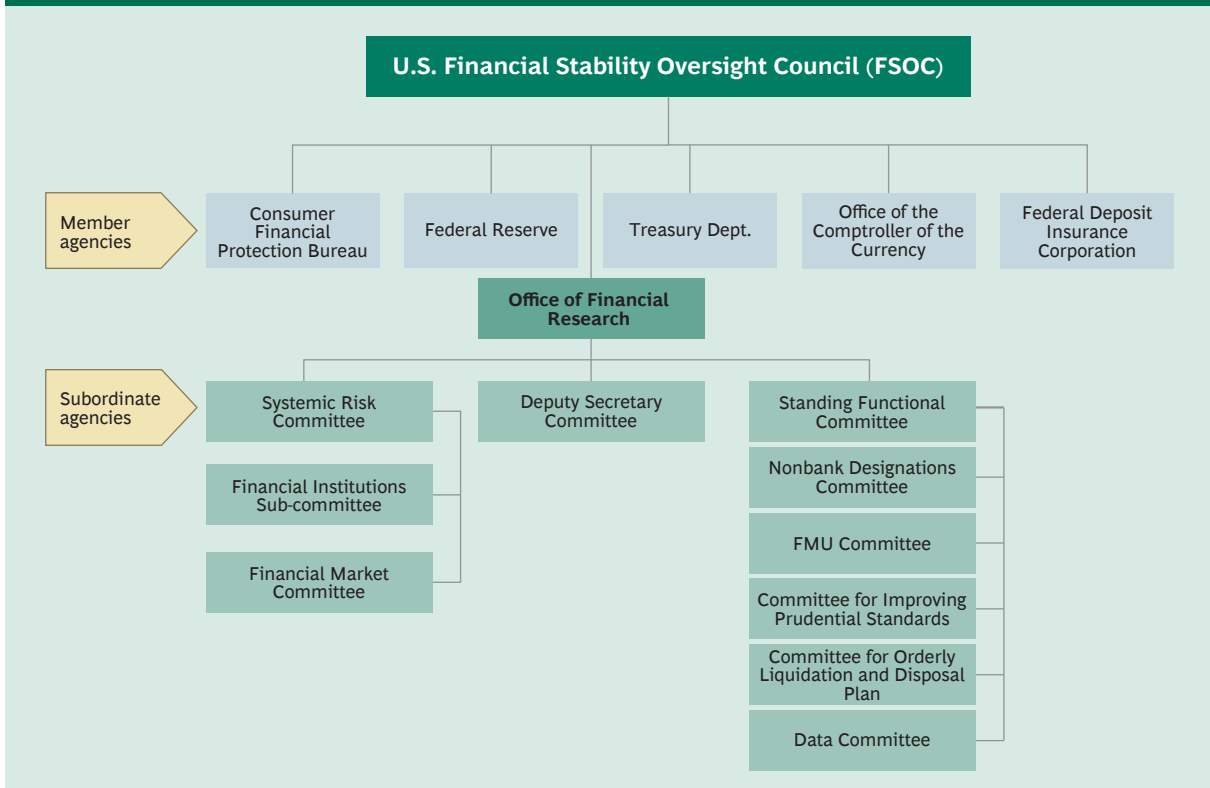
enterprises, financial institutions and the government. The fiscal policy shall act as the last resort. The fiscal department should prepare contingency plans, provide necessary subsidies or cover part of the loss when the loss is so large that social or financial stability is endangered.

3.3 Better Regulation: Learn from the United States and Improve the Macro Prudential Regulatory System

As mentioned above, systematic risks, once triggered, will be devastating to the whole financial system or even the entire economy. Drawing lessons from the U.S. experience in preventing systemic risks in the post-crisis era, we thereby make three suggestions for China's macro prudential regulatory system.

The U.S. government actively advanced financial regulatory reforms after the outbreak of the financial crisis⁶, mainly in the following aspects. (See Exhibit 6.) The U.S. government

Exhibit 6. Organizational Structure of the U.S. Financial Stability Oversight Council (FSOC)



set up the Financial Stability Oversight Council (FSOC) as per the Dodd-Frank Wall Street Reform and *Consumer Protection Act* to coordinate the whole picture and control systematic risks. The FSOC is equipped with a sound macro prudential regulation and governance mechanism capable of identifying, assessing, monitoring and controlling systematic risks. Its organizational structure is outlined below.

- **A distinct organizational framework and clear division of responsibilities.** The FSOC *Rules of Organization* specifies rules of composition, procedures and voting, and establishes a working mechanism for collaboration and coordination. The FSOC consists of ten voting members and five nonvoting members. Voting members are from federal financial regulation mechanisms while nonvoting members serve in an advisory capacity to the FSOC. Under the FSOC is the Office of Financial Research (OFR) that helps it collect and analyze data about the financial system. The Deputy Secretary Committee, Systematic Risk Committee and Standing Functional Committee are responsible for different parts of the daily work and facilitate tasks of the FSOC.
- **Inter-departmental collaboration and communication.** By establishing the FSOC, which is essentially a general coordinating agency involving the United States Treasury, Federal Reserve and financial regulators, the government can have access to information from various perspectives and sources at the macro, medium, and micro levels to comprehensively identify and monitor systematic risks. The FSOC also serves as a platform for inter-departmental consultation and discussion, coordinated fiscal, monetary and regulatory policies, and comprehensive measures to handle potential risks, in order to prevent and control systematic risks.
- **Information sharing and transparency.** According to *Rules of Organization*, the FSOC shall report to the U.S. Congress through regular reports and special reports. On one hand, it is required to submit annual work reports to Congress, explaining all emerging factors affecting U.S. financial stability. On the other hand, it must also provide special reports on specific issues as required by Congress. Meanwhile, sticking to the basic principle of “transparency with confidentiality protected,” the FSOC has maintained information transparency and full communication with the public, ensuring transparency while protecting confidentiality.
- **Valuing expert opinions and expertise.** Among the ten voting members, there is one independent member with insurance expertise to assist during decision-making. Under the FSOC, the OFR is set up to help the FSOC and financial regulators collect and analyze financial market data and promote financial stability. Professionals and specialized offices ensure effective operation of the FSOC as an inter-departmental council.

The U.S. experience shows that the setup of the FSOC and continuous improvements in the regulatory system have helped develop a financial stability oversight system featuring clear labor division and sound regulation and information sharing and transparency, which enables the country to better deal with systematic financial risks.

Suggestions for China's macro prudential regulatory mechanism on preventing systematic risks

The current macro prudential regulatory mechanism in China is still weak⁷. First of all, instead of being adopted into law, the macro prudential regulatory mechanisms in China are scattered in various departmental regulations within the PBOC, China Banking Regulatory Commission, China Securities Regulatory Commission, and the China Insurance Regulatory Commission. Additionally, without unified regulatory standards, each regulatory authority is likely to act on its own, leading to low regulatory efficiency and blind spots. In China, a dedicated department for macro prudential regulation with statutory mandates is not in place yet.

Here are three suggestions on improving China's macro prudential regulatory system.

- **Establishing a legal framework: strengthening regulatory functions and giving it statutory status and administrative power.** China should strengthen the macro prudential regulatory functions of its central bank. As to legislation, it may revise the Law of the PBOC or roll out the Law on Macro Prudential Regulation to give the PBOC the status of a macro prudential regulatory authority, expand its power of macro prudential regulation, develop its regulatory function different from financial business forms, and use more tools for monitoring, identifying and preventing systematic risks.
- **Information transparency: multi-dimensional analysis, monitoring and measurement.** China should establish a unified information collection and analysis framework, obtain information from various perspectives and sources at the macro, medium and micro levels, grasp the risk profiles and trends in each financial area, and comprehensively identify, monitor and measure systematic risks.
- **Sound governance and organizational structure: the basis for effective operation of an inter-departmental committee.** China should build an inter-departmental governance and coordination mechanism to promote collaboration and communication and ensure a clear division of labor and outline expected performance duties. Meanwhile, the government should coordinate fiscal, monetary, and regulatory poli-

cies via a platform for inter-departmental consultation and discussion and take comprehensive measures to prevent and control systematic risks.

Notes:

1. In 2016, the incremental aggregate financing to the real economy (including RMB loans, entrusted loans, trust loans, bonds, bank acceptance bills undiscounted) registered RMB 17.8 trillion. In the same year, the nationwide investment in property development was RMB 10.3 trillion, and the leverage ratio of real estate companies was usually 200% (which means 30% to 35% of the investment came from its own money). About RMB 6.7 trillion out of the RMB 10.3 trillion was raised through financing; that is to say, real estate financing accounted for about 37% of the aggregate financing.
2. The *Maastricht Treaty*, effective in 1993, lays down guiding principles for fiscal policies of member states: from 1994, the government deficit to GDP ratio (the deficit ratio) in EU member states must not exceed 3% and the government debt to GDP ratio (the debt ratio) must not exceed 60%.
3. Moody's sets a ceiling for national debt ratio based on the macroeconomic situation in different countries and when the ratio breaks the ceiling, it might lead to state default. It is deemed "very dangerous" when the ratio is less than 4% away from the ceiling, "dangerous" within 4.1 to 6.9% from the ceiling, "alerting", 7.0-12.4%, and "safe" when it is more than 12.4% from the ceiling; the red line for local government debts set by China is 100%, still 10% away from Moody's ceiling, within the "alerting" range.
4. *2015 Report on China's Financial Stability: Non-normal Financial Risks in the New Normal*. China Financing Publishing House. 2015
5. Luo Yu. *Studies on Deleveraging in Major Developed Countries and in China*. 2016
6. Chang Tong. "Comparison of Financial Macro Prudential Regulatory Institutions and Mechanisms in the United States and the United Kingdom." December 16, 2014.
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