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CHINA'S DEBT PROBLEM AND RISING SYSTEMIC RISKS: IMPACT OF THE GLOBAL FINANCIAL CRISIS AND STRUCTURAL PROBLEMS

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ABSTRACT

The fast expansion of China's debt, in particular corporate and local government debt, has attracted international attention and has also become a major concern of China's policy makers. Even though China can tolerate a higher debt level than many other emerging and developing economies owing to the sheer size and other special features of the Chinese economy, systemic risks for financial stability have been rising since the global financial crisis and the cushions built in the past decades to withstand a higher debt level have also been weakened. This paper reviews the evolution of China's debt built-up, examines reasons behind this trend and factors leading to the rising systemic risks including the expansion of shadow credits, increasing interlinkages between the stock and bond markets as well as the banking sector, and declining returns of investment from the corporate sector. The paper also makes recommendations for addressing the challenges to maintain financial stability and economic growth.

TABLE OF CONTENTS

I. INTRODUCTION...1
II. THE SIZE, COMPOSITION AND EVOLUTION OF CHINA'S DEBT BURDEN 3
III. THE ACHILLES' HEEL: HIGH CORPORATE AND LOCAL GOVERNMENT DEBT AND THEIR CHANGING COMPOSITION...5
IV. REASONS FOR THE FAST INCREASING DEBT BURDEN...9
V. SPECIAL FEATURES OF THE CHINESE ECONOMY TO TOLERATE HIGH DEBT RATIO.......17
VI. WEAKENING OF BUFFERS AND INCREASING SYSTEMIC RISKS.....................................21
VII. IMMINENT DEBT CRISIS UNLIKELY BUT HIGH TIME FOR ADDRESSING RISING SYSTEMIC VULNERABILITIES..29

I. INTRODUCTION

In 2016, the total GDP of China was over RMB70 trillion ($ 11 tn), quite remarkable for a developing country which is the second largest economy in the world. However, the total debt[2] was about 2.7 times of its GDP in the same year, significant and burdensome by standards. No wonder the Chinese central government announced in December 2016 that deleveraging would be one of the two priorities for the Chinese economy in 2017. The trajectory of the fast increase of debt in China since 2008 not only shows the impact of the global financial crisis on China but also reflects the structural problems the Chinese economy encounters at this development stage of its economic development.

The main culprit for the global financial crisis of 2008 was too much borrowing by households, the corporate and public sectors, depending on which country is being referred to. However, the most popular remedy by governments to fight against shrinking global and domestic demand was to create more debt via different policy measures and instruments. So much so that in June 2016, amid historically high levels of global debt, the Bank for International Settlements (BIS)[3] called for the ending of the debt-fuelled growth model adopted in the world.

Indeed China is one of such countries and its debt level has exploded since 2008. Like many emerging economies, its corporate debt has been increasing fast. Its local government debt has also been a long standing problem. The speed of debt expansion and the size of its debt have attracted much international and domestic attention. As a result, debt accumulation is not only a top concern of the Chinese government but also an important aspect being scrutinized by international investors and commentators.

In assessing the magnitude of the systemic risks of the debt problems of China, it would be important to avoid two pitfalls. One is not to examine debt indicators out of the context of the Chinese economic fundamentals as well as development stages and, the other is not to give due consideration to the developments of the global economy. Since the late 1990s when China had serious non-performing loan problems, there have been predications and announcements of imminent Chinese financial collapse, economic hard landing or China's Minsky Moment almost every year. Each time the Chinese economy managed to "muddle through" with various successful or not very successful reforms and the introduction of new policies and regulations. Meanwhile the economy also has been growing in size and since 2009 it has become the world's second largest economy in nominal GDP terms, next only to the United States. In 2010 it has become the world's largest exporter and in 2013 the largest trading nation. Its financial sector has also expanded at a lightning speed in size, though its sophistication somewhat lagged behind, including the banking sector, bond markets and stock exchanges. Its bond market is the third largest in the world. China is still a growing economy, though at a slower pace than before. However, not to solve its exploding debt problem would not only further slowdown the economic growth but also carries significant systemic risks for the economy as a whole.

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[2] Reuters, 'China GDP beats expectations but debt risks loom', 20 January 2017. Available from http://www.reuters.com/article/us-china-economy-gdp-idUSKBN15406C.

[3] Bank for International Settlements, 86th Annual Report 1 April 2015–31 March 2016 (26 June 2016).

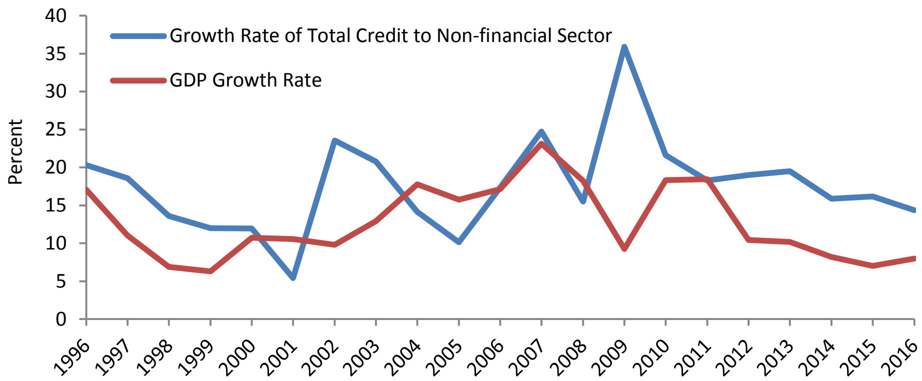
The increasing size, complexity and linkages of the financial market make China's debt problem much more tangled than the 1990s. The global financial crisis of 2008 and the economic development in China have reduced, in a couple cases even wiped out, the effectiveness of some of the buffers China has enjoyed for decades for coping with its debt problem and other economic challenges. China is now at an important cross road. Without some important reforms at the financial and economic fronts, to "muddle through" the debt problem it is currently facing would be much more difficult than before. However, to reform and rebalance its economy during an economic downturn with weak global demand is a very challenging task.

The remainder of this paper is organized as follows: Following an introduction, Section II examines the size, composition and evolution of China's debt burden; Section III highlights the Achilles' heel of China's debt mountain namely high corporate and local government debt and their changing composition; Section IV explains the reasons for increasing debt burden; Section V reviews the special features of the Chinese economy which make a developing country like China tolerate a higher debt ratio; Section VI reveals that even though China's GDP growth is still decent in comparison with most other countries in the world, its economic buffers are weakening and systemic risks are rising; Section VII stresses the urgency to address rising systemic vulnerabilities although an imminent debt crisis is currently unlikely.

II. THE SIZE, COMPOSITION AND EVOLUTION OF CHINA'S DEBT BURDEN

China's debt situation has gone through a fascinating evolution (Figure 1). Before opening up to the world, China pursued the policy of "self-reliance". Restrictions on external borrowing were very tight. China had almost no external debt. The period since China's opening up in the 1980s to 2004 was a golden development phase when debt increase was mostly lower than GDP growth. Though there was the non-performing loan problem in the 1990s, it was much easier to handle during this period of fast economic growth. In addition, much of the borrowed money was invested in the manufacturing sector and contributed to the impressive and robust GDP growth which lasted for many years at double digits. Right before the global financial crisis during the years between 2004 and 2008, debt and GDP growth were basically synchronized with some fluctuations. In this period, GDP growth was at a stable and similar pace as the debt increase, which shows that debt had its positive function on economic activities. Since 2008, China has entered the stage of debt explosion and slower economic growth, accompanied with much lower returns on investment, resulting in some wasteful resource allocation and increasing financial fragility. Investment in this period is more on infrastructure than manufacturing.

Figure 1. Total Credit to Non-financial Sector Growth Rate *vs*. Nominal GDP Growth Rate

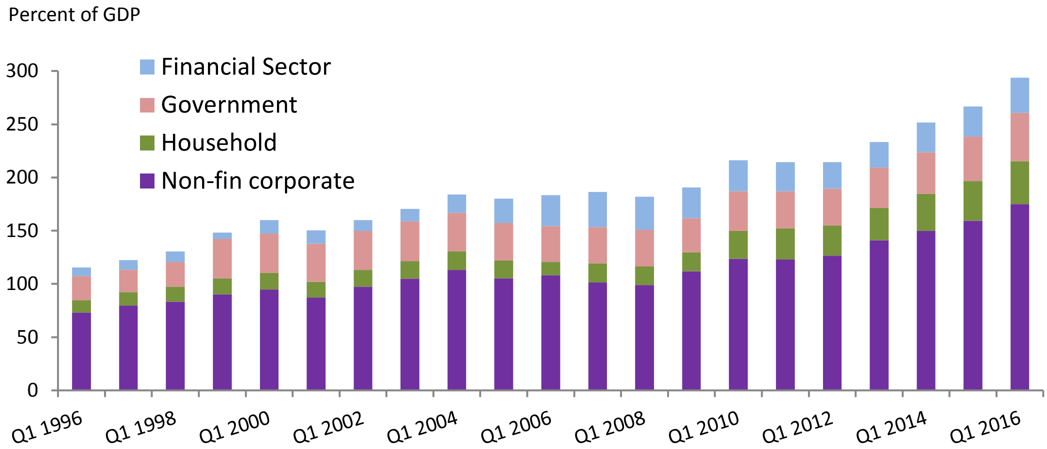


Source: UNCTAD Secretariat's calculation based on data from China National Bureau of Statistics, Bank for International Settlements
Note: GDP and Total Credit growth rate calculated based on value at RMB current price

In 2015 the total debt of China, which includes all categories of liabilities, was at approximately 250 percent of GDP, approaching US $30 trillion in nominal dollar terms (Figure 2). Comparatively speaking, China's debt to GDP ratio in 2014 was lower than some developed countries including Japan at 400 percent, Ireland at 390 per cent, Singapore at 382 percent, Belgium at 327 percent, Netherlands at 325 percent, Greece at 317 per cent as well as Spain, Denmark , Sweden, Italy, the United Kingdom, the United States, South Korea and Canada. However, the ratio was higher than almost all the developing countries except that of Malaysia. Now with debt servicing up to 20 percent of GDP, debt is a drag on the economic growth.

But an imminent debt crisis was not very likely. External debt denominated in foreign currencies was around 7 percent of the GDP in 2015 dwarfed by China's foreign exchange reserve as well as assets held abroad. This ratio is much lower in comparison with many developing countries including some Asian countries growing at faster rate than China. In addition, China also runs a relatively big current account surplus. Therefore, currency mismatch in debt position is not a problem for China. According to data from the BIS, general government debt was around 43 percent at the end of 2015, a manageable rate and lower than that of many advanced economies. Household debt was about 39 percent of the GDP. The Achilles' heel was non-financial corporate debt which was very high at about 162 percent of GDP (Figure 2). Corporations were by far the biggest debtors, especially state-owned enterprises. The most dangerous trend was the speed of the debt accumulation which carries systemic risks if not addressed very quickly.

Figure 2. China's Total Debt-to-GDP Ratio and sector distribution



Source: UNCTAD Secretariat's calculation based on data from PBOC, BIS, IMF and IIF

III. The Achilles' heel: high corporate and local government debt and their changing composition

The most vulnerable parts of the composition of the Chinese debt are its corporate debt and local government debt.

More than 60 %[4] of the corporate liabilities are owed by state-owned enterprises (SOEs) amounting to about 115% of GDP. Debt owed by firms with an interest coverage ratio less than one, a threshold being considered as loans potentially at risk, has reached approximately more than 15 percent of the total commercial bank loans to corporations or about 12 percent of GDP in 2015[5]. Reported problem bank loans, including "special mention loans," amounted to $ 641 billion, or 6 percent of GDP, showing an important increase from the end of 2014. [6]

The composition of corporate debt has been undergoing major shifts. With the development of China's bond market, especially with the lower cost for issuing bonds vis-à-vis bank loans and further restrictions on shadow banking, corporations have been resorting more to direct mobilization of financing from the bond market (Figure 3). One major reason was its low cost in comparison with bank loans. According to the Chinese central bank, the interest rate for bank loans in the first quarter of 2016 was 5.7 percent across all maturities while the yield on 10-year AAA-rated corporate bonds averaged only 3.8 percent in line with data from main bond clearing houses. In addition, offshore interest rates are also considerably higher than the onshore market. With such a huge cost differential in borrowing, it is not surprising that Chinese corporates have rushed to the domestic bond market in recent years. This is one of the reasons for pushing the ranking of the Chinese bond market to the world's third largest with the current size of around US$ 7.7 trillion, just behind the United States and Japan. [7] As a result, the share of bond financing has increased from almost negligible before 2004 to 12 percent of the total corporate financing in 2015.

Unlike some other emerging markets where the distinction between domestic debt and foreign debt has become more blurred owing to foreign participation, the Chinese onshore corporate bonds are predominantly owned by domestic investors because China had tight restrictions on foreign participation in the Chinese bond market, which were reduced starting from 2016. Though the restrictions did not benefit the mobilization of foreign resources, they have minimized potential exchange rate risks and capital flow reversal in times of economic downturn.

China's onshore bonds distinguish between corporate bonds and enterprise bonds. The latter are normally approved by the National Development and Reform Commission (NDRC) and the issuers are mainly large enterprises owned by the central government while the former are by the local governments or smaller private or public corporates. At the beginning, the majority of bonds were issued by large state-owned enterprises in the form of enterprise bonds which are normally considered as having implicit government guarantee though there

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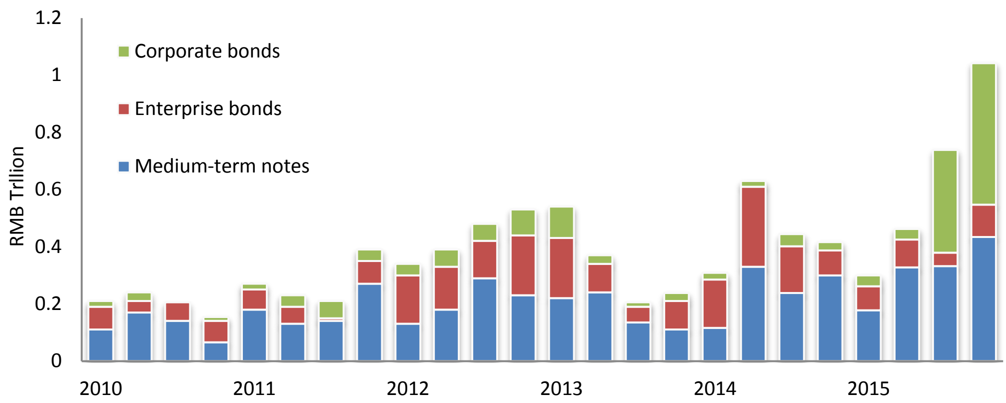
[4] BNP Paribas Asset Management, 'Why Hasn't China's Credit Crisis Exploded?' 6 April 2017. Available from http://institutional.bnpparibas-am.com/hasnt-chinas-credit-crisis-exploded/#acceptLicense.
[5] International Monetary Fund, Global Financial Stability Report (GFSR) (April 2016).
[6] Ibid.
[7] Financial Times, 'China securities houses on track for record bond fees', 16 May 2016. Available from https://www.ft.com/content/0793e206-18d1-11e6-b197-a4af20d5575e?mhq5j=e2.

have already been some cases of default in the past couple of years as the government is aiming at minimising the reliance of the SOEs on the government. On the whole, implicit contingent liabilities constitute a challenge for the central and local governments.

Figure 3. China's Corporate Bonds



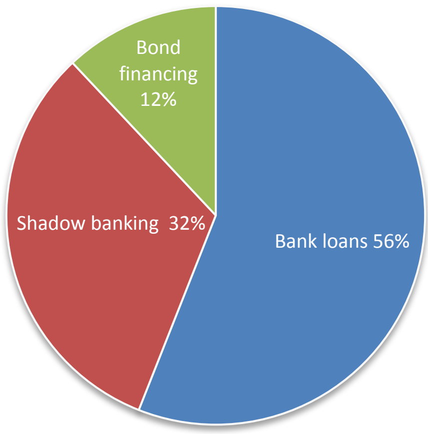
Source: UNCTAD Secretariat's calculation based on data from China Bond and Wind
Note: Enterprise bonds are issued by state-owned enterprises often for the financing of large infrastructure projects. Corporate bonds include listed medium-term notes and nonlisted debt.

However, bank loans, though declining in share, continue to be important. They account for over 58 percent of total corporate financing in 2015 and 56 percent in 2016 (Figure 4). Both corporate debt in bank loans and domestic onshore bonds are predominantly denominated in the Chinese currency. Offshore financing is only around 4% by end of 2015. In comparison with other emerging economies whose corporate debt on average is 62% in local currency,[8] China's corporate debt is very low in external financing. Bond financing for the corporate sector constitutes 12 percent and shadow credits 32 percent in 2016.

Though the size of the corporate debt is alarming, it should not be understood as the government being exposed to contingent liabilities as big as 162% of GDP. This is because a significant number of the SOEs are financially healthy and pose no risk of needing direct or indirect government support. According to Moody's, debt owed by SOEs to the amount equivalent about 20-25% of GDP may require to be restructured. [9] The International Monetary Fund (IMF) estimated that the corporate debt could result in bank losses equal to 7 percent of GDP. [10] The IMF data has not included all categories of debt but already indicates clearly the significant pressure on the banking sector by SOE debt build-up.

[8] Atradius, 'A closer look at corporate debt in EMEs', 5 May 2016. Available from https://group.atradius.com/publications/economic-research-corporate-debt-in-EMEs-may-2016.html.
[9] Ibid.
[10] D. James, J. Garrido, and M. Moretti, 'Debt-Equity Conversion and NPL Securitization in China: Some Initial Considerations', IMF Technical Notes and Manuals No. 2016/5 (April 2016).

Figure 4. China's Corporate Sector Debt
As of 12/31/2016



Source: UNCTAD Secretariat's calculation based on data from IMF and Deutsche Bank

Corporate debt also highlights the need for economic structural reform especially for the sectors with overcapacity. For instance, labor intensive textile enterprises tend to have higher debt and non-performing loans (NPL). Basically, firms in the traditional sectors like mining, textiles, construction, real estate, public administration etc. borrowed the most, accounting for 64% of total loans in recent years.[11]

Many Chinese corporates have started repaying their foreign borrowing since 2014 or even earlier. According the Bank for International Settlements, [12] an important part of the massive outflow of capital from China since June 2014 was partly a reflection of Chinese corporations repaying their foreign debt. The third quarter of 2015 alone saw Chinese firms' net repayment of foreign currency debt cross-border at $34 billion.[13] The deleveraging by the corporate sector in foreign debt is positive for China's financial stability as it further lowers the risk of currency crisis.

Local government debt is also a weak link and was about 44 percent of GDP in 2016. By the end of 2016, local government bonds (LGB) stood at around RMB 33 trillion (approximately US $ 4.8 trillion) [14]. This includes the quasi-fiscal expenditure on non-recognized government platforms. Central government in 2015 loosened the quota for bond sales by local governments by three times to RMB1.5tn ($240bn) to fight the increasing reliance on shadow banking by local governments. This was called "Closing the back door

[11] Chi Lo, 'China's Debt Crisis Fears Are Overplayed', 26 April 2016. Available from http://www.barrons.com/articles/chinas-debt-crisis-fears-are-overplayed-1461658925#:pa_ALwnEBblCtA.
[12] Bank for International Settlements, *BIS Quarterly Review*, March 2016, pages 26-27.
[13] Robert Neil McCauley and Chang Shu, 'Dollars and renminbi flowed out of China', 6 March 2016. Available from http://www.bis.org/publ/qtrpdf/r_qt1603u.htm.
[14] Tao Wang, *China's debt problem - Understand China's Economy (Part II)* (translated from Chinese) (21 Feb 2017). Available from http://bond.10jqka.com.cn/20170221/c596541713.shtml.

while opening the front door". This policy has given the local governments the opportunity to roll over their bank loans by issuing bonds. Many local governments have rushed to "swap" their bank loans into local government bonds (municipal bonds) generally at low interest rates. It is expected that LGBs will expand exponentially. The government's plan is to have about $1.4 trillion to $ 1.7 trillion worth of local government bonds by the end of 2017. This is meant to improve the maturity of local government debt and avoid a "fiscal cliff" owing to closing avenues for shadow banking. However, if revenue inflow of the local governments does not improve, it would really mean "kicking the can down the road".

IV. REASONS FOR THE FAST INCREASING DEBT BURDEN

The reasons for the debt explosion in China since the global financial crisis have many folds. There are both external and internal factors, structural and cyclical reasons, as well as economic and social influences. Externalities like the global financial crisis and the resultant low aggregate demand is a factor. China's deliberate self-chosen structural transition from a trade and investment driven growth model to one which relies more on domestic consumption and service industry could be another reason, as the transition would induce more investment on new development engine like services as well as investment more tailored to satisfying domestic needs than needs for foreign markets where demands have been shrinking. Problems caused by development stages, weak institutional setup, demographic changes, economic distortions inherited from past decades are also reasons behind the debt accumulation. The following is a non-exhaustive list:

A. US$ 590 billion stimulus package of 2008

As a concrete action by China to follow up the G20's determined decision to coordinate expansionary policies to boost global demand following the onset of the global financial crisis, China announced its huge fiscal stimulus package in November 2008 amounting to 4 trillion renminbi which was about US$ 590 billion. The world welcomed this Chinese policy decision. However, by 2008 China had already had its own structural problems like overcapacity and real estate bubble. Cut price competition in some traditional sectors like textile, steel, cement, etc has already been an important economic phenomenon. Sudden loosening of credit of such a huge amount could not quickly find its productive outlets without major structural reform. Benefiting from hindsight, there was the severe criticism of the stimulus package, especially about its size. Economists questioned why China took very strong medicine when Western countries caught a cold. After all, the global financial crisis originated from the developed countries. Much of the implementation of the stimulus package was carried out by local governments. The desire to get highest returns quickly from the newly printed money led investors including local governments to put their money in the real estate projects resulting in major property bubbles in some big cities. Through this process, local governments and the corporate sector have accumulated a record amount of debt, but did fuel the GDP growth and also made a contribution to the aggregate global trade, in particular commodities. With it, China kept importing some important commodities and did contribute around 30% to the global GDP growth in the years following the stimulus.

B. Shrinking global demand

With the fiscal stimulus, China has also announced its plans to rebalance its economy and shift from relying on external demand to domestic consumption, from heavy emphasis on manufacturing to more on services, from GDP growth at all costs to more sustainable and environmentally friendly growth. Yet China's economic rebalancing has been taking place at a time of global financial crisis and great world economic slowdown. Should the rebalancing take place during years of robust GDP growth it would definitely have been less painful. The expansionary policy could not immediately find good productive opportunities in the real economy as domestic consumption could not pick up immediately, thus much of the fiscal stimulus went to investment in infrastructure which has long investment cycles without quick and high returns. Bank credit also went to the real estate development and propping up loss-making firms. Property bubbles and NPL worsened as a result.

With the shrinking global demand and China's rebalancing policies towards more self-sustaining on GDP growth and less dependent on exports, its foreign trade surpluses have been narrowing for some years. The trade surplus stood at 9.9 percent in 2007. It dropped to 2.5 percent percent in 2012 and 1.5 percent in 2016.

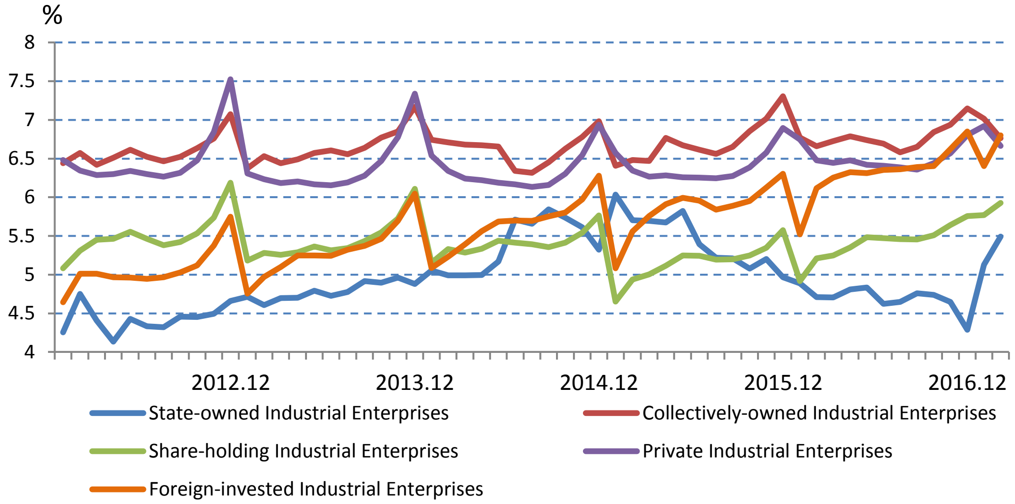
C. Lower investment returns and property bubble

For servicing public or private debt, decent revenue or profit returns would be required. Lower investment returns, be it caused by external shocks or domestic structural weaknesses, would lead to a snowballing of debt because debtors have to borrow more to roll over old debt in order to remain viable. However, in the absence of robust external and domestic demand, and without making the enterprises more productive and competitive through reform, borrowing more now would imply greater difficulties to service debt down the road.

While increasing debt is a world phenomenon since the global financial crisis, the use of debt has been different among countries. For some countries, the newly created debt has gone to the balance sheets of the financial sector and corporates. Much of the debt either stays on the balance sheet or has been used for speculation to get some returns in an environment of low or negative interest rates. For China, much of the credit expansion has been invested in housing, infrastructure and rolling over of debt by zombie enterprises. There was a lack of good investment opportunities in the productive sector as profit returns had already started to decline before the global financial crisis. This trend has been exacerbated since the global financial crisis (Figure 5). There are various estimates floating around about the level of investment returns in China. One estimate is that it would require four times of the amount of credit issued in 2008 to generate the same unit of output as in the period of fast economic growth. [15] According to estimates of some experts, the average return on investment of the Chinese enterprises was above 10 percent before the global crisis, but in 2016 it was about 5 percent, a drop of 50 percent.[16] Taking into consideration the cost of raising financing, the enterprises can barely break even now.

[15] The Economist, Special Report, Finance in China, 7 May 2016.
[16] Zhang Ming, 2016. Available from https://www.ishuo.cn/doc/jlhonfqf.html.

Figure 5. China Industrial Enterprises Profit Ratio from Main Operational Revenue



Source: UNCTAD Secretariat's calculation based on data from China National Bureau of Statistics

Following are some factors leading to the trend of declining return on investment:

a. <u>The phasing out of China's demographic dividend and increasing costs of production</u>

China's insertion into the global value chain and the fast economic growth period from the late 1980s to the turn of the century have benefited enormously from the cheap, abundant and educated work force China had at that time. However, China's working age population has been shrinking because of its one-child policy. Since 2010, the work force has started to drop rapidly. According to China's National Bureau of Statistics, 2015 alone saw a reduction of 4.9 million. This is unprecedented in the world. With it, are the increasing cost of labour and increasing burden of social security for the enterprises and the government. The aging of the population before getting rich has its negative impact on domestic consumption owing to the need for precautionary savings before retirement and the declining income after retirement.

Costs of production beyond labor including land, electricity and production material have also been increasing by a wide margin.

b. <u>Overcapacity and challenges to reform SOEs</u> are major reasons for lower profit margin. Investment driven growth has been a problem in China before 2008. The global financial crisis which led to shrinking external and domestic demand has made the overcapacity worse and more widespread. The situation is especially serious in traditional sectors like textiles, steel and mining. However, the SOEs with excess capacity have been major recipients for credit flow. Their privileged status to get credit makes them less driven to upgrade technology and to implement meaningful reform to develop capacity for rolling out new or improved products. In addition, the SOEs are also burdened by their role to assist the government in rebalancing the economy and implementing policies without causing social instability which includes avoiding firing workers. The balancing between commercial interests and their social/political responsibilities is an intricate task which makes reform of the SOEs even more challenging. By 2015, the SOEs, many of them are gigantic in size, accounted for around 55% of corporate debt but only produced 22% of economic output.[17] Their profit margin was lower than the privately- or publicly-owned enterprises.

To remove redundant loss-making enterprises including SOEs through reform would be important for strengthening the viable enterprises and dynamic enterprises and improving the effectiveness of asset allocation. In this aspect China should draw lessons from Japan in dealing with its property and stock exchange bubbles in the 1980s when Japan had a long period of deflation as a result of trying to avoid enterprise and bank closures. SOE reform would be painful but to delay the day of reckoning could result in more pain and greater cost down the road.

c. Property bubble

Because of the above reasons, when enterprises have access to credit some would prefer channelling much of the money to the real estate sector. Property speculation has become hot in many cities. In 2016 alone, according to the data from China's central bank, [18] credit used for property development was about US$3.88 trillion, a YoY increase of RMB 5.67 trillion.

D. Carry trade, illicit financial flows and financial liberalization

China has taken important steps to liberalize cross border financial flows since 2009 though at a much slower pace since 2016. This has been encouraged by multilateral financial institutions, and also been considered necessary for meeting the criteria for joining the SDR currency basket and for deepening its financial market. Meanwhile, institutional building including the introduction and enforcement of required rules and regulations has lagged behind. With this gap, corporations, private individuals and some players in the financial market have engaged in activities in exchange rate and interest rate arbitrage resulting in large amounts of short term borrowing and outflow of capital.

In the period of 2012 to 2014 there was significant appreciation of the Chinese currency. The expectation in the market those days was that the RMB would appreciate further; some people called it a one-way bet. Thus, borrowing dollar from foreign banks, exchanging them to RMB would bring in a good return through depositing the money in Chinese banks which had much higher interest rates than countries undergoing loose monetary policy. Some would use the money to purchase Wealth Management Products (WMP) whose return would be much higher than bank deposits. Unlike other emerging market bank loans, Chinese investors borrowed loans with very short maturities with the anticipation of changes of exchange rate or interest rates. Much of the loans were in the category of trade financing, including fake trade deals. China's borrowing from foreign banks by the end of 2008 was about US$ 200 bn. By early 2014, this number has shot up to more than US$ 1 trillion. Claims had risen by $643bn in 2014 and 2015. 80% of which had maturities less than a year.

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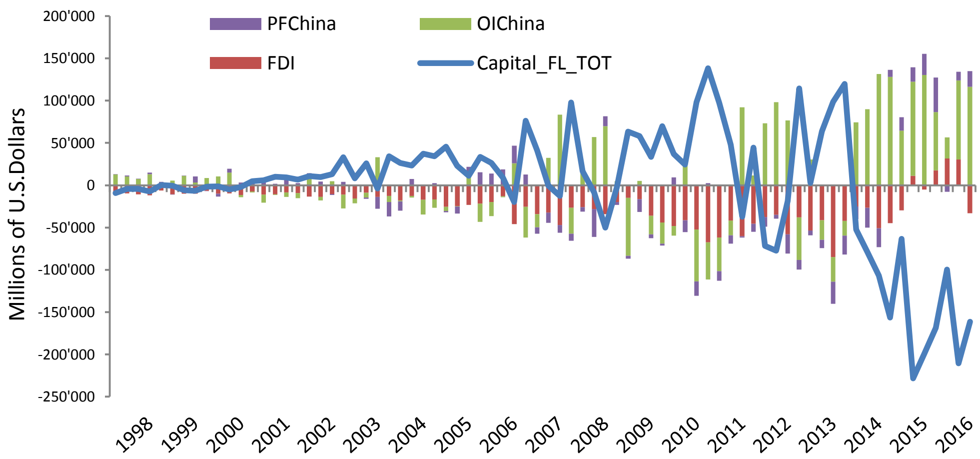
[17] IMF, The People's Republic of China: 2016 Article IV Consultation, Country Report 16/270 (August 2016).
[18] Mo Kaiwei, 'The meaning of a neutral and stable monetary policy', *China Net*, 23 Feb. 2017. Available from http://opinion.china.com.cn/opinion_63_158163.html.

When RMB started to depreciate, Chinese borrowers rushed to pay back the loans. The Bank for International Settlements reported[19] that foreign bank claims on China fell by $305bn in the 18 months through June 2016.

Unreported illicit flows have also grown. Under China's capital account, "Errors and omissions" — a catch-all for cross-border transfers that have not been properly classified — reached the amount of $89bn in the first half of 2016 (Figure 6).

Figure 6. China's Capital Flow



Source: UNCTAD Secretariat's calculation based on data from Thomson Reuters

E. Fast expansion of shadow banking especially WMPs

Shadow banking refers to non-bank financial intermediary activities provided outside the financial regulations. A large part of it is attributable to off balance sheet activities provided by commercial banks through platforms like wealth management products.

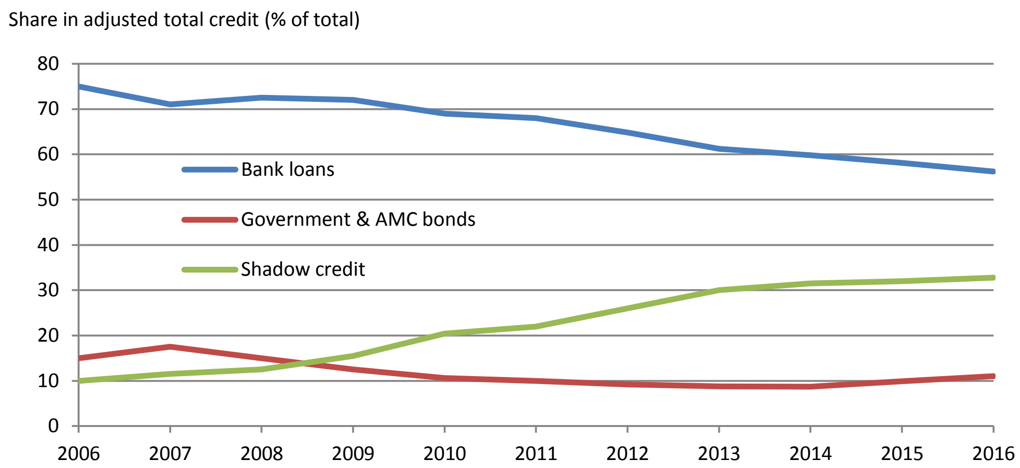
Comparing with many advanced countries, China's shadow banking is modest. But the speed for its expansion was extraordinary (Figure 7). Bank lending was the only source for credit and financial intermediation before China's opening up. In the early 2000s, in the absence of bond markets and developed stock exchanges, bank loans occupied a predominant share. Therefore, China's financial market was bank-centred, especially dominated by China's four largest banks for many years after its opening up. The global financial crisis dampened the shadow banking activities in many advanced countries, but in China its amount exploded since 2008 because financial institutions tried to be creative and make use of the central government's initiative to implement financial liberalization as an opportunity to

[19] Bank for International Settlements, 86th Annual Report 1 April 2015–31 March 2016 (26 June 2016).

circumvent regulations. With the very low interest rate environment, banks, though having plenty of liquidity, have suffered from lower operational profits. Large enterprises that have good access to credit also looked for opportunities to get higher returns. At the other end of the spectrum, private firms and smaller enterprises were hungry for credits. Sometimes, they could only get credit on time through shadow banking channels. Therefore slow economic growth and shrinking global demand as well as the fiscal stimulus have sowed the seeds for off balance sheet financial activities.

The estimate of the size of China's shadow financing was more than 40 trillion yuan in 2015,[20] nearly two-thirds of GDP. While bank loans seemed to decline in the past years, shadow credit went through a steady increase between 2006 and 2008 and a fast expansion since 2009. Adding this to the total debt would certainly drive up China's debt to GDP ratio by an important margin.

Figure 7. The Rise of Shadow Credit in China



Source: UNCTAD Secretariat's calculation based on data from CEIC & UBS

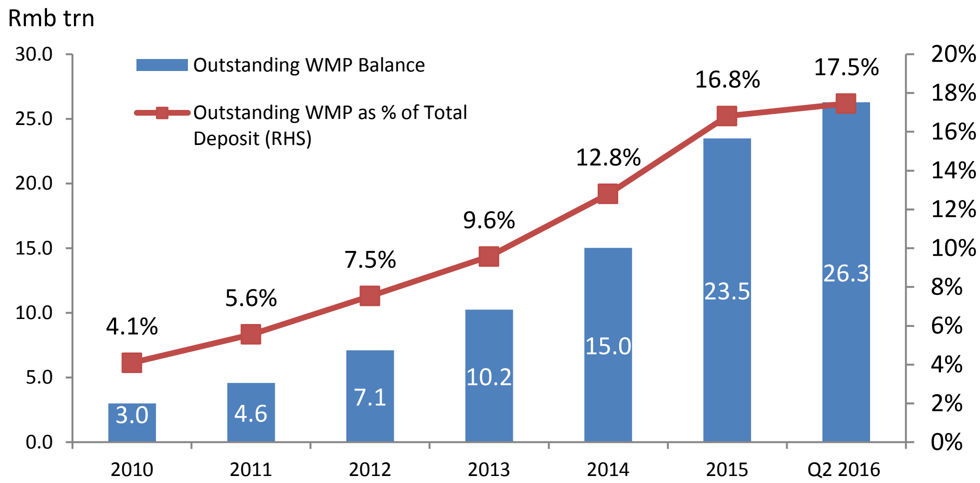
Wealth Management Products (WMP) are the main instrument for shadow banking. WMPs are debt-like instruments offered at interest rates higher than those of the normal bank loans. Most importantly, in many cases they could be repackaged so that they would not be shown in the issuers and owners' balance sheets as WMPs would not appear as regular loans but as investment and categorised as "investment receivables". This way WMPs can avoid being accounted for when calculating bank reserve requirements. For instance, if a bank sells WMPs to another bank, then purchases it at the interbank market, the WMP sold even one day ago could be qualified as bank asset instead of a liability. The banks could win on three fronts, i.e. higher operation profits, report higher capital adequacy ratios and also less money put aside for capital requirements. Typically WMPs are of short maturities. The reason for

[20] IMF, Global Financial Stability Report (October 2016).

their fast increase is mainly due to the urge of banks and investors including household bank depositors to search for higher returns in a low interest rate environment since the global financial crisis. It is an important way for banks to circumvent the capped interest rates which the central bank introduced to avoid interest rate wars among banks. It is a creative way for banks to maintain decent returns and market share during the period of loose monetary policy pursued by the government because of slowing global and domestic economic growth. Interest rate in China was around 2 percent those days. Instead of interest rates wars, banks, in particular small and medium-sized banks have been using shadow banking as an effective weapon to attract customers with the promise of higher yields (around 5 percent, thus 2-3 percent higher than bank deposits).

WMPs have rocketed from 4.1 percent of the total bank deposits in 2010 to 17.5 percent in the second quarter of 2016 amounting to RMB 26.3 trillion according to China Government Securities Depository Trust & Clearing Co. Ltd (Figure 8).

Figure 8. Outstanding WMP Balance vs. Total Deposit



Source: UNCTAD Secretariat's calculation based on data from China Government Securities Depository Trust & Clearing Co. Ltd, China National Bureau of Statistics of China.

Seeing the potential risks of WMPs, the central bank tried to rein the large banks first of all. Since 2015, large banks have been restricted to issue WMPs as they are requested to show them on their balance sheet. However, small and medium sized banks in various provinces continued to increase issuing WMPs aggressively.

In January 2016 the Ministry of Finance announced its plan to include WMPs in the measuring of credit growth which means WMPs will be required to be reported in banks' balance sheets. From the first quarter of 2017, China's central bank, PBoC, started to include assets behind WMPs in its Macro-Prudential Assessment (MPA). Thus, WMPs are being included in assessing bank risks. The China Banking Regulatory Commission will require banks to set aside capital for provisioning for WMPs. It is expected that more stringent regulations and accounting standards will put the brake on the expansion of WMPs as further issuing will have to satisfy the newly introduced measures. However, funds and securities firms will also have to be kept under the radar to check the expansion of WMPS as they have already overtaken banks as the larger drivers for the WMP issuance in 2016.

V. SPECIAL FEATURES OF THE CHINESE ECONOMY TO TOLERATE HIGH DEBT RATIO

Some special features of the Chinese economy have allowed it to stand a higher debt to GDP ratio than many other emerging and developing economies.

A. A large, diversified and growing economy with a strong role of the state

China ranks as the second largest economy in the world. The size of its GDP in 2016 has surpassed RMB 70 trillion. By territorial area, China is the fourth largest in the world. Within this large country, economic development stages are quite varied, ranging from the first world to the third world with coastal regions and Beijing much more advanced in all aspects of economic development while the northwest and other regions still relatively backward. This gives the possibility of utilizing the "flying geese" economic model within the country. For instance, some more advanced regions have been trying to search for development in less advanced regions. In addition, the economy is quite diversified with manufacturing industries, service sector and agriculture all contributing to the GDP growth. For instance, service industry has been enjoying healthy growth. The economy as a whole is still growing. At 6.7 percent in 2016, China's GDP growth rate is decent, especially in the current world environment. Though China's growth has been investment driven or fueled by debt for many years, some new dynamic economic sectors have been emerging including services, green energy-related products and so on. The IMF recently revised up the GDP growth outlook for 2017 by 0.3 percentage points to 6.5 percent while it lowered GDP growth forecast for some countries. [21]

The size of the economy, its diversified economic structure and attempts to make variation in economic development within the country as an opportunity for the "flying geese" model to take place give China stronger capacity to absorb external and domestic economic shocks and more room for manoeuvre to tackle emerging economic challenges. Comparing with small countries and economies with heavy reliance on one or two commodities, China does enjoy greater flexibility in withstanding higher level of debt.

In addition, the role of the state is still important as some large corporations and banks are state owned though the market has begun to take prominent role in commercial activities. When the largest lenders and the largest borrowers are all under the supervision of the central government whose debt and budget deficit are low, the government has the capacity and policy space in times of need to raise new capital to support troubled banks and corporations as well as shore up depositor confidence in the financial sector if it is really called for. The government is also in a position to take a leading role to coordinate and initiate debt restructurings or relatively milder mitigating actions to avoid disorderly bankruptcies or disruptive credit event that would negatively affect financial stability.

[21] IMF, World Economic Outlook Update, 16 Jan. 2017.

B. Debt is predominantly domestic and external debt is low

According to Moody's, China's domestic debt is [22] at 196.8 percent of GDP and external debt was 8.6 percent in 2014, 7 percent in 2015. External debt is much lower than many emerging and developing economies. Thus, China does not have difficulties in servicing its external debt. The IMF's latest regional report stated that [23] foreign bank claims on China accounted for $1 trillion with varied maturities. Foreign direct investment and portfolio equity together account for 70 percent of China's external liabilities [24], a much safer structure of liabilities than debt dominated in foreign currency. Though such kind of investments could also move out of the country if investors wish to do so, China's currency intervention, massive at times, and capital control could offset such kind of movements quite some instances. Its net international investment position is about 1.6 trillion or 15% of GDP. China is still a net creditor.

C. Low central government debt

China's public debt has risen markedly, to 40.6% of GDP at the end of 2015, according to Moody's estimates, from 32.5% in 2012. [25] The central government debt was at 17 percent of GDP in 2015. This ratio is still below the public debt to GDP ratios of major advanced economies. When using the IMF's augmented way of calculating public debt which covers all types of local government debt including bank loans and bonds, it would be about 60 percent of GDP for 2015. [26] The central government debt is lower than many developing and developed countries. The corporate and local government debt are predominantly domestic. Therefore, the probability of a currency crisis is low. If needed, the central government is in a position to stimulate the economy by increasing central government debt.

D. Credit mainly coming from the banking sector

While stock and bond markets have been growing fast, banks are still the main conduits for credit. The banking system is not highly leveraged. In 2015, 58 percent of the corporate debt came from bank lending while direct financing from bonds and credit from shadow banking are of relatively less importance. The banking system is liquid and mainly financed by deposits. Bank deposits amount to more than 200% of GDP, though precise amount of WMP is hard to get hold of. Even though the fast developments in China's financial market have been changing the landscape, the financial system still lacks the sophistication of the advanced economies where securitization is much more prevalent than in China. An economist from Fitch rating agency commented on this unique feature of the Chinese financial system and stated that "China's financial system is dominated by banks and funded

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[22] Global Credit Research, 'Moody's changes outlook on China's Aa3 government bond rating to negative from stable; affirms Aa3 rating', 02 Mar 2016. Available from https://www.moodys.com/research/Moodys-changes-outlook-on-Chinas-Aa3-government-bond-rating-to--PR_343931.

[23] IMF, Regional Economic Outlook, Asia and Pacific, April 2016, Box 2.3. China Opening Up: The Evolution of Financial Linkages.

[24] E Prasad, 'China's economy and financial markets: Reforms and risks', Testimony before the U.S. China Economic and Security Review Commission on the status of market-oriented economic reforms in China, April 27, 2016. Available from http://www.brookings.edu/research/testimony/2016/04/27-china-economy-financial-markets-prasad.

[25] Global Credit Research, 'Moody's changes outlook on China's Aa3 government bond rating to negative from stable; affirms Aa3 rating,' 02 Mar 2016. Available from https://www.moodys.com/research/Moodys-changes-outlook-on-Chinas-Aa3-government-bond-rating-to--PR_343931.

[26] Atradius, op. cit.

overwhelmingly by retail deposits. Both the banks and borrowers are either state-owned or heavily state-influenced. These factors suggest that the kind of collapse of confidence among creditors that might precipitate a financial crisis is unlikely in China".[27]

E. High savings rate especially from households

China's gross savings are close to 50% of GDP[28]. On the other hand, household debt is relatively low and savings are high, which is an important cushioning factor. The analysis from the IMF economists also confirms that there is a healthy risk-sharing across households and corporations. Countries that save more can afford to borrow more. Households now have debt equal to 38% of GDP. Much of the debt is concentrated in house mortgages which are considered as high quality collaterals, particularly when the government does not seem to want to see the burst of the property bubble as it would definitely have very negative impact on social stability. The probability of defaulting on mortgages is low. On the other hand, savings by households are high, their total liquid assets in the Chinese banking system amounted to 80% of GDP in 2015. With aging population peaking in the coming years and the lack of a good social security system, the trend of high precautionary saving in Chinese households is still prevailing. Household savings is mainly intermediated by the banking sector. The relatively low household debt and high savings rate is a good anchor for the financial system. It minimizes the risk of fast reduction of consumption which can have negative impact on growth, employment and investment. This risk-sharing across households and corporates, meaning households save and the corporates borrow, is an important reason for China's low external debt.

F. Capital control and government influence

Though reforms have been underway, China's capital account has not yet been fully liberalized and the government has been very cautious on this front. Transfers of funds abroad have to go through screening. More strict capital control and other corrective measures would normally be imposed during times of big upsurge of outflows of money. Besides, the government has significant influence over state-owned banks and SOEs, which allow corrective measures to be taken more quickly than some other economies. Even though capital control always has many leakages through various channels, it can play an important role in keeping liquidity at home.

G. Large foreign exchange reserves and significant liquid assets

China has high liquidity buffer against a financial crisis. At the central government level, the foreign reserves are less than before but still the largest in the world at around US$ 3 trillion by the end of 2016 (Figure 9). External debt is low. Even though trade surplus has been shrinking, current account surplus is still healthy. Banks are still relatively liquid.

Though China's corporate debt is high amounting to approximately 160 percent of GDP, its total asset is roughly about 180 percent of GDP, which is higher than that of other emerging economies.[29] Since China so far has had few cases of bankruptcy and quality of the corporate asset does not have readily available information, it is difficult to assess whether in

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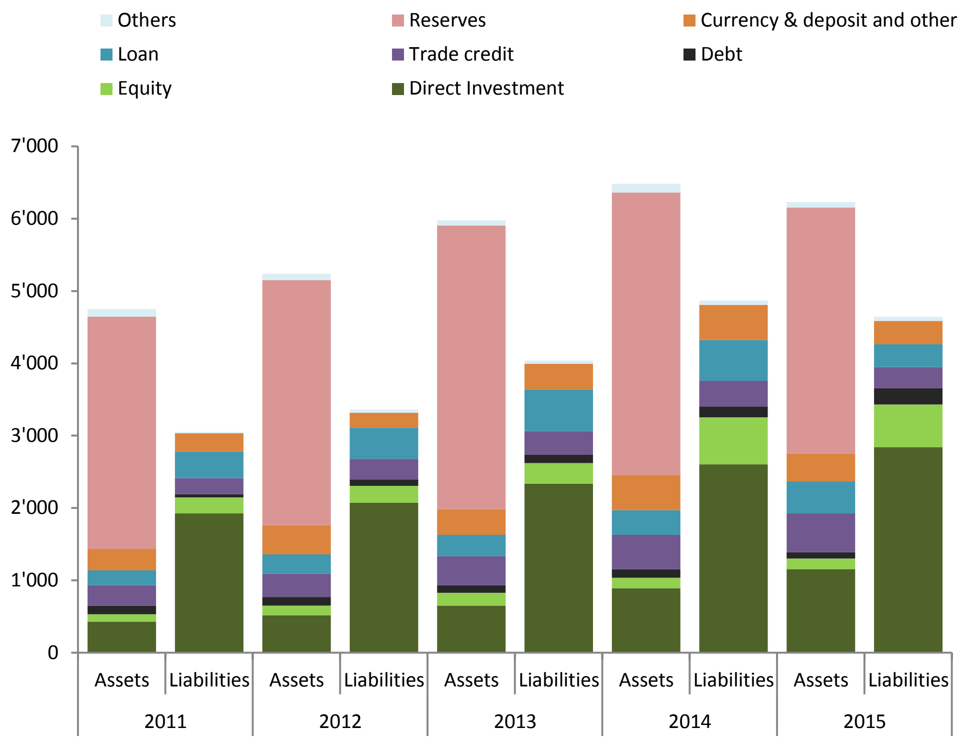
[27] Huileng Tan, 'China hard landing unlikely but debt levels a concern: Fitch,' CNBC, 5 April 2016. Available from http://www.cnbc.com/2016/04/05/china-hard-landing-unlikely-but-debt-levels-a-concern-fitch.html.
[28] Steve Johnson , "Asians save, but Latin Americans spend," EM Squared, *The Financial Times*, 4 May 2016.
[29] IMF, IMF Financial Stability Report Oct. 2016, Figure 3.2.1, panel 1.

times of crisis fair value of assets could be maintained and liquidation of assets could normally be carried out smoothly.

Figure 9. China's Assets and Liabilities
(Billions of U.S. dollars)



Source: UNCTAD Secretariat's calculation based on data from IMF, World Bank and CEIC.

VI. WEAKENING OF BUFFERS AND INCREASING SYSTEMIC RISKS

Despite the size and composition of China's debt as well as the economic fundamentals and financial positions of China not supporting the prediction of an imminent debt crisis, underlining systemic financial and economic risks and vulnerabilities are rising. In addition, some cushioning factors like high savings rate and high foreign reserves have been weakened and eroded especially since the global financial crisis. The effectiveness of government policies and oversight has been compromised to some extent by shadow banking. Because of these reasons, the probabilities of systemic financial crisis to be triggered by certain domestic and external sudden changes have been elevated.

A. Breathtaking speed of debt increase and diminishing returns

Economists have often used such adjectives as "neck breaking" and "breathtaking" to describe the fast economic growth of China in the 1980s and 1990s. Right now the same two words could be borrowed to describe the increase of the Chinese debt burden. At the onset of the global financial crisis in 2008, China's debt to GDP was approximately between 164% to 170% according to different data sources. Comparing with the current 260% of debt to GDP ratio, the past seven years have witnessed a tremendously dangerous debt built up. However, this fast increase of debt also exposes some distortions and systemic risks. Central government debt increase was not big but corporate debt increase was huge. Lending by the shadow banking sector and bonds increased fast. The alarming phenomenon is that the already fast credit increase has picked up speed in 2016. Credit growth in the first quarter of 2016 was reported to be up 58% over the same quarter in 2015 at 7.8 trillion Chinese yuan. [30] The first round of expansionary credit policy in response to the global financial crisis in 2008 had some positive effects to counter the negative effects of the global financial crisis by expanding aggregate demand. However, now the margin efficiency of credit increase has been diminishing as an increase in each unit of credit in China is generating lesser and lesser amount of GDP. Some economists have been debating whether this is a result of wasteful investment, [31] including lending to the so called "zombie enterprises"- enterprises which are not efficient or with overcapacity - to keep them afloat. It may also be the case that money borrowed has been kept at the balance sheet of enterprises without being invested in productive sectors. Therefore, it is high time for a close examination of credit utilization and lending policies. To use expansionary policies to stimulate the economy without looking into the absorbing power and efficiency could be counterproductive and create bubbles and wasteful investments.

B. Non-performing loans from the corporate sector and local governments pose threat to the banking sector

It is not surprising that with sluggish global demand, domestic overcapacity and increasing credit risks by the alarming expansion of shadow banking, NPL loans would be on the rise. However, to estimate the size of it would be a difficult task as data is difficult to get by. To

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[30] Bob Bryan, 'LARRY FINK: There's a '20% chance' China's debt bubble bursts,' Business Insider, 27 April 2016. Available from http://uk.businessinsider.com/fink-20-chance-china-debt-bubble-bursts-2016-4?r=US&IR=T.

[31] Tao Wang, op. cit.

make things more complicated, the definition of NPL in China is broader and looser than that of the IMF.

A top Chinese official in charge of supervising major state-owned financial institutions from the China Banking Regulatory Commission stated in 2016 that NPL pressure is the worst in 2015 since 2004 when the major banks were recapitalized[32].

The IMF's April 2016 Global Financial Stability Report estimates that 15.5 percent of total commercial banks' loans to corporates, or $1.3 trillion (12 percent of GDP) are potentially at risk of being turned into non-performing loans as the profit earnings of the enterprises do not show the ability to service their debt. In addition, it is doubtful that local governments have the capacity to service the debt mountain amounting $4 trillion. In May 2014, China released the national audit outcome of local government finances which found that 40% of the loans are being repaid through land sales [33]. This shows that the local governments do not possess reliable and sustainable sources of revenue for servicing their debt. In addition, the audit also showed that already 20% of new borrowing had been used to repay old debt. Though servicing old debt with new borrowing is a frequently used strategy by borrowers, the two findings pointed to increasing risks of more non-performing loans at local government level.

With the current efforts to reduce leverage by local governments and the corporate sector cutting over-capacity as well, there are the increasing risks of default on borrowing in different forms, both loans and bonds. Defaults and bankruptcies will definitely negatively affect the banking sector and increase the stock of NPL. In view of the potential systemic threat of non-performing loans from the corporate sector and the local governments on the banking sector, the central government has allowed corporations to swap their debt in exchange for equity, named debt-for-equity swap. This kind of technique was used by other countries as well as China before. In times of good economic growth, it could be quite effective as with time the size of debt would decrease to a very manageable amount. It happened to China in the late 1990s. However, at times of slower economic growth as it is now, its effectiveness could be reduced and could even worsen the burden on the banking system as banks would be forfeited the business opportunity to receive interest and principal payments and also lose the ability to sell the equity to the central bank or other banks. The IMF published a paper in April 2016[34] to alert that the maturity and liquidity transformation through the debt-for-equity swap may just kick the can down the road and would not address the problem of NPL fundamentally. Meanwhile, it could worsen the banks' asset quality. The IMF paper pointed out that although corporate debt is currently at a manageable level, it needs to be addressed with urgency in order to avoid serious problems down the road. Similarly, local governments will be allowed to swap 1 trillion yuan ($160 billion) of their existing high-interest debts for lower-cost bonds. In view of the outcome of the 2014 audit of local government debt, it seems that such a swap should also be accompanied by policies to increase local government revenue and promote efficiency of their investment. Debt to

[32] The Wall Street Journal, 'CHINA'S ECONOMIC SLOWDOWN: Deleveraging could be healthy if private firms are allowed to grow,' 14 August 2016. Available from https://www.wsj.com/articles/chinas-economic-slowdown-1471194066.

[33] MIT Center for Finance and Policy, 'China's Growing Local Government Debt Levels', Policy Brief, January 2016. Available from http://gcfp.mit.edu/wp-content/uploads/2013/08/China-Local-Govt-Debt-CFP-policy-brief-final.pdf .

[34] D. James, J. Garrido, and M. Moretti, 'Debt-Equity Conversion and NPL Securitization in China: Some Initial Considerations,' IMF Technical Notes and Manuals No. 2016/5 (April 2016).

equity swaps (D/E swaps) can cushion the deteriorating bank asset quality. It is a good decision that the guidelines issued by the State Council of China in October 2016 aiming at reducing debt burden explicitly forbids banks to hold equities from D/E swaps. Otherwise, such a swap would carry the risk of turning corporate and local government debt to bank debt with a longer maturity. The speed of deleveraging would be important as any drastic deleveraging and destocking of houses could lead to higher levels of NPL and the potential of bankrupting the banking sector as direct financing through bonds and other financial instruments are still much less important than that of bank loans.

High levels of NPL in the banking sector would also damage the confidence of households who are important asset holders of the banks. Negative impact on their confidence in the banking sector would lead to greater capital outflows.

C. Systemic risks posed by shadow banking especially WMPs

Shadow banking has increasingly become a major risk for the financial stability and the health of the banking sector owing to its fast expansion, their involvement of wholesale funding and their distraction of quality bank assets. WMPs have become more popular and their expansion has become increasingly worrisome.

Because of the opaqueness of WMPs, a lack of reliable data has hampered a comprehensive understanding of the actual risks they pose. Lately more vigorous tracking of WMPs by some institutions have given more information on the investment pattern and magnitude of WMPs and thus deeper understanding of the risks they pose to the stability of the banking sector if not properly regulated. WMPs have the following risks:

a. Maturity mismatches: WMPs are typically of short maturities. In 2015, more than half of the WMPs had maturity less than 90 days and 13 percent shorter than 30 days.[35] Bearing in mind that WMP funds are not just used for interbank lending which is very often short term, they are also funding corporate bonds. Therefore, maturity mismatches are obvious. Should there be any market event and investors all rush to sell WMPs, there would be a huge liquidity problem for banks and other investors.

b. Difficult to control credit growth: The lack of transparency for shadow banking would mean it is more difficult to control credit growth. Many WMPs are not shown in the banks' balance sheets. Structured WMPs which are composed of multiple tranches with different risk levels and correspondingly higher yields are even more opaque and it is difficult to calculate their leverage.

c. Credit risks: Lack of proper or light screening of loans and investors by shadow banking especially WMPs have worsened the quality of assets of the banking sector and could result in future credit risks. For small and medium sized banks they may have viability problems because of their large exposure to problem investors. WMPs are responsible for much of the wasteful investment or misallocation of resources as they channel credit to those who are not qualified for normal bank loans. WMPs provide access to credits to industrial sectors already suffering from overcapacity, to property developers in regions where there is an oversupply of houses,

[35] IMF, Global Financial Stability Report, Oct. 2016.

and to local government. Normally WMPs do not have guarantee for returns. However, losses are very rare as banks do not want to lose their customers.

d. Distracting quality assets from the banking sector: Take household bank deposits for an example. Household savings are very important to the financial stability of China and the robustness of household balance sheets has been vital to the health of the banking sector. In the past, households had no other options but to deposit their savings in the banks. In 2008 China's listed banks got about 70 percent of their funds from deposits[36]; households occupy a large share. With financial liberalization and deepening of the financial market, households are no longer satisfied with the return from bank deposits. They have become more sophisticated than before. They are important players for WMPs. According to Credit Suisse, households' exposure to bank WMP increased from RMB 0.9 trillion in 2009 to RMB 12 trillion in 2014[37]. Banking deposits still occupy 54 percent of households' financial assets in 2014 but the WMPs already accounted for 13 percent of household assets. The 2014 households asset mix shows two major characteristics and trends. Firstly, China's households' wealth is more illiquid, especially comparing with late 1980s and early 1990s when households wealth was predominantly bank deposits. Non-financial asset level is higher than that of many developed countries. Thus the increasing share of WMPs would mean an even less share of good quality banking deposits in an already shrinking financial asset in the households asset portfolio. Therefore, the ease of using household savings as a cushion for corporate and local government debt is becoming more challenging than before. Secondly, though bank deposits were still the main financial investment for households, other more opaque and more leveraged financial instruments and equities which could be used as collateral for further borrowing were becoming more popular. In 2015 and 2016, there was significant increase of WMP purchase by households.

D. Shrinking foreign exchange reserve

For years China had enjoyed both current account and capital account surpluses. As a result, its foreign exchange reserves have piled up, reaching more than US$ 3 trillion since 2011.

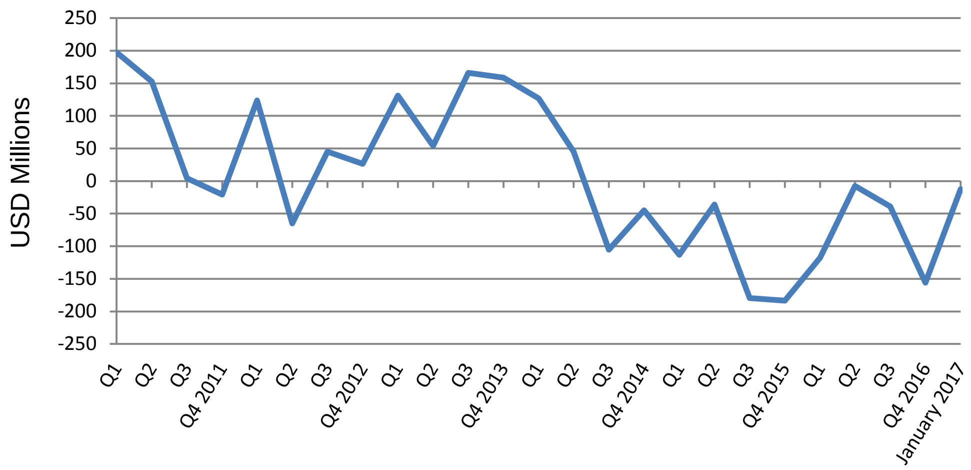
Since the financial crisis, its current account surpluses have become narrower. However, the capital account plunged to deficit in 2012, the first time since 2000. It improved somewhat in 2013. But the deficit in the capital account has been getting bigger since the depreciation of the RMB of 2014. Up to the end of 2016, there were at least 9 quarters when the capital account was in the negative territory. In January 2017, for the first time in 6 years China's foreign reserves fell below US$ 3 trillion. The main reasons have been capital outflow in different forms and the open market intervention to maintain levels of exchange rates of RMB through selling foreign currencies and buying yuan by the central bank of China. The depreciation of the RMB and capital flow have worked on each other. Namely, before 2012, there was widespread expectation of strong appreciation of RMB. There was the belief that it was a one way bet. This led to increasing borrowing of dollar abroad by Chinese enterprises as well as inflows of hot money from foreign sources. The depreciation expectations triggered outflow of capital through repaying of debt in dollar as well as outflow of hot money. The outflow of capital weakened the market confidence on the RMB and led to more selling of RMB and thus further increasing the depreciation pressure.

[36] Bloomberg, 'Digging Into China's Growing Mountain of Debt,' 28 Aug. 2016. Available from http://www.bloomberg.com/news/articles/2016-08-28/digging-into-china-s-growing-mountain-of-debt.

[37] Victor Wang et al., 'Family assets allocation in 2014 and its implications,' Credit Suisse, 2015.

The foreign exchange reserve of a country is an important buffer for debt problem. But it does not mean the bigger the reserve the better for the economy. Too large a reserve incurs cost. For instance, holding of US treasury gets very small returns. Meanwhile, for many years there was the fear of debasement of dollar in the past, though currently the strong dollar makes the Chinese central bankers much at ease on this front. However, a fast reduction of around US$ 1 trillion of foreign reserves over a period of slightly over a year is also worrisome (Figure 10).

Figure 10. FX Reserve Quarterly Changes



Source: UNCTAD Secretariat's calculation based on data from China National Bureau of Statistics

E. Persistent capital outflows is a systemic risk while sudden large outflows could trigger a crisis

Certain external factors could lead to renewed surge of outflow of capital. The promised continued hikes of the benchmark interest rate by the US Federal Reserve would be one important factor of such. When yields on US Treasuries rise above equivalent bonds in China, the attractiveness of holding such bonds would be minimized causing more pressure for capital outflows. In the same vein, expectations of further depreciation of RMB will also make it difficult to keep liquidity at home.

An important gauge of the magnitude of the outflow of capital is size of the errors and omissions in the capital account. This item includes various creative ways for getting capital outside of the country including over-invoicing trade transaction. Over the past few years, it has been increasing fast, reaching an amount of US$ 75 billion in the third quarter of 2016 and US$ 58 billion in the fourth quarter the same year[38].

[38] Source of data: State Administration of Foreign Exchange (SAFE) of China, http://www.safe.gov.cn/. Balance of payments data.

Another source of capital outflow comes from the household side. Sending children abroad for their education and tourism abroad have been the trend. These two items have seen a fast increase amounting to approximately US$ 100 billion in 2015. As the Chinese population gets richer and the real estate prices in major cities get higher, a rush to buy properties abroad has emerged. Chinese property buyers have constituted the largest group of foreign real estate investors in a few countries like the United States, the United Kingdom, Australia and New Zealand, pushing property prices in these countries to an unprecedented level. In the United States alone, there has been an inflow of US$ 110 billion from Chinese investors between 2010 and 2015[39]. Last year, the Chinese authorities have tightened capital control and the results have already shown.

With the increasing tempo of interest rate hike by the United States Federal Reserve and depreciation pressure on the Chinese currency, the probability of another round of capital outflow could not be ruled out. Persistent and large outflow of capital would weaken China's liquidity cushion built up over the past decades. It is even more important to prevent large and sudden outflow of capital which could trigger a systemic crisis through undermining the confidence in the banking sector and the national currency. Capital control has various leakages and may not be able to effectively stamp tidal outflows of capital.

F. Risks for China's large and interconnected financial sector

With financial liberalization, the landscape of China's financial sector has changed. The banking sector, bond markets and stock exchanges have all expanded at a fast pace in the past decade. By mid-2016, [40] China's banking sector had an asset of about $ 30 trillion, ranking first in the world. Its bond market is the third largest with its size of about $9 trillion in the first half of 2017[41], while the stock markets are worth around $6 trillion, the second largest in the world. Though the author does not have data for the current total financial asset of China, it has been estimated that [42] in 2013 it reached $35 trillion which was 371 percent of China's GDP of the same year. By outstanding financial asset, China is second only to the United States and occupies 13 percent of the global total. While there is sharp competition between different financial markets, their interlinkages have also grown. The afore-mentioned WMP shows how intertwined the banking sector is with the markets through collateralization and repackaging. The risk is that vulnerabilities of one market would cause contagion effect in other markets. The increasingly interconnected Chinese financial sector faces greater systemic risks.

There has been increasing reliance on whole sale funding by financial institutions. This would mean in times of market volatility, the contagion effects would be faster and larger than before. On the other hand, it also means that deposits are becoming a smaller share of the asset of the banking sector. This makes the prevention of systemic crisis even more important. Even though the banking sector has not been providing guarantee to some

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[39] Yuan Yang, "Beijing Clampdown slows China spending spree on US property: Capital outflow curbs expected to ease upward pressure on real estate prices," *The Financial Times*, May 16, 2016.

[40] The Economist, Special Report, Finance in China, 7 May 2016.

[41] https://www.bloomberg.com/news/articles/2017-02-15/ubs-says-9-trillion-china-bond-market-to-come-of-age-this-year

[42] Min Liao, Tao Sun, Jinfan Zhang, 'China's Financial Interlinkages and Implications For Inter-Agency Coordination,' IMF Working Paper No. 16/181 (August 26, 2016).

financial instruments, the implicit contingent liability is very much there. In times of crisis, the credit risks would fall on the banks.

WMPs have further connected various financial instruments and institutions through cross purchasing and cross use of collateral assets and most importantly through the interbank market. As a result, risks of contagion among and between institutions have been amplified.[43] In order to be in a position to offer higher yields for WMPs, banks have been investing the proceeds from WMPs in corporate bonds or stock markets, sometimes through trust firms or asset management corporations' subsidiaries or brokerage firms and other avenues. According to the New York Times, [44] the bond holdings of wealth management funds more than doubled over the 18 months through June 2016. Some estimates put WMP funds' holding of outstanding Chinese corporate bonds at the level of more than 50 percent of the total stock. [45] WMPs also channel funds to the stock markets. The multi-layer intermediation of funds could increase risks and costs. Instead of deposits, banks, especially smaller banks, increasingly rely on whole sale funding such as trust firms, targeted asset management corporations and asset management corporations for asset. With their increasing share in total bank assets, they could become market movers and shakers, which constitute a challenge to maintain financial stability if not managed well. In August 2016, Moody's warned [46] that significantly higher dependence on wholesale funds in China's financial market means higher systemic risk for China's banking sector. The IMF also highlighted this risk in its latest two issues of the Global Financial Stability Report. With the expansion of shadow banking activities, there has been an increasing share of wholesale and repo funding provided by non-bank investors and third party funds associated with financial products like WMPs. These products have stronger bias of risk aversion than bank deposits. In addition, because of the opaque nature of these financial instruments, their flight to safety could not be quantified and regulated as effectively as bank deposits. Therefore there is the tendency to amplify the market volatility during times of market turmoil.

Corporate and local government debt are no longer just a mirror image of asset of the banks. Even though bank loans continue to dominate they are of less importance comparing to the beginning of the millennium. With the increasing share of corporate bonds and other financial instruments in the composition of debt for corporations and local governments since 2008, transmission of financial shocks is becoming faster and more significant. [47]

G. Drastic and prolonged decline of investment returns

Debt financing for investment in the productive sector would lead to a virtuous circle if it could produce returns higher than break-even point i.e. more than debt servicing needs for the principal and interest plus tax, depreciation, amortization and production cost. If debt could not produce this kind of outcome and is being used to support wasteful investment or

[43] IMF , Global Financial Stability Report, Oct. 2016.
[44] Keith Bradsher, "To Problems With China's Financial System, Add the Bond Market," *The New York Times,* 20 Dec. 2016. Available from https://www.nytimes.com/2016/12/20/business/dealbook/china-bonds-fall-rates.html?_r=0.
[45] Bloomberg, 'China's $3.8 Trillion Wealth Products Reel Amid Bond Rout,' January 10, 2017. Available from https://www.bloomberg.com/news/articles/2017-01-10/china-s-3-8-trillion-wealth-products-reel-as-bond-binge-unwound.
[46] Global Credit Research, 'Moody's: China's banking system faces systemic risk from significantly higher dependence on wholesale funds,' 29 Aug. 2016. Available from https://www.moodys.com/research/Moodys-Chinas-banking-system-faces-systemic-risk-from-significantly-higher--PR_354245.
[47] IMF, Global Financial Stability Report, Oct. 2016.

luxurious consumption, then debt would turn unsustainable. Return on investment (ROI) in China has been declining for years. According to the Chief Economist of the National Information Centre of China, ROI was slightly above 15 percent in 1993, then declined to around 8 to 10 percent between 2000 and 2008. It suffered a drastic drop since the global financial crisis, and was at 2.7 percent in 2014.[48]

Naturally, ROI have not plunged across the board. New drivers of growth like health care, information technology, telecommunication-service enterprises generate much higher returns than the traditional sectors like mining and steel. Private companies' ROI is much higher than that of SOEs. The SOEs accounted for around 55% of corporate debt but only produce 22% of economic output.[49] Take steel for example. According to the National Statistical Bureau of China, the steel sector alone carried debts amounting to RMB 4.37 trillion by the end of 2015. Their profit margin is generally lower than the privately or publically owned enterprises, though statistics are not easy to locate.

a. Nation-wide price-cutting competition

With declining profit return and overcapacity, many enterprises have resorted to cutting prices to defend their market shares. When all enterprises start to use the same strategy, it triggers the process of racing to the bottom and further diminishing returns. With knife thin profits, many enterprises have been floating around break-even level thus not in a position to spend money on research and development for new products and technology upgrading, which gives them even less opportunities to look for new frontiers for higher profit margin. It is a vicious circle.

b. Property bubble

Because of difficulties to maintain decent profit margin in face of intense price competition and increasing production costs, many enterprises have channelled much of the bank credits to the real estate sector. Property speculation has become hot in many cities. Declining returns and property bubbles show that pump priming has its limit. By printing more money without being backed up by real capital accumulation, credit expansion is to use the savings of the private sector including households' on low return or wasteful investments or property bubbles. This kind of misallocation of resources would eventually further depress productivity and negatively impact on long term economic growth. The credits channelled to such kind of investment would be most likely turned into bad debt owing to the lack of capacity of the investors to generate meaningful returns. To keep afloat, enterprises survive on inflows of credit instead of creating more value added resulting to fast accumulation of debt. Not to stop this kind of spiralling down to the bottom would lead to systemic problems for the financial system. The increasing debt would be mirrored by a worsening of the financial status of the Chinese banking system as bank credit is still the main channel of financing. Pressured by the desire of investors to seek for higher returns and added to by the development of the financial market, lower ROI would also lead to outflow of capital. This in return would worsen expectations for currency depreciation thus further capital outflows and weaken investors' confidence in the economy.

[48] Fang Jianping, Chief Economist of the National Information Centre of China, 26 May 2016. Available from http://futures.hexun.com/2016-05-26/184070005.html.

[49] IMF, The People's Republic of China: 2016 Article IV Consultation, Country Report 16/270 (August 2016).

VII. IMMINENT DEBT CRISIS UNLIKELY BUT HIGH TIME FOR ADDRESSING RISING SYSTEMIC VULNERABILITIES

Despite some commentaries in the mass media about an imminent debt crisis in China, a look at the asset and liability position, its economic fundamentals and buffers built show that, barring seismic global financial volatility, a debt crisis is unlikely in the short term. Facts point to worrisome debt trends and problems, in particular with the corporate sector, local governments and the fast credit expansion, but would not support the current gloom and doom predictions. There have been increasing vulnerabilities in the financial sector and erosion of buffers. However, debt at the central government and household levels are healthy.

On the whole, China has a very significant amount of highly liquid assets.

Even in the worst scenario when corporate debt and local government debt turns into non-performing loan en masse, which does not seem likely at this moment, the Chinese central government would still have tools and resources to deal with the problem including gradually restructuring its underlying assets to help the economy avoid a serious liquidity/credit crunch. Firstly, the government has the fiscal space as its fiscal deficit is only around 3% of GDP. During the past and current financial crisis, socialization of debt has been repeatedly used even though it has been widely criticized. In times of needs, China has policy space to do the same. It should be relatively less painful for China as much of the corporate debt is owed by SOEs and some large banks are state owned. In addition, as some major banks are state owned and with good liquidity positions, the government can resort to banks to step in at a scale much larger than the current swaps if the situation warrants such kind of intervention. The D/E swap is actually a government-led domestic debt restructuring which is relatively gradual and will take some time. A sudden systemic crisis resulting from liquidity squeeze does not seem to be on the horizon.

However, it is high time for China to address its rising systemic risks. Following are some suggestions that could be considered:

Slow down the fast credit expansion and enhance investment quality: Increasing debt and lower economic growth is a legacy of the global financial crisis. Further financialisation of the world economy since the 1980s owing to financial liberalization, financial engineering and the increasingly broader coverage of internet has made borrowing by governments and other economic entities easier, more tempting, more difficult to track, easier to securitize current and future economic activities, easier to be highly leveraged and yet more difficult to regulate.

The current credit explosion in China carries the risk of a banking crisis in coming years. The corporate and local government debt are approaching critical levels. Banks and financial intermediary institutions should enhance capacity in pricing risks and improve quality of lending. An important part of the credit should be spent on the productive sector to allow decent growth and debt servicing capacity. With the current debt level, credit expansion without proper design would amount to giving alcohol to a drunk person, which would only worsen the hangover. It is important to distinguish borrowing which creates wealth and return for servicing debt from borrowing which delays restructuring needs and prolongs the life span of entities which see no prospects of bringing back returns larger than the investment.

Not to deleverage would lead to the Japanese style of chronically low or no growth for decades, as high debt servicing would be a burden for economic growth and structural reform would be pushed to the future. According to estimates by UBS Securities, 10 percent of new credit went toward servicing existing debt in 2015. Such a scenario would not be tolerable for China whose economy is still at a catching up phase and the per capita income is still low. The government also has introduced measures to monitor and reduce the amount of the issue of WMPs to make sure it should not develop into a subprime phenomenon. The China Banking Regulatory Commission noted that the provision coverage in China's banking sector had reached 180%, while the capital adequacy ratio was above 13%, positioning it well to withstand a reasonable increase in non-performing loans.[50] In the worst case scenario when the confidence in the banking system collapses, so long as the government retains control over the capital account, liquidity may most probably flow back to the banking system.

The need to reduce credit growth has been highlighted by policy makers and also experts. Nevertheless, the reduction should be undertaken in a steady and gradual way alongside fundamental structural reforms to improve the effectiveness and efficiency of the utilization of capital.

Undertake structural reform for SOEs and taxation reform for local governments: Restructuring the SOEs is a mammoth task but essential for addressing the debt burden of the corporate sector and to make them robust and lean. International trade and the Chinese economic model have both undergone tremendous transformation over the years. To keep the SOEs afloat by pumping more credit into the companies would prolong the pain without value added to the Chinese economy and increase the debt burden.

As for local governments, a fundamental examination and reform of the taxation system may be required to allow a sustainable stream of revenue to the local governments and have a clear redistribution of financial obligations and responsibilities between the central and local governments.

The guidelines that the government issued in October 2016 to reduce the debt burden include measures such as mergers and acquisitions, bankruptcies, debt-to-equity swaps and debt securitization. However, the loss-making zombie-enterprises especially those in traditional sectors continue to suck in significant amount of the credit and would defeat the purpose of the ongoing deleveraging efforts. Training for new jobs and increasing the provision of social security could be strengthened to prepare for the winding down of these redundant enterprises. Mergers of enterprises suffering from severe overcapacity without dismantling the unproductive capacities and without a demonstrated reduction in credit needs may not be a contribution to the government encouraged supply-side reforms. The same with equity swaps. Securitization of NPLs without real restructuring and reform would not reduce the impaired assets held by banks nor would it revive the zombie enterprises especially when global demand is not robust.

To restructure or remove redundant loss making enterprises would be important for strengthening the viable enterprises in dynamic sectors. If operating profits or earnings before interest and taxes (EBIT) are about the same level of the interest payments for debt, and it is

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[50] Jillian Yue, 'Is China's Debt Level Reaching Crisis Level?,' China Money Network, 06 April 2016. Available from http://www.chinamoneynetwork.com/2016/04/06/is-chinas-debt-level-reaching-crisis-level.

not a new sector with potential to grow, the firm should be closed. This is what the Japanese government failed to do in the 1980s and China should not repeat this history.

Maintain appropriate level of economic growth*:* The best way to solve the debt problem would be maintaining and enhancing economic growth. Yet, it is a complicated and multidisciplinary topic. It is abundantly clear that to rely solely on credit expansion without decent return would defeat the purpose. Maintaining economic growth at appropriate level does not mean that China can grow out of its current debt problem in an organic way. The magnitude of debt is too big to be solved in such a painless way. But for China's economic structure, to have a drastically low economic growth would also be disastrous as there is no good social security system in place and the population has not been prepared for it. Sudden decline of GDP growth would lead to outflow of capital and reduce the confidence in the banking sector, which is not good for the financial stability of the country.

Live with appropriate level of debt: Excess of debt in some sectors may continue to haunt for some years. Yet, it should be pointed out that as China is still a developing country at the stage of catching up, it would need to live with some debt. There is a trade off in paying down domestic and external debt. Very often, imposing high taxation or following austerity measures would be needed to cut down expenditure and reduce debt, which can stifle economic growth and distort income distribution sometimes. Therefore, if the fiscal position is comfortable and no debt crisis is looming, to maintain some level of debt would be healthy. Organic economic growth with no debt could forego chances of faster economic growth. With China's high savings rate, it seems China can afford to have relatively high debt. But to determine what is the comfortable and optimal level of debt is not an easy job. It is a science rather than art.

Strengthen deposit insurance: Deposit insurance could increase confidence in the banking system and is considered as an option against bank run risk. Apparently, the Chinese population has confidence in the banking sector. China has introduced deposit insurance in 2015 at the level of RMB 500,000. In view of the fast increase of family wealth in China, consideration could be given to increase the amount.

Maintain capital control: Large and sudden capital outflow carries the risk of a systemic crisis and this particular risk is a major one that China is facing in the current global economic environment and the particular development stage of China. The fast expansion of China's middle class and increasing corporate assets make capital outflows for purpose of earning higher yields through interest rate, currency exchange rate and regulation arbitrages tempting during times of volatility. These outflows could disrupt a country's economic development and contribute to leading the economies to the middle-income trap because hard-won liquidities which could stay at home for further economic development and reduce financial risks have flown to destinations outside the country for getting higher earnings or speculation. Capital outflows could lead to a financial crisis which could roll back economic development by decades and incur tremendous human suffering for the population.

Continue with the current deleveraging policy measures and put a brake on shadow banking: Current debt swaps for corporate and local government debt are not unique policy measures. China has used it before, as well as other governments. It would be important to undertake empirical studies and examine ways to make them more effective.

China's debt dynamics is an excellent case to demonstrate that assessing debt sustainability and tracking debt vulnerabilities is a complicated task. The macroeconomic structure, savings pattern, characteristics of the banking system, economic policies, liquidity provision and a host of other factors interact with each other. For emerging and developing economies whose domestic financial markets are neither mature nor deep, it would be necessary to strengthen capacity for effective asset and liability management in national debt management. Good data collection and reporting as well as analytical capacity to assess the assets and liabilities of the public sector including the risks of contingent liabilities arising from the local governments and public enterprises would be important. This would assist the efficient management of the risk exposure and allow timely reduction and elimination of mismatches between funding sources and spending needs and thus reduce the probability of debt crises. Addressing problems before they explode to significant proportion would reduce the costs and increase creditworthiness of these economies and most importantly minimize the probability of debt crisis. To look at one indicator and pronounce the coming of a debt crisis would not be beneficial as there is the risk of a self-fulfilling crisis. Confidence management is an important task of the central banks and sovereign governments nowadays as with globalization and modern technology capital flows can be extremely volatile and can react quickly on news and unprocessed information without solid analysis and verification. A way to reduce shadow banking could be for China's central bank and the large state owned banks to reduce its bias to give preference and priority to SOEs in their lending and allocate more credit to smaller banks. This would reduce the need and urge to get funds at all costs including higher cost credit from shadow banking.

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