No 28 – June 2019

Policy Brief

CEPII

Setting the Stage for RMB Internationalization

Liberalizing the Capital Account and Strengthening the Domestic Bond Market

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Summary

Internationalizing the Renminbi pertains to the new era of China's reform, starting at the 19th Congress of the Communist Party. It is not a technical reform, but a political one. The objective is threefold: to match China's autonomy in economic policy, to further Asian integration, and to safeguard worldwide multilateralism against the rise of protectionist forces.

The challenge has been aggravated by the protectionist policies pursued by the US, degrading ipso facto the functions assumed by the dollar in the international payment system. China's authorities have drawn lessons from the Asian crisis of 1997-98 and the systemic crisis of 2008-09. They are now searching for a second-best option in advocating a multilateral international payment system based on the SDR.

The process of currency internationalization is linked to the modernization of domestic capital markets. Studying the progress in both dimensions makes the first two parts of the paper. We ask the following questions. In the first part: which steps has China taken, and should take in the future, to complete the gradual process of currency internationalization currently under way? In the second part: how can China build the deep and resilient bond market required to attract international investors?

A shorter third part examines why emerging market countries are incentivized to issue their government debt in their own currencies to attract foreign investors in the lingering context of ultra-low interest rates in the main convertible currencies. The status of a freely usable currency, already reached by the Renminbi in its prudent internationalization, together with a reform of the huge domestic bond market, should make China able to attract foreign saving. This is compatible with the Belt and Road Initiative, which is bound to mobilize massive capital exports in the form of long-term loans.

1. Introduction

The financial system in China does not yet match China's economic weight on the global stage. Nor does it reflect the geopolitical ambition that China's leaders have demonstrated over the past few years An important reason of such a situation is the mismatch of its financial system relative to the pattern of financial globalization. This mismatch came in the limelight when the Chinese leadership started to reinforce their support to RMB internationalization through a gradual liberalization of the capital flows starting 2014. After the financial turmoil of mid-2015 to the spring of 2016, it appeared that opening the capital account should be a lengthy and progressive process.

The present Policy Brief aims at understanding the sequence of this process against the theoretical framework of Mundell's trilemma to point out the stages of this double-sided process. Indeed, the latter consists in both liberalizing the capital account and strengthening the domestic capital market, chiefly the bond market. We define the prerequisites to achieve the status of a global currency: capital account openness; deep, liquid and resilient bond market; transparent and respected legal framework; and predictable economic policies.

We measure China's advances in the three dimensions to assess China's trajectory in Mundell's framework towards the ultimate objective of a fully convertible currency[1]. It should be compatible with the long-run objective of the Belt and Road Initiative to transform the pattern of globalization.

2. Beijing is keeping a tight grip on the capital account liberalization process

2.1. Domestic stability is the priority

Since the start of the opening process in 1978, the transition towards a market-based economy has dramatically transformed the domestic business landscape in China. However, the liberalization process was mostly contained to internal markets until the mid-1990s. With the setting up of the central bank in 1994 and the unification of internal exchange rates prior to China's WTO entry in 2001, the trade account hugely expanded, while the capital account remained relatively close, being driven by targeted inward direct investments. On the other side, the massive current account surplus gave rise to the accumulation of foreign exchange reserves. After the 2008 global financial crisis, inducing China's authorities to launch a huge stimulating plan, international financial flows have been opening *via* Hong Kong offshore market place since 2010 and more extensively since 2013, making the RMB a "freely usable" currency (as stated by the IMF), but not a fully convertible one.

Chinese authorities' prudent approach as regards the opening of the capital account reflects the risks inherent to such a process. Decades of tight control over financial flows have led to a risk-prone allocation of China's massive captive savings. Following the privatization of urban land in 1998, the real estate sector became the single source of yield for the huge household savings trapped in low-return bank deposits. Real estate prices have ballooned as a consequence (+360% on average per square meter since 2000). Allowing an intensification of financial diversification abroad could prove destabilizing for this sector, and consequently for the whole financial system. Besides, captive resources allowed the central government to let local authorities finance their infrastructure spending that made the core of the stimulating plan through bank and shadow bank credit. The large amount of domestic debt is a threat to the opening of the financial account in the balance of payment. It was made apparent in the turmoil triggered by massive capital outflows between August 2015 and early 2016, forcing the authorities to spend about $1trn in foreign reserves to stabilize the renminbi exchange rate. To manage the credit risk, financial authorities have been securitizing and lengthening the maturity of the local government debt through bond swaps entirely held domestically. At end-2018, foreign institutions held 8% of the central government outstanding bonds and virtually 0% of local government bonds. As long as the Chinese government maintains control over the sovereign bond yields, it can protect both its socio-economic model (by raising money through debt to finance public investment) and the balance sheet of the institutions that hold its debt (mainly banks). Those financial institutions might be in trouble should the value of the bonds held on their balance sheets be no longer under control. The big national banks have robust balance sheets and are under central government oversight. The risk of eventual financial disruption mainly lies in private banks with links to shadow banking and in city banks in poorer provinces.

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(1) Robert Mundell, in collaboration with Marcus Fleming proposed in the early 1960's a geometrical interpretation of the incompleteness of the international monetary system [R.Mundell (1961), A theory of optimum currency areas, American Economic Review].The inexistence of a supranational currency as a ultimate reserve asset restrains the ability of national authorities in searching the optimal combination of stability in exchange rates, capital mobility and autonomy in their domestic policy objectives.

Another major risk linked to the capital flow liberalization is the increase in sensitivity to foreign monetary shocks, and a subsequent loss of autonomy in domestic economic policymaking under the threat of capital outflows, eventually exacerbated by the intrinsic inability of financial markets to price the risk of worsening geopolitical rivalries. Since price and job stability is at the heart of the Chinese economic model and crucial factor in the Communist Party's legitimacy, controlling the exchange rate is a means to enforce the priority of domestic policy objectives. While these considerations have been a key reason for Chinese authorities' caution since the start of the reform, recent episodes of financial turmoil have given leaders an actual idea of the destabilizing potential of a weakening in capital controls.

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High debt levels in the corporate sector, opacity in the auditing system, rapid growth in "shadow banking" activities, and the speculative attitude of national financial investors have made the domestic financial market fragile and kept it far from meeting international standards. As long as the pressure on the RMB remained upward, these caveats were not stringent, and international financial inflows remained intense. It even fueled an appreciation tendency that impeded on China's competitiveness level. The "one-way bet" that constantly led global investors to foresee an appreciation in the RMB also seemed to have blurred Chinese authorities' vision by minimizing the perception of the risk of a rapid inversion in financial flows.

The closed nature of China's financial markets protected the country from a major shock during the Asian currency crisis in the late 1990s, which led to intense and hence destabilizing financial outflows from other Asian countries. However, the progressive opening created new channels for cross-border financial flows, while circumvention of capital controls became more sophisticated (through such means as trade and FDI over invoicing, and development of underground financial institutions). Thus, when the future pace of economic growth became more uncertain in China, leading to the reversal of expectations on the RMB exchange rate, the direction of financial flows reversed abruptly, fueled by a flight to quality that depreciated the exchange rate. Approximately USD1.5trn flowed outside China between mid-2014 and late 2016 (according to the Institute for International Finance). This disruption became dramatic on two occasions, during the summer 2015 (with a 70% drop in the Shanghai A-Share stock index between June and October) and in January 2016 (one-third loss in A-Share index capitalization).

The stabilization of financial markets, alleviating the impact on the exchange rate and on the broad economic activity, was only made possible by the aggressive use by the PBoC of the huge currency reserves accumulated over the two previous decades (from USD25bn in January 1994 to USD4000bn in June 2014). Between July 2014 and December 2016, the international reserves melted from 4 trillion USD to 3 trillion USD. Being able to mobilize as much as 1 trillion of USD in one year and a half, which represented close to 10% of China's GDP in 2015, is a unique case, representative of the stabilization process "with Chinese characteristics".

In the aftermath of those bouts of market unrest, the authorities chose to switch their focus back to financial stability and to slow down the process of liberalization by reintroducing some restrictions on international flows. The panic episodes illustrated the fact that capital account liberalization can adversely impact countries with poorly developed financial markets, weak accounting system and property rights, as demonstrated by Eichengreen et al. (2011) among others. This eventually resulted in calls for forceful reform of the domestic financial system and a gradual liberalization of the capital account (Liu *et al.*, 2018).

The reference made by former Chinese central bank governor Zhou Xiaochuan to the risk of a "Minsky moment" in China, *i.e.*, a sharp drop in asset prices, is double-edged. It reflects the awareness of the Chinese authorities of the need to make the economic model more sustainable through structural reforms, but also to implement only gradually these reforms to conjure the risk of financial destabilization.

2.2. Yet, China has embarked on a gradual liberalization of the capital account

Although the process has been slow, the Chinese authorities have undertaken the liberalization of China's capital account. Several key objectives are motivating them. The first one aims at improving asset allocation, which runs parallel with the efforts to reduce excess capacities in the economy. While a brutal opening up would be destabilizing, a prudent move towards liberalization allows for a smooth reallocation of excess savings away from low-return asset classes, or overinvestment in real estate, towards foreign assets. The second one has been promoting outward foreign investments in order to acquire foreign technology, especially as part of the Belt and Road Initiative (BRI). These goals would benefit from increased stability in cross-border financial flows.

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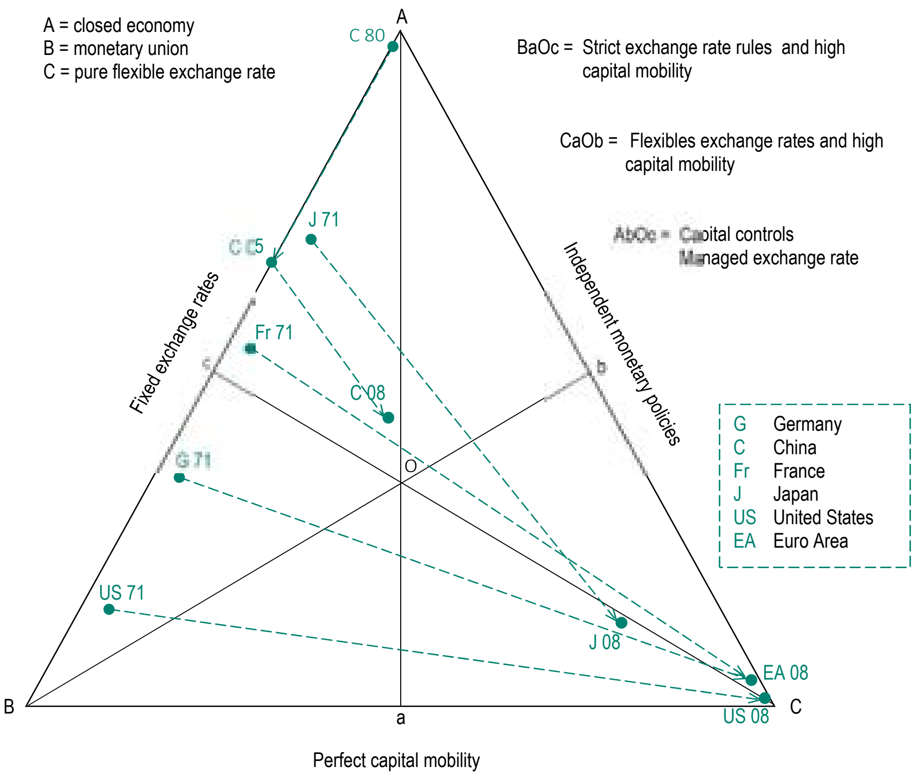
Figure 1 – The Mundell triangle and the changes in position of the main economies after the financial crisis



Source: Authors.

The liberalization of portfolio inflows also serves three different purposes. The first one is the facilitation of foreign investments in the Chinese domestic markets, in a bid to compensate as much as possible the outward flows. Foreign holdings of Chinese domestic bonds increased by RMB 887bn between the launch of the "Bond Connect" initiative in June 2017 and the end of 2018[2]. The introduction of technical knowledge and best practices by foreign investors would help regulate domestic financial markets. The banking sector can benefit from the alignment with international standards in terms of credit rating and legal framework, as well as from the development of new and more sophisticated market segments such as derivatives (CDS, ABS, *etc.*). Lastly, promoting RMB internationalization presupposes the availability and liquidity of a large pool of safe domestic assets for international investors. As a side note, it is important for China to continue showing its willingness to pursue reforms before the IMF's next review of the Special Drawing Right (SDR) scheduled in 2021.

the introduction of technical knowledge and best practices by foreign investors would help regulate domestic financial markets

These considerations have nurtured the involvement of Chinese authorities in gradually pursuing the opening up process. Hence, although domestic objectives always remained central in the short run, the country has embarked on a smooth path towards liberalization, after the impact of the 2015 and 2016 turmoil had calmed down. We illustrate this move in the theoretical framework of the "Mundell triangle" (figure 1). The different areas in the triangle represent different types of national choices in adjusting to international constraints. Three types of dominant adjustment are represented in the triangle corresponding to the diamond-pattern delimitated by the summits A, B and C, the center O, the sides and the medians of the triangle. When closer to vertex A, capital controls dominate the adjustment to international constraints; the area closer to vertex B represents the prevalence of fixed exchange rates, while the zone close to vertex C reflects a system based on flexible exchange rates. In 1978, at the start of the reform process, China was an entirely closed economy relative to international markets.

The model shows the changes in the international monetary system over time. The year 1971 signalled the end of the Bretton Woods era, whereby different countries exhibited different types of capital controls, while fixed but adjustable exchange rates defined common rules and procedures to manage exchange rates. The US were the most financially open country in vertex B. At that time, China was almost entirely closed. After the demise of Bretton Woods, the reform of the IMS towards an SDR-based multilateral system failed. Meanwhile the shocks on oil prices caused the main advanced countries to move together towards vertex C, showing more financial integration and more flexible exchange rates. The Jamaica agreement in 1976 officially validated the new rule-free system. However, Europe created a regional monetary system, the EMS, in the 1980s, and prepared in the 1990s to introduce the Euro as the single currency in 1999. During the same period, China carefully experimented carefully with trade opening after its monetary reform in the mid-1990s, followed by its entry in WTO in 2001, after having successfully weathered the Asian crisis.

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Meanwhile, China undertook important reforms in the mid-1990s, creating a central +bank, unifying the exchange rate and opening up to international capital flows, primarily *via* inward direct investments. Up until July 2005, China kept a fixed exchange rate against the dollar. Over the following years, the country carefully established a crawling peg and

(2) http://www.chinabondconnect.com/en/market-data.htm

Table 1 – Main steps of the capital account and exchange rate regime reforms in China

Date	Measure	Move in the triangle ↘ Exchange Rate	↓ Capital Flows
Jul. 03	Launch of Qualified Foreign Institutional Investors (QFII) scheme		✓
Jul. 05	Shifted from a peg to the dollar to a managed floating exchange rate, with reference to a basket of currencies	✓	
Jul. 08	The peg against the dollar was reintroduced as a response to the Global Financial Crisis	×	
Jun. 10	End of a two-year peg to the dollar	✓	
Jul. 10	Financial institutions in Hong Kong were allowed to open RMB-denominated accounts		
Apr. 12	Launch of Renminbi Qualified Foreign Institutional Investors (RQFII) scheme		✓
Apr. 12	Enlargement of fluctuation band around the central reference rate (±1%)	✓	
Sep. 13	Opening of the Shanghai Free Trade Zone (SFTZ)		✓
Mar. 14	Enlargement of fluctuation band around the central reference rate (±2%)	✓	
Nov. 14	Launch of the Shanghai-Hong Kong Stock Connect		✓
Jul. 15	China Interbank Bond Market (CIBM) opened to central banks, sovereign wealth funds and international organizations		✓
Jul. 15	Launch of the Mutual Recognition of Funds (MRF) between Mainland and Hong Kong		✓
Aug. 15	Reform of the currency regime: daily opening fixing rate (the central parity rate) against the USD would be set based on the closing rate of the previous day, the supply-demand conditions in the market and changes in major currency rates	✓	
Oct. 15	Banks required to pay a 20 percent deposit on forward sales of foreign exchange		×
Dec. 15	Introduction of a measure monitoring moves of CNY against a basket of trading partners' currencies (and not the USD alone) by China Foreign Exchange Trade System (CFETS)	✓	
Dec. 16	Launch of the Shenzhen-Hong Kong Stock Connect		✓
Mar. 16	CIBM opened to foreign investors with no investment limit		✓
Jun. 17	Launch of the Bond Connect: further faciliation of foreign investment in the Chinese bond market		✓

Source: Authors.

accepted a wider range of capital inflows. However, in 2008 the country was still inside vertex A. The entrance in vertex C and the adoption of a flexible exchange rate regime were still a long way off.

In a speech on March 23 2009, Zhou Xiaochuan, then governor of the PBoC, advocated a reform of the IMS[3] asserting China's long-term objective to erase the predominance of the dollar in order to migrate towards a more sustainable multilateral IMS. That is, moving towards the lower right side of the triangle that allows independence from the key currency. However, such a move requires profound institutional changes.

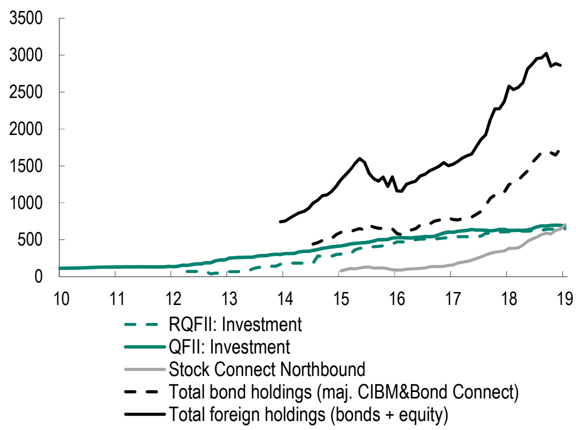
Table 1 below describes the main steps of the reform already initiated in China since the end of the full dollar peg. Changes in the exchange rate regime mean a move towards vertex C, while the liberalization of capital flows points out to a move towards the lower side of the triangle.

In particular, the Stock Connect, as well as the CIBM Direct and Bond Connect programs, considerably alleviated regulatory constraints for foreign investors to access Chinese stock and bond markets, respectively. These efforts paved the way for the inclusion of Chinese assets in global indexes[4], which in turn raised interest from international investors.

Now, where does China actually stand in terms of portfolio inflows and outflows within the process of liberalization? Figure 2, below, shows the amounts at stake for each measure aiming at facilitating capital inflows, as well as the aggregate figures of foreign holdings of both bonds and equities as published by the PBoC (Figure 2).

Figure 2 – Foreign holdings of bonds and equities, and main schemes supporting capital inflows

(bn RMB)



Sources: CEIC, Wind, SAFE, PBoC, authors' calculations.

(3) Zhou Xiaochuan, reform of the international monetary system, essay 23 March 2009. Governor Zhou criticized the IMS for the inherent deficiencies caused by using credit-based national currencies as means of international settlement. He called for a greater role for the SDR that reflected China's long-standing position for an IMS less detrimental to developing country. He envisioned the reform as a gradual process, able to yield win-win results for the benefits of a multilateral economy.

(4) Stocks listed on the Chinese domestic equity market ("A-Shares") were partially included in MSCI indexes as of June 2018. In April 2019, Chinese bonds were included in the Bloomberg Barclays Global Aggregate Bond Index.

When it comes to outflows, a look at the balance of payments shows that the accumulated amount since 2010 of foreign debt securities and equity officially detained by Chinese investors stood at 2.3 trillion of RMB as of QIII-2018, *i.e.*, two thirds of the amount of foreign holdings in China. However, flight to quality and capital control circumventions might have led to an underestimation of this figure. Accumulated net errors and omissions since 2010 indeed amounted to 6.7tr. RMB, while "Other investments" (such as deposits and loans) assets also ballooned during the timeframe.

Looking at the overall picture, the opening up of China's financial markets is a very gradual process, and still at an early stage. However, the Chinese government, well aware of the fate of Japan yielding to US pressure to liberalize its financial system in the late 1980s, indicated that it will not bow to international pressure and will keep as prudent path as long as necessary.

3. Increased sophistication of the domestic financial markets is needed prior to entering vertex C

3.1. Current state

China's role in the global economy has changed dramatically since the start of the reform and opening up process in 1978. From $305bn in 1980, its GDP increased to $12,015bn in 2017, raising its share of the world GDP from 2.7% to 15% (IMF, 2018). This development has been interrelated with the rapid expansion of the financial system in China. Equity markets opened in 1990 and 1991 with the Shanghai and Shenzhen Stock Markets, respectively. Since then, their total capitalization has increased rapidly, reaching 71% of China's GDP in 2017 ($8.7 trillion, according to the World Bank) to become the world second largest after the United States (surpassing the Euro area as a whole). The bond market also skyrocketed, from only 1% of worldwide outstanding bonds in early 2000s to 9% at end-2017, reaching about $10 trillion.

Further liberalization of these huge markets requires a balance between inward and outward pressures on flows. As unveiled by the recent events, outward pressures remain high, while international investors are still cautious about investing in the domestic markets. The attractiveness of these markets for foreign investors results from an unstable balance between, on the one hand, the opportunities presented by the vast Chinese market, and, on the other hand, the constraints on cash mobility, as well as the immaturity of the financial infrastructures and the legal framework. While the authorities have sought to strengthen their control to readjust this environment, their abrupt methods (stopping some quotations, etc.) have reinforced the distrust of foreign investors, who are reluctant to engage in a market where the legal framework is shifting and unpredictable.

Although both equity and bond markets' opening up processes have important implications for the financial world order, the most crucial channel for RMB internationalization will be the bond market, more specifically, the availability, accessibility and liquidity of low-risk bonds. We therefore focus on the features of the Chinese domestic bond markets.

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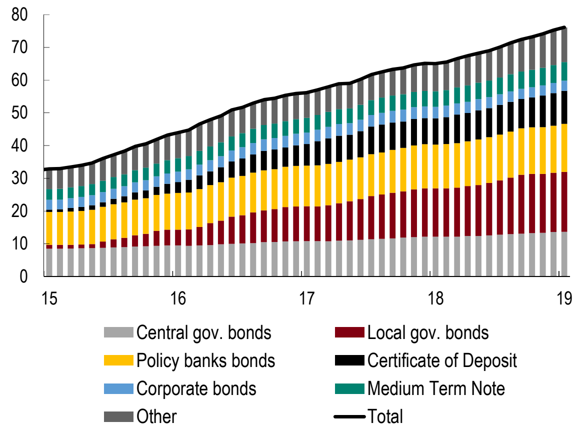
As reflected in Figure 3, government and policy bank bonds[5] account for more than 60% of the total outstanding market. Over the past few years, the outstanding amount of local government bonds increased sharply (from virtually 0% in early 2015 to 24% of the total market). This rapid trend was driven by a debt-for-bond swap program initiated by the authorities to rein in risky off-budget borrowing from local governments. Before the scheme, local governments were not authorized to issue bonds. Facing structural revenue shortfalls due to a deficient intergovernmental tax redistribution system (see below), local governments circumvented the rules by creating opaque funding schemes, the Local Government Financing Vehicles (LGFVs). The debt-for-bond swap program was initiated to redirect these high-interest and short duration debt assets towards a transparent, more stable and less costly source of funding. It also contributed to deepening the overall bond market.

Figure 3 – Total bond market by type of issuers

(RMB trillion)

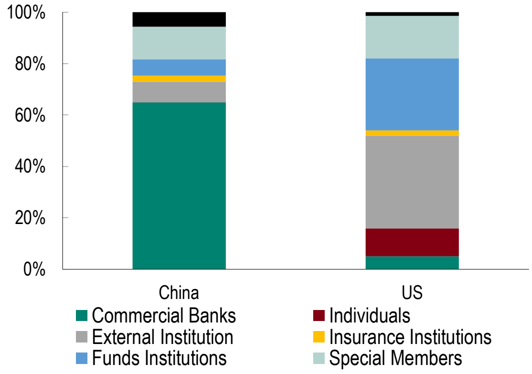


Sources: Wind, authors' calculations.

One of the main features of the market is the very narrow investor base: domestic commercial banks hold 65% of all government bonds, and as much as 86% of local government bonds (as of January 2019). As a comparison, banking institutions held 5.1% of all Treasury Securities in the US at

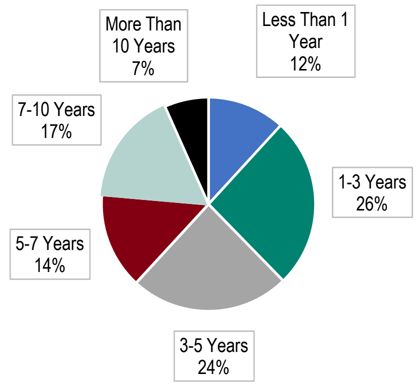
(5) China Development Bank (CDB), Export-Import Bank of China (Chexim), Agricultural Development Bank of China (ADBC).

Figure 4 – Treasury bonds holding, by investor
(share of total, end-2018)



NB: Special Members include Government and Monetary Authority.
Sources: Wind, SIFMA, authors' calculations.

Figure 5 – Outstanding bonds by tenor
(% of total interbank bond market)



Source: Chinabond.

end-2018. Figure 4 shows the aggregate holding structure for central government bonds.

The narrow investor base, dominated by commercial banks, weighs on the overall liquidity of the bond market. The buy-and-hold attitude on the market is partly explained by the usual low trading frequency of commercial banks. In addition, the opacity of company accounts, low credibility of credit ratings, and erratic bond defaults (although still rare), which are due to the unpredictability of government support, make risk assessment difficult on the Chinese bond market. This motivates investors to hold bonds rather than trading them on the secondary market. Low liquidity, together with a concentration of bond issuance on short term maturities (Figure 5) hamper the constitution of a long and continuous benchmark yield curve in China.

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What is more, a thin market for hedging instruments and uncertainties about bankruptcy law enforcement prompt foreign investors' caution, at a time when the Chinese authorities allow an increasing number of credit events to gradually lead the financial system on a sounder basis.

China is at the forefront of digital technology, leading the way to the development of Big Data and artificial intelligence. The heavy importance of commercial banking originated during the industrial revolution, which took place between 1995 and 2010 when bank lending was the major engine of finance. This financial structure is less relevant in the new digital era. The upsurge of tech-oriented start-ups is funded *via* equity investment. However, equity financing has been strained lately by the lack of well-functioning capital markets. Equity investors need better information and disclosure in the equity market than are currently available, as well as a more streamlined process for initial public offerings. They also need to manage their risks and run their asset liability management *via* deep, diverse and resilient bond markets.

Being a long-term investor requires a strategic behaviour. Because the volatility in equity yields is higher than that in government bonds, and because bond volatility diminishes as the maturity increases, those bonds should constitute the core assets in the portfolio of long-run investors[6]. This is why government bonds issued in local currencies are a hedge against equity risk. They appeal not only to domestic investors, but to foreign ones as well. Of course, the latter are exposed to currency risk. However, the J.P.Morgan government bond, local-currency index for big issuers has fluctuated between a 5.2 and a 7.2% yield since 2010, much higher than the yield offered by US Treasury bonds. This extra yield is more than enough to make up for the risk of carry supported by foreign investors, especially since inflation is low in China and the yuan dollar exchange rate is effectively controlled by the central bank. Therefore, the potential to attract foreign investors is large. Making it effective depends entirely on the reform of the domestic government bond market, particularly the local government one because of its size.

Moreover, the huge consumer market is driven by the growing importance of knowledge-intensive sectors that triggers new social demand in higher-quality public services that is impinging upon social policies. Besides, China is a highly decentralized nation where local governments provide most public services. There is a severe imbalance between public expenditures and fiscal resources for most local authorities (figure 6). The large stimulation plan launched in the aftermath of the financial crisis intensified this imbalance. Local authorities had to turn

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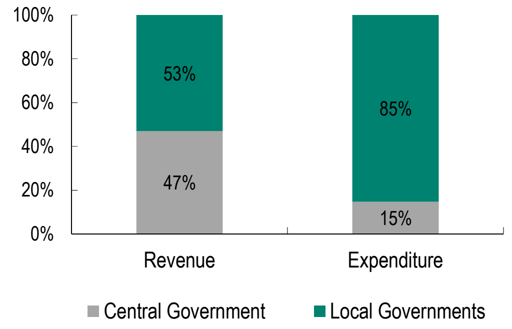
(6) Campbell J. and Viceira L. (2002), "Strategic Asset Allocation," Oxford University Press.

Figure 6 – Share of Revenue and Expenditure per government level, 2017

(% of total and bn RMB)

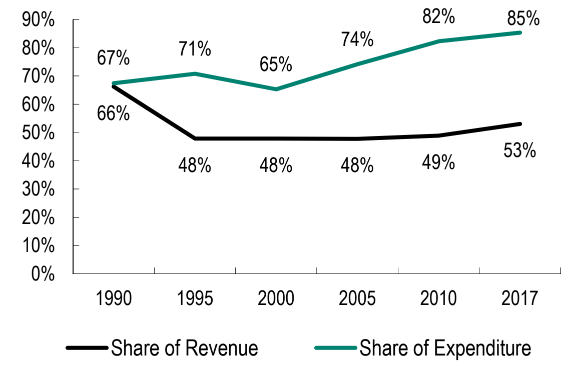


	Revenue	Expediture
National Government	17,259	20,309
Central Government	8,112	2,986
Local Governments	9,147	17,323

Source: National Bureau of Statistics of China.

Figure 7 – Share of Local Governments in national Revenue and Expenditure

(% of total)



Sources: National Bureau of Statistics of China, authors' calculation.

to risky financing sources, and this risk is now lingering on local bond markets.

Overall, the discrepancy between revenues and expenditures has constantly widened since 2001, when China's entrance in WTO triggered a massive and lengthy investment boom (figure 7).

Paradoxically the share of subnational spending is higher than even in the most decentralized federal states. The key features of the current fiscal system date back to the fiscal reform of 1994, undertaken in order for the central government to recover control on fiscal policy. Rules-based revenue sharing and intergovernmental transfers replaced ad hoc transfers. It shifted drastically the fiscal balance of local governments to lingering deficits. Debt accumulated very unequally between provinces (figure 8).

3.2. Reinforcing the soundness and depth of the domestic government bond markets

To sum up our findings, the size of the local government debt has surpassed that of sovereign debt. This is critical because the local government bond market exhibits vulnerabilities: low liquidity, weak credit discipline and structural deficits cum imbalances between provinces and municipalities. The situation worsened to finance the huge stimulation plan in 2009-10, while local governments set up their Local Government Financing Vehicles (LGFVs) to borrow from banks and capital markets. The vehicles were used to circumvent restrictions on legal borrowing. However, this off-budget financing was undertaken under lax credit conditions and entailed a vicious circle with banks, which hold most local bonds with limited trading opportunities.

In 2014, a revised budget law allowed provincial governments to issue bonds on their own, subject to an annual cap set by the National People Congress in order to get rid of LGFVs. A bond-swap program completed the law to lengthen the maturity of local government debt, in replacing high interest, short-maturity debt with provincial government bonds (2 to 20-year maturity). After the reform, the size of the local government bond market jumped from 1.1trnRMB to 18.1trn between 2014 and 2018. The reform was effective in helping maturities to rise, interest costs to decline, and the diversity of debt instruments to standardize. Nonetheless, the heterogeneity across provinces has pervaded. The less-developed provinces display the highest debt burden and the lowest bond-issuance capacity. Despite the disparities, the spreads across provinces was only 10 to 20bps, pointing out to inefficiencies in credit rating.

The IMF has listed the impediments for an attractive and well-functioning local government bond market [7]: low liquidity and a narrow investor base, ratings not related to fiscal fundamentals, a fragmented regulatory framework, a lack of disclosure and limited debt-management capacity in less-developed provinces. To strengthen financial markets, the State Council has ordered and monitored two types of policies: financial regulation on the one hand, to improve liquidity and broaden the investor base, and intergovernmental fiscal reform on the other hand.

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The credit rating problem is being handled, however, since general government-linked bonds have been woven into global benchmarks. In 2017, the BIS stated that Chinese bonds issued offshore were significantly underrated relative to the

(7) Lam R. and Wang J. (2018), "China's local government bond market", IMF Working Paper, no 219, September.

Figure 8 – Local Government Debt, 2016
(in % of GDP)

Sources: National Bureau of Statistics of China, Wind, authors' calculations.

same bonds issued onshore. The main responsibility lay with the regulators interfering in the rating business by requiring high ratings for all government bonds. This conflict of interests has put domestic rating agencies in a weak position towards international investors who wondered whether the domestic rating system was able to uncover risk. The government reacted after having decided to overhaul the financial regulation system in the National Financial Work Conference. In 2018, it suspended the license of Dagon, the largest domestic credit agency. Meanwhile, in January 2018, the government delivered a license for scoring Chinese bonds to S&P Global Agency. It is expected that the growing influence of global rating agencies would progressively improve both disclosure and rating of government bonds.

the reform in fiscal policy is more politically sensitive since it impinges upon social objectives

The 5th National Financial Work Conference in July 2017 has established the Financial Stability and Development Committee of the State Council in order to strengthen the financial supervisory framework by enhancing cooperative actions between the central bank, getting more power in supervision and macro prudential policy, and the three regulation agencies for banks, securities and insurance. Lately the bank and insurance regulation agencies have been merged. This institutional reform is the response to the 2015 financial destabilization. It underscores the government's decision to make financial stability a top priority by promoting prevention and closing loopholes in financial supervision to make finance serve the real economy with stricter governance. Moody's Investors Service has hailed the measures implemented to improve and standardize the information provided to bond investors. Cooperation amongst the financial authorities aims at improving prompt corrective actions against the emergence of new risks and eliminating market segmentation, to broaden the investor base. Ex post measures to deal with local government insolvency are also needed. Those measures are provisions to resolve local government debt and procedures to negotiate debt restructuring.

those reforms will abate vulnerabilities in subnational bond markets in shrinking excessive indebtedness of local governments, thus building investor confidence

The reform in fiscal policy is more politically sensitive since it impinges upon social objectives. It is in the making and should increase the role of central government for the purposes of raising social spending and reducing regional disparities. Improving relationships is crucial to China's rebalancing towards inclusive growth. Those reforms will abate vulnerabilities in subnational bond markets in shrinking excessive indebtedness of local governments, thus building investor confidence[8].

Figures 7 and 8 display the extent of the imbalances between revenues and expenditures of local governments and the disparities between provinces. China is a uniquely decentralized country, especially since public pensions and unemployment insurance are managed at the local level (table 2). That is why fast-growing education and health care expenditures require a major realignment in responsibilities.

Table 2 – Share of Local Governments in national Expenditure by type, 2017
(% of total)

	Central Government	Local Governments
Total Expenditure	15	85
Expenditure for Education	5	95
Expenditure for Social Safety Net and Employment Effort	4	96
Expenditure for Medical and Health Care, and Family Planning	1	99

Source: National Bureau of Statistics of China.

On the revenue side, there is a heavy reliance on revenue sharing because most indirect taxes accrue to central government, either totally or partially. It is the case of the value added tax (VAT). Income taxes (personal and corporate) are shared between central and local governments, but the personal income tax is very low (5% of total taxes). It follows that the revenue structure precludes the progressivity of the tax system. Taxes on properties are not linked to the value of properties. Because the taxes on properties are not able to contribute to revenues, the local governments have relied on land sales to generate income. This mechanism has generated speculative behaviours on real estate markets that have nurtured social inequalities. In addition, land sales are by definition a non-renewable source of income.

(8) Wingender P. (2018), "Intergovernmental fiscal reform in China," IMF Working Paper, no 88, April.

The encompassing fiscal plan was announced in August 2016 with three goals: to clarify expenditure responsibilities, to recentralize key functions and to consolidate the transfer system. On the spending side, exclusive central responsibility for public spending is based upon public goods of national scope and broader access to basic social services to support development across regions. Health care and basic education (primary and secondary levels) can be partially decentralized under central coordination. Social protection will be backed by a central provision of social insurance to assert the principle of justice as equity with more central funding to improve the quality of services.

On the revenue side, centralization is recommended for both macro stabilization and income redistribution. A recurrent market value-based property tax progressive with wealth is being experimented. An equalization transfer system is imperative to compensate regions with low-tax revenue capacity in order to enforce national standards in health care, education and social protection. The amount transferred to individual provinces will be based on an expenditure-sharing formula, conditional on the quality of services.

This broad and ambitious fiscal reform, joined to the consolidation of the bond market described above, should complete the management of excessive borrowing that is under way. LGFVs are going to be entirely eradicated by bringing all the remaining debt under local government budget, thanks to increasing allowance of official local government bonds *via* the bond-swap program. China's bond market is going to be able to compete for international investor portfolio diversification. Better disclosure and ratings that are more accurate are improving the information provided to bond investors, allowing investors to better assess and price risks.

Broad, deep and resilient bond markets need market makers. The fiscal reform will increase the share of central government bonds with the centralization of expenditures providing basic social services. The financial reform is in the process of reducing the segmentation of the whole market for public bonds *via* better information, supervision and risk management. With the safety net reinforced at the national level, domestic saving will be free to exploit more investing opportunities in the liabilities of large institutional investors, insurance companies and pension funds. The latter follow long-term investment strategies and can act as stable market makers.

The reforms pertain to the doctrine of a mixed economy and are consistent with the rise of the middle class that takes advantage of the vast consumer market. As long as real income gets improving and unemployment is limited, macroeconomic policy can match the management of short-term disturbances and the long run planning of strategic objectives. Amongst big countries, China is the one that has undertaken the most ambitious environmental policy, while making big investment in R&D and higher education. The most worrisome challenge does nont lie in China's society but in global politics.

4. China's own path for gradual internationalization

The persistence of low interest rates in advanced countries gives emerging market economies (EMEs) an opportunity to issue government bonds in their own currency to attract foreign investors. Such an awkward pattern makes international investors in search for yield ready to buy government bonds in EMEs, even more than long-run interest rates in European core countries and in Japan linger close to zero. As stated above, the yield differential between EME bonds issued in their own currencies and the bond returns in advanced countries is advantageous despite the currency risk, but in specific countries (Argentina, Egypt, South Africa, Turkey). The yield spread is large enough to make a buffer against currency risk.

Furthermore, the yield curve has turned inverted in the US for the first time since early 2007. Inversion of the yield curve has always been a forewarning of a recession in the US since the end of World War II, albeit without giving any indication as to the timing of the downturn in the business cycle. The inversion of the yield curve is partially due to the slowdown in China, which in turn is linked to the protectionist policy in the US. For the first time, US and China macroeconomic outlooks are intertwined, but not mechanically complementary. This is an argument for sharing risks. Nonetheless, betting on EME currency bonds is betting against the dollar.

This is exactly what China's strategy is all about in internationalizing the Renminbi. It is why the reform in Chinese government bond market is so critical in the present stage of internationalizing the domestic currency. By building up deep and resilient bond markets, China and some other large EMEs can develop a new class of safe assets, which can withstand competition with bonds in low-growth advanced economies. The bond market is the linchpin in the transformation of the financial system to meet the needs of the new innovative digital economy that tends to find financial resources outside the traditional bank financing.

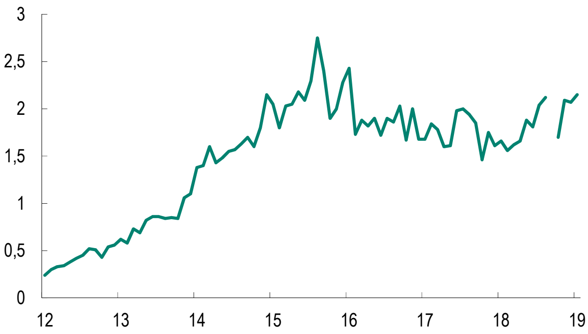
This is a long-term strategy whose international counterpart is the internationalization of the Renminbi to participate to a multilateral world order beyond the key currency system. A long-term strategy anyway, since the share of the renminbi in international payments is still very low and hampered by the turmoil of the 2015 opening of the capital account (figure 9).

Cerutti and Obstfeld recently looked at China's financial markets in the global context, comparing them with other Asian countries[9]. Foreign participation in Stock and bond markets is exhibited in table 3.

One can see that the East Asian model, represented by Japan and Korea, opens the Stock market much more than the bond market. The case of Japan is striking. The public debt is by far the largest of the world in proportion to

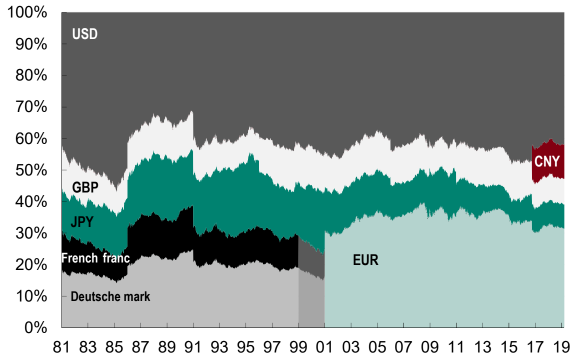
(9) Cerutti E. and Obstfeld M. (2018), China's bond market and global financial markets, IMF Working Paper, no 253, October.

Figure 9 – RMB's share as a world payments currency
(% of global payments))



Source: SWIFT.

Figure 10 – Composition of SDR basket



Source: IMF.

GDP. Nonetheless, national investors hold the larger part. Insurance companies, pension funds and above all the postal system are the main investors that permit the yield on public bonds to stay extremely low. No doubt that China, with its large household and corporate savings and the will of the State Council to keep a comprehensive regulation of finance, will keep the share of foreign investors in the bond market lower than Japan. However, given the size of the bond market and the potential of development with the restructuring of the domestic financial system, there is a large margin of expansion. The very high level of foreign investors in the US bond market is mainly due to the "safe asset" syndrome linked to the key currency status of the dollar. In our view, the decline of this status with the continuous rise in world GDP of countries that are not subordinated to the political ideology of Western countries is inevitable. It opens the question of the future international monetary system to preserve a multilateral world order.

According to the authors of the IMF paper, deepening the bond market in China would raise the impact of current Chinese policies upon key financial centers, regarding the capital flows from those centers to China. Back to the Mundell triangle in figure 1, China will move steadily to vertex C if China's capital markets are developing, influencing international investors' portfolios at the margin to buy a larger share of China's public debt. The long-run solution is clear. With well-working domestic financial markets, China will reach vertex C, *i.e.* a combination of free capital flows and independent monetary policy, as soon as broad, deep and resilient domestic capital markets have been established and tested. In the meantime, a mix of capital controls should be retained, together with a managed exchange rate regime against a currency basket to preserve as well as possible the autonomy of monetary policy.

Before being fully convertible, the Renminbi has reached the status of a freely usable currency. Key milestones are the inclusion in SDR basket, in foreign reserves of EMEs and developing countries, in global bonds and equity indices. Regarding the SDR, the renminbi was introduced in the basket at the 2015 revision (figure 10). The development of domestic financial markets should give China a higher share at the next revision, more in line with the importance of the country.

the Belt and Road Initiative (BRI) provides an overarching framework for China to achieve its economic and strategic goals

The Belt and Road Initiative (BRI) provides an overarching framework for China to achieve its economic and strategic goals[10]. BRI has the potential to bring infrastructure, new trade route and better connectivity between China, Africa and Europe. BRI opens opportunities to recipient countries that are infrastructure-constrained, because their lack of public goods is undermining their development. The Asian Development Bank (ADB) estimates that countries gathered in the BRI need to invest $22.6trn in infrastructure from 2016 to 2030 ($1.5trn yearly) in electricity generation, transport and telecom in order to drive up growth. Conversely, long-term investments generate potential growth for sustaining future debt-servicing capability. BRI can change the pattern of globalization with the support of massive infrastructure investment *via* long-term financing.

Table 3 – Share of foreign participation in stock and bond markets

In %	Stock market capitalization				Bond market outstanding			
	2014	2015	2016	2017	2014	2015	2016	2017
China	1.9	1.6	1.5	2.4	1.9	1.5	1.3	1.6
Japan	17.4	17.4	16.4	16.8	7.4	8.5	8.7	9.2
Korea	31.2	28.6	31.2	32.9	6.9	6.5	5.6	5.9
US	33.1	34.6	33.1	34.8	27.0	27.4	27.8	27.6
India	3.9	3.9	3.8	2.8	0	2.8	2.3	3.2

Source: IMF Financial Statistics.

(10) Miller, T. (2017), "Belt and Road to leadership", China Economic Quarterly Review, vol.21, no 2, June.

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CEPII Policy Brief
CEPII’s insights on international economic policy

CEPII – Paris – 2019
No ISSN: 2270-258X

Editorial Director: Sébastien Jean
Managing Editor: Christophe Destais
Production: Laure Boivin

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