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China and the Impossible Trinity: Economic Transition and the Internationalization of the Renminbi

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Abstract

With the recent formal inclusion of the Renminbi (RMB) into the IMF's Special Drawing Right (SDR) currency basket, prospects for further internationalization of the RMB are improving. However, as China attempts to simultaneously undergo an economic transition into a more balanced growth model, and the internationalization of its currency, pressures are mounting from the impossible trinity. The latter is based on the Mundell-Flemming model. The latter posits a policy-choice problem in which a country cannot simultaneously have unfettered capital movement, an independent monetary policy, and a fixed exchange rate system. Naturally, three baskets of policy combinations are possible. Historical events such as the Asian financial crisis (1997-1998) have demonstrated that countries are strictly bound by the impossible trinity.

The paper posits that China should opt for the policy basket of a fully liberalized capital account, fully liberalized interest rates, and maintain its current basket peg exchange rate regime but eventually allow for a greater spread. The policy sequence should begin with the liberalization of the interest rates while maintaining the current level of capital controls. Once adequate time has been given to allow the domestic financial and economic system to adjust and consolidate itself, the liberalization of the capital account should be the next goal. Finally, the basket peg exchange rate regime should be allowed a greater float. While the interest rates and the capital account are undergoing liberalization, the exchange rate should operate as a policy tool so as to minimize shocks to the domestic economic system. The policy basket and sequence have been chosen because they are conducive to a risk-averse economic transition from the current export-led growth model. The paper visits the cases of Hong Kong, the United States, and the European Union to examine their policy choice vis-à-vis the impossible trinity in order to make a case for why China should opt for the suggested policy basket.

Keywords: *Renminbi (RMB) internationalization, economic transition, impossible trinity*

1. Introduction

The issue of Renminbi 人民幣 (henceforth RMB) internationalization has, in the post-2008 financial crisis era, become increasingly popular both in policy and academic circles. Whether the literature approaches the subject of currency internationalization through a political economy perspective (Helleiner, 2008; Strange, 1971, 1986, 1988), or a more functional analysis (Krugman, 1984; Chinn and Frankel, 2007;

Eichengreen, 2005, 2011; Eichengreen and Flandreau, 2010), it is evident that RMB internationalization is admirably difficult and complex. For the first time in the history of currency internationalizations, the internationalization of the RMB is not being driven by market forces; rather, it is a top-down government-led project (Petkova, 2013). This means that the issues concerning currency internationalization have been and still are being evaluated by the Chinese central government. This leads to the creation of strategies and policy paths *a priori*. Moreover, China is pushing for the internationalization of the RMB in the absence of full convertibility under the capital account, and non-market-based exchange rate and interest rate (He, 2015). While in recent years much progress has been made towards the liberalization of the aforementioned three areas, at the time of this writing, China still has not accomplished full liberalization of either three. Nonetheless, this allows for novel approaches to understanding and analyzing RMB internationalization. It is important to note here that this paper focuses on the functional aspects of currency internationalization; however, it is duly acknowledged that a large corpus of literature is focused on the political economy aspects.

As such, the article approaches RMB internationalization in a specific manner: it seeks to provide and justify a policy path targeted at tackling the "impossible trinity". The latter is based on the assumption that a country whose currency is internationalized cannot simultaneously have free capital movement (a liberalized capital account), an independent monetary policy (regulated interest rates), and a fixed exchange rate. To this effect, it is only possible to have two of the aforementioned policies. As such, there are only three possible policy baskets. Firstly, a country can opt for a fixed exchange rate regime with a fully liberalized capital account, but forgo the independent monetary policy. Secondly, it can choose a domestically geared monetary policy

with a free capital account, but leave the exchange rate as a free float. Lastly, it can favor a fixed exchange rate regime with an independent monetary policy, but have a control on capital movement. There are, of course, benefits and drawbacks to each basket. That said, it appears that there is a consensus that China should opt for either the first or third basket[1]. As such, this paper supplements the current "impossible trinity" literature by providing a justification for pursuing the first policy basket based on RMB internationalization and economic transition into a more consumption-focused economy.

This paper is comprised of three sections. The first one examines literature pertaining to the impossible trinity, both China-focused and how other states have approached the problem. The second looks at the two other policy baskets of the impossible trinity and makes a case as to why they are not ideal for China's situation. The third section analyzes, in detail, the recommend policy basket, specifically within the context of benefitting the Chinese economy. Fourthly, the article goes over the specific policy sequence that China should aim for with regard to achieving the suggested basket's policy goals. The final section examines the possible drawbacks of the suggested basket.

The covered issue is of relevance because a mismanagement of the impossible trinity can have devastating economic consequences domestically as demonstrated by the Asian financial crisis whereby those affected countries attempted to disregard the impossible trinity and maintain free capital movement, an independent monetary policy, and a fixed exchange rate only to witness their foreign exchange reserves emptied and their currencies collapsed. However, China's behemoth economic size means that should it mismanage the impossible trinity, not only will its domestic economy face tremendous turbulence, but it will also send shockwaves throughout the global economy.

The claim that this policy basket suits China's circumstance is based on four assumptions. Firstly, Chinese financial reforms will transform its finance and banking sectors into more lucrative, competitive, and international entities. Secondly, China is transitioning from an export-led economic growth model into a more consumption-driven model. Thirdly, while an economic transition is happening, China still needs to and will need to have a sizeable exporting sector in the near future. Finally, RMB as an international currency will not reach the same extent of internationalization as the U.S. Dollar in the foreseeable future. The first assumption serves as the basis for full capital account liberalization. Without unfettered capital movement, China's finance and banking sectors will not be able to become internationally competitive. The second assumption is the logic behind the full liberalization of the interest rates. The current "financial repression" regime, which is essentially government-regulated interest rates aimed at consolidating government-directed investments, heavily favors state-owned enterprises (henceforth SOEs) while penalizing individual savers and small and medium enterprises (henceforth SMEs). In order for China to move to a more consumption-driven model, its domestic ability to innovate has to improve. This means creating an environment whereby SMEs can thrive, and this requires the lifting of financial repression so as to allow SMEs to acquire better loan rates. At the same time, individual savers need to be encouraged to consume and spend more, and this also requires the lifting of financial repression so as to allow for better deposit rates. Finally, the third and fourth assumptions make a case for a managed floating exchange rate with a greater floor and ceiling. On the one hand, China's exporting sector will still play a significant role in the economy; this means that a free-floating exchange rate is not desired as there is too much risk involved with exchange rate fluctuations which damage the already small profit margins of the exporting sector. On the other hand,

allowing the RMB to appreciate gives impetus to increase domestic consumption and imports by giving individuals a greater purchasing power. Moreover, insofar as the RMB is not a widely accepted reserve currency like the U.S. Dollar, it does not require a free floating exchange rate. Due to these reasons, the policy basket that I am recommending to tackle the impossible trinity is beneficial for China's situation.

2. The Impossible Trinity: A Synoptic Overview

The impossible trinity is based on the Mundell-Flemming model (Mundell, 1961, 1963; Flemming, 1962) that has been further developed by other scholars (Burda and Wyplosz, 2005; Obstfeld, Shambaugh and Taylor, 2004). Essentially, the theory is a policy-choice problem whereby a country cannot have, at the same time, unfettered capital movement (fully liberalized capital accounts), an independent monetary policy (regulated domestic interest rates), and a fixed exchange rate. The central bank can only have two of the three policies. The general theory stipulates that under the conditions of free capital mobility and a fixed exchange rate regime, the country's central bank would be unable to dictate the money supply as a result of unfettered capital movement and consequently, be unable to set the domestic interest rates. The free flowing of capital would push the domestic interest rates towards the international rates; thus the central bank loses its capacity to set a domestic monetary policy. The following example illustrates this in detail:

Suppose a country with an independent monetary policy that allows its central bank to set the domestic interest rates below the market (global) interest rates so as to allow cheaper loans in order to spur economic growth. The difference in interest rates between the domestic and the

market would entice investors to sell the domestic currency due to the lower interest rate and buy foreign currencies. This results in depreciation of the domestic currency. Now, the country also has a fully liberalized capital account which means no capital control tools can be used to prevent capital flows. Likewise, under a fully liberalized capital account, in order for the central bank to prevent a complete collapse of the domestic currency is to decrease the excess circulation of its domestic currency through mass purchases with its foreign exchange reserve. However, no central bank has an unlimited foreign exchange reserve[2]*. Once its reserves are dry, the central bank would be unable to maintain the exchange rate, and the domestic currency collapses. This is exactly what happened to the countries affected during the Asian financial crisis.*

How have other countries dealt with the impossible trinity? Yip (2011) highlights three examples. Firstly, Hong Kong has opted for a fully liberalized capital account, a non-independent monetary policy whereby the money supply is determined by market forces and the interest rates are linked with the U.S. interest rates, and a fixed exchange rate that uses a currency board system that is pegged to the U.S. Dollar. Singapore, on the other hand, has chosen free capital movement, an independent monetary policy, but made its exchange rate a free floating regime. The United States, like Singapore, uses a free floating exchange rate regime, its monetary policy is independent and set by the Federal Reserve, and free capital movement is allowed. Another example that is not covered by Yip is the European Union, and it has opted for a stable exchange rate, free capital movement, and a non-independent monetary policy whereby its interest rates closely follow the world rates. These examples serve to demonstrate that the impossible trinity is unavoidable and must be dealt with. As Riedel, Jin and Gao (2007: 172) state, "It is therefore

impossible to avoid the force of the impossible trinity indefinitely. The validity of this proposition has been proven time and time again throughout history, as one country after another has been forced to abandon fixed exchange rates in order to preserve monetary policy as a tool of macroeconomic management."

Lo (2015) argues that prior to the initiation of capital account liberalization in 2005, the impossible trinity did not affect China, nor was it a concern for the central government. The closed capital account meant that China was able to enjoy both an independent monetary policy and a fixed exchange rate. However, since then, China's capital account has witnessed progressive liberalization with steady capital inflows acting as a catalyst for further liberalization. Lo further explains that due to China's deep foreign exchange reserves, the People's Bank of China (henceforth PBoC) has been able to "sterilize" the effects of the impossible trinity with policy tools such as implementing a reserve requirement ratio in order to maintain monetary and exchange rate controls. However, such a method, even with a limited liberalized capital account, is heavily draining on the country's foreign exchange reserves. As such, Lo argues that, eventually, China will have to forgo interest rates or exchange rate controls.

On the one hand, the Institute of World Economics and Politics (2003) of the Chinese Academy of Social Sciences argues that it is imperative for China to maintain an independent monetary policy due to the size of its economy. In addition, a fixed exchange rate is also needed so as to develop the real economy and maintain price stability. As such, the capital account should not be fully liberalized as free capital movement can disrupt the exchange rate and hamper economic development, especially in the absence of a fully developed foreign exchange market in China. Yip (2011) also argues for this policy basket with two minor revisions. Firstly, he suggests that China maintains its

current level of capital account openness, which means that further liberalization or more capital controls should be held off; and allows the RMB to appreciate incrementally which means a managed floating exchange rate. He argues that an independent monetary policy is important because like the U.S., a large domestic market is necessary for economic output. At the same time, a liberalization of the exchange rate can result in rapid appreciation of the RMB and cause domestic and regional recessions. The latter can have severe economic and even political consequences for China. Of course, if China wants an independent monetary policy, it must maintain current levels of capital controls. Otherwise, more capital account liberalization would endanger exchange rate controls and ultimately disrupt domestic economic activities. Nonetheless, capital controls mean a reduction of monetary efficiency. Yip (2011) warns of the dangers of full capital account liberalization without a complete deleveraging of the financial sector, especially with regard to non-performing loans. Since unfettered capital mobility gives more room for such bad loans to be made, it is advised that China maintains capital controls until these loans are dealt away with.

Huang and Wang (2004) have made a case for moving towards more exchange rate flexibility. They argue that since China's entry into the WTO, China is becoming increasingly integrated with the global economy in a financial sense, and as such, the exchange rate should move towards further liberalization. Moreover, China should not forget the experiences of the Asian financial crisis when hot money devastated domestic economies leading to currency and banking crises due to fully liberalized capital accounts. In essence, the authors concur with the previous authors and argue for a non-liberalized capital account to avoid the dangers of hot money, an independent monetary policy so that China can maintain monetary controls, but opt for a more flexible exchange

rate as further integration with the world economy will necessitate it. In a more general context, Rodrik (2011) argues in his book that more countries should opt for restricting capital movement, an independent monetary policy, and a fixed exchange rate regime. He makes the case that rapid financial integration on the global scale has increased the frequency and volume of capital flows, and as such, the effects of free capital movement have been amplified in this current era. Due to this, he argues, economic crises have become more habitual and more devastating. He points to the fact that global GDP (gross domestic product) growth was the fastest when capital controls were orthodox economic practice during the Bretton Woods era.

Riedel, Jin, and Gao (2007) have however demonstrated that even with capital controls in place, there are still significant levels of capital flows going in and out of China. Moreover, this is not a recent phenomenon. Prior to capital account undergoing liberalization in 2005, between 1997 and 2002, non-FDI capital outflows[3] managed to overtake FDI inflows to create a capital account deficit; and after 2002, non-FDI inflows began to increase. As such, it appears that the de jure capital controls were and are not able to completely limit the prohibited capital flows. The problem, then, is that given this situation, capital controls are not effective; therefore, capital account liberalization is only natural. At the same time, there have been, since 2001, significant domestic and international pressures on China's exchange rate regime to appreciate the RMB. As such, the authors conclude that China will eventually opt for a free-floating exchange rate regime, but for now, it will try to find the optimal flexibility. Furthermore, they also expect capital account liberalization, and a liberalization of the financial system (interest rates).

Chinese academics have likewise commented on the impossible trinity and offered their takes on what China's approach should be. Zhao (2015) argues that China should strive for an independent monetary

policy, a limited capital account, and a managed floating exchange rate with a ceiling and floor. She argues that stabilizing the exchange rate is the most important mission of the PBoC, and that while depreciation may be bad, expectations of continuous depreciation are even worse. Furthermore, she urges the more prevalent use of the reserve requirement ratio[4] to manage the exchange rate. At the same time, she argues that a slowing down of the liberalization of the capital account would give more policy flexibility to manage the exchange rate and set the domestic monetary policy. Like many others, she is concerned about the effects of hot money on the domestic financial system under a fully liberalized capital account. While she realizes that RMB internationalization requires capital account liberalization, she urges extreme caution with regard to the liberalization process.

Chen and Yu (2010) make the case that China should pursue an independent monetary policy, unfettered capital movement, and a free-floating exchange rate regime. They argue that the ability for the central bank to dictate the money supply is the basis for many other policy tools. In using these policy tools, the central bank can then effectively lead and direct the economy in order to maintain macroeconomic flexibility. Hence, an independent monetary policy is paramount. With an independent monetary policy, a free-floating exchange rate regime becomes much easier to control. At the same time, a free-floating RMB, in turn, contributes to macroeconomic flexibility as the domestic monetary policy would become more efficient. They do, however, argue that this policy basket is a long-term goal, and that in the absence of a fully developed domestic financial system and a large enough domestic market size to absorb the economic turbulence of unfettered capital flow and a free-floating RMB, this policy basket would be unattainable. The article concurs with these authors on this point. They also make an interesting point concerning the actual extent to which the impossible

trinity is binding. They argue that within the impossible trinity, there is actually quite a lot of flexibility with regard to the extent of capital account liberalization, the range of exchange rate regimes that can work, and the degree to which the monetary policy remains independent.

This rather brief literature review on the impossible trinity has highlighted a preference for an independent monetary policy to be the foundation for a selecting policy basket.

3. The Impossible Trinity: Other Policy Baskets

At this point, it is important to reiterate the original proposition of the article: China should, against the backdrop of RMB internationalization and economic transition into a more balanced model between exports and consumption, opt for the policy basket of free capital movement, a non-independent monetary policy, and a managed floating exchange rate regime with a greater ceiling to floor spread. As such, it is necessary to explain why the other policy baskets are not ideal for accomplishing the aforementioned goals.

Firstly, the policy basket of free capital movement, an independent monetary policy, and a free-floating exchange rate regime. The initial evaluation of this basket is that while it is beneficial for RMB internationalization, it would hamper and make more difficult the economic transition. A non-managed exchange rate would see the RMB appreciate for a period of time until market supply and demand have reached an equilibrium on its value. This appreciation would drastically hurt China's exporting sector and weaken GDP growth as China's economy is still dependent on exports. Moreover, a rapid decline in the exporting sector can lead to mass lay-offs, and in the absence of a well-functioning social welfare system, there is potential for social unrest which would further damage attempts at economic reform. While RMB

appreciation can indeed boost purchasing power to increase domestic consumption, this transition requires time. A free-floating exchange rate would appreciate the RMB too quickly without giving ample time for the exporting sector to adjust. At the same time, unfettered capital movement can always inject risk into the domestic financial system with the flow of hot money. Furthermore, consider the following scenario. Suppose that the RMB is appreciating due to the free-floating exchange rate, and the exporting sector is facing serious problems. Compounded with the flow of hot money making the domestic financial sector increasingly volatile, the ability for the PBoC to regulate domestic interest rates would be seriously questionable. On the other hand, this policy basket is useful in spurring RMB internationalization. Free capital movement would drastically increase the use of RMB for trade settlements, and allow for the development of a proper foreign exchange market. A free-floating exchange rate would make the RMB more attractive to hold for two reasons. Firstly, it would not be subject to central bank intervention to either appreciate or depreciate, rather, market forces would determine its value. Secondly, since the RMB is expected to appreciate, it would increase the purchasing power of importers of Chinese goods. Moreover, an independent monetary policy would mean that the PBoC can expand the money supply as it sees fit in coordination with RMB expansion. As a final note, when the RMB has consolidated its status as an international and reserve currency in the future, and China's economy has shifted to become more consumption-based, this could be an ideal policy basket choice for China in the long-term.

Secondly, the policy basket of limited capital movement, independent monetary policy, and a fixed exchange rate regime. This policy basket would be beneficial for economic transition, but it would hamper efforts at RMB internationalization. Firstly, with regard to the

capital account, only two possible outcomes can occur. Either it keeps moving towards more, if not full, liberalization, or it maintains its current level of control and openness. This is because adding more capital controls is likely to cause investor panic if they suspect that their capital may eventually end up trapped in China which can result in large capital outflows until the controls are set in place. On the other hand, should the capital account move towards more liberalization, the point of this policy basket is defeated. As such, the only plausible situation is maintaining the current level of control and openness. This can shelter China from global economic volatility and domestic volatility as a result of sudden capital flows, which is ideal for a smooth economic transition. Coupled with a fixed exchange rate, the PBoC can allow gradual appreciation of the RMB and make changes when necessary, for example, if the appreciation is taking too much of a toll on the exporting sector and it cannot adjust. At the same time, the smooth economic transition is also predicated on significant interest rate reforms. For example, the issue of non-performing loans would have to be dealt with, and the financial repression regime would have to be lifted carefully. However, with regard to RMB internationalization, its progress would have to slow down and become more incremental due to restricted convertibility under the capital account. China would have to rely on the methods used right now for RMB expansion such as bilateral currency swap agreements, the expansion of RMB clearing banks, and further development of the off-shore RMB markets. On the other hand, the limited capital movement and fixed exchange rate would still see a different exchange rate for on-shore and off-shore RMB markets much like now. The worry here is that due to this difference, arbitrage can occur. All in all, this policy basket can be a good option in the short term for smooth economic transition; however, it comes at the cost of hampering RMB internationalization.

Lastly, Yip's point regarding the need for an independent monetary policy due to China's domestic market size as being similar to the U.S. domestic market size needs to be challenged. He argues that the large domestic market is necessary for output. However, given China's current domestic market size, this point is not valid. Currently, it is too small and underdeveloped vis-à-vis the U.S., hence the need for economic transition into a more consumption-based economy. Therefore at this moment, an independent monetary policy should not be a top concern for China. That being said, the untapped potential of the Chinese domestic market is immense. According to World Bank data, Chinese household final consumption expenditure as a percentage of GDP reached 36.5% in 2014 (World Bank, 2014). This means that the Chinese domestic market only constitutes a little over one third of China's total GDP. Fortunately, household final consumption expenditure annual percentage growth in 2014 grew by 9.1% (*ibid.*). At the same time, the household final consumption expenditure per capita growth was at 8.6% in 2014 (*ibid.*). This goes to show that Chinese domestic consumption, while still small, is indeed on the rise. Furthermore, despite a dip in 2014 at 4.2% Chinese imports of goods and services have been growing at an average of 8.8% per annum between 2011 and 2014 (*ibid.*). As such, there is still a lot of potential for the Chinese economy with regard to becoming more consumption-focused. There is evidence to suggest that a sufficiently large domestic market is needed to field an international currency. For example, the Swiss Franc became a reliable investment during and in the years following the 2008 financial crisis. However, despite pressures to appreciate, the Swiss central bank initiated an exchange rate ceiling on the Franc (Graham, 2015).[5] This is because the Swiss economy is not sufficiently large enough to back up such a strong currency. The adverse effects on the economy would be significant, such as the damaging of export competitiveness. Insofar as the RMB is not

internationalized to the extent that the U.S. Dollar is with regard to global demand, it is preferable for the market to drive the demand and supply of the RMB. While an independent monetary policy may give the PBoC and central government peace of mind, pragmatically, it should not be a top concern as the domestic and global economic conditions are not yet ripe for an independent monetary policy.

There are, of course, many more potential problems with these policy baskets and only a few problems were highlighted so as to conduct a quick overview in order to demonstrate the extent to which these policy baskets are not beneficial for China.

4. Policy Basket Analysis: Interest Rate Liberalization

The primary goal of interest rate liberalization in this policy basket is to aid in the transition towards a more balanced economy between exports and domestic consumption, and spur RMB internationalization. There are currently two major problems affecting China's domestic financial system. Firstly, the financial market is underdeveloped. One requirement of currency internationalization is that the domestic financial market needs to be open, deep and broad. Secondly, the presence of strong domestic financial regulations; specifically, the financial repression regime which has been put in place to service large SOEs. This regime has distorted the efficient allocation of funds and loans in the economy due to heavy state intervention. These two issues significantly impede China's economic transition and efforts at internationalizing the RMB. As such, through full interest rate liberalization – having the domestic interest rates correspond to the world interest rates – the Chinese economy can reap many benefits.

Currently, the Chinese domestic financial market can be considered deep (Naughton, 2007); that is, the ratio of the M2 money supply – the

broad money supply – to the country's GDP is significantly high. However, the market is not broad, in the sense that the system has little room for market-based financial instruments such as bonds, derivatives, and futures, for example (Dobson and Masson, 2009). Instead, most of the system is banking and related services. The banks, especially the large ones, are state-owned, and the smaller banks are state-controlled. As such, the banking sector faces virtually no competition from other sectors of the financial system. One notable problem is the controls on corporate bonds (*ibid.*). While liberalization of corporate bond issuance has been implemented, corporate bonds still do not compare to the size of government and central bank bonds. Moreover, corporations often forgo bond issuance on the domestic market and opt for foreign markets instead. UBS (2006) argues that this is due to the underdevelopment of the domestic bond market whereby lack of benchmark rates, poor liquidity, and an immature credit market all distort proper risk and reward analysis. Similarly, Zhou (2005) argues that these problems are compounded by institutional weaknesses such as bankruptcy laws still in development, independent default procedures from market norms, lack of developed credit rating system, lack of up-to-date accounting standards and bond issuer transparency, and lack of market discipline. The PBoC is also in need of reform. Its control over the money supply and credit is not done through market operations, but through direct intervention by changing reserve requirements or dictating the inter-bank deposit and lending rates (Naughton, 2007). Furthermore, while China does enjoy an independent monetary policy as of now, the PBoC's ability to implement the latter is severely hampered due to the relatively inflexible exchange rate. These issues are to demonstrate the extent to which the domestic financial system is underdeveloped.

Interest rate controls are a macroeconomic policy tool for developing economies. State-directed funding and loaning give the

government more control over which parts of the economy it wants to develop. However, Li (2014) notes that such controls usually result in inefficient financial resources distribution. Specifically, within the context of China: "Distorted interest rates serve as a hidden tax on savers and a subsidy for borrowers, which encourage leverage and lead to unproductive use of credit. Not surprisingly, interest rate controls are often associated with high levels of non-performing loans and frequent recapitalization of banks." This leads to the issue of financial repression. A study by McKinsey Global Institute (2006) found that private corporations only received around 25% of bank loans while producing over 50% of China's economic output. As such, there are significant efficiency improvements to be made through interest rate liberalization. While SMEs have been shown to be instrumental in innovation, they also have been outcompeting with large SOEs in terms of productivity and efficiency. However, Podpiera's study (2006) demonstrated that the profitability of a private corporation had no effect on loan growth from banks. As a result, the large banks were being outcompeted by other financial institutions that had more profitable customers. This has led to the development of the shadow banking sector[6] which has, in recent times, become an integral part of China's domestic financial system (Shevlin and Wu, 2014) that provides risky and high-interest loans for those SMEs that are unable to obtain loans from the banks. Unfortunately, due to the high loan rates, many SMEs often fail. This goes to show that the current domestic financial system does not have the institutional capacity to support SMEs. Moreover, the oversight of the PBoC distorts the efficient allocation of credit through focusing on sectorial restrictions as opposed to the risk and productivity potentials of borrowers and projects, which often contradict market forces (Dobson and Masson, 2009). The authors provide the following example: a productive and profitable corporation in a restricted sector would be

denied credit, while a less productive one in a permitted sector would obtain credit. At the same time, small entrepreneurs are virtually barred from accessing loans due to state regulations requiring banks to obtain disproportionate levels of collateral. Essentially, SMEs are barred from accessing the cheap and elastic loans that SOEs enjoy.

Interest rate liberalization, Li (2014) argues, "generally leads to more efficient allocation of financial resources, widens credit for previously underserved sectors (especially small businesses), and promotes more sustainable growth." Likewise, diversifying the range of financial instruments and the market at large, which is a necessary step for liberalization, is also conducive to economic growth and stability (Clarida, Gali and Gertler, 2000; Bernanke and Gertler, 2001). However, Mehran and Laurens (1997) warn that the benefits of interest liberalization are predicated upon proper timing, pace, and sequencing. Furthermore, premature and rushed liberalization usually results in interest rate volatility and capital outflows which can lead to bank failures. At the same time, sluggish liberalization can make room for new problems. Nonetheless, Liao and Tapsoba (2014) argue that this process of interest rate liberalization will not be easy for China, and that a period of learning-by-doing is integral to a smooth and successful transition.

How will liberalizing interest rates aid in economic transition? If the goal is to stimulate more domestic consumption, then there are three major benefits. Firstly, SMEs would be able to access loans from the banks as opposed to heavily relying on the shadow banking sector. On the one hand, this decreases the amount of non-performing corporate loans in the system, and reduces the overall risk in the system by flushing the risky instruments that the shadow banking sector offers. On the other hand, SMEs would finally have broad institutional support which can allow them to thrive. Their high levels of productivity and

efficiency vis-à-vis the SOEs not only make them prime employers, but are also conducive of innovation. Domestic innovation is rightfully important for raising domestic consumption, especially in high-tech sectors. Instead of having to rely on increasing imports, domestic consumption can be spurred with domestic commodities. Having a substantial domestic market size is also crucial for fielding an international currency, especially if the RMB becomes a widely accepted reserve currency. Furthermore, as SMEs thrive, they will naturally want to expand abroad once they are capable. This is crucial for RMB internationalization as the expansion of Chinese industry and business would increase RMB-denominated trade and eventually be able to issue RMB-denominated corporate bonds.

Secondly, there would be a complete refurbishment of the domestic financial system whereby market forces, not government guidance, sets the pace of the system's operation. This means the creation of more diverse financial instruments and markets for those instruments which can spur the development of the financial sector towards more trading and high-finance activities, as opposed to being dominated by banking. Moreover, the creation of markets for these financial instruments would, on the one hand, allow more of the population to enter the markets; on the other hand, more corporations can rely on the domestic market for funding instead of going to foreign markets. In short, the domestic financial market would develop to become broader. At the same time, market forces would reorganize the distorted allocation of funding and capital in the system, and properly set the incentives and risks. A refurbishing of the system would also mean the upgrading of the financial system's practices, especially with regard to accounting, risk and reward analysis, credit management, and finally the drafting of a proper bankruptcy law. As a result, the financial market would become increasingly open and more reflective of the market conditions. In

essence, interest rate liberalization would result in a deep clean and reorganization of the underdeveloped domestic financial system.

Thirdly, liberalizing interest rates aids in the financial system's process of deleveraging by cleaning up non-performing loans. Likewise, in conjunction with the previous point, the banking sector would be taken off its training wheels and forced to become more competitive. According to Li (2014), some bankers are worried that liberalization would force changes in existing business models, and increase competition. This is not necessarily a bad thing, as Li (2014) further explains that: "To survive in a market-based interest rate environment, Chinese banks will need to pass the 'market test' of their ability to properly price counterparty risks and manage balance sheets as they embrace new business opportunities and innovative products." As the banks become more competitive, they would acquire the confidence and ability to compete internationally, naturally leading to an outward expansion of the Chinese banking sector. This will be crucial for RMB internationalization as Chinese banks would be able to provide liquidity and convertibility abroad. Of course, there will no doubt be difficulties and problems, but this deep cleaning of the banking sector is beneficial in the long run as the economic distortions of financial repression are becoming increasingly burdensome on the economy. However, this deep cleaning has to be gradual. The dangers of rapid liberalization are too costly, especially for an economy the size of China's.

In sum, interest rate liberalization is becoming an increasingly pressing issue as the underdeveloped and distorted domestic financial system is taking a greater toll on the Chinese economy at large. While interest rate liberalization is key to economic transition and RMB internationalization, its progress must be gradual and cautious in order to avoid major economic disturbances which can result in detrimental consequences.

5. Policy Basket Analysis: Capital Account Liberalization

The present capital account set-up slows down the pace of RMB internationalization. There are still capital controls in place and the RMB is not yet fully convertible[7]. While a limited capital account is good for weathering global economic turbulence[8], there are major benefits to be reaped with a fully liberalized one, albeit there will be more risk in the domestic financial system. Currently, according to Gao (2013), FDI and bank loans are subject to the least amount of capital controls while the currency market is more restricted, and derivatives and other financial instruments are the most controlled with non-residents being unable to access them. It is, however, important to note that full convertibility has both institutional support and foreign demand. For one, it was included in the 12th five-year plan (Gao, 2013), and according to a report conducted by the PBoC Project Team (2012), capital account convertibility is desired within the next decade. On the international level, the RMB being approved to join the IMF's SDR means that China's capital account will have to continue with further liberalization. Moreover, increasing trade frequencies and volumes with its regional neighbors means that the demand for China to open up its capital account is on the rise.

In general, capital account liberalization has a multitude of context-dependent benefits and costs. Firstly, capital flows subject the domestic financial sector to increased levels of competition (Prasad and Rajan, 2008). Moreover, as more foreign investors enter the domestic financial sector, they will demand the same standards they are attuned to at home, thus this boosts the country's level of corporate governance. The further development of the domestic financial sector as a result of larger volumes and more frequent capital flows can boost overall economic productivity (Rajan and Zingales, 2003; Stulz, 2005). Secondly, free

capital flows induce better financial regulation and supervision. For example, foreign banks in the domestic financial sector require efficient financial intermediation, and they generally raise the overall quality of financial services (Edison et al., 2002). Thirdly, FDI that is aimed at the domestic financial sector from countries with more efficient regulation and supervision has the effect of transferring finance know-how which helps the developing economy understand and master the complexities of the global economy, ultimately helping it integrate further and better (Goldberg, 2004). A final possible benefit is that free capital movement can be used as an indicator for measuring both the effectiveness and quality of macroeconomic policies (Prasad and Rajan, 2008). Since foreign investors will usually pull their money when they sense macroeconomic trouble, or more foreign investors being attracted to the country, the free flow of capital allows such a phenomenon to manifest and acts as an indicator.

The biggest concern, for China, is that a fully liberalized capital account in the absence of a developed domestic financial system can result in strong financial volatility as hot money would enter and leave, especially if the on-shore and off-shore RMB markets display a significant difference in exchange rates which would spur arbitrage. At the same time, the process of liberalization, in China's case, is and has been made relatively smooth due to China's vast foreign exchange reserves (Prasad and Rajan, 2008). However, using the country's foreign exchange reserve to absorb the shocks of capital account liberalization spawns problems of its own making, some of which China is already experiencing. For example, Prasad and Rajan (2008: 12) cite:

> Overly rigid exchange rates and repressed financial sectors […] While policymakers in emerging markets often recognize this point, they are typically under political constraints to restrain rapid currency

> appreciation, because this could hurt export competitiveness. Consequently, they are able to allow only modest currency appreciations that, in the short run, generate expectations of further appreciation. This pattern, in turn, tends to fuel speculative inflows and makes domestic macroeconomic management even more complicated.

This raises yet another issue: the problem of China's exchange rate regime and capital account liberalization. Mongrué and Robert (2005) argue that the extent to which a country can benefit from free capital movement depends on the type of exchange rate regime it uses. Consequently, Mouley's study (2012) concludes that the more flexible the exchange rate regime, the smoother the liberalization process of the capital account. On the other hand, a common problem with free capital movement coupled with an open, deep and broad financial market is that speculative market players can always inject instability into the domestic financial system. The broader the financial market, the more choices they can speculate on. Moreover, Prasad and Rajan (2008) demonstrate that capital controls are most effective in a developed financial system where regulation, supervision, and institutional strength are all very strong. In China's case, this suggests that the capital controls in place currently are not effective, especially when Riedel, Jin, and Gao's (2007) empirical results are taken into consideration. Furthermore, Prasad and Rajan (2008) make the point that trade expansion is de facto capital account liberalization as trade, which is part of the country's current account[9], avoids capital account limitations. As such, this calls into question the utility of some of the present capital controls. Another problem of capital controls is economic distortion. Johnson et al. (2006), in surveying Malaysia, conclude that capital controls can give a preference with regard to allocation of capital inflows to corporations

with strong political ties, as well as shielding certain corporations from competition. This can be seen in China with regard to the SOEs. The general warning for China is that capital account liberalization should be supported by a strong and developed domestic financial system.

Despite these challenges, China's transition into a fully liberalized capital account will be relatively smooth. For one, China's large economic size and trade volume mean that it is unlikely that there would be a sudden stop of capital inflows, and that its balance sheets are deep enough to avoid defaulting on debt should massive capital outflows occur. On the other hand, prior to capital account liberalization, China should work towards more economic transparency, especially on the exchange rate front. That means allowing the RMB to appreciate gradually while maintaining capital controls as opposed to liberalizing the capital account then having a drastic appreciation. In essence, it is better for China to appreciate the RMB at its own pace instead of having the market decide overnight. As such, the smaller the appreciation it faces upon capital account liberalization, the less adverse effects it has on China's economy. The PBoC Project Team (2012) report also addresses some specific concerns. Firstly, there is limited currency mismatch risk for Chinese banks as their assets are mostly denominated in RMB; secondly, Chinese foreign exchange reserves are mostly invested in bonds and would not be significantly disrupted by market fluctuations; thirdly, short-term foreign liabilities constitute only a fraction of China's gross foreign debt; finally, property and asset bubbles are under control.

The question is, then, how can free capital movement aid in economic transition and RMB internationalization? Assuming that a smooth interest rate liberalization has already been accomplished, allowing free capital movement would spur the development of the domestic financial markets. At the same time, there would be more

incentives for foreign financial institutions to enter the Chinese market. This would boost competition and raise the overall standards of finance and banking in China. In essence, with regard to further domestic financial system development, free capital movement would help substantially in deepening China's integration with the international economic system. With regard to economic transition, diversifying and making more transparent the Chinese financial markets would allow the domestic population to trade on these markets. At the same time, with more foreign institutions in the domestic system, corporations – both domestic and foreign – would have a broader range of options for issuing bonds and securing loans. Moreover, lifting capital controls is the ultimate market test for China's finance and banking sectors. No longer would the system be sheltered by capital controls. The banks and financial situations would have to compete at the international level. Of course, this process is best done in a gradual process to avoid shocks to the domestic financial system. In the long term, this market test would prove especially useful as the inefficiency of the current domestic financial system would be cleared out.

On the other hand, free capital movement has significant benefits for spurring RMB internationalization. For one, more RMB denominated trade would occur. Instead of only having the RMB convertible in the current account, allowing capital account liberalization would broaden the types of financial transactions that the RMB can be done in. One major roadblock to RMB internationalization is the inability for the on-shore RMB market to be tapped by the global economic system. While trade in goods and services can be cleared in RMB, allowing financial market transactions to do the same would drastically increase the amount of RMB flow. Secondly, lifting capital controls would effectively boost the RMB's level of liquidity, thus making it more appealing as a reserve currency. Having the RMB widely

accepted as a reserve currency significantly raises the RMB's status as an international currency. Thirdly, lifting capital controls would increase the volume of RMB circulation in the world. This allows for China to benefit from collecting seigniorage. The larger the volume of RMB circulation, the more gains can be made from the latter. However, if capital controls remain in place, seigniorage as a potential benefit of issuing an international currency would remain distant. Finally, liberalizing the capital account would allow more foreign institutions, governments, and individuals to hold Chinese government bonds. This is especially useful in expanding the RMB abroad, and this provides a way for the RMB to radiate outwards without necessarily having to rely on trade as a channel for RMB internationalization.

6. Policy Basket Analysis: Basket Peg Exchange Rate Regime

Taking these elements into consideration, the exchange rate should remain a basket peg regime with a band float[10] with the addition that, eventually, the ceiling and floor of the band should be increased. The increase in the width of the band should be based on the economic needs of the time and should not be a certain set-in-stone goal. Moreover, the weights of the currencies in the basket should be constantly adjusted to reflect changing global economic conditions.

First, Frankel (1999) warns that there is no one-size-fits-all exchange rate regime, and that countries must experiment in order to find the right regime that works for their own circumstances. Moreover, as global and domestic economic conditions change, the country should work to update its exchange rate regime as well. Likewise, Frankel (ibid.) further argues that without strong institutional backing and a developed domestic financial system, the exchange rate regime will face severe issues.

With regard to a more flexible exchange rate regime that China should aim for, Huang and Wang (2004) offer some insights. Firstly, they argue from historical experience citing that the Asian financial crisis revealed that exchange rate targets were a part of the problem contributing to the financial and monetary collapse of several affected countries. At the same time, increased exchange rate flexibility would have lessened the pressures from speculative attacks to which exchange rate targets fell to. They consider the proposals for a new basket peg; however, they make the case that insofar as the U.S. remains China's largest trading partner, the volatility of the U.S. Dollar versus other currencies, especially regional currencies in Asia, could contribute to exchange rate instability. That said, the article does argue for eventually widening the exchange rate band. To this Huang and Wang (*ibid.*) urge caution with regard to speculation pressures. For example, if the market expects further appreciation of the RMB and further band increases, then hot money is more likely to enter China. The surge of hot money can fuel into domestic market bubbles, and if the bubble bursts or nears bursting, history shows that the hot money will leave causing massive capital flight, further destabilizing the domestic financial system. Nonetheless, with regard to exchange rate reform, the authors urge caution and gradual pacing.

Huang and Wang (*ibid.*) also consider some structural immaturity of the Chinese domestic financial system that can contribute to ineffective exchange rate management. Like many others, they fear that the non-performing bank loans can become increasingly difficult to deal with. Moreover, the state-owned sector is suffering from overall inefficiency and lack of profitability which can worsen if the RMB appreciates. Next, they cite the lack of a properly developed social welfare system as being a significant macroeconomic imbalance. At the same time, the domestic

financial markets are illiquid, and this can cause serious problems if large inflows and outflows of hot money occur (Calvo, 2002), and the damage on the domestic financial system resulting from financial bubbles would be substantially large given the low level of liquidity of domestic financial markets. Finally, Huang and Wang (2004) call into question the ability of the Chinese financial and banking sectors to manage and regulate the domestic financial system, especially with regard to handling risks posed by the exchange rate. One final benefit of maintaining an exchange rate band, from the perspective of domestic economic stability, is that it can be widened or narrowed according to the economic needs of the time. As such, in turbulent global economic times, the Chinese authorities can intervene if need be to mitigate the adverse effects on the domestic economy.

While there are risks in moving towards a more flexible exchange rate regime, there are substantial benefits to be gained for China's economic transition and RMB internationalization. Firstly, allowing the RMB to appreciate gradually with an exchange rate band allows China to simultaneously increase its imports and boost the purchasing power of the citizens. While increasing domestic consumption is not as simple as raising purchasing power, it undoubtedly helps. At the same time, the exchange rate band prevents the RMB from appreciating too much. This is to give the exporting sector time to adjust to the changing value of the RMB. Furthermore, this is conducive to a smooth and risk-averse transition. Too rapid an appreciation would cause significant harm to the exporting sector resulting in sharp declines of profits, and at worst massive layoffs which can lead to social disharmony, especially in the absence of a well-developed social welfare system. Applying shock therapy to the exporting sector would only damage efforts for economic transition. The appreciation of the RMB would also aid in domestic corporations doing mergers and acquisitions by boosting their

purchasing power. Through mergers and acquisitions know-how would be transferred which, in turn, would help domestic firms innovate, and increase efficiency and productivity.

For RMB internationalization, exchange rate reforms towards more flexibility are essentially giving the market forces more weight to dictate the value of the RMB. In this way, the RMB becomes a more appealing currency to hold as its value would be more market-derived as opposed to having the authorities intervene constantly. A more flexible exchange rate reform also sends a positive signal to investors and the global market. On the one hand, it demonstrates that the Chinese authorities are more comfortable and confident in the domestic financial system's ability to manage the RMB. On the other hand, it also shows that the domestic Chinese financial system has developed and matured to the point that market forces can play a bigger role in valuing the RMB. The appreciation of the RMB would likewise make the RMB more attractive as a reserve currency, especially coupled with full capital account liberalization to boost the currency's liquidity. Appreciation of the RMB also has the potential of making the possibility of monetary integration and union in the region more attractive. As the RMB appreciates, neighbor countries would find it increasingly more expensive to import from China. This can build pressure for the RMB to become a regional currency, which would be a watershed event in the internationalization process of the RMB. Finally, given the circumstances of a developed domestic financial system that is open, deep and broad, and a fully liberalized capital account, RMB appreciation – while it would hurt export trade volumes – would spur more RMB trade on the foreign exchange markets. This is conducive to RMB expansion abroad.

7. Policy Sequence Analysis

The specific sequence for realizing the recommended policy basket is as follows. Firstly, the interest rates should be liberalized while maintaining the current level of capital account openness, perhaps even adding some temporary capital controls (for example, a Tobin tax has been suggested[11] – a Tobin tax is a tax placed on all foreign exchange transactions, and the goal is to act as a de facto capital control and stave off speculation pressures) if there is too much volatility in the domestic financial system. Once the interest rates have undergone successful liberalization, allow for a period of time for the domestic economy to adjust to the new system, especially with regard to allowing the domestic financial system to mature and develop open, deep and broad financial markets. Next, the focus should turn to full capital account liberalization. If the interest rates were liberalized successfully, and the domestic financial system has strengthened and developed properly, then capital account liberalization should be an easy and relatively smooth process. On the exchange rate front, the width of the band should be adjusted accordingly to suit the economic needs of the time as the interest rates and capital account are undergoing liberalization. Essentially, the exchange rate serves as a policy tool – and not a policy target – while the other two aspects are liberalizing. Once both the interest rates and capital account are successfully liberalized, the exchange rate becomes a policy target. At this point, the band of the exchange rate should be oriented towards fulfilling whatever economic goal that the country perceives as being key.

The interest rates should be the first focus due to three reasons. Firstly, a fully developed and robust domestic financial system is the essential foundation for a strong economy. In the absence of a strong domestic financial system, the structural integrity of the domestic economy would be substantially fragile, and external shocks would

induce a disproportionate amount of damage. In essence, a solid domestic financial system is key to absorbing the shocks and turbulence of the global economy. China cannot always rely on capital controls to brace the domestic economy from external pressures, especially if it wants to internationalize the RMB and further integrate itself with the global economy. Moreover, as previously mentioned, capital controls actually function better in the presence of a strong domestic financial system. Secondly, liberalizing the interest rates while the capital account is not fully open yields two advantages. On the one hand, insofar as some capital controls are in place, it braces the domestic economy – to a certain extent, there will no doubt be volatility, especially with liberalization on such a scale – from external speculation and hot money which can seriously damage liberalization efforts. On the other hand, the capital controls give the domestic authorities more capacity to step in and guide the process of liberalization, and intervene when and where need be. Both of these advantages give interest rate liberalization a better chance at succeeding. Finally, interest rate liberalization would allow the domestic economy to undergo a deep cleaning process whereby the macroeconomic imbalances would be sorted out. For example, the issue of the non-performing loans and commercial bank deleveraging would be dealt with in a less risky manner while capital controls are in place. However, if capital account liberalization were to be accomplished first, attempts at interest rate liberalization would be much more difficult and with significantly more risks.

The full liberalization of the capital account follows the liberalization of the interest rates for three reasons. Firstly, once a robust domestic financial system is set in place, unfettered capital movement would only aid in its further development, especially with regard to broadening financial markets. At the same time, the risks of capital account liberalization are reduced the stronger the domestic financial

system is. As such, at this point in time, opting for capital account liberalization before interest rate liberalization can have drastic negative consequences for the domestic economy in the form of capital flight, massive speculative pressures, and overall instability. Therefore, capital account liberalization at this point in time would only hinder efforts at financial reform and economic transitioning. Secondly, with the development of the domestic financial markets, more opportunities would be created for the financial sector to become increasingly productive. However, lifting capital controls before the domestic financial markets can absorb external shocks does no good for the economy. On the other hand, once domestic financial markets have developed enough with regard to openness, breadth and depth and passed the market test, allowing a free flow of capital would be the natural next step since if capital controls are still kept in place, they would hinder the further development of financial markets. Finally, it needs to be pointed out that the capital account ought to have a certain degree of liberalization while the interest rates are being liberalized. Too many capital controls would prevent the liberalization of the latter as capital allocation would be distorted and the interest rates would not congregate towards the global rates. As such, it is important to keep a certain degree of capital account openness. However, once the domestic interest rates have matched the global rates, and the domestic financial system and economy have had time to adjust, then full capital account liberalization should be pursued.

Finally, with regard to the exchange rate, the current set-up that is a basket peg regime with a floating band should be kept. Essentially, the band's float should be widened or narrowed at the PBoC's discretion. However, the eventual goal, as the article posits, is to widen the band so as to stimulate RMB internationalization and economic transition through gradual appreciation. In tandem with capital controls, the

exchange rate should be used to aid in the process of interest rate liberalization. Once that liberalization is complete, the removal of all capital controls for capital account liberalization should likewise be guided by the exchange rate to prevent systemic volatility. Aiding and guiding implies adjusting the band. For example, if there are a lot of speculation pressures due to expectations that interest rates will rise, then the PBoC can widen the band's range. While this method of management is not suitable for small economies with shallow foreign exchange reserves, it is not so much a problem for China's economic size and vastly deep reserves which are still increasing annually. It is then expected that the band's ceiling to floor spread can be kept at a relatively liberal range when the interest rates are being liberalized. This is because the presence of capital controls and the possibility of adding additional temporary controls would act as a buffer from speculation and hot money. However, during the process of capital account liberalization, the exchange rate would have to play a bigger role in fending off speculation. Once the capital account has reached full liberalization, the exchange rate can then be used to serve other economic needs and goals. However, insofar as the interest rates and capital account are undergoing liberalization, the function of the exchange rate ought to be tied to the goal of fulfilling successful liberalization. This specific basket peg with a floating band regime was selected because it is the most flexible out of the managed regimes. Furthermore, it gives the central bank more options vis-à-vis setting the rate. For example, it can manipulate the weight of the currencies in the basket, add or remove currencies, or adjust the band itself. Moreover, in the previous section on the exchange rate it was mentioned that a more flexible regime is more conducive to interest rate and capital account liberalization. Finally, the managing of such an exchange rate regime can allow the PBoC to accumulate more experience which is crucial if the

PBoC is to become increasingly independent from the government – which an open, deep and broad domestic financial system with a fully liberalized capital account requires.

This policy sequence is the most risk-averse because it seeks to develop the robustness of the domestic financial system first so as to provide a strong foundation before pursuing unfettered capital movement. The capital controls and the control over the exchange rate make this process of interest rate liberalization more sheltered and less prone to shocks. Once the interest rates have been liberalized and the domestic financial system has developed a good level of robustness, the liberalization of the capital account would likewise be made much easier. On the home front, the domestic financial system would be able to absorb hot money, while on the exchange rate front, its flexibility can ward off speculation pressures. Finally, once the structure of the domestic economy has adjusted and operates comfortably with fully liberalized interest rates and free capital movement, reorienting the exchange rate to service other economic goals would be quite straightforward. Overall, this policy sequence also seeks to maximize protection for the domestic economy by setting up buffers to shield off external shocks from paralyzing the domestic economy. However, above all else, there is a need to operate at a gradual pace and allow time for the economy to adjust to the new structural changes. More than ever, Deng Xiaoping 鄧小平's timeless adage of "crossing the river by feeling the stones" (摸著石頭過河) must be heeded when tackling the impossible trinity.

8. Drawbacks: Comments and Considerations

Nonetheless, it is also important to assess the negative consequences of the recommended policy basket. Firstly, insofar as the exchange rate

regime remains a variation of the fixed regime, foreign exchange reserves will still play a significant role for the Chinese economy. However, as evidence suggests, China's basket peg is moving towards more diversification – although the US Dollar will remain the most important currency for the time being. Nonetheless, more diversification will naturally lead to a better hedging of monetary risk. Yet, this also means that China cannot slowdown the acquisition of foreign exchange reserves, especially if the US Dollar is to remain the anchor currency. On the one hand, as China will still remain a large exporting country, trade surpluses will undoubtedly continue to boost its foreign exchange reserves. On the other hand, the sustained accumulation of US Dollars in the reserves means that US monetary policy will continue to affect China's economy. While diversifying the currency basket can mitigate this risk to an extent, its actual effect may indeed be minimal. Nonetheless, the PBoC will still be expected to play a key role in exchange rate and foreign exchange reserves' management. At the same time, in the absence of capital controls, speculative pressures on the RMB will become more difficult to manage, especially with regard to arbitrage. Hence, under this policy basket, China will still be largely affected by US monetary policy.

Secondly, the fully liberalized interest rate together with unfettered capital movement may pose significant problems. On the one hand, global economic turbulence will have a more pronounced impact on the domestic economic system in the absence of capital controls and a non-independent monetary policy. On the other hand, given the present international economic climate – near-zero and or negative real interest rates – there is the potential for the generation of excessive liquidity and credit. For example, the fear is that low interest rates can fuel economic bubbles as investments flow into the real-estate and stock markets. Of course, the PBoC is not forced to also indulge in quantitative easing.

Nonetheless, cheap and elastic lending as a result of world interest rates means that the PBoC will have to manage the problem of excessive liquidity. Coupled with unfettered capital movement, there is a chance that hot money and risky investment positions can cause domestic economic instability. However, this problem can be mitigated if the PBoC adopts other policy tools to combat excessive borrowing, such as collateral requirements. While liberalizing the domestic interest rates may make the PBoC less powerful on a de jure basis, it also allows the PBoC to innovate new policy tools and focus on other aspects of the financial system without always being tied down by interest rate management. A similar problem occurs with regard to the mismatch of economic cycles. Since this policy basket opts for fully liberalized interest rates, the matching of domestic rates with that of the world's poses difficulties for the boom and bust cycles. This problem can be seen in the case of Hong Kong whereby its domestic interest rates follow that of the US Federal Reserve's. If, for example, the US domestic economy is experiencing a slowdown and thus requires a lowering of interest rates in order to stimulate borrowing and investing, the Hong Kong economy could be heating up. However, a cutting of interest rates by the Federal Reserve deems that Hong Kong's domestic rates are lowered as well. This has the potential to stimulate excessive borrowing in Hong Kong which can fuel speculative bubbles and overheat the economy. As such, this requires more prudent monitoring and management on the part of the Hong Kong Central Monetary Authority. This situation can likewise occur in China. However, due to Hong Kong's currency board exchange rate regime, currency speculation pressures are generally not problematic. In China, on the other hand, under this policy basket, a fully liberalized capital account with a basket peg exchange rate regime means that currency speculations will no longer be mitigated by capital controls, and this can become a serious headache for the PBoC.

9. Conclusion

This paper has argued for China to pursue a specific policy basket to tackle the impossible trinity. Against the backdrop of economic transition into a more balanced model between domestic consumption and exports, and maximizing the internationalization of the RMB, China should aim to liberalize its interest rates, liberalize its capital account, and allow a greater exchange rate float but maintain its current currency basket peg regime. This policy basket is the most conducive to the aforementioned goals of economic transition and RMB internationalization. Furthermore, the proposed policy path for achieving the goals of the basket has been selected for its risk-averse nature. Specifically, China should seek to liberalize its interest rates while using the current capital controls in place to prevent any large influx of capital movement in or out of the country. Once the domestic financial system and the economy at large have accustomed themselves to the new interest rates after a period of adjustment, the liberalization of the capital account can begin. In order to ensure a smooth full opening of the capital account, the basket peg exchange rate regime ought to be used as a policy tool to hedge against potential capital flow problems should they arise. Finally, once both the interest rates and the capital account have been liberalized, exchange rate reform towards a higher floor and ceiling can be pursued.

Notes

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1. Please see the literature review section (§2).
2. Once it is suspected that a country's foreign exchange reserve is soon to run dry, speculative attacks against the country's currency will begin to occur on the market.
3. Non-FDI capital flows were, de jure, restricted.
4. The reserve requirement ratio is a policy tool of the central bank to reduce excess liquidity or to inject the financial system with more liquidity. Essentially, it sets the minimum fraction of deposits that each commercial

bank must hold.

5. "Swiss franc jumps 30 percent after Swiss National Bank dumps euro ceiling" (by Patrick Graham). Reuters, 15th January 2015. *<http://mobile.reuters.com/article/idUSKBN0KO16Y20150115>*
6. The goal of the shadow banking sector is to bypass official regulations on interest rates and seek to implement more market-driven rates, and the sector also serves as an alternative for those who are unable to access bank loans. The shadow banking sector has outgrown the traditional banking sector four-fold from 2008 to 2014.
7. A fully liberalized capital account is not decisive with regard to currency internationalization. There are currencies which are fully convertible but are not considered international. However, an open capital account does indeed aid in the process of internationalization.
8. Ostry *et al.* (2010) found that countries with capital controls maintained a better level of economic output during the 2008 financial crisis than those countries that had free capital movement.
9. The RMB is fully convertible under the current account.
10. A modification on the impossible trinity theory that stipulates a fixed exchange rate regime. A basket peg regime is not an intermediate exchange rate regime that is neither completely fixed, nor completely floating.
11. "China Draft Rules for Tobin Tax on Currency Transactions". *Bloomberg News*, 15th March 2016. *<http://www.bloomberg.com/news/articles/2016-03-15/china-said-to-draft-rules-for-tobin-tax-on-currency-transactions>*

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