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Capital Account Liberalization and China's Financial Integration

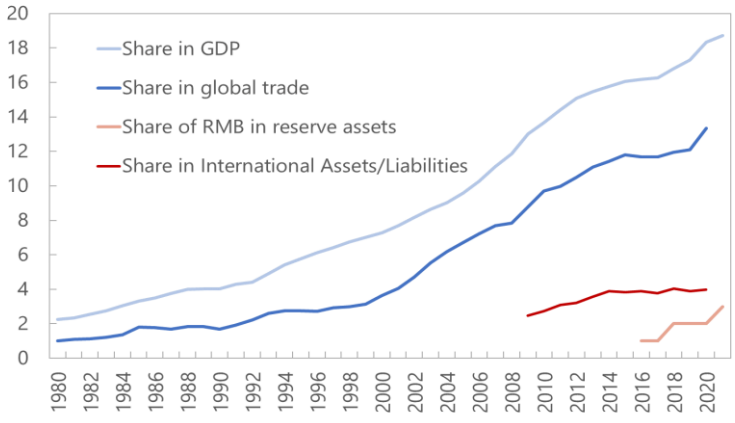
Longmei Zhang [1][2]

After four decades of rapid economic growth, China has become the world's second-largest economy and established intricate trade ties with the rest of the world. Nonetheless, China's financial integration is still in its infancy, primarily due to restrictions on cross-border capital flows. This paper provides an overview of China's capital account policies and its global financial footprint. By looking at cross-country experiences, this study examines how capital account liberalization and financial deepening may significantly expand China's foreign assets and liabilities and affect the landscape of the international monetary system. In this context, it will also discuss the implications of China's financial integration on Renminbi internationalization. While China's trade integration has largely strengthened the dollar's role in the international financial architecture, its financial integration may have a greater impact on the global use of Renminbi.

A. China's ascent and two-speed integration

Over the past two decades, China has risen to prominence as a global economic powerhouse. The WTO entry in 2001 spurred China's rapid trade integration and facilitated a sea change in global supply chains. Following decades of economic expansion, China is now the world's largest exporter and the second-largest economy. However, despite its economic success and close trade ties with the rest of the world, China's financial integration is far more limited. It accounts for only four percent of global holdings of oversea assets and liabilities, compared to 13 percent in trade and 18 percent in global GDP. In this context, the international use of China's currency, RMB, is also minimal, accounting for two percent of cross-border payments and 3 percent of reserve assets.

China's rapid trade integration vs. limited financial integration



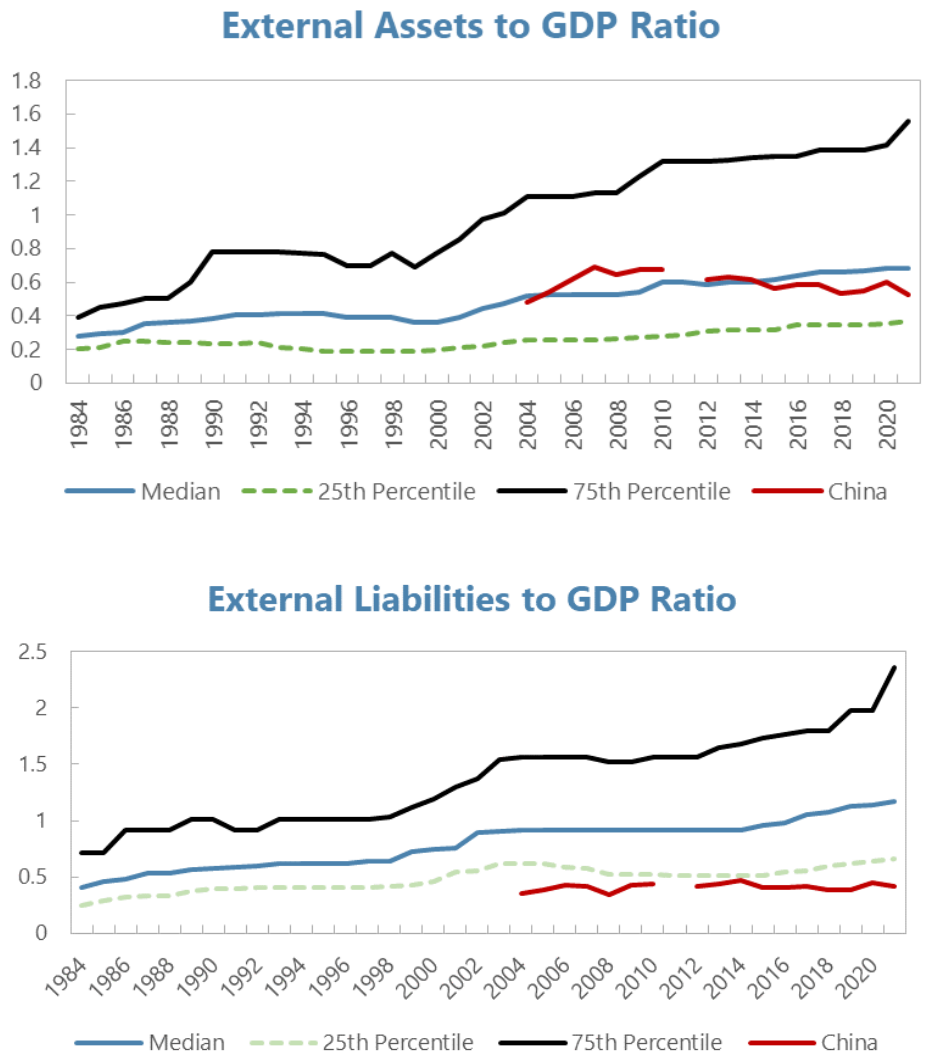
Sources: IMF, SWIFT and author's calculations.

[1] The author would like to thank Jeffery Frankel for insightful discussions and advice, as well as Ajmar Ahmady, Reza Baqir, Edoardo Campanella, Sonali Jain-Chandra, George Chouliarakis, John Haign, Jo Johnson, Joong Shik Kang, Aparna Mathur, Daniel Murphy, Ted Truman, Yiqun Wu, Richard Zeckhauser, and seminar participants at the Harvard Kennedy School senior fellow seminars for their helpful comments. Danni Sun and Andy Theocharous provided excellent research assistance.

[2] The views expressed here are those of the authors, and do not necessarily represent the views of the IMF, its Executive Board, or IMF management.

China's external financial exposures are also significantly lower in comparison to other countries. In recent decades, waves of financial liberalization have resulted in financial deepening and increased financial integration around the world. The graphs below show the percentile distribution of international investment positions as a percentage of GDP (a common measure of a country's de-facto financial integration) for 190 countries. The graph shows that the median value and the 75th percentile of the distribution have both increased significantly. In this global setting, China's external balance assets have only increased in proportion to its economic size, with the ratio remaining largely stable. Its external assets in 2021 account for 52 percent of GDP, which is less than the median country's exposure of 69 percent. Likewise, China's external liabilities represent 41 percent of GDP, which is significantly less the 25th percentile value of 66 percent.

Figure 1: Global Distribution of International Investment Positions

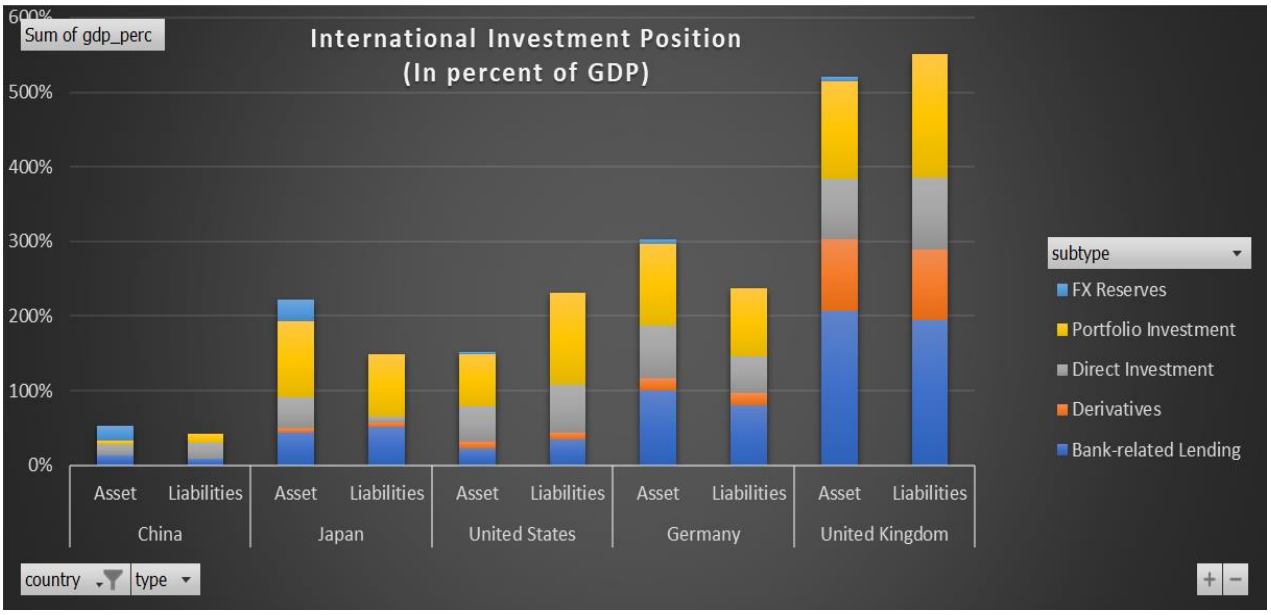


Sources: International Monetary Fund and author's calculations.

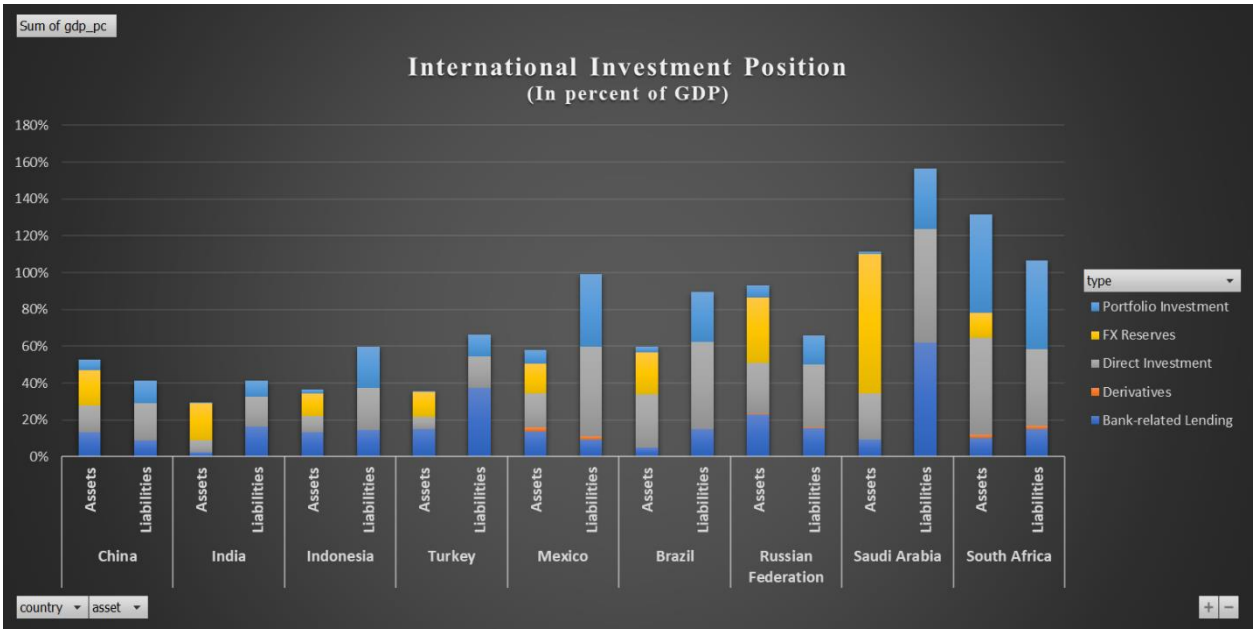
Note: The percentiles are based on a sample of 190 countries.

China's limited financial integration is broad-based across all asset classes and driven by the lack of private sector participation. Cross-border capital flows can be classified into direct investment, portfolio investment, financial derivatives, and bank loans. As financial markets have matured over the past two decades, portfolio investment has grown in importance in cross-border financial flows globally. The world's reserve currencies issuers, such as the United States, the Eurozone, Japan, and the United Kingdom, usually have large *gross* external financial exposures[3], with assets and liabilities ranging from 150 to 300 percent of GDP, respectively. While the RMB has joined the SDR basket in 2015, China's external financial exposures in all asset sectors are significantly lower compared to the other reserve currency issuers. For example, while the Chinese banking system is the largest worldwide, it is very domestically focused with gross foreign exposures (sum of assets and liabilities) at 22 percent of GDP, compared to 56 percent in the US and 95 percent in Japan. Similarly, despite past expansion in FDI and oversea investment, China's gross direct investment positions are 37 percent, compared to 112 percent for the United States. The gap is the largest for portfolio investment. China's gross portfolio investment stands at 18 percent of GDP, compared to around 200 percent in both the U.S. and Japan. What distinguishes China is its reserve holding, which stands at 20 percent of GDP and reflects previous FX interventions, whereas other reserve currency issuers have very limited foreign exchange reserves (in the range of 3-6 percent of GDP), with the exception of Japan. In other words, China's lack of financial integration mainly reflects the limited participation of its private sector in the global financial system, while the official sector has larger exposures than other reserve currency issuers.

Figure 2: Cross-Country Comparison of IIP



[3] Note that the net positions of the reserve issuers differ, with Japan and Germany being net creditors, while the United States and United Kingdom are net debtors.



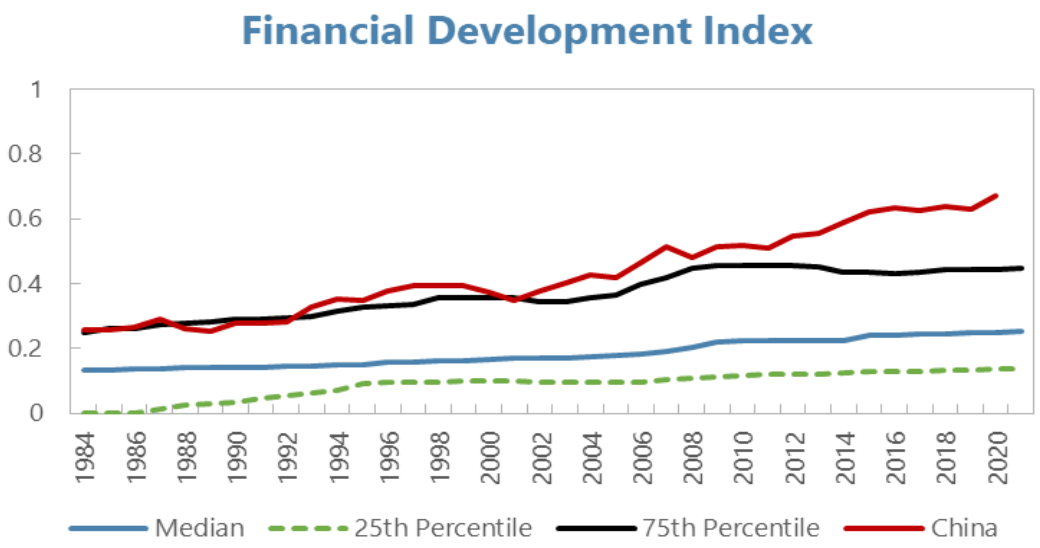
Source: International Monetary Fund and author's calculation.

In general, emerging markets have less global financial exposure compared to advanced economies, reflecting their level of development. However, when compared with peer middle-income countries, China's global financial exposures also rank near the bottom, similar to India and Indonesia. Other major EMs have a greater exposure, either through bank lending (Turkey, Saudi Arabia) or through portfolio investment (Mexico, South Africa, Brazil). A common characteristic shared by China and other EMs is the relatively large FX reserve holding, compared to advanced economies.

While financial development is frequently cited as a barrier to China's global engagement, the level of financial integration also lags behind domestic financial development. The graph below compares China's financial system to the rest of the world using the IMF financial development index, which assesses financial institutions and financial markets in terms of their depth (size and liquidity), access (ability of individuals and businesses to access financial services), and efficiency (ability of institutions to provide financial services at low cost and with sustainable revenues, as well as the level of activity of capital markets)[4]. The index demonstrates significant development in China over several decades, with the 2021 index exceeding the 75th percentile. The financial development level stands in contrast to China's external financial positions, which are below the 25 percentiles of global distribution.

[4] For more details on the construction of the financial development index, please see https://data.imf.org/?sk=f8032e80-b36c-43b1-ac26-493c5b1cd33b

Figure 3: Global Distribution of Financial Development Index

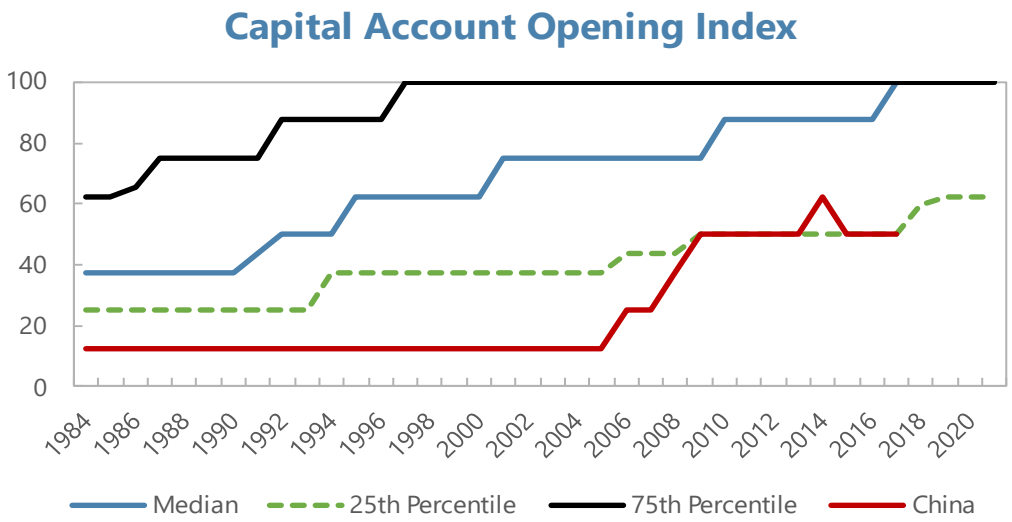


Source: International Monetary Fund and author's calculation.

B. Capital account control: a binding constraint

China's financial integration has been largely constrained by the government' decision to maintain a closed capital account. Since the fall of the Bretton Woods system in 1973, many countries have switched toward flexible exchange rates and open capital accounts, resulting in an increase in the size and volatility of cross-border financial flows. According to de jure indices, capital account openness now varies significantly across income levels. Generally, advanced economies have fully liberalized their capital accounts, while emerging markets and low-income countries have retained certain restrictions notwithstanding partial liberalization. In comparison, China has maintained strong capital account limits for decades, with a much tighter grip on capital mobility than its peers. The graph below depicts the global distribution of capital account policy according to the Quinn and Toyoda index (2008), with 1 indicating a completely open policy and 0 a fully closed one. Despite some opening since the middle of the year 2000, China's liberalization of its capital account remains in the bottom 25 percent. Fernandez et al. (2016) develop an alternative capital control index, where 1 denotes a fully closed capital account and 0 a fully open one. In addition, the index can differentiate between limitations on inflows and outflows. With an index value of 0.9, their measure also emphasizes the strong capital regulation in China. Other well-known de-jure capital account indicators, such as the Chinn-Ito index, reveal a comparable level of capital control in China.

Figure 4: Global Distribution of Capital Account Index

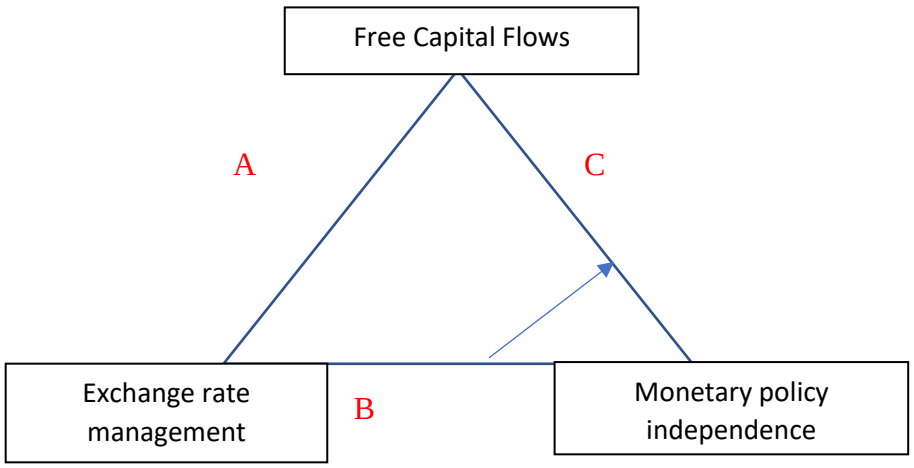


Source: Quinn and Toyoda (2008). The index ranges from 0 to 100, with 0 representing a fully closed capital account and 100 representing a fully open capital account.

Capital account control: now or forever?

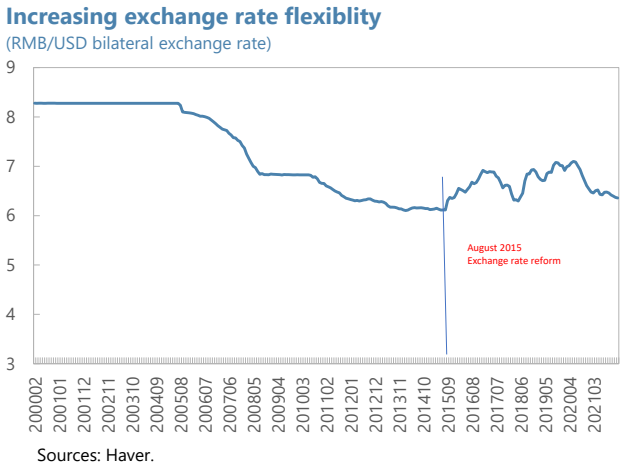
To comprehend China's capital account policies, it is necessary to look at the broad macroeconomic context. The Chinese government, like policymakers elsewhere, faces the impossible trinity of maintaining exchange rate stability, monetary independence, and capital account openness at the same time. With exports being a key driver of growth in the Chinese economy, the exchange rate was a key consideration in policymaking. As a large economy, China also places a premium on independent monetary policy that can be tailored to domestic concerns. As a result, the natural choice is to achieve these policy objectives by maintaining strict capital account controls.

Figure 5: The Impossible Trinity



However, China's capital account is not likely to be closed forever. As the Chinese economy gradually shifted away from exports, the government began to allow for greater exchange rate flexibility, thereby facilitating capital account opening. Export growth has slowed in the aftermath of the global financial crisis, and domestic demand became increasingly important in driving China's economic growth. Initially, demand was driven by investment, reflecting both the government's stimulus package and rapid private investment amid easing credit conditions. Nonetheless, the investment boom resulted in a large increase in debt and heightened financial vulnerabilities. In response, the government has launched a deleveraging campaign since late 2017 to curb excessive investment while instituting reforms to boost consumption as a new growth driver. As China continues to rebalance from external demand to domestic demand, the government will have more policy space in the future for exchange rate flexibility and cross-border capital mobility. The pace of liberalization is likely to be gradual. Nonetheless, over the next two decades, China's capital account could become much more open, with far-reaching repercussions for the global financial architecture.

Figure 6: Exports and Exchange Rate Flexibility



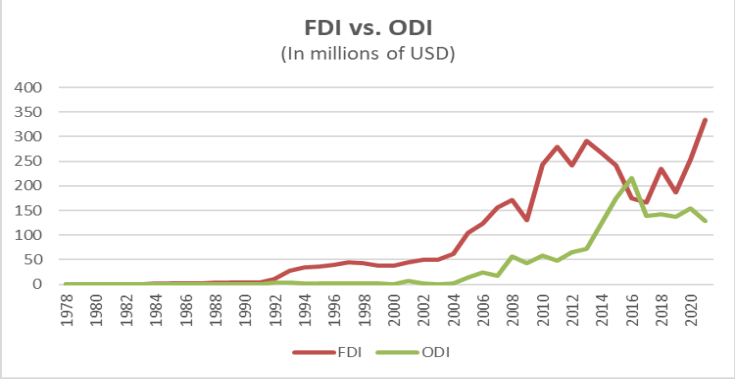
China's calibrated opening up: a historical overview

The 1978 reform by Deng Xiaoping ended the era of a closed China and opened the Chinese economy to international commerce and investment. Since then, China has steadily opened up through a series of incremental stages, using a cautious and selective strategy with differing regulatory stances dependent on the type and direction of capital flows. FDIs have been liberalized first reflecting its benefit on economic growth and job creation, while portfolio and banking flows have been heavily managed until recently, reflecting their inherent volatility and implications for financial stability. ODIs are under increasing scrutiny given increasing concerns related to debt issues. This section provides a summary of the evolution of China's capital account policy.

The government has promoted and liberalized FDIs more rapidly than other types of capital flows, such as portfolio and banking flows. This is mostly owing to the longer-lasting and more stable nature of FDI, as well as the substantial benefits it offers to the domestic economy, such as bringing new technology, managerial expertise, and creating job. To attract FDI, the government gave tax benefits for foreign-funded firms, with their corporate income tax rate being half that of domestic firms (15 percent compared to 33 percent). Initially, FDIs were managed using a positive list, which restricted foreign corporations to investing in listed sectors. Since 2016, China has implemented a negative list pilot program in select cities, which was then expanded nationwide in 2018. Under the new framework, foreign investors are permitted access to all sectors that are not listed. The list has since been refined annually, with the 2022 edition containing 31 prohibited items. In parallel, there exists a more liberal negative list for China's 20 Free Trade Zones. Currently, China's manufacturing sectors are almost fully liberalized, except for rare earth mining, publishing printing, and Chinese herbal medicines. For the service sectors, the national list still has a wide range of restrictions on investment scope and foreign ownership caps, particularly in utilities, IT, and legal services, education, wholesale trade, among others.

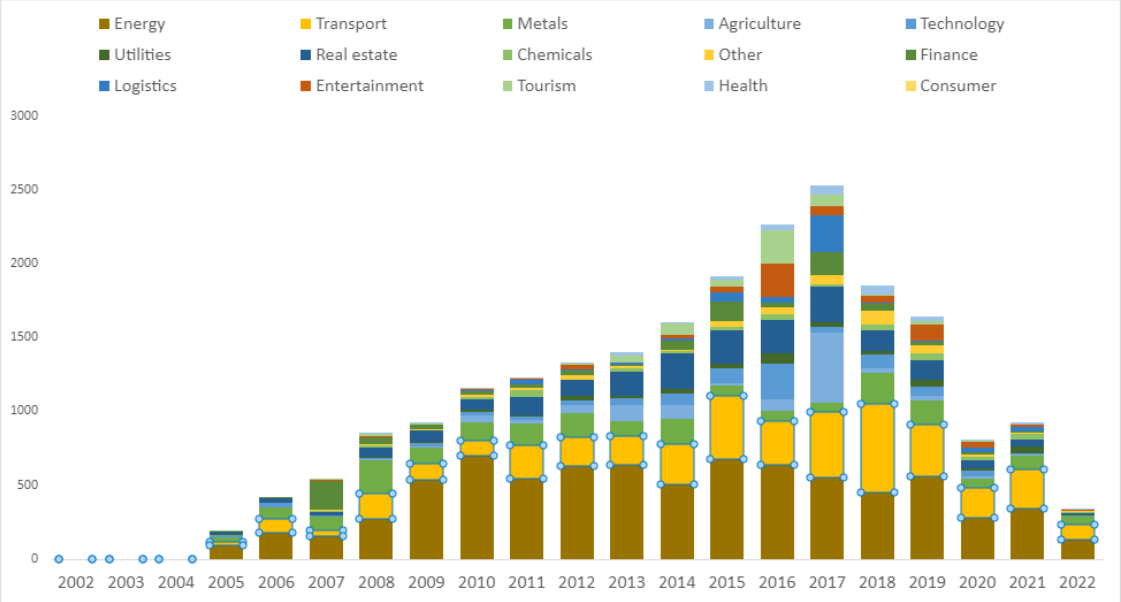
In contrast to the progressive posture towards FDI, the government's ODI policy was initially neutral but has become more restrictive due to the accompanying debt accumulation. During the 1990s and the early 2000s, China's oversea investment was minimal. Over time, as China's economy grew, Chinese companies began investing abroad, a trend that has accelerated since 2013, partly reflecting the launch of the belt and road initiative. In response to growing ODI, a formal regulatory framework was introduced in 2014 by the Ministry of Commerce. Since 2017, as part of the broader deleveraging campaign to address debt built-up, the government has tightened its policy on overseas investment and adopted a sector-specific approach, prohibiting investments in real estate, hotels, cinemas, entertainment, and sport clubs, while encouraging investments in infrastructure, equipment, high-tech, energy, agriculture, and services. There are separate rules restricting overseas investment by SOEs. For instance, state-owned enterprises that have over the leverage limit are forbidden from investing overseas. In addition to regulatory changes, enforcement has also tightened, with overseas mergers and acquisitions being subjected to increasing scrutiny. Reflecting the tightened control, ODIs have fallen dramatically since 2017 (Figure 5 and 6).

Figure 7: China's FDI vs. ODI



Source: People's Bank of China

Figure 8: Sectoral Distribution of China's Oversea Investment



Source: American Enterprise Institute.

Portfolio inflows have been liberalized at a considerably slower rate than FDI, but in recent years they have become the focus of opening up. In 2002, the government established the QFII (Qualified Foreign Institutional Investors) program with a quota of $30 million. This program permits foreign financial institutions to convert foreign currencies into RMB and invest in China's capital market. With the accumulation of offshore RMB liquidity in financial hubs such as Hong Kong, the government created the RQFII scheme in 2011, which grants access to China's capital market to international investors using offshore RMB. The investment quota of QFII and RQFII were gradually lifted over time, and fully removed in May 2020. Simultaneously, investment scope has been broadened and administrative procedures simplified. In addition to QFII and RQFII, which are primarily open to large foreign investors with assets exceeding certain thresholds, the government launched stock connect and bond connect in 2014 and 2015, respectively, through which investors can access the Chinese capital account via Hong Kong with much looser eligibility requirements. In the process of opening up, the government has also adopted a staggered strategy to first bring in stable investors (such as central banks and pension funds) and then flightier investors (such as hedge funds) to minimize financial stability risks and build up reputation gradually (Clayton et al 2022).

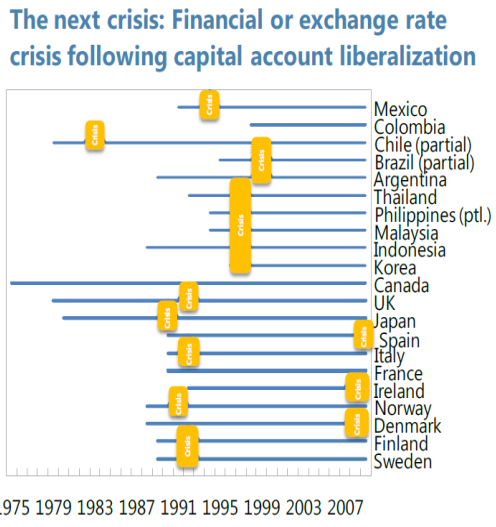
In comparison to inflows, the liberalization of Portfolio outflows began later and progressed at a slower rate. 2006 saw the introduction of QDII (Qualified domestic institutional investors), a parallel program to QFII. That permits domestic financial institutions to invest in international financial goods. RQDII (RMB Qualified domestic institutional investors), a parallel program to RQFII, was created in 2014, permits domestic institutions to invest in RMB products marketed abroad. Both programs were halted in 2015 due to strong capital outflow pressures, and they were reinstated in 2018. As of 2021, the QDII scheme has a quota of 147 billion USD. In addition, there is a separate scheme QDLP (Qualified Domestic Limited Partnership), a pilot

quota-based program which allows foreign and domestic asset managers to raise RMB from high net worth and institutional investors in China for the purposes of overseas investments, with the aggregate quota of 10 billion USD.

Cross-border banking flows are more regulated on the liability side, and less on the asset side. Due to the lack of financial development in the earlier years, financial institutions had limited operations abroad. With the increase in ODIs since 2013, Chinese banks have extended their overseas operations, mostly to assist Chinese companies in "going abroad." Nonetheless, with the decline of ODI since 2017, the overseas expansion of Chinese banks has also slowed. On the liability side, due to China's high saving rate and relatively restricted capital account, banks have access to a substantial quantity of domestic deposits, and hence have less incentives to seek financing overseas. However, in recent years a new trend has evolved, as Chinese banks have begun to issue bonds abroad for financing, reflecting tightening domestic financial conditions and lower funding cost abroad. The overall foreign debt limit is also subject to the regulation macroprudential framework[5].

Policy trade-offs for liberalizing capital account

Theoretically, capital account liberalization would enhance the efficiency of capital allocation and promote economic growth, though the empirical evidence has been mixed[6]. At the same time, an open capital account is accompanied by more volatile cross-border capital flows, in particular portfolio flows, which often bring significant challenges to macroeconomic and financial stability. This is particularly the case for countries with weaker institutions and less developed banks and financial markets. Historically, a few countries have experienced financial crisis due to capital outflows (Bayoumi and Ohnsorge (2013)). For an economy to fully benefit from an open capital account, it is critical to strengthen its institutions and regulatory framework and develop the domestic financial system. Lardy and Douglas (2011) identified three preconditions for capital account convertibility in China: a strong banking system, a relatively developed financial market, and an equilibrium exchange rate. The 2015 mini crisis in China is a good example when capital account opening went ahead of domestic reforms. Japan's experiences in the 1980s and 1990s also demonstrate that liberalizing the capital account prior to domestic financial reforms could pose substantial threats to financial stability and hinder long-term prosperity (Box on Japan). The International



Source: Bayoumi and Ohnsorge (2013).

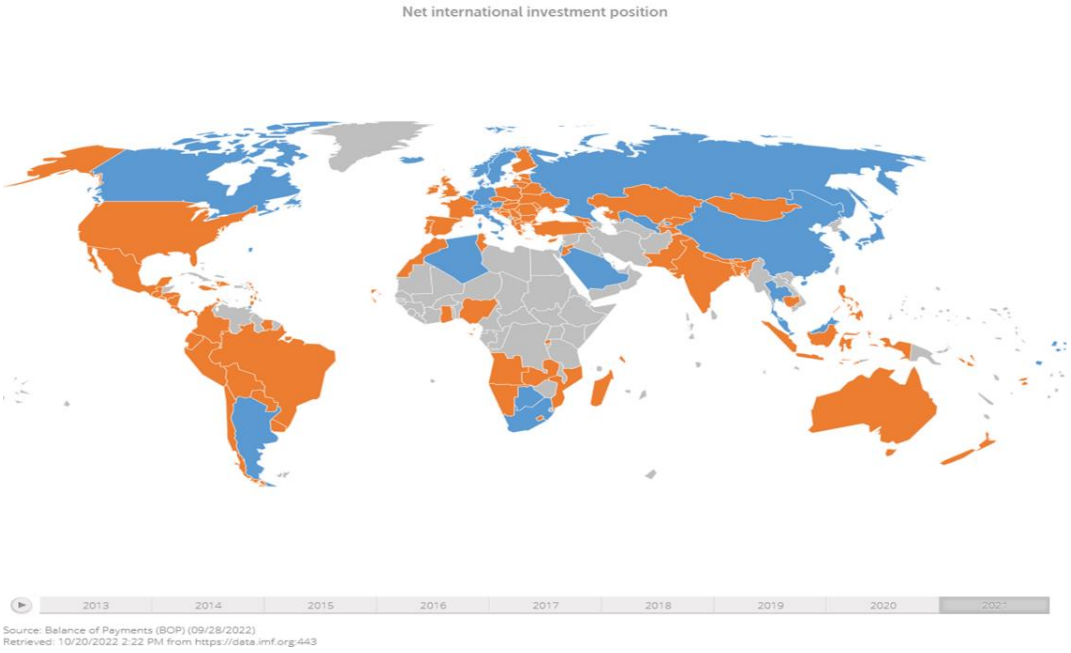
[5] The foreign debt limit is set based on an institution's net assets, which is then adjusted based on a specified leverage limit (the leverage rate is set at 2 for financial institutions) and the macro-prudential parameter (adjusted counter-cyclically based on aggregate macro conditions).

[6] See Eichengreen (2011) for a comprehensive review.

Monetary Fund has recently introduced the integrated policy framework (IMF, 2021) to guide countries on the best policy mixes to respond to extreme events for capital outflows.

For many emerging markets, reflecting the insufficient domestic saving and the large financing need for development, an open capital account is necessary to attract foreign funding. As shown in the chart below, most emerging markets are net debtors and rely on foreign funding. In contrast, China has a significantly higher rate of national savings, and a net creditor position. Therefore, there is no imminent need to liberalize capital account from the financing perspective. Nonetheless, bringing foreign financial institutions and investors could promote the price discovery in the capital market [7]and risk management in the domestic financial system, hence enhance capital allocation. As China's economy matures and growth slows, it is also vital to liberalize outflows so that domestic savings could seek higher return abroad instead of being captivated domestically, which fueled real estate bubbles and excessive debt built-up in the banking system.

Figure 9: Net International Investment Position across Countries



Source: International Monetary Fund

Note: Orange color indicates net debtor countries, while blue shows net credit countries. Gray indicates no data available.

[7] See Schipke and Zhang (2019) for a comprehensive review on the lack of risk pricing in China's bond market.

C. Implications of capital account opening: Stock vs. flows

For policymakers, a key consideration for changing capital account policies is the ensued capital flow volatility. In particular, if large outflows dominate, the exchange rate would be put under considerable downward pressures; conversely, large net inflows could lead to rapid currency appreciation. Nonetheless, it is often hard to draw generalized conclusions about the direction of net flows following capital account opening, as these flows are sensitive to the cyclical swings in global macroeconomic conditions. When a country's economy is in a recession, opening its borders may not result in substantial inflows. In a similar fashion, capital account openings may result in limited inflows and accelerated outflows in the context of tighter global financial conditions. In contrast, the IIP positions, which reflect cumulative flows over time, are far less volatile and have a more stable relationship with the structural characteristics of the economy. In this study, we do not explore the effects of lifting capital account restrictions on cross-border flows; rather, we focus on the effects on its external positions. Bayoumi and Franziska (2013) present a comprehensive analysis of the potential effects on flows.

D. Drivers of External Positions

In this section, we evaluate the primary determinants of a nation's foreign assets and liabilities. Generally speaking, countries with higher income and more developed financial system tend to also have a large global presence. Financial institutions from these countries would be more engaged in cross-border activities reflecting their higher level of risk management and the desire for portfolio diversifications. A deep and liquid financial market also attracts more foreign inflows. At the same time, cross-border financial flows are subject to capital account regulations, with the degree of control varies across jurisdictions.

Existing literature frequently focuses on a country's net international investment position, which is a critical indicator of the economy's external sustainability and sensitivity to global financial shocks. In a similar vein, there is a substantial body of work that investigates the drivers of cross-border capital flows and distinguishes between various types of flows, such as FDI flows and portfolio flows. In contrast, the gross international investment situation has received relatively little attention to this point. He et al. (2012) examines gross FDI and portfolio investment positions in 25 developed and emerging nations with four levels of capital control, calculating the group mean to draw implications for China as its level of control changes. The paper also studies the drivers of capital flows, and projected China’s investment positions by calculating cumulated flows. Hooley (2013) analyses the impact of capital account liberalization on China’s external positions by simply assuming it would reach the level in the U.S.

We conduct a more rigorous analysis to quantify the impact of capital controls and financial development on the overall international investment positions. Critically, we distinguish between inflow and outflow controls, as they have different implications for a country’s asset and liability positions. In addition to overall financial development, we also evaluate the impact of financial institutions and financial markets separately.

The model is set up as a fixed-effect dynamic panel:

$$Y_{i,t} = C_i + \propto * Y_{i,t-1} + \beta 1 * CAP_{i,t} + \beta 2 * FD_{i,t} + \beta 3 * CAP_{star,t} + \beta 4 * FD_{star,t} \quad + \varepsilon_{i,t}$$

The dependent variable $Y_{i,t}$ is the external assets/liabilities to GDP ratio of country I in year t. We include its lagged variable $Y_{i,t-1}$ on the right-hand side because international investment positions are built overtime and thus exhibit a higher degree of persistence. Ci stands for the country fixed effect, which is intended to capture country-specific factors, such as institutional variables. $CAP_{i,t}$ represents the degree of capital control of country i in year t, with 1 indicating complete control and 0 indicating fully liberalized. We use the inflow index for regressions on external liabilities, and the outflow index for regressions on external assets. FD refers to the financial development index, which also ranges from 0 to 1, with 1 being the most advanced. We also use subindices for financial institutions and financial markets in subsequent regressions. $CAP_{star,t}$ and $FD_{star,t}$ capture the global environment in year t, they are derived as the average capital account control and financial development indexes worldwide.

Given the dynamic context, the traditional Ordinary Least Square (OLS) fixed-effect estimator is biased because the demeaned lagged dependent variable is correlated with the demeaned residual after the within transformation. To overcome this concern, we employ the Arellano-Bond GMM method, in which the equation is estimated in first differences using lagged levels as instruments. The results are displayed in tables 1 and 2.

On the asset side, the high degree of inertia (0.83), as anticipated, reflects the nature of asset accumulations. With a coefficient of 0.6, financial development has a statistically significant impact on a country's external asset/GDP ratio. This indicates that for the median country in the sample, with a financial development index of 0.4, an improvement in its financial system to match that of the advanced economies (with a value of 1) would improve its external position by 0.36 or 36 percent of GDP. Compared to financial markets, financial institutions tend to have a greater impact on a country's external expansion, with a coefficient of 0.60 versus 0.30. Similarly, limits on capital outflows greatly reduce the size of foreign assets, with a coefficient of 0.2. This means that if a country transitions from a fully closed to fully open capital account policy, its external assets would increase by 20% of GDP. The importance of the global environment is demonstrated as well. Global financial development has accelerated in recent decades, influencing a nation's external position by a coefficient of 1.45. On the other hand, capital control throughout the rest of the globe does not appear to have played a substantial influence. This is likely because most advanced economies had already liberalized their capital accounts by the time the sample begins in the 1980s.

On the liabilities side, we observe a similar degree of inertia (with a coefficient of 0.86) as liabilities were accumulated over time. Financial development plays a larger role in driving a country's external liabilities, with the coefficient highly significant at 0.83 compared to 0.6 for external assets. With coefficients of 0.4, both financial institutions and financial markets are equally important in determining the level of external liabilities. Furthermore, restrictions on inflows also have a larger impact compared to the effect of outflow restrictions on external assets (with the coefficient of 0.23 compared to 0.18 for external assets). This implies that as a country fully opens to inflows, its external liabilities could rise by 23% of GDP. Interestingly, global

financial development and capital account restrictions are not shown to be statistically significant in driving a country's external liabilities.

Table 1. Dependent Variable: External Assets/GDP

Lagged asset/GDP	**0.83**	**0.86**
	(0.00)	(0.00)
Financial development	**0.61**	
	(0.01)	
Financial institutions		**0.62**
		(0.01)
Financial markets		**0.25**
		(0.09)
Cap_outflow	**-0.18**	**-0.17**
	(0.01)	(0.02)
FD_STAR	**1.45**	**1.45**
	(0.08)	(0.08)
CAP_STAR	**0.07**	0.07
	(0.82)	(0.82)
Constant	**-0.43**	**-0.43**
	(0.01)	(0.01)
Number of Observations	1227	1227
Number of Countries	80	80

Note: Numbers in brackets refer to P-values.

Table 2. Dependent Variable: External Liabilities/GDP

Lagged liabilities/GDP	**0.88**	**0.87**
	(0.00)	(0.00)
Financial development	**0.83**	
	(0.01)	
Financial institutions		**0.42**
		(0.08)
Financial markets		**0.40**
		(0.01)
Cap_inflow	**-0.23**	**-0.21**
	(0.01)	(0.02)
FD_STAR	0.59	0.75
	(0.47)	(0.36)
CAP_STAR	-0.15	-0.18
	(0.63)	(0.56)
Constant	-0.12	-0.11
	(0.48)	(0.49)
Number of Observations	1224	1224
Number of Countries	80	80

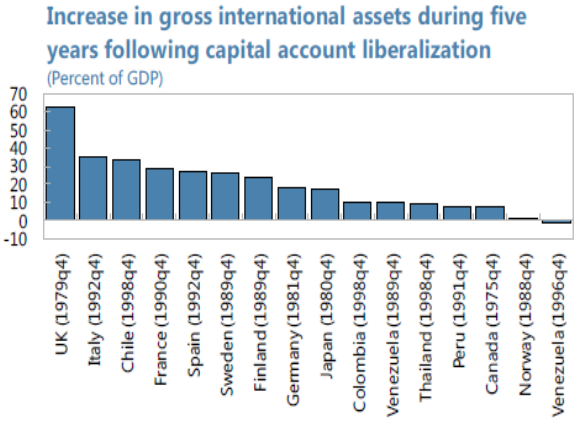
Note: Numbers in brackets refer to P-values.

E. Scenario projections

In this section, we examine illustrative scenarios in which China fully opens its capital account and continues its financial deepening, and we predict the evolution of its external balance sheets based on the empirical relationship derived in earlier sections.

Scenario 1: Fully open capital account today

This scenario examines the hypothetical situation in which China's capital account is completely open today, while the degree of financial development and global environment remain unaltered. According to the regression, reducing China's capital flow limitations from their present level of 0.9 to 0 would increase its external assets by 16% of GDP and its liabilities by 21% of GDP, bringing the assets/liabilities ratio to 69% and 62% of GDP, respectively. The magnitude derived from the estimates are similar to the observed financial expansion historically following opening up in other countries as shown in Bayoumi and Ohnsorge (2013).



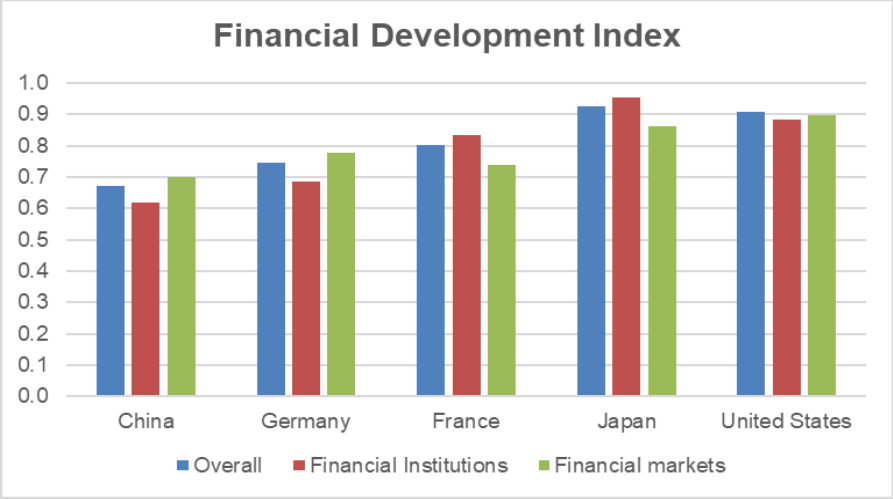
Source: Bayoumi and Ohnsorge (2013)

Scenario 2: Financial system matures and capital account fully open

Despite rapid progress, China's financial sector still has ample room to develop, when compared to other reserve currency issuers. The overall financial index in China is 0.65, compared to 0.75 for Germany and France, and 0.9 in the United States and Japan. The disparity is particularly pronounced in access to financial services, as well as depth of financial institutions and financial markets.

In this scenario, we assume that China's financial development will reach that of France and Germany, with the financial index rising to 0.75 from its present level of 0.65. Simultaneously, the capital account is completely liberalized. The upgrade in the financial sector would increase China's external assets by 6% of GDP and increase its external liabilities by 8% of GDP. Adding the effect of capital account liberalization would increase China's total external assets and liabilities to 75% and 70% of GDP, respectively.

Figure 10: Financial Development Index



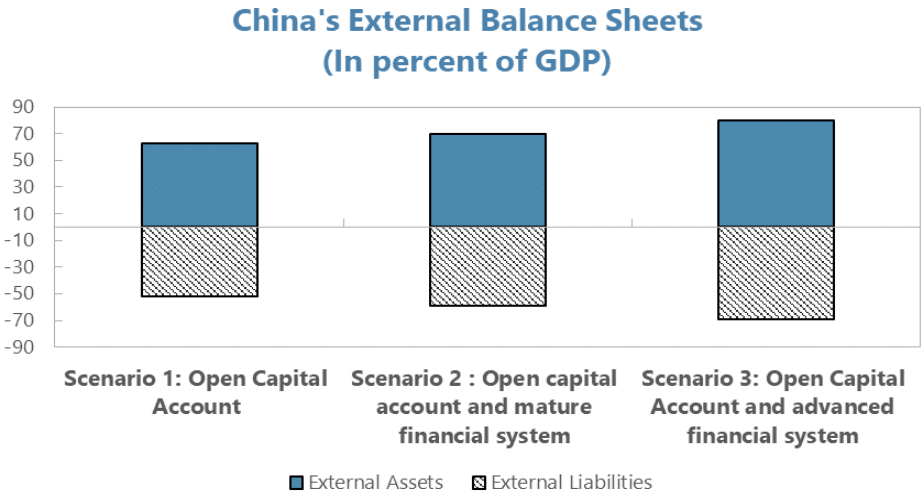
Source: IMF.

Scenario 3: Advanced financial system and capital account fully open

This scenario assumes China attain the same degree of financial development as the United States and Japan, with the financial index rising to 0.9 from its present level of 0.65. Simultaneously, the capital account is completely liberalized. The financial deepening could boost China's external assets and liabilities by 15 percent and 20 percent of GDP, respectively. Adding the effect of capital account liberalization would increase China's external assets/liabilities to 84 and 83 percent of GDP.

Even under this scenario, China's projected gross positions as a percentage of GDP remain lower compared to other issuers of reserve currencies. However, if China's GDP share continues to rise, China's external positions as a proportion of world GDP will grow significantly and expected to reach 20- 25 percent from the present 10 percent.

Figure 11: Projection of China's External Balance Sheets



F. Implication of financial integration for RMB internationalization

Financial integration and currency internationalization often go hand in hand, but their relationship is not one to one. Until recently, China's trade integration was not associated with increased use of RMB. Similarly, China's financial integration, in particular overseas lending, was mostly in US dollars. However, going forward, the financial integration may have a more pronounced impact on the global use of RMB, in particular with the opening up of portfolio investments.

Since China's entrance into the WTO in 2001, international trade has expanded significantly. However, trade was invoiced and settled mostly in US dollars. Only in 2009 did the People's Bank of China permit cross-border settlement in RMB, initially through pilot programs in a few regions and then expanded nationwide in 2011. Since then, the RMB's proportion of China's trade settlements has increased steadily but remains low at 15% for goods trade and 27% for service trade in 2021. As a result, China's trade integration has largely strengthened the US dollar as a vehicle currency in global trade. Georgiadis et al. (2021) studied RMB trade invoicing in selected countries and find that China's trade integration has strengthened U.S. dollar invoicing at the expense of Euro.

Chinese banks' oversea expansion so far has also played a minor role in RMB internationalization. Among China's official lending (lending by policy banks and large state-owned banks), Reinhart et al (2021) has shown that more than 70 percent of China's official overseas lending is in USD, with the RMB loans accounting for less than 10 percent.

On the other side, capital market liberalization may have a stronger impact on RMB internationalization. Foreign investors currently control only 2% of Chinese stocks and 4% of Chinese bonds, compared to 40% and 33%, respectively, in the United States. Therefore, further opening up may result in a steady increase in foreign ownership and a larger share of RMB assets in the global financial system. Similarly, easing limits on outbound portfolio investment might boost RMB liquidity abroad and promote RMB lending offshore.

Meanwhile, it is also important to recognize that financial integration is a necessary but insufficient condition for currency internationalization. Japan's experiences suggest that while an opening capital account and financial deepening could lead to a significant expansion of international investment positions, they may not be associated with increasing global use of the currency. Economic fundamentals, such as strong growth and low and steady inflation, continue to be essential for currency adoption in international transactions (box on Japan).

G. Conclusions

After four decades of rapid economic growth, China has become the world's second-largest economy and established intricate trade ties with the rest of the world. However, China's financial integration is still in its infancy, primarily due to its strict capital account controls. This policy was selected in conjunction with a rigid exchange rate regime, which insulates the economy from global financial shocks and ensures exchange rate stability, which is a top priority given China's export-driven economic model. In the aftermath of the global financial crisis, when international trade slowed and China shifted its focus to domestic demand, a more flexible exchange rate regime was adopted, allowing for the relaxation of capital controls. A fully liberalized capital account could boost China's financial integration significantly, with far-reaching implications for the international monetary system.

China's external assets and liabilities currently account for 53% and 41% of GDP, respectively. We project that by fully opening its capital account and developing a financial system comparable to that of advanced economies, China's external assets/liabilities positions would rise to 84 and 83 percent of GDP, respectively, based on cross-country experience. When measured in terms of global GDP, this increase would be more significant. If China's share in the global economy continues to rise, its external assets and liabilities will rise from 10 and 8 percent of global GDP to 25 and 21 percent, respectively.

While capital account liberalization could enhance financial integration and improve resource allocation, it also poses new challenges to financial stability. A more financially integrated China would make the Chinese economy more susceptible to global shocks, while Chinese shocks would have a greater impact on the international financial system. To fully benefit from an open capital account, it is critical for China to strengthen its institutions and regulatory framework and develop the domestic financial system. For the rest of the world, until now, most economic shocks from China have been trade and supply chain related, whereas financial shocks may become more prominent in the future. From a structural perspective, China's increasing international investment position could change the landscape of global financial assets, with an increasing share of RMB assets, which will set the stage for more widely adoption of the RMB as a global currency.

Nonetheless, China's future capital account policy is fraught with uncertainty. While the changing macroeconomic trend would allow for the relaxation of capital controls, further structural changes, such as the elimination of implicit guarantees and SOE reforms, are required to ensure financial stability in a more open China. As demonstrated by the 2015 mini-crisis, capital account liberalization prior to domestic reform could result in financial turbulence and a

reversal of opening up. As a result, future capital account liberalization is expected to be gradual. The government may liberalize inflows and outflows at different paces, resulting in an asymmetric opening, depending on the prevailing macroeconomic conditions and the direction of net capital flows. Finally, as geopolitical tensions rise, the global financial system is vulnerable to fragmentation. As China opens up, this fragmentation may lead to more geographically lopsided financial integration.

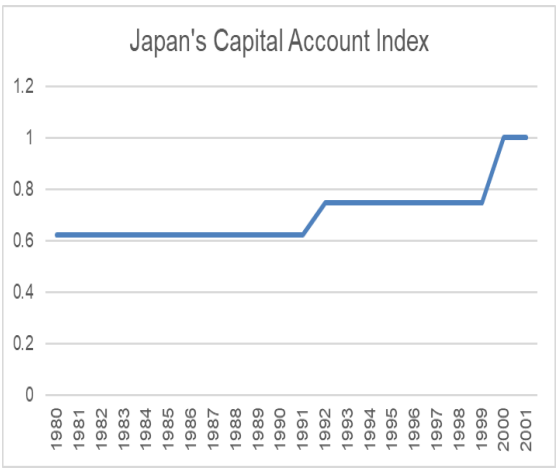
China's increasing global financial exposure will set the stage for RMB internationalization. China's trade integration and previous financial integration, in particular overseas lending, have often relied on the US dollar as the pricing and payment currency, rather than the RMB. The next wave of financial opening up in the capital markets may have a greater impact in boosting the share of RMB assets in the global financial system and, consequently, the RMB's international role. At the same time, Japan's experiences show that while global financial connectivity is necessary for currency internationalization, it is not sufficient. Economic fundamentals, such as robust growth and low and steady inflation, continue to be essential for the widespread use of a currency in international transactions. Therefore, RMB internationalization will depend not only on a more open capital account, but also on reforms that sustain China's robust economic growth.

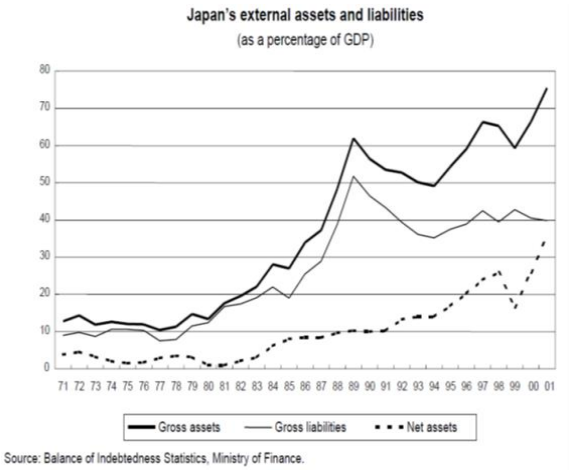
Box: Japan's Capital account liberalization and financial integration

In its post-war history, Japan has adopted an export-driven economic model accompanied by rigorous currency rate management and domestic financial repression. Consequently, the capital account was substantially closed, comparable to the situation in China. After the collapse of the Bretton Woods system in 1973, the major advanced economies proceeded to liberalize their capital accounts, whereas Japan's opening up did not begin until 1979, when the government liberalized capital inflows in response to Yen depreciation pressures, allowing foreign investors to hold Japanese securities such as bonds, certificates of deposit, loans, etc. 1980 saw the introduction of the Foreign Exchange Law, which established the presumption that international capital transfers are permissible, replacing the previous premise that they are not. The second phase of liberalization occurred in 1984/1985, reflecting in part external influences, and included milestones such as the legalization of international portfolio investments by domestic financial institutions. Domestic financial liberalization progressed more slowly than capital account openness, with interest rates fully liberalized in 1994 and competition among banks, insurance corporations, and trusts permitted in 1992[8].

[8] See Frankel (1984) for a full recount of Japan's capital account liberalization.

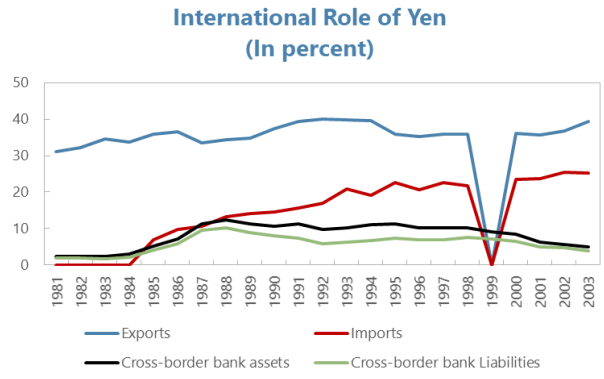
Capital account liberalization has resulted in a significant expansion of Japan's oversea investment positions, with external assets surged from 10 percent of GDP in 1979 to 60 percent of GDP in 1990s, which then retreated following the banking crisis, and resumed expansion in the early 2000. Today, with a fully open capital account, Japan's external assets and liabilities stand at 220 percent and 150 percent of GDP, respectively. Japan is also one of the world's largest net creditors, with net assets equal to 70 percent of GDP. However, Japan's opening up was accompanied by the banking crisis in the 1990s, which led to decades of anemic growth and deflationary pressures.





Source: Quinn and Toyoda (2008).

Japan's financial integration had a non-linear impact on the international use of the Yen. The internationalization of the yen accelerated in the middle of the 1980s as a result of the financial reform, with the proportion of yen-denominated assets reaching 12 percent of cross-border bank assets/liabilities; however, it has steadily declined since then, particularly after the Asian financial crisis. Similarly, the yen's share of Japan's trade invoicing plummeted during the crisis, rebounded, and subsequently stabilized at approximately 40% for exports and 25% for imports. This is against the backdrop that Japan's gross international investment positions expanded further to more than 100 percent of GDP.



Sources: Japan Ministry of Finance, BIS, IMF,OECD.

Japan's experience demonstrates that liberalizing the capital account prior to domestic financial reforms could pose substantial threats to financial stability and hinder long-term prosperity. In addition, while global financial connectivity is necessary for currency internationalization, it is not sufficient. Economic fundamentals, such as robust growth and low and steady inflation, continue to be essential for the widespread use of a currency in international transactions.

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