China's currency campaign: the challenge of internationalisation and digitalisation of the Renminbi

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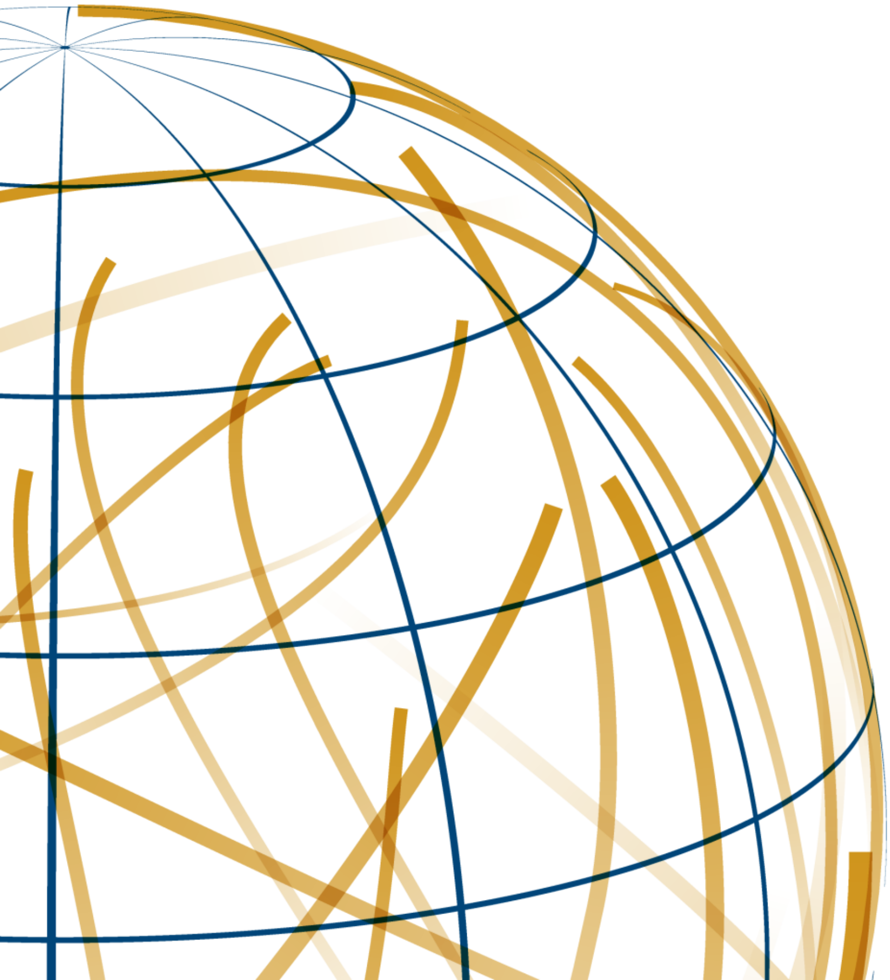

Stiftung Wissenschaft und Politik
German Institute for International and Security Affairs

SWP Research Paper 7
June 2024, Berlin

- In China, money, currency and payment transactions are manifestations of state sovereignty and political power. The primary objective of Chinese monetary policy is to maintain domestic stability, expand the scope of its own influence internationally, and reshape the global financial and monetary system to make it more compatible with the structures of the Chinese one-party state.
- China is pursuing the internationalisation of the renminbi on several tracks in small persistent steps and with a long-term perspective, but it has so far shied away from the decisive transition to convertibility.
- For the time being, the renminbi does not play a significant role on the global financial and currency markets. However, it is gaining ground as a trading, credit and reserve currency in Asia and the Global South.
- China is a pioneer in the development and introduction of digital central bank money. It is striving to play a leading role in the digitalisation of international payment transactions. Prospectively, the technology and infrastructure developed in China and the standards set for cross-border payments using blockchain and real-time transactions could replace the current international banking and clearing system in a cost-effective manner.
- The Chinese leadership believes that digital central bank money offers great potential: In terms of domestic policy, it creates further opportunities for surveillance and repression. Internationally, it would become easier for China and third countries to circumvent Western financial sanctions.
- In response to China's currency campaign, the European Union and the European Central Bank should step up their own efforts to internationalise and digitise the euro. Europe should avoid dependence on China when it comes to the future critical infrastructure of an interoperable system for international payments with digital central bank money.

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ISSN (Print) 2747-5123
ISSN (Online) 1863-1053
DOI: 10.18449/2024RP07

(English version of
SWP-Studie 9/2024)

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China's Currency Campaign. The Challenge of Internationalisation and Digitalisation of the Renminbi

China is the world's largest trading nation and second-largest economic power. However, the national currency of the People's Republic, the renminbi (RMB), only plays a minor role on the international stage. The low penetration of the RMB on the international financial markets has a negative impact on the Chinese economy and is a source of political vulnerability. The Chinese leadership is not resigned to this unsatisfactory state of affairs. For some time now, it has been making extensive efforts to spur the internationalisation of its own currency. China is a pioneer in the development and introduction of digital central bank money. The country is striving for a leading role in the digitalisation of international payment transactions.

So far, monetary policy has received comparatively little attention in analyses of China's foreign policy. Yet, if the RMB were to assume a more important role at the expense of the US dollar and the euro, it would have far-reaching political implications beyond the technical level. If China were to take the lead in a future digitised international payment system, the country's vulnerability to Western financial sanctions would diminish and the People's Republic would be in a position to establish effective leverage vis-à-vis third countries.

This research paper takes stock of RMB internationalisation. What political and economic calculations is China following? What strategies has it chosen, what measures have already been taken, and what obstacles and limitations is it encountering in its endeavours? What are the chances of success, based on this analysis? The paper also takes an analytical look at the development and introduction of digital central bank money in China and its foreseeable political and economic implications — both nationally and internationally.

The paper comes to the following results and conclusions:

- The aim of Chinese monetary policy is to ensure domestic stability and expand its own room for manoeuvre in the international financial and monetary system — possibly to the detriment of the West — and to reshape the global system in such a way that it becomes more compatible with the structures of the Chinese one-party state. In China, there is a longstanding awareness that money and currency form a decisive basis for political power. Its own currency, the RMB, is a cornerstone of China's state sovereignty, identity and nationalism.

- Although China does not allow currency convertibility out of concern for its internal stability and maintains capital controls, the country is persistently pursuing the goal of RMB internationalisation with a long-term perspective and on several tracks. Domestically, the objective is to develop efficient financial and capital markets and gradually open them up to foreign investors. The RMB is to be increasingly utilised abroad. Milestones on this long march of RMB internationalisation include the establishment of a convertible offshore RMB, the conclusion of numerous currency swap agreements with foreign governments, the development of an infrastructure for payment transactions that is independent of SWIFT and the gradual flexibilisation of the exchange rate regime.
- For the time being, the RMB does not play a significant role on the global financial and currency markets. The global dominance of the US dollar remains unchallenged, far ahead of the euro. But even compared to the pound and yen, the RMB is less internationalised. As long as China continues to maintain capital controls and market access barriers to its capital markets, the willingness of investors to hold large volumes of RMB will remain low. However, the RMB is increasingly gaining ground as a trading, credit and reserve currency in Asia and the Global South.
- China will be the first major economy to issue a central bank digital currency (CBDC) nationwide. The Chinese state has an ambition to actively shape the future of blockchain technology, digital money and payment transactions in the interests of the party and the state.
- Officially, China's central bank is pursuing three goals with the introduction of the digital RMB, namely the provision of cash in digital form, the guarantee of secure infrastructure for payment transactions and its use for cross-border payments. However, the economic and political implications go far beyond the technical level:
  - Firstly, the introduction of the digital RMB creates new options for fiscal and monetary policy.
  - Secondly, state security organisations will be able to use the payment transaction data for surveillance, prosecutions and repression.
  - Thirdly, it should be possible in the future to use a CBDC to process cross-border transfers using blockchain, peer-to-peer networks in real time and at very low cost, thereby bypassing the existing banking and clearing system. The technological expertise and practical experience acquired in the process offer China the opportunity to play a leading role in the development of infrastructure and interoperability standards between domestic and foreign payment systems. China is actively looking for multi-track solutions here.
  - Fourthly, a digital RMB that can be used in international business transactions would enable China and third countries to circumvent Western financial sanctions more easily. With a payment transaction infrastructure centred on China, the People's Republic would gain access to payment data worldwide.
- China's persistent pursuit of monetary autonomy and the power to shape and influence the global financial system is a further argument for giving the internationalisation of the euro a higher political priority and setting the appropriate course at the European level.
- The head start of the People's Republic with the introduction of a CBDC should also be an incentive to step up efforts to develop a digital euro. With the digital euro, Europe and the European Central Bank (ECB) have the opportunity to issue digital central bank money that — in contrast to the Chinese model — effectively and reliably protects electronic wallets and users' transaction data against unauthorised access and storage.

China's Monetary Nationalism

Money and political rule in China's history

China's past and present provide eloquent testimony to the political significance of money and currency.[1] In the country's long history, there are numerous examples of how "bad money" has led to political instability, the delegitimisation of political rule, territorial disintegration, civil war and chaos. It is historically proven that the early paper currencies under the Song (1127—1279), Yuan (1271—1368), Ming (1378—1635) and Qing (1636—1912) dynasties experienced deep losses in value as a result of excessive monetary expansion, which subsequently undermined the legitimacy of imperial rule and contributed to its demise. The Taiping Rebellion (1851—64), which is estimated to have cost the lives of 20 to 50 million people, was also triggered by a currency crisis.[2]

In the period 1839—1949, which China's official historiography refers to as the "century of humiliation", the state's monopoly on currency was challenged several times and from different sides: initially by the branches of European banks in the coastal trading ports, then later also by local Chinese banks and provincial governments, and finally by invaders from Japan. In China's republican era, the Kuomintang government and Japanese colonial authorities fought bitterly for national currency dominance in the years 1938—41. After Japan put the currency of the Republic of China under massive pressure by selling on foreign exchange markets, the currency war escalated in 1941 when both sides carried out attacks, acts of sabotage and even military assaults on the opposing central banks and banks.[3]

For China's communist rulers, money and currency have always been an essential foundation of their rule.

It is firmly anchored in the current political culture of remembrance that China's revolutionary changes of power in the 20th century were preceded by runaway inflation. Massive currency devaluations were followed by food riots and unrest, which were key factors in the fall of the empire (1912) and the defeat of the Kuomintang in the Chinese Civil War (1927—49). The student protests in Tiananmen Square (1989) also had a monetary component against the backdrop of high inflation (around 25 per cent).[4] Also unforgotten are the former restrictions on China's national sovereignty, for example as a result of the parallel existence of several currencies on the country's territory, the uncontrolled activities of foreign banks, or the indebtedness of the state and private sector to foreign countries.

The collective memory of all these events continues to characterise the mindset and actions of the Chinese state and party leadership to this day. For China's communist rulers, money and currency have always been an essential foundation of their political rule, comparable in importance only to the insignia of the people, army, territory, party and state. On the occasion of the founding of the central bank and the introduction of the new currency, the renminbi,[5] Mao Tse-tung proclaimed on 1 December 1948, just one year before the proclamation of the People's Republic of China (PRC): "The Chinese people finally have their

1 Beyond its economic functions (medium of exchange, store of value, unit of account, measure of debt), money always has an intrinsic political and social dimension; see especially Stefan Eich, *The Currency of Politics: The Political Theory of Money from Aristotle to Keynes* (Princeton, NJ, 2022).

2 Eswar R. Prasad, *Gaining Currency: The Rise of the Renminbi* (Oxford, 2017), 1—10.

3 Ibid., 5—14.

4 See Patrick Hess, *Episodes of High Inflation in China and Their Impact*, unpublished manuscript, presented at the conference "Inflation and Deflation in East Asia" (Ludwigshafen: Ostasieninstitut, 20 May 2022).

5 Renminbi (RMB) is the official name for China's currency. The units of the RMB are called yuan.

own army, their own regime, their own land and now their own bank and currency! This is how a republic mastered by the people should be like."[6] The symbolic names given to the central bank (People's Bank of China, PBoC) and the currency (People's Money, RMB) as well as the enforcement of an RMB with stable value as legal tender in the turmoil of the civil war contributed significantly to legitimising the Chinese Communist Party (CCP) in the founding phase of the PRC.

The defensive and offensive sides of Chinese monetary nationalism

Due to this historical background, money and currency are integral parts of China's sovereignty, identity and nationalism. China's monetary nationalism has an economic and a political facet: Economically, its currency is an instrument to safeguard monetary stability and promote economic development, growth and competitiveness, if necessary, also at the expense of third countries. Politically, the RMB is an internal symbol of national identity and an external manifestation and instrument of China's claim to international leadership.

It is obvious that the monetary system is subordinate to the CCP's interest in maintaining the system and its power in order to preserve political stability. Money and currency are core elements of politics and political power. Only after recognising this premise can their economic dimension be assessed. The political system, which describes itself as "Socialism with Chinese characteristics", makes use of efficient market economy regulations and provides very broad scope for entrepreneurial freedom and autonomy. However, the CCP's claim to leadership in all key political issues remains absolute.

In this type of political setting, the central bank responsible for monetary policy (the PBoC) cannot be independent. As in other centres of power, the management staff of the PBoC are committed to the communist party and ideology. Leninist organisational principles also apply to the PBoC. From a constitutional point of view, the PBoC is a subordinate authority of the State Council, which is responsible for political supervision and the budget. All important monetary policy decisions ultimately require the approval of the State Council. The fact that the PBoC nevertheless enjoys a certain degree of authority and independence is primarily due to its success in fulfilling its mandate, namely to safeguard the monetary value of the RMB and promote economic growth.[7]

China's monetary nationalism has both domestic and foreign policy aspects. On the one hand, it has a defensive inward focus for the purpose of protecting financial sovereignty; on the other hand, it has an offensive outward focus in an effort to gain international financial leverage and influence.[8] In the 20th century, during the ruling eras under Mao Tsetung, Deng Xiaoping and Jiang Zemin, the focus was primarily on defensive aspects. China's state and party leadership was concerned with controlling the RMB and enforcing it as the only legal tender on the territory of the PRC, securing the currency's internal monetary value and thus the Chinese people's trust in it. The leadership could thus avoid financial and currency crises that could have jeopardised this trust as well as internal stability while also averting any financial dependencies, be it through foreign debt or through the dominance of Western banks and financial institutions in China itself.

From a Chinese perspective, a sense of vulnerability persists regarding monetary and financial policy, right up to the present day.

Although monetary and financial policy has succeeded in mastering all these tasks, a sense of vulnerability persists from a Chinese perspective, right up to the present day. The international monetary system remains US dollar-centred and Western-dominated and could potentially be used as a political weapon against the People's Republic. Financial sanctions, such as those imposed on Russia in response to the war of aggression against Ukraine, would also hit China's economy hard. In addition, the Chinese economy and economic policy are at the mercy of the sometimes surprising twists and turns of US monetary policy, at least as long as stable exchange rates are sought for the RMB and certain restrictions on capital

6 Quote taken from Prasad, *Gaining Currency* (see note 2), 16.

7 For a legal and political categorisation of the PBoC, see Knut B. Pißler, "History and Legal Framework of the People's Bank of China", in *Central Banking and Financial Stability in East Asia*, ed. Frank Rövekamp, Moritz Bälz and Hanns Günther Hilpert (Cham: Springer, 2015), 11–24.

8 For this differentiation in detail, see Eric Helleiner and Hongying Wang, "The Richness of Financial Nationalism: The Case of China", *Pacific Affairs* 92, no. 2 (2019): 211–34.

movements are maintained in a controlled manner for capital transactions with foreign countries. In the not unthinkable event of a financial and economic crisis, China's political stability or even the CCP's claim to power could be jeopardised by rampant capital flight.

From a Chinese perspective, the offensive financial and currency policy goals that have become increasingly apparent since the turn of the millennium have therefore always had a defensive connotation. For example, the build-up of currency reserves (totalling USD 4 trillion at peak times) was obviously based on the idea of having to be prepared for speculative attacks on its own currency and a likely subsequent financial crisis.[9] The actively pursued goal of internationalising the RMB was therefore also a reaction to the turbulence on the global markets in the financial crisis of 2008/09. China's demand for a level of representation at the International Monetary Fund (IMF) and the World Bank that is in line with the country's economic weight is also understandable and legitimate. Other financial policy measures already display a clearly offensive character, such as the establishment of new competing multilateral financial institutions, for example the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB). State or quasi-state direct investments and foreign loans made as part of the Belt and Road Initiative (BRI) already testify to China's strong economic and political dominance in regional and international contexts. The dependencies and asymmetrical power relations that have emerged as a result have become proven instruments of economic coercion in China's foreign policy, when deemed necessary.

In the current era of government under Xi Jinping (since 2014), China's monetary and financial policy has been characterised by an offensive approach. The People's Republic is actively seeking to exert influence, co-determination and participation in international financial and monetary matters in line with its own political ideas and interests. Due to its growing political ambition, it is inconceivable that China could be passively integrated into the existing governance structures of the global monetary system in the same way as the former financial policy "rising powers" Germany, Japan and Saudi Arabia, especially as the United States — supported by other G7 countries — is actively blocking China from having a greater "vote and quote" in the IMF and World Bank. The state and party elites in the People's Republic regard it as illusory that America would ever offer China a genuine partnership in the existing governance system or even respect Beijing's core political interests. It is therefore the long-term objective of the Chinese leadership to gradually change the international financial and monetary system in such a way that its own room for manoeuvre is expanded and that of America and the West is reduced.[10] In the long term, the People's Republic must endeavour to reshape the global monetary and financial system in such a way that it is sufficiently compatible with the structures of the Chinese one-party state. China's monetary policy and international financial policy therefore align with the country's overriding political interests.[11]

9 Another motive was undoubtedly to promote the domestic export industry.

10 For example, Gregory Chin, "China's Rising Monetary Power", in *The Great Wall of Money: Power and Politics in China's International Monetary Relations*, ed. Eric Helleiner and Jonathan Kirshner (New York, NY: Cornell University Press, 2014), 184—212.

11 Fundamentals of China's foreign policy, Nadine Godehardt, *Wie China Weltpolitik formt. Die Logik von Pekings Außenpolitik unter Xi Jinping*, SWP-Studie 19/2020 (Berlin: Stiftung Wissenschaft und Politik, October 2020).

The Renminbi's Long March to International Currency Status

As early as the opening and liberalisation of the Chinese economy under Deng Xiaoping in the 1980s and 1990s, the question arose as to what role the RMB would be able to play internationally in the future. The idea of RMB internationalisation was first officially mentioned in 2006 in a document from the Chinese central bank in the form of a positive recommendation.[12] According to the document, greater use of the RMB outside its own borders would promote China's status, political influence and economic competitiveness. The desired internationalisation of the RMB was given political backing and momentum as a result of the shocks resulting from the global financial market crisis that began in 2008. This event clearly demonstrated to the Chinese government the risks of dependence on the US dollar and a dollar-dominated financial system.

China's motives

From a Chinese perspective, the internationalisation of the RMB is necessary to counteract the economic and political disadvantages facing the PRC in the current international monetary system. The worries and concerns of the Chinese leadership are primarily in three areas.[13]

Firstly, China's companies are exposed to currency-related costs and risks — particularly substantial currency risks — in their foreign trade and investments, even though the country is now the world's second-largest economy (based on market prices) and largest trading nation. China's domestic financial institutions and financial markets will not be able to develop in the same way as the country's real economy for the foreseeable future. In contrast, RMB internationalisation could allow China's citizens, companies, banks and corporations to use their own currency internationally as a means of payment and investment, to raise RMB-denominated capital or to issue RMB-denominated bonds abroad.

Secondly, China is at a disadvantage due to the obligation to hold foreign exchange reserves denominated in US dollars to hedge against currency and financial market crises. Beijing views these investments as inefficient, loss-making and politically humiliating. As a large economy with global economic exposure, China holds the highest level of dollar currency reserves in the world and considers itself to be in a dollar trap due to the associated asset risks, which are difficult to calculate. In the worst-case scenario, the People's Republic would have to accept the United States offloading its monetary obligations to foreign countries through an expansive monetary and fiscal policy.

12 People's Bank of China (PBoC) Study Group, "The Timing, Path and Strategies of RMB Internationalisation" (Beijing, 2006), quoted in Yiping Huang et al., *Paths to a Reserve Currency: Internationalization of the Renminbi and Its Implications*, ADBI Working Paper 482 (Tokyo: Asian Development Bank Institute, May 2014), 3.

13 On the goals of RMB internationalisation: Alex He, *Domestic Sources and RMB Internationalisation: A Unique Journey to a Major Global Currency*, CIGI Papers 67 (Waterloo, Ontario: Centre for International Governance Innovation, May 2015), 3—13; Edwin L.-C. Lai, *One Currency, Two Markets: China's Attempt to Internationalize the Renminbi* (Cambridge: Cambridge University Press, 2021), esp. chapter 3: "Why Does China Want to Internationalize the Renminbi?", 37—57; Ming Zhang and Bin Zhang, "The Boom and Bust of the RMB's Internationalisation: A Perspective from Cross-Border Arbitrage", *Asian Economic Policy Review* 12, no. 2 (2017): 237—53; Paola Subacchi, *The People's Money: How China Is Building a Global Currency* (New York, NY: Columbia University Press, 2017), esp. chapter 5: "Living with a Dwarf Currency", 85—98. The goals mentioned are derived from the concrete measures and occasional political announcements. The Chinese government itself has not yet published an official strategy paper on RMB internationalisation.

Table 1

International monetary functions

	Central banks	*Private economic entities*
Means of exchange and payment	Intervention in the foreign exchange market, international support loans against financial and currency crises, opening of swap lines	*Financial transactions:* International credit transactions, spot, forward and option transactions on foreign exchange markets *Real economy transactions:* Trade and investment transactions
Unit of account	Intervention and exchange rates, anchor for monetary policy	Invoicing, measure of debt, denomination in foreign currency bonds, standard for calculation and risk measurement
Store of value	Reserve currency	Currency substitution, foreign currency holdings in terms of cash, deposits, loans and bonds

Source: Own compilation based on: Peter B. Kenen, *The Role of the Dollar as an International Currency*, Occasional Papers 13 (New York: Group of Thirty, 1983), 16.

RMB internationalisation would be a way for China to free itself from the dollar trap.

Thirdly, the global dominance of the US dollar gives the hegemon America disproportionate financial power (from China's perspective). If necessary, American financial sanctions could cause considerable damage to China's economy. RMB internationalisation would be a way to reduce the existing vulnerability vis-à-vis the United States in order to free itself from the dollar trap, so to speak. In addition, the PRC could gain political status and influence by establishing the RMB as a key transaction vehicle on the international financial markets. Beijing's aim is to overcome the dominance of the dollar on the global financial markets and establish a multipolar currency system. The status quo of having a "dwarf currency", the RMB, in a financial and monetary order dominated by America and the US dollar is not acceptable to China in the long run.

These three sets of concerns and the resulting commitment to change distinguish China's project of currency internationalisation from the rather half-hearted efforts with which the former West Germany and Japan in the 1980s and 1990s — and the eurozone since the beginning of the 21st century — supported and continue to support the internationalisation of the mark, yen and euro.[14]

Benefits, costs and risks of the renminbi internationalisation

As politically desirable as the international upgrading of China's own currency may be from a Chinese perspective, it cannot simply be decreed politically. Nor does such a process only bring advantages. Currency internationalisation in general, and RMB internationalisation in particular, are associated with costs and risks.

Usually a currency can be considered international if it can be used to fulfil the primary monetary functions (medium of exchange, unit of account, store of value), not only domestically but also abroad, that is, beyond the borders of the issuing central bank's jurisdiction. A distinction must be made between (private) use by households, companies, banks and corporations, and the use by central banks (see Table 1).[15]

14 See Benjamin J. Cohen, "The Benefits and Costs of an International Currency: Getting the Calculus Right", *Open Economies Review* 23, no. 1 (2012): 15—20.
15 On the internationalisation of currencies in general: Benjamin J. Cohen, *Currency Statecraft: Monetary Rivalry and Geopolitical Ambition* (Chicago, IL: Chicago University Press, 2019); Peter B. Kenen, "Currency Internationalisation: An Overview", in Bank for International Settlements (BIS), *Cur-*

Using a different currency instead of the domestic and customary legal tender is a matter of trust. Therefore, currency internationalisation can only ever be a demand-driven, market-based process. Internationalisation also requires government support. In order to be accepted, the international currency should be convertible into other currencies without restrictions and should be available globally to a sufficient extent. The issuing country should therefore have open, deep and well-developed financial markets so that investors can invest there at any time. Conversely, investors must also be able to rely on being able to withdraw their capital at any time. Only countries that sustainably and credibly secure internal and external monetary stability have the prerequisites to provide a global or reserve currency.

This provision of an international currency goes hand in hand with considerable advantages for the issuing country, as a look at the United States clearly illustrates. From the perspective of the economic and political heavyweight China, the potential (five) advantages must outweigh the (four) disadvantages *à la longue*.[16]

Benefits

1. Lower transaction costs in foreign trade: The use of the RMB on the international goods and financial markets would have multiple advantages for Chinese companies and corporations. Exporters could invoice in RMB; importers could acquire goods and services abroad in RMB; financial institutions could conduct their business activities abroad in RMB; industrial, commercial and financial enterprises could invest abroad in RMB and raise capital abroad in RMB. Risks concerning exchange rates would be eliminated for all of them. The Chinese state and state-owned enterprises would benefit as well. They could raise capital abroad in the form of RMB bonds, and they could grant loans in RMB, for example for infrastructure projects. A digital RMB that is interoperable in international financial transactions could drastically reduce cross-border transfer costs.

2. Seigniorage gains: Seigniorage in the narrower sense refers to the central bank's profit from money creation, which results from the difference between the nominal value of the (interest-free) means of payment and their lower production costs. Additional seigniorage profits arise when the domestic currency is held as a financial asset abroad. A real transfer of wealth (in favour of the domestic economy) takes place (at least temporarily) with the transfer of the country's own currency into foreign hands. Above all, however, the issuer's economy gains a considerable advantage in terms of interest. This is because as soon as foreigners hold sufficient liquidity in the foreign currency, it is possible for domestic borrowers, bond issuers and also state bodies to finance themselves at more favourable (interest) rates. China is also seeking this privilege. If there is a corresponding international demand for RMB, foreign countries would make capital available to China. However, a successful spread of the RMB abroad would not only give China's economy and state a strong competitive advantage on the financing side; indirectly, it would also give a boost to the financial centres of Hong Kong and Shanghai. As the domestic financial and capital markets develop and deepen, China's banks and financial institutions could improve their financial strength, become more competitive internationally and expand into new markets.

3. Macroeconomic stability and fiscal resilience: An international currency acts as an anchor in the global financial system. For the issuing country, this reduces the systemic risk of currency and financial crises. Issuing countries have the advantage of being able to raise bonds abroad and also offset balance of payment deficits in their own currency. This greatly expands their fiscal leeway and the monetary policy options of their central bank. In the 1960s, Valéry Giscard d'Estaing, France's finance minister at the time, described this advantage with regard to the United

rency Internationalisation: Lessons from the Global Financial Crisis and Prospects for the Future in Asia and the Pacific, BIS Papers 61 (Basel, 2011), 9—18, https://www.bis.org/publ/bppdf/bispap61.pdf (accessed 22 February 2024).

16 For the benefits and costs of RMB internationalisation and currency internationalisation in general described below, see Cohen, "The Benefits and Costs of an International Currency" (see note 14); Haihong Gao and Yongding Yu, "Internationalisation of the Renminbi", in BIS, *Currency Internationalisation* (see note 15), 111—13; Lai, *One Currency, Two Markets* (see note 13); Liqing Zhang and Kunyu Tao, "The Benefits and Costs of Renminbi Internationalisation", in *Renminbi Internationalisation: Achievements, Prospects, and Challenges*, ed. Barry Eichengreen and Masahiro Kawai (Tokyo and Washington, D.C.: Asian Development Bank, 2015), 348—75.

States as an “exorbitant privilege”.[17] In fact, the annual absolute returns of American investments abroad are considerably higher than those of foreign investments in America on a sustained and permanent basis.[18] One of the main reasons for these differences in yields and returns is that the world beyond the United States is more or less forced to hold liquidity and currency reserves in US dollars, not least to protect itself against volatility risks and currency shocks.

4. Gain in foreign policy power: An internationally recognised currency gives the issuing country political standing, prestige, soft power and very direct influence over the states that have pegged their exchange rate and hold reserves in the foreign currency. In view of its universally useful international monetary functions, the reserve currency becomes a quasi-public good in whose existence and preservation third countries (must) also have an interest. States that provide an international currency are the key players in the global macro-management and governance of international financial and monetary policy. In a bilateral context, an international currency can serve as a strategic tool for wielding political influence, offering both opportunities for positive promotions and the means for implementing negative sanctions.

- On the positive side, a country’s own currency can be used for loans and donations, for example for development aid, emergency measures to deal with natural disasters, military aid, as well as stabilisation and support measures in the event of financial and currency shocks. In the latter cases, it is up to the issuing country to decide whether and, if so, to what extent it supports the country concerned via swap lines or through direct interventions on the foreign exchange market.
- As a negative measure, a global, extraterritorial ban can be imposed on the use of one’s own currency in international payment transactions with enemy states, such as those that the United States and the EU have imposed on North Korea, Iran and Russia. The foreign currency reserves of the enemy state can also be frozen, insofar as access to them is possible. It is precisely these measures by America (and its allies) that make China aware of its financial vulnerability. The internationalisation or digitalisation of the RMB would therefore be an effective way of protecting itself to some extent against potential financial and currency attacks by the United States. In addition, RMB internationalisation could enable the PRC to build up its own power to impose financial sanctions in the medium to long term and apply it if necessary.

5. Promotion of liberal financial and capital market reforms domestically: The complete internationalisation of the RMB would inevitably entail the liberalisation of interest rates, exchange rates and the unrestricted movement of capital abroad. It would therefore require reforms in China in order to address these matters. However, various politically influential interest groups in China — such as the four major state-owned banks, state-owned enterprises, and the export, construction and property industries — object to such reform measures. This anti-reform lobby cannot, however, fundamentally oppose the internationalisation of the RMB — a goal that is being pursued by the state and party leadership, has been identified as a geopolitical priority and is also popular with the public. In this respect, the dissemination and enforcement of its own currency on a global level is a politically expedient instrument for forcing through domestically controversial liberalisation measures within the PRC. China pursued a similar reform strategy when it joined the World Trade Organization.[19]

Costs and risks

The advantages described above for the issuing country are accompanied by considerable costs and risks. The transition to a reserve currency country harbours substantial stability risks.[20]

1. Appreciation pressure: A high or rising global demand for a country’s currency can result in its unintended

17 See Cohen, “The Benefits and Costs of an International Currency” (see note 14), 27.

18 For empirical evidence see Pierre-Olivier Gourinchas and Hélène Rey, *Exorbitant Privilege and Exorbitant Duty*, Discussion Paper no. 16944 (London: Centre for Economic Policy Research [CEPR], 22 January 2022). Calculations for 2017 by Edwin Lai, see Lai, *One Currency, Two Markets* (see note 13), 43—46.

19 This aspect is particularly emphasised by the following Chinese authors: Gao and Yu, “Internationalisation of the Renminbi” (see note 16), 118—21; Lai, *One Currency, Two Markets* (see note 13), 48—49; Zhang and Tao, *The Benefits and Costs of Renminbi Internationalisation* (see note 16), 354—59.

20 For the following, see the information in literature presented in note 16.

appreciation, which constitutes the flip side of seigniorage gains. Although it is true that appreciation of a currency benefits domestic consumers and the import economy by increasing purchasing power, it simultaneously erodes price competitiveness for export companies, putting pressure on the national economy to adapt. Such a reduction in competitiveness is problematic from a Chinese perspective, considering the high priority that Beijing has traditionally given to exports and the associated positive income and employment effects.

China is maintaining capital controls for systemic and political reasons.

2. Stability risks in the free movement of capital: Currency internationalisation generally limits the ability to conduct monetary policy autonomously. Once a country engages in international trade and finance transactions, it inevitably faces the conflicts between exchange rate stability, the free movement of capital, and retaining autonomy in monetary policy: Only two of these three goals can be realised in this trilemma.[21] In the long term, it would make sense for China to combine monetary autonomy with convertibility and flexible exchange rates, that is, to adopt the position chosen by the leading Western central banks — the Federal Reserve (Fed), the ECB, the Bank of Japan (BOJ) and the Bank of England (BOE). As already discussed, China maintains capital controls for systemic and political reasons and protects exchange rates via currency reserves.[22] Obviously, the state and party leadership fears that convertibility would mean losing control over volatile exchange rates, being exposed to unwanted capital flight, and an inability to guarantee domestic financial, economic and political stability. Stability takes precedence over RMB internationalisation in the CCP's policy calculations. As a consequence of the conflicting objectives described above, the PBoC's monetary policy is not entirely autonomous in matters of liquidity management. Monetary and fiscal policy adjustments to the international economic environment are always necessary, especially in response to the Fed's guidelines and decisions.

3. Transformation risks: Renminbi internationalisation exacerbates the loss of control that China is already facing as a result of the policy of financial repression and limited capital mobility. The PBoC cannot control the RMB markets outside the borders of the PRC, and capital and payment transactions with foreign countries only to a limited extent. Payment transactions for cross-border movement of goods and services are not subject to restrictions, and there are even gaps in the existing foreign exchange controls on capital movements. Against this backdrop, differences in short-term interest rates between RMB domestic markets and RMB offshore markets constantly lead to arbitrage and speculative movements, the costs of which are ultimately borne by the PBoC. And the more that offshore RMB circulate abroad, the higher the currency reserves that need to be held. Another problem is that foreign RMB liquidity has contributed significantly to the formation of bubbles on the Chinese asset markets (equities, real estate). Particularly in periods of appreciation pressure on the RMB, foreign liquidity flowed uncontrollably into China.

4. Global responsibility of the monetary hegemon: A country with an international currency not only enjoys an exorbitant privilege. It must also bear exorbitant burdens.[23] It is true that the mandate of monetary policy only applies to the domestic currency, the domestic market or the domestic economy. But the hegemon cannot afford to lose the trust of foreign investors and the global financial markets. From a foreign perspective, both secure, unhindered access to the liquidity of the international currency and its stability in value are essential. In this respect, the advantages provided by having the status of a reserve currency country also give rise to a special responsibility for maintaining stability of the international currency and financial markets. In financial crises, for example, America is repeatedly called upon to act as a lender of last resort, providing the major global central banks with unlimited liquidity via swap lines in order to avoid liquidity bottlenecks on

21 This fundamental theorem of monetary and exchange rate policy was first described analytically by the economists Marcus Fleming and Robert Mundell in the early 1960s, see James M. Boughton, "On the Origins of the Fleming-Mundell Model", *IMF Staff Papers* 50, no. 1 (2003): 1—9.

22 See Hector Perez-Saiz and Longmei Zhang, *Renminbi Usage in Cross-Border Payments and the Role of Swap Lines and Offshore Clearing Banks*, IMF Working Paper 77/2023 (Washington, D.C.: IMF, March 2023), 3—4.

23 On the concept of "exorbitant duty", see Gourinchas and Rey, *Exorbitant Privilege* (see note 18).

the markets.[24] In turn, combating inflation at home also follows the imperative of maintaining international confidence in the stable value of the currency. In addition, the reserve currency country is required to continuously allow current account deficits (and practically therefore also budget deficits) so that its own currency can be sufficiently available as a source of global liquidity. The continuous current account deficits inevitably result in growing foreign debt. Fiscal over-indebtedness constitutes a long-term threat.[25] At present, it is still uncertain what exorbitant burdens China will have to shoulder. The People's Republic has already demonstrated its political willingness to assume responsibility, at least within a regional framework.

The international use of the renminbi: Barriers, approaches, measures

It is not foreseeable whether, when and how the PRC will achieve complete convertibility as is required for RMB internationalisation. Although China has made progress in developing its domestic financial sector and liberalising interest and exchange rates, capital movements abroad remain strictly regulated. It is not only interest groups such as exporters and the state-owned economy that are vehemently opposed to the liberalisation of capital movements.[26] Systemic barriers also stand in the way of the transition to convertibility: If one considers that, in Xi Jinping's era of government (since 2012), China's economy and markets have been brought firmly under the control and into the service of the party and state, it is hard to imagine that this same party and state could be prepared to expose its own economic policy to the assessments and sentiments of the international financial markets. In view of the political fear of losing control, the convertibility of the RMB is illusory for the time being. Without this convertibility, however, foreign investors would shy away from investing in China's financial and capital markets, especially as the legal and regulatory framework conditions are also problematic. In a system of "Socialism with Chinese characteristics", there is no reliable guarantee of the rule of law and property rights. Company data and financial information are neither transparent nor reliable. Sometimes they are manipulated for political reasons.

"Crossing the river by feeling for the stones."

Irrespective of the lack of political and institutional prerequisites, the PRC is fundamentally committed to the long-term goal of RMB internationalisation and is making persistent efforts to implement it effectively. If market forces are not sufficient to realise this plan, the supporting hand of the state is needed to stimulate international demand for the RMB. The controlled, cautious, incremental, gradualist and politically coordinated approaches that can be observed here are very similar to the those used in the reforms for macroeconomic transformation and foreign trade liberalisation. The Chinese proverb "Crossing the river by feeling for the stones" describes the approach symbolically.[27] The metaphor makes it clear that the path to the goal is not predetermined, but rather resembles a long process based on the principle of trial and error. It may be necessary to pause or turn back if you are in danger of losing your footing.

The approach of the People's Republic to RMB internationalisation does not necessarily correspond with those used for the currency internationalisation of the dollar, mark, yen and euro. In view of the country's unique political and economic circumstances, China is seeking its own path. For the period following the turning point marked by the global financial market crisis in 2008/09, a multi-pronged approach is recognisable: On the one hand, the aim is to develop efficient domestic financial and capital

24 And it fulfils this obligation, at least in the systemically important financial markets. For an empirical estimate of the costs borne by America during the global financial market crisis of 2008/09 and other financial crises, see Gourinchas and Rey, *Exorbitant Privilege* (see note 18).

25 This is a development that is sometimes referred to in the literature as the "new Triffin dilemma", see Pierre-Olivier Gourinchas, Hélène Rey and Maxime Sauzet, *The International Monetary and Financial System*, NBER Working Paper 25782 (Cambridge, MA: National Bureau of Economic Research, April 2019), 33 – 36; Perez-Saiz and Zhang, *Renminbi Usage in Cross-Border Payments* (see note 22), 5.

26 See Randall Germain and Herman Mark Schwartz, "The Political Economy of Currency Internationalisation: The Case of the RMB", *Review of International Studies* 43, no. 4 (2017): 765 – 87.

27 On this metaphor, see Miguel Otero-Iglesias, *Renminbi Internationalisation: Stuck in Mid-River – For Now*, Analyses of the Elcano Royal Institute 84/2018 (Madrid, July 2018); Subacchi, *The People's Money* (see note 13), 106.

markets and gradually open them up to foreign investors. On the other hand, the RMB is to be increasingly used abroad. To this end, the use of China's own currency in cross-border trade and services is being promoted over a long time horizon, and efforts are being made to establish RMB offshore foreign markets. Politically, the use of the RMB in foreign trade is being actively promoted in China's neighbourhood and in the Global South. Technological developments such as the digitalisation of payment transactions also offer the opportunity to make the RMB more widely used around the world. The internationalisation of the RMB is therefore like a "long march", the course and end point of which cannot be determined. What is visible is a gradual process that is being actively driven forward by China's government and financial institutions at various levels.[28]

RMB in foreign trade

In July 2009, the PRC launched a pilot project for an initial five Chinese cities and their foreign trade with Hong Kong, Macao and the countries of South-East Asia in order to process exports and imports via the vehicle RMB and enable invoicing in RMB. After a successful start, the project was gradually expanded to cover the whole of China, and the restriction to the immediate regional neighbourhood was lifted. Thirty-one clearing banks worldwide were designated for payment processing in RMB by the end of 2022. The early currency swap agreements with the Bank of Korea (December 2008) and the Hong Kong monetary authorities (January 2009) were followed by numerous other agreements with 40 central banks to date.[29] The PBoC concluded a swap agreement with the ECB in October 2013 and a clearing agreement with the Deutsche Bundesbank in March 2014. Apart from Frankfurt, RMB clearing in Europe is also possible in London, Paris, Luxembourg, Zurich, Budapest, Moscow and Belgrade.[30] China is adapting a similar strategy for the promotion of the international use of the digital RMB (e-CNY) and is initially focusing on local pilot projects and bilateral agreements with foreign jurisdictions.[31]

Development of an independent infrastructure for international payment transactions

In October 2015, the Cross-Border Interbank Payment System (CIPS), developed by the PBoC, went into operation. China now has its own platform for clearing and settling international foreign trade transactions in real time. Thanks to CIPS' own messaging capacities, the PRC now has a functional national alternative to the established SWIFT system. CIPS is based in Shanghai, uses the established SWIFT standards, is organised as a cooperative like SWIFT and also has Western banks as shareholders. There are currently 1,443 banks participating in CIPS, either directly with their own clearing account or indirectly as participating users. So far, however, CIPS has been used almost exclusively for cross-border payments in RMB. At the equivalent of around 14 trillion euros in 2022, the transfer volume corresponded to slightly less than 1 per cent of the SWIFT volume. China has also created an alternative platform in the credit card business: "China Union Pay", founded in 2002 by the PBoC and leading Chinese banks, can be used worldwide for payment transactions. For their part, the Chinese digital companies Alibaba and Tencent have developed payment services that are also expanding their international presence. In order to create interoperability in cross-border payment transactions for its newly developed digital central bank money, China is focusing on innovation, standardisation processes and international cooperation.[32]

Price formation on commodity markets

As the world's largest and most important consumer and importer of commodities, China is actively seek-

28 For the following description of the components of renminbi internationalisation, see Yin-Wong Cheung, "A Decade of RMB Internationalisation", *Economic and Political Studies* 11, no. 1 (2023): 47—74; Lai, *One Currency, Two Markets* (see note 13), 58—93; Prasad, *Gaining Currency* (see note 2), 37—149; Subacchi, *The People's Money* (see note 13), 108—35.

29 The People's Bank of China, *2023 RMB Internationalisation Report*, 22, 23, http://www.pbc.gov.cn/en/3688241/3688636/3828468/4756463/5163932/2023120819545781941.pdf (accessed 31 January 2024).

30 On the spread and functioning of cross-border RMB payments, see Perez-Saiz and Zhang, *Renminbi Usage in Cross-Border Payments* (see note 22), 7—12.

31 More on this in the following section "China's New Digital Currency", pp. 23ff.

32 More on this in the following section "China's New Digital Currency", pp. 23ff.

ing to expand RMB invoicing and RMB quotations and reduce its dependence on dollar-based agricultural and commodity trading. The commodity exchanges in Dalian, Shanghai and Shenzhen, as well as the Shanghai Oil and Gas Exchange established in 2021, provide RMB trading platforms and publish RMB-denominated commodity indices. Where appropriate, contracts in RMB are concluded with supplier countries such as Russia, Brazil, Argentina and the Gulf States.

Development of RMB offshore markets

In view of the continuing restrictions on capital movements in and out of China, the adoption of the RMB as a means of payment or financing vehicle abroad is limited. Therefore, RMB offshore markets had to be created outside the jurisdiction of the PRC, where RMB proceeds can be freely exchanged into other currencies, and investment, lending and financing transactions can be carried out in RMB. The globally established financial centre of Hong Kong — with its advanced infrastructure, free movement of capital, generally liberal regulations and close economic ties to the PRC — has been predestined as a location for the establishment of such offshore markets. A functioning RMB offshore market requires a freely convertible RMB. Parallel to the non-convertible onshore RMB (CNY), a convertible offshore RMB (CNH) was thus created. The system can be summarised with the formula “one currency — two markets”.[33] For foreigners, the offshore RMB and RMB offshore market create the possibility of using the Chinese currency not only for trade transactions with the PRC, but also for international financial transactions and as an investment vehicle and store of value.

The issuance of bonds denominated in RMB in Hong Kong, so-called dim sum bonds, proved to be highly attractive at times. Issuers benefited from the lower interest rate (compared to the “panda bonds” issued in the People’s Republic), and investors could expect RMB appreciation gains for some time. In general, bank accounts denominated in RMB were high-yielding investments during the period of RMB appreciation.

The newly emerging RMB offshore market was largely fuelled by China’s foreign trade surpluses. These were recycled via the PBoC’s currency swap lines and foreign loans from Chinese banks and corporations. As early as March 2012, China provided the BRICS countries with credit facilities in RMB. Loans from Chinese state and development banks to partner countries as part of the BRI launched in 2014 are increasingly being granted in RMB. The multilateral development banks NDB and AIIB, which were founded at China’s initiative, can also grant loans denominated in RMB, although they are still predominantly provided in US dollars.

Relaxation of restrictions on capital movements

As already discussed, the desired internationalisation of the RMB is hampered by China’s continued restrictions on capital movements. These are responsible for the fact that the PRC is far less integrated into the global economy in financial terms than it is in terms of foreign trade and direct investment. Although the capital controls protect the People’s Republic from the uncertainties of volatile financial markets in the short term, they do not force it to make the necessary structural adjustments to meet global economic requirements. In economic terms, the country is thus accepting a loss of efficiency. China’s savers and investors are missing out on potentially profitable investment opportunities abroad.

To counteract these negative effects, the PRC is liberalising capital movements in a controlled manner. The liberalisation steps are linked to specific programmes. Windows or quotas are being opened for capital flows into China and between RMB onshore and RMB offshore markets: Special programmes allow selected institutional investors to invest in China’s capital markets. Others allow Chinese financiers and companies to invest in RMB offshore markets abroad. Foreign companies can also raise capital in RMB offshore markets and then invest it in the People’s Republic. “Connect” programmes give investors in China, Hong Kong and third countries the opportunity to invest in the others’ stock or bond market within the framework of fixed quotas (“Shanghai-Hong Kong Stock Connect”, “Shenzhen-Hong Kong Stock Connect”, “Shanghai-London Stock Connect”, “Bond Connect”). Companies can borrow abroad for investments in designated free trade zones (Shanghai, Guangdong, Tianjin, Fujian). Despite all these programmes and measures, the RMB is still a long way from convertibility; however, there has been financial integration into international markets.

33 On this concept, see Lai, *One Currency, Two Markets* (see note 13); Subacchi, *The People’s Money* (see note 13), 114—16.

Flexibilisation of the exchange rate regime

From a theoretical and historical perspective, flexible exchange rates are not a necessary prerequisite for a currency to be widely used internationally. However, in the current currency and exchange rate system of the post-Bretton Woods era, flexible exchange rates are a necessity and are also in the interests of the participating countries in terms of efficient capital and goods markets. In fact, China has made progress in the transition from fixed to flexible exchange rates, reducing the prior undervaluation of the RMB against the dollar and the euro. The external value of the RMB is now determined by a managed floating within the framework of a periodically adjusted parity ("crawling peg"). The PBoC allows daily exchange rate movements of a maximum of 2 per cent around the fixed parity of the RMB against a designated basket of currencies. A market-determined external value of the RMB that is in line with the economic fundamentals is then formed in the medium to long term via floating central rates. Although flexibility of the exchange rate regime has been achieved in this way, the RMB foreign exchange markets are comparatively less liquid and developed.[34] And ultimately, China's exchange rate policy remains dollar-centred. The basket of currencies designated by the PBoC is dominated by the dollar and currencies from the dollar zone. To hedge against currency shocks, the PBoC primarily holds dollar reserves. An autonomous RMB currency area remains illusory for the time being.

Establishment of the RMB as a reserve currency

It is primarily economic criteria that qualify a currency as a reserve currency: an appropriate significance in world trade and on world financial markets, free movement of capital, flexible exchange rates, a stable and sustainable national economy, and developed financial markets. China has improved in terms of these criteria over the past few years, but still only partially fulfils them. It is due to China's political and economic clout that central banks and the IMF give the RMB a certain bonus. Starting in 2011, the first central banks included the RMB in their basket of reserve currencies. In November 2015, the Executive Board of the IMF decided to include the RMB in the IMF currency basket at an initial share of 10.9 per cent.[35] The ECB has also held RMB in its official currency reserves since June 2017, albeit with the rather symbolic equivalent value of EUR 500 million.[36]

RMB internationalisation – a mixed interim assessment

The currency internationalisation measures imposed by the Chinese authorities after 2008/09 have not failed to have an effect. As a result, the RMB became increasingly important internationally as a means of payment and store of value. However, this trend came to a sustained halt in the summer of 2015 due to turbulence on the Chinese stock market and the subsequent depreciation of the RMB.[37] The RMB no longer appreciated, and it was no longer worth it for market participants to hold RMB liquidity speculatively. However, following the relative stagnation in the second half of the 2010s, the internationalisation of the Chinese currency now appears to be gaining momentum again, as can be seen from the Standard Chartered Renminbi Globalisation Index (RGI), which has documented the process since 2012.[38] The RMB has been able to record gains on shares, particularly

34 On the development of China's exchange rate regime, see Sonali Das, *China's Evolving Exchange Rate Regime*, IMF Working Paper 50/2019 (Washington, D.C.: IMF, 2019).

35 The value of IMF Special Drawing Rights (SDRs) is calculated from the IMF currency basket. SDRs are allocated to IMF member countries and constitute a claim to IMF currencies. They are an integral part of the currency reserves of each IMF member country. IMF basket currencies are the dollar, the euro, the Japanese yen, the pound sterling and the RMB.

36 See European Central Bank "ECB Completes Foreign Reserves Investment in Chinese Renminbi Equivalent to €500 million", press release, 13 June 2017, https://www.ecb.europa.eu/press/pr/date/2017/html/ecb.pr170613.en.html (accessed 9 July 2023).

37 See Otero-Iglesias, *Renminbi Internationalisation* (see note 27), 8–11.

38 The "Renminbi Globalisation Index" (RGI), which was set up by Hong Kong-based Standard Chartered Bank in 2012, is calculated from the use of the offshore RMB (CNH) in foreign exchange trading, payment transactions, bonds and accounts in the financial centres of Hong Kong, Singapore and London. It was not until March 2021 that the RGI reached the level of September 2015 again, with an index value of 2,570 points. Currently (in June 2024), the RGI index stands at 4,963 points, see *RGI Dashboard*, https://research.sc.com/rgi-dashboard/ (accessed 3 June 2024).

Table 2

Percentage shares of USD, EUR, JPY, GBP, RMB in the global financial and currency markets

	Period	*USD*	*EUR*	*JPY*	*GBP*	*RMB*
Global payment transactions[a]	April 2023	42.7	31.7	3.5	7.0	2.3
Global foreign exchange trading[b]	2022	44.2	15.3	8.3	6.4	3.5
International bond and debt securities[c]	2022	47.8	38.2	1.3	7.4	0.6
Currency reserves of the central banks[d]	3rd quarter 2023	59.2	19.6	5.5	4.8	2.4
Weight in the IMF currency basket[e]	since August 2022	43.4	29.3	7.6	7.4	12.3

a Share of payment transactions processed via SWIFT. Payment transactions processed via CIPS or alternative platforms (Paypal, crypto) are not included.
b Share values normalised to 100 per cent. Survey by BIS.
c Share of allocated reserves. Definition and survey by BIS.
d Definition by the IMF (COFER).
e Information from the IMF.

Sources: SWIFT, Bank for International Settlements (BIS), International Monetary Fund (Currency Composition of Foreign Exchange Reserves, COFER).

in international payment transactions and on the foreign exchange markets.[39]

The RMB still does not play a significant role in the global financial and currency markets.

Despite the recent rise in the RGI, the RMB still does not play a significant role in the global financial and currency markets. A comparison of the shares of the five IMF basket currencies — the dollar, euro, yen, pound sterling and RMB — shows the clear dominance of the dollar in international payment transactions, international foreign exchange transactions, trading in international bonds and debt securities, and in reserve holdings (see Table 2). In all categories, the dollar's share has even increased in recent years, with the exception of the reserve holdings of central banks. The euro occupies a stable second place. The RMB is significantly less internationalised, even compared to the yen and pound.

However, the data in Table 2 only provide an incomplete picture of the international role of the Chinese currency. In fact, the RMB has visibly gained status and profile in China's foreign trade and capital transactions as well as in the regional context over the past 15 years. However, this positive development is not — or only partially — recognised in the available statistics from SWIFT, the Bank for International Settlements (BIS) and the IMF. The use of Chinese and Asian sources provides sufficient empirical evidence of the regional and international importance of the RMB:

RMB as a means of payment: 18.2 per cent of Chinese trade and services were settled in RMB in 2022.[40] The natural centre of these transactions with foreign countries is in Hong Kong, with a share of 50.3 per cent, followed by other Asian financial centres such as Singapore (10.3 per cent), Macao (4.0 per cent),

39 On foreign exchange trading, see Claudio Borio, Robert McCauley and Patrick McGuire, "Dollar Debt in FX Swaps and Forwards: Huge, Missing and Growing", *BIS Quarterly Review*, (December 2022), 53; the share of the RMB in payment transactions processed via SWIFT amounted to 4.5 per cent in April 2024, see the non-public newsletter "SWIFT RMB Tracker".

40 The People's Bank of China, *2023 RMB Internationalisation Report* (see note 29), 11—12.

Tokyo (2.4 per cent) and Taipei (2.2 per cent).[41] According to Chinese media reports, RMB exceeded US dollars in China's total payment transactions for the first time in March 2023. The RMB is accepted in cross-border payments more than elsewhere by Asian countries and in parts of Africa and Latin America.[42] More recently, Russia, Brazil and Argentina (still under the Kirchner administration) have begun to increasingly use the RMB as a means of payment in foreign trade transactions. In response to Western sanctions, Russia has switched its international payment transactions to RMB as far as possible. India, on the other hand, still insists on dollars or rupees. It is also reported that RMB cash has become the unofficial parallel secondary currency in some of China's neighbouring countries, such as Laos, Myanmar and North Korea ("yuanisation").

RMB as a store of value: Bonds and debt securities denominated in offshore RMB are predominantly issued in Hong Kong and held in Hong Kong bank accounts. The issuance of international bonds denominated in RMB, the "dim sum bonds", began steadily increasing again starting in 2018 following a massive slump between 2014 and 2017.[43] However, the RMB has hardly benefited from the global trend of relatively decreasing dollar reserve holdings. Central banks are choosing to shift into gold and convertible currencies. It is likely to be mainly central banks in Asia, Africa and Latin America that are storing RMB as a reserve currency.

RMB as a monetary policy anchor: Although no country in the world has officially pegged its currency to the RMB to date, China's trading partners are increasingly basing their exchange rate policies on the current exchange rates of the RMB to the US dollar. The stability of intra-regional exchange rates is an important factor for economic stability and growth, especially for the countries of East and South-East Asia, which are linked by sophisticated trade and production networks. Traditionally, the common link to the external dollar anchor secures stable intra-regional exchange rates. With the rise of China as Asia's centre of economic gravity, the exchange rate movements of the RMB against the US dollar have therefore increasingly assumed a guiding and anchoring function for the ASEAN states, Taiwan and South Korea.[44] In the meantime, even the exchange rates of the BRICS currencies (and those of some other countries in the Global South) correspond more closely with the RMB exchange rates than those of the Asian currencies traditionally orientated towards the US dollar. Obviously, an RMB currency zone emerged in the 2010s that is already significantly larger than the euro currency zone.[45]

Geopolitical potential for a multipolar global monetary system

The continued underdog position of the RMB in the global financial and currency markets contrasts with China's strong position in the real global economy as the largest trading nation and second-largest economic power. It is unlikely that this imbalance will change and that China's national currency could gain significant international weight for payment and credit transactions or as an investment vehicle. The continued adherence to restrictions on capital movements and market access restrictions to the domestic capital market, the persistence of current account surpluses[46] and the increasing economic problems of the People's Republic argue against the RMB gaining status. In view of domestic debt, declining economic growth and geopolitical conflicts with America, it is unlikely that China will relax its capital controls in principle or allow high deficits in foreign trade. Maintaining macroeconomic and domestic political stability remains a priority for China's state and party leadership.

41 Ibid., 9.

42 See Perez-Saiz and Zhang, *Renminbi Usage in Cross-Border Payments* (see note 22), 16.

43 Hudson Lockett and Cheng Leng, "China's 'Dim Sum' Bond Sales Surge on Demand from Domestic Investors", *Financial Times*, 31 July 2022, www.ft.com/content/ac31d244-33b7-4375-8b0d-696140d1bda0 (accessed 29 June 2023).

44 See Chi Hung Kwan, "Issues Facing Renminbi Internationalisation: Observations from Chinese, Regional and Global Perspectives", *Public Policy Review* 14, no. 5 (2018): 883—90; Ulrich Volz, "Navigating the Trilemma: Central Banking in East Asia between Inflation Targeting, Exchange-Rate Management and Guarding Financial Stability", in *Central Banking and Financial Stability in East Asia*, ed. Rövekamp et al. (see note 7), 157—67.

45 See Camilo E. Tovar and Tania Mohd Nor, *Reserve Currency Blocs: A Changing International Monetary System?,* IMF Working Paper 20/2018 (Washington, D.C.: IMF, 2018), 11—20.

46 With its current account surpluses, China is withdrawing liquidity from the global financial markets. However, a lead currency country should instead provide liquidity to the global markets.

Nevertheless, the RMB certainly has the potential to develop into a major international currency in the long term. A stronger role for the RMB as a globally used payment, credit and investment vehicle in the future is supported not only by China's significant position in global foreign trade and as an economic power, but also by the widespread global unease concerning the dominant position of the dollar, America's exorbitant currency privilege and the associated systemic risks.

In particular, the developing and emerging countries of the Global South are vulnerable in the dollar-centred global monetary system. In a world of volatile financial markets, they are repeatedly forced to take on the burden of adjusting to a US monetary and fiscal policy that is primarily orientated towards American economic and political interests. Unlike the G7 countries and America's allies, the emerging economies do not have access to the Fed's swap lines for short-term liquidity bridging in the event of financial crises, such as the insolvency of Silicon Valley Bank in 2023. As a group, they are underrepresented in the IMF and World Bank and can only exert limited influence there. In addition to the general levels of dissatisfaction, there are fundamental doubts as to whether the unipolar global monetary system, which is centred on the dollar, can be sustained in view of America's growing national and foreign debts, coupled with the fear that the United States could be tempted to get rid of its debt through inflation and devaluation at the expense of foreign creditors holding dollars.[47] The use of the dollar (and the euro, yen and pound) for financial sanctions against Russia and the seizure of the Russian central bank's currency reserves have further fuelled unease about dollar hegemony and the Western-dominated global monetary system. With growing mistrust concerning America and the dollar, the RMB is becoming more attractive.

For China, there is an opportunity to promote the RMB as an alternative "emerging market currency".

In view of the current financial, monetary and foreign policy risks, it is necessary for the emerging markets to diversify their own currency dependencies and to take precautions against the uncertainties of the current financial and monetary system. Against the backdrop of this widespread criticism of the dollar, China has the opportunity to promote the RMB as an alternative "emerging market currency", as a kind of counterweight to the dollar. Beijing is supported in its ambitions to create a multipolar currency system and to break the dominance of the dollar by the BRICS group, which has spoken out accordingly several times in its final declarations. The call for "de-dollarisation" has a monetary and a geopolitical component:

- In terms of currency policy, the RMB could be used to discipline America if it abuses its exorbitant privilege as the issuer of the world's reserve currency in an exploitative manner in terms of monetary and fiscal policy. The alternatives of the RMB (and the euro) would serve as both a reinsurance and a safety net against a potentially globally destabilising American macro policy. The growing internal and external debts of the United States and its fragile domestic political situation make it imperative to take precautionary measures against a conceivable collapse of the existing global monetary system.[48]
- Geopolitically, currency policy is an area of conflict in the Sino-American rivalry. Financial sanctions are an effective instrument of American foreign policy. They could cause considerable damage to China or other countries. China, which is vulnerable on this front, is arming itself by internationalising its own means of payment and establishing a currency zone centred around the RMB. It would also be advantageous for third countries to be able to switch to an alternative infrastructure for cross-border payments and an alternative currency in the event of a potential conflict with America. If the dollar and euro are problematic for a state regime for geopolitical reasons or for fear of sanctions, China could provide the RMB as an effective alternative via swap lines and help out with its

47 This scepticism is referred to as new Triffin dilemma, see Gourinchas, Rey and Sauzet, *The International Monetary and Financial System* (see note 25), 33–36.

48 See Kwan, "Issues Facing Renminbi Internationalisation" (see note 44). However, a multipolar international monetary and financial system would not necessarily be more stable. If the key players — in all likelihood America, Europe and China — do not come together to co-operate, which is not necessarily to be expected, the system would be highly volatile and unstable as a result of opportunism, free-riding and devaluation contests.

CIPS transfer infrastructure. Digital central bank money could also be an interesting option.[49]

From the perspective of the Global South, currency policy and geopolitical considerations may argue in favour of a multipolarisation of the international monetary system (and thus a stronger role for the RMB). Still, the RMB remains commercially unattractive compared to the dollar (and the euro), at least as long as it is not fully convertible and RMB liquidity is not sufficiently available globally. On the other hand, countries always have administrative options to influence foreign trade payments. It can therefore not be ruled out that the forces of geopolitics will prove to be more powerful than the factors concerning economic cost and efficiency. Just as supply chains and trade flows are already geared towards geopolitical constraints in the present, geopolitically fragmented credit and capital markets could also emerge in the future. It is even conceivable that the global monetary system will collapse and a bipolar currency regime will emerge in which China forms its own currency zone with other revisionist states.

One open, speculative question is how China would behave as a currency hegemon. Would the People's Republic work cooperatively and constructively with America and the eurozone? Would it be prepared to take on economic adjustment burdens and, for example, open swap lines in RMB in crisis situations or grant support loans to financially troubled countries? On the one hand, China's constructive role in past financial crises gives reason for cautious optimism.[50] On the other hand, Beijing's restrictive attitude towards countries that are unable to repay their BRI loans suggests that China will primarily focus on its own interests. It seems unlikely that it would adopt solutions conceived in the United States.

In any event, China is single-mindedly and persistently pursuing its goal of national rise in the area of financial and monetary policy as well. Digital payment systems could make it easier and cheaper to bypass the dollar and euro in the future. They could thus give the internationalisation of the RMB a new boost. China began laying the foundations for state digital money at an early stage. It will try to use its "first mover" advantage in the digitalisation of currency and payment systems commercially and geopolitically on an international scale.

49 See the following section "China's New Digital Currency", pp. 23ff.

50 For example, China kept its own currency stable both in 1998 during the turmoil of the Asian crisis and in 2015—17, when it was under pressure to devalue and refrained from devaluing, thereby helping to calm the international markets. It remains to be seen whether China will be willing to support a rouble exchange rate under pressure to devalue in order to make it easier for Russia to repay war debt denominated in yuan.

China's New Digital Currency

Monetary sovereignty under pressure to innovate

China is a technology-savvy country. New technologies are spreading rapidly in the economy and society. The party and the state regard innovation as an effective driver of the country's national advancement. Digitalisation is actively promoted. The innovations and business activities of fintech companies have long been seen as a welcome opportunity to reform an antiquated financial and banking system.[51] At the end of 2022, 75.6 per cent of all Chinese (1.067 billion) had internet access and 1.065 billion used a smartphone.[52] In its urban centres, China is already almost a cashless society. According to a survey by the PBoC, 59 per cent of all payment transactions were made by mobile phone in 2019, only 23 per cent by credit card and 16 per cent in cash.[53]

Towards the end of the 2010s, China's regulatory authorities and political leadership increasingly realised that the innovations of the fintech industry were — irrespective of the commendable technological and economic progress associated with them — undermining and threatening the monetary sovereignty of the state, that is, the sovereign power over money and currency. The emergence of private cryptocurrencies and the dominance of digital payment platforms have been and continue to be viewed particularly critically. The party and state's claim to power has resulted in an absolute imperative to respond to the systemic challenges of the private digital economy in regulatory and political terms. The introduction and establishment of a central bank digital currency should prove to be an appropriate and effective strategy in the medium term in order to avoid financial risks and strengthen the state's oversight and surveillance capacities on the markets.[54]

Private cryptocurrencies: China established itself early on as a global centre for the production and trading of bitcoins. Bitcoin is historically the first private cryptocurrency to circulate in virtual networks and accounts on a decentralised basis and independent of state control using blockchain technology. However, China's financial and monetary authorities had no interest in the establishment of a competing private currency and the resulting erosion of the state's monetary monopoly. They were therefore quick to take action against bitcoins and other private cryptocurrencies.[55] As early as August 2017, the issuance and trading of cryptocurrencies, including bitcoins, was banned, and internet access to foreign crypto exchanges was blocked. Starting in May 2021, financial transactions involving cryptocurrencies were completely illegal. The production of bitcoins ("mining") in China was also no longer possible. Even more

51 For a detailed description of the upheavals in China's financial system triggered by fintech, see Martin Chorzempa, *The Cashless Revolution: China's Reinvention of Money and the End of America's Domination of Finance and Technology* (New York, NY: Public Affairs, 2022), 19—108.

52 See China Internet Network Information Center, *The 51st Statistical Report on China's Internet Development* (Beijing, 2023), 15, http://www.cnnic.com.cn/IDR/ReportDownloads/202307/P020230707514088128694.pdf (accessed 9 August 2023).

53 See Working Group on E-CNY Research and Development of the People's Bank of China, *Progress of Research & Development of E-CNY in China* (Beijing: People's Bank of China, July 2021), 2, www.pbc.gov.cn/en/3688110/3688172/4157443/4293696/2021071614584691871.pdf (accessed 1 August 2023).

54 For this view, see also Chorzempa, *The Cashless Revolution* (see note 51), 137—53; John Garnaut and Matthew Johnson, "Drivers of the PRC's Digital Currency Project", in *The Flipside of China's Central Bank Digital Currency* (Canberra: Australian Strategic Policy Institute, 2020), 8. See also the following remarks in the text.

55 The problem with Bitcoin is the lack of a real equivalent value, a cover or an anchor that could credibly guide price formation. For a sceptical assessment of cryptocurrencies, see BIS, *Annual Economics Report* (Basel: BIS, 2022), 78—90. Beyond the fundamental criticism, the interventions of the Chinese authorities were motivated by the obvious security and stability risks, such as the use of cryptocurrencies for money laundering and criminal activities, the formation of speculative bubbles and the new channels opening up for capital flight.

than the payment token Bitcoin, the Chinese authorities perceived the plans presented by Facebook in 2019 to establish the stablecoin Libra, later Diem,[56] as a global means of payment via its own network as a threat to their monetary sovereignty. They feared that the global use of Libra/Diem in Facebook's social networks would further strengthen the global dominance of the dollar, and that China would also have to accept the introduction of the new artificial currency (and thus the Facebook platform).[57]

Thanks to the innovations of Alibaba and Tencent, China is currently the most advanced market for digital financial services in the world.

Digital payment platforms: In mobile payments, China experienced in the 2010s a unique and spectacular technological and market development, which was largely driven by the digital platforms Alipay and WeChat Pay. The two companies are not actual financial service providers, but companies from outside the industry that have their origins in online retail (Alibaba) and social media (WeChat/Tencent). The two platforms have successfully expanded their business portfolios beyond mobile payment processing to include traditional banking services and offers for favourable consumer loans, insurance or lucrative investment opportunities in money market mutual funds. Their services are now used by 1.3 billion (Alipay) and 0.9 billion users (WeChat Pay). The innovations and investments of Alibaba and Tencent have made China the world's most important and advanced market for digital financial services. On the other hand, the disruptive changes in China's financial markets have also brought to light numerous problems and excesses: blatant cases of credit and investment fraud, growing consumer debt, inhumane working conditions, misuse of user data, insufficient data security against criminal access by third parties, unfair contract clauses, excessive fees and gagging contracts.[58]

The resulting disruption in general and the commanding market positions of Alibaba and Tencent, which dominate mobile payments with a market share more than 90 per cent (2020), in particular, have prompted China's authorities and politicians to crack down on the fintech industry with increasing severity and in many cases to utilise the police. From the perspective of the party and the state, the two companies' digital financial services projects are not only a regulatory challenge, but also a political one. From a regulatory perspective, it is about avoiding systemic risks that jeopardise the stability of the financial market. The state and party leaders are concerned about the lack of transparency, the inadequate supervision of the widely ramified shadow banking system, and the strong market positions of Alibaba and Tencent, all of which encourage abuse. The realisation that Alipay and WeChat Pay are ultimately digital network companies that conduct risky banking transactions without the necessary equity capitalisation could not continue without consequences. The insolvency of just one would destabilise the financial markets, not only because of the conceivable collapse of payment transactions, but also because of the resulting existential strains on the financial institutions indirectly exposed.[59]

Politically, the level of control exercised by Alibaba and Tencent over user data, payment flows, infrastructure and technologies beyond state control was a provocation. Due to their financial power, both companies had also gained considerable political influence. Against this backdrop, the criticism openly voiced by Jack Ma, the charismatic founder and CEO of Alibaba, in October 2020 — in which he fundamentally questioned the regulatory and monetary sovereignty of the state — was viewed as hubris. The IPO of Alibaba's fintech spin-off Ant Group was cancelled at short notice at the personal behest of Xi Jinping. The entire fintech sector had to submit to political supervision and strict regulation as part of a large-scale campaign. All fintech companies had to register

56 Stablecoins are cryptocurrencies that represent the value of another asset and may also have corresponding collateralisation. For Libra and Diem, it was planned to use a basket of state currencies or a specific state currency as collateral.

57 On China's policy towards bitcoins and cryptocurrencies, see Chorzempa, *The Cashless Revolution* (see note 51), 153—58; Ying Huang and Maximilian Mayer, "Digital Currencies, Monetary Sovereignty, and U.S.-China Power Competition", *Policy & Internet* 14, no. 2 (2022): 329—30.

58 See Chorzempa, *The Cashless Revolution* (see note 51), 109—34, 183—96; Aaron Klein, *China's Digital Payments Revolution* (Washington, D.C.: The Brookings Institution, April 2020); Viviana Zhu, *China's FinTech: The End of the Wild West* (Paris: Institute Montaigne, April 2021), 9—21.

59 See Chorzempa, *The Cashless Revolution* (see note 51), 149—53, 183—96.

Excursus: Central bank digital currencies

CBDCs are forms of electronic/digital money issued by the central bank. CBDCs constitute a direct payment obligation of the central bank, just as with cash and sight deposits at the central bank, that is, the two existing components of central bank money. Logically, a CBDC is therefore legal tender and widely available to the general public ("retail-based") and to specialised companies ("wholesale-based") involved in financial transactions and payments. Two forms of CBDC are possible: On the one hand, CBDCs can be issued as a value-based token using a blockchain managed by the central bank, and thus it can enable peer-to-peer payment transactions in the same way as cash. On the other hand, CBDCs can be account-based, so that transactions are processed via accounts at the central bank.

The emergence of private cryptocurrencies, fintech and payment platforms has put the world's central banks under pressure to adapt and act. They are being called upon to continue to fulfil their sovereign tasks in the future, namely to supply the economy and society with secure, stable, widely accepted money and to provide an efficient infrastructure for payment transactions.[a] The view has prevailed among central banks that the introduction of CBDCs is necessary and appropriate for reasons of stability and that it is generally in the public interest. From the perspective of the central banks, the introduction of CBDCs is intended to ensure efficient and secure payment transactions, and thus financial stability. Other motives include greater financial inclusion, the fight against money laundering, crime and terrorist financing, the realisation of cost savings and possible new options in monetary policy (e.g. negative interest rates, helicopter money). The introduction of CBDCs is linked to the goal of ensuring data protection and data security in digital payment and financial transactions, enabling the interoperability of payment systems, guaranteeing effective supplier and market competition, and promoting innovation. The efficiency and productivity potential of the new technologies (blockchain, distributed ledger) should be exploited, and the way should be paved for further innovations that also go hand in hand with the digitalisation of payment transactions, such as smart contracts and efficient, cost-effective, cross-border transfers. As cash holdings decline — and in some countries have almost disappeared — CBDCs are intended to guarantee access to central bank money in the future. Politically, the central banks are concerned with maintaining their mandate to control monetary policy and regulate the financial markets.[b]

Note: For a quick overview of CBDCs, see the Atlantic Council's "Central Bank Digital Currency Tracker": www.atlanticcouncil.org/cbdctracker/

a For central banks' motives, see the Bank for International Settlements (BIS) survey of 81 central banks worldwide in 2021: Anneke Kosse and Ilaria Mattei, *Gaining Momentum – Results of the 2021 BIS Survey on Central Bank Digital Currencies*, BIS Papers 125/2022 (Basel: BIS, Mai 2022).

b For the objectives pursued with the introduction of CBDCs, see in particular *Central Bank Digital Currencies: Foundational Principles and Core Features* (Basel: BIS, 2020); BIS, *Annual Economic Report* (Basel, June 2022), 75—78, 90—102; Group of Thirty, Working Group on Digital Currencies, *Digital Currencies and Stablecoins: Risks, Opportunities, and Challenges Ahead* (Washington, D.C.: Group of Thirty, July 2020); Gabriel Soderberg et al., *Behind the Scenes of Central Bank Digital Currency: Emerging Trends, Insights, and Policy Lessons*, Fintech Note 4/2022 (Washington, D.C.: IMF, February 2022); these publications also highlight the problems and risks associated with the introduction of CBDCs.

as financial market holding companies under commercial law and were therefore subject to the applicable banking regulations. New or stricter regulations were issued in the areas of consumer protection, data protection and data security, labour protection and competition. Alibaba and Tencent were required to disclose the credit ratings of their users and make them available to the state and competitors.[60]

Digital central bank money – pioneer China

Around the year 800, during the Tang Dynasty, paper money was circulated in China for the first time in human history. Today, China is once again a pioneer in the monetary system and is the first major economy to issue a CBDC nationwide.[61] The primary aim of this step is to permanently secure state sovereignty in monetary and currency matters in China itself. Instead of merely reacting passively to monetary in-

60 Ibid., 137—39, 209—19; Zhu, *China's FinTech* (see note 58), 21—28.

61 For CBDCs see the excursus above. Some developing and emerging countries have already tested CBDCs in pilot projects. The Bahamas was the first country in the world to successfully implement a CBDC, the "sand dollar".

novations from the private digital economy, the Chinese state itself aims to shape the future of blockchain and digital money and payment transactions in general and to use these technologies to secure and expand the power of the party and the state.

The central bank wants to ensure that the supply of money is also guaranteed in the future in the event of a decline in the use of cash.

According to the white paper published by the PBoC in July 2021, China is pursuing three objectives with the introduction of the digital yuan, the e-CNY.[62] Firstly, cash should also be made available to the public in digital form. The central bank wants to ensure that the supply of money is guaranteed by the state in the future in the event of a decline in (physical) cash usage. The e-CNY is also intended to guarantee access to money and cash for people who do not have their own bank account, that is, to improve financial inclusion. Secondly, the e-CNY is intended to ensure secure, efficient payments under the conditions of fair competition between providers. As a form of state money, the e-CNY is legal tender. It offers protection against data misuse by platforms and criminals, enables the interoperability of systems, and is a fallback option should one of the private systems collapse. Thirdly, possibilities for the use of the e-CNY in cross-border payments are to be explored.

China's digital currency project started in 2014.[63] In 2016, the PBoC officially announced its intention to introduce digital central bank money for electronic payments (digital currency electronic payment, DCEP) and set up an internal research institute, the Digital Currency Research Institute, for this purpose. Facebook's Libra initiative (2019) gave the CBDC project political urgency, so that the first pilot tests were launched in April 2020, initially in the cities of Shenzhen, Suzhou, Chengdu and Xiong'an.

Since then, the use of the e-CNY has been successively tested and introduced in an increasing number of regions and to ever more recipients. It is not yet clear when the e-CNY will be available throughout the country. China's pioneering work in the introduction of a CBDC attests to the country's leadership in digital technologies and payment transactions. However, it also implies considerable risks for the PBoC, the party and the state, as design flaws could lead to enormous economic damage and result in a loss of political legitimacy.[64]

The white paper published by the PBoC provides detailed information on the architecture of the e-CNY.[65] According to this information, the e-CNY is digital central bank money and legal tender. It digitally supplements and replaces physical cash in circulation with identical value (1:1). It is widely available to the general public ("retail-based") and is intended to be interoperable with all private payment systems. The PBoC does not charge a usage fee for the e-CNY, but it does not pay interest either. The e-CNY is issued and administered centrally by the PBoC and put into circulation via commercial banks or other intermediaries — and it is backed 100 per cent by the central bank. Users therefore do not access the e-CNY directly through the PBoC, but via intermediaries at banks or through digital and telecommunications companies. To be able to pay with e-CNY, users must register an electronic wallet ("wallet") by providing their identity, bank details or at least one telephone number and then fill it with an authorised amount. The wallet can be accessed via smartphone apps, electronic watches, wristbands, chip cards and machines. The e-CNY can be used as a value-based payment token, for example for peer-to-peer transactions, as well as account-based via commercial and online banks. Offline transactions, between two mobile phones, for example, are also possible. Transactions are cleared centrally via the PBoC by means of registration, authentication and verification. Controlled anonymity applies: Users' data is protected against access by merchants, banks and platforms, but it can be viewed and monitored by the PBoC in real time, for example to combat money laundering or crime. The e-CNY issued by the PBoC is not block-

62 See Working Group on E-CNY Research and Development of the People's Bank of China, *Progress of Research & Development of E-CNY in China* (see note 53), 3—5.
63 On the introduction of a CBDC in China, see Chorzempa, *The Cashless Revolution* (see note 51), 196—203.
64 Possible problems could include invalid payments, double debits in e-CNY accounts, successful hacker attacks, and loss of control in the credit and financial markets.
65 Working Group on E-CNY Research and Development of the People's Bank of China, *Progress of Research & Development of E-CNY in China* (see note 53), 6—11; see also Darrell Duffie and Elizabeth Economy, eds., *Digital Currencies: The US, China, and the World at a Crossroads* (Stanford, CA: Hoover Institution Press, 2022), 24—32; Jianguo Xu, "Developments and Implications of Central Bank Digital Currency: The Case of China e-CNY", *Asian Economic Policy Review* 17, no. 2 (2022): 240—46.

chain-based, but the future issuance and use of digital central bank money is fundamentally open to new technologies, so that further innovations, such as programmability for smart contracts, are conceivable.

China's pioneering work in introducing a CBDC is testament to the country's leadership in digital technologies and payments.

The design is very promising. However, it remains to be seen to what extent people and companies will actually accept the e-CNY in China. Thanks to intensive promotion, 261 million Chinese had an e-CNY wallet in 2022. However, the amount of e-CNY in circulation at the end of 2022 corresponded to just 0.1 per cent of cash in circulation in China.[66] Given the existing and convenient payment portals of Alipay and WeChat Pay, the additional use of the digital yuan makes little sense from a user perspective for the time being. It is even conceivable that the Alibaba-Tencent duopoly will be further strengthened by the introduction of the new e-CNY money. A broader use of the e-CNY is only to be expected in connection with additional benefits that are not yet available, such as for offline transactions, payments as part of smart contracts and international transfers. On the other hand, the state could set new incentives for the application of the e-CNY or, conversely, enforce the use and acceptance of the e-CNY through laws, decrees or other forms of state pressure.

Even if China's public and private sectors remain cautious about the new digital means of payment, the goals set by the PBoC in its white paper are likely to be achievable. However, the white paper does not seem to reflect fully the ambitions of the central bank, the state and the party. The economic and political implications of the state's new digital money go far beyond the technocratic level of monetary policy. With the e-CNY, China's state authorities have a new instrument that is likely to be used in various fields, both inside and outside the country. Domestically, the e-CNY creates new options for monetary policy and gives the state unimagined possibilities for control, surveillance and repression. At an international level, blockchain technology could revolutionise cross-border payments. Chinese technology and Chinese companies could acquire dominant positions in the areas of global payments and services. An early and successful introduction of the e-CNY internationally could sustainably bolster both the global status of the RMB and the resilience of the Chinese economy vis-à-vis Western sanctions.

66 Own calculations based on statistical data from the State Council, see "Digital Yuan in Circulation Hits 13.61 Bln Yuan in 2022", *Xinhua*, 25 February 2023, https://english.news.cn/20230125/a6833c7ff7634bf7b90371a8dc2aeaa2/c.html (accessed 15 August 2023).

New options for monetary policy

With the ban on cryptocurrencies, the introduction of a CBDC and the enforcement of platform interoperability (domestically), the Chinese government has resolutely confronted the challenges of the fintech industry. The RMB remains unchallenged as the most broadly accepted means of payment and the authoritative monetary unit of account in China. Fears that prices and wages would be expressed in foreign or digital currencies — meaning that monetary policy measures would no longer have any influence on domestic prices and economic activity at home — have receded into the background. Nevertheless, China's monetary policy will change as a result of the digitalisation of money and, in particular, the introduction of the e-CNY.

Future changes will depend crucially on the extent to which and in what way the e-CNY will supplement or even replace existing physical cash and central bank money in general. China's policymakers, in particular the PBoC, will influence the rate at which the e-CNY is used to shape further developments as far as possible in their favour. Despite this still unpredictable environment,[67] the extent and direction of the coming change can be recognised in outline. There are new options for monetary policy (1) due to the displacement of physical cash, (2) due to the real-time recording and programmability of a CBDC, (3) due to the possibility of direct payments by the central bank to private households and companies and (4) due to new technological possibilities for controlling capital movements. If successfully implemented,

67 Apart from any administrative incentives and regulations designed to promote the use of the e-CNY, three points will prove to be critical in terms of regulation: (1) Will physical cash continue to be legal tender and remain in circulation? (2) Will non-banks, i.e., private individuals and companies, be allowed to hold e-CNY accounts with the PBoC in the future? (3) Will the PBoC pay positive interest or charge negative interest on the digital central bank money it issues?

China's monetary policy could lead the way internationally.

(1) The use of cash has been declining in China for a long time.[68] The production, storage, anti-counterfeiting, distribution and redemption of banknotes and coins generate considerable costs that the PBoC would rather not have. China's party leadership would also favour the abolition of physical money, which it sees as an instrument for money laundering, criminal activity and corruption. However, cash remains indispensable as a means of payment in many rural regions of China for the time being. As the introduction of the e-CNY is about improving financial inclusion, the associated abolition of physical money would be counterproductive. Therefore, the PBoC's assurances that it will neither discontinue the supply of cash nor replace it with administrative decrees as long as there is a demand for a physical means of payment are (still) credible.[69] However, if a cash ban were to be issued in the distant future — meaning that people and companies in China would no longer be able to use cash — the PBoC would have a new monetary policy option. In the event of severe recessions or deflation, it could levy a negative interest rate and thus incentivise private-sector spending.[70]

With the issuance of e-CNY, it will be possible to record payment transactions, liquidity movements and lending in real time.

(2) China's monetary policy will become more targeted and effective in the future. With the issuance of e-CNY, it will be possible to record payment transactions, liquidity movements and lending in real time. Monetary authorities will thus be able to obtain a precise picture of current events on the financial markets at an early stage and deploy their instruments immediately, without delay and in accordance with the circumstances. As the CBDC is traceable and programmable, the PBoC will also be able to make much more targeted use of its monetary policy management instruments. Appropriate programming should make it possible to limit and control the setting of interest rates, minimum reserves and money supply quotas in terms of time, use, region and price, and to track their implementation.[71]

(3) It is also conceivable that the PBoC could pay out "helicopter money" to private households, for example in the form of consumer vouchers, or that it could grant investment subsidies to cooperatives and companies in order to directly and immediately stimulate overall economic demand. This distribution channel would have the additional advantage of making any misappropriation of funds by corrupt intermediaries virtually impossible. The PBoC would thus take over fiscal policy tasks, as it were. It would also be the executive organ of fiscal policy.[72]

(4) Cross-border payment transactions with e-CNY would create new opportunities for the PBoC to control and manage capital movements and foreign exchange reserves. Through appropriate blockchain programming, the PBoC could put itself in a position to condition or exclude certain uses of the e-CNY, such as a sale on the foreign exchange market. The RMB could thus be better protected from speculative attacks.[73]

Tool of control, surveillance and repression

Every transaction carried out with the new digital currency e-CNY is saved and stored in the PBoC's central databases as part of the registration, authentication and verification process. The design of the e-CNY thus allows for the respective wallet holder to be identified. These digital footprints are undoubtedly an expedient instrument for the Chinese state and party in the Xi Jinping era, not only to combat crime but also to secure power. The PBoC offers assurances that

68 The decline in cash use in China (and in other countries) for the period 2006—2016 is well documented empirically by Tanai Khiaonarong and David Humphrey, *Cash Use across Countries and the Demand for Central Bank Digital Currency*, IMF Working Paper 46/2019 (Washington, D.C.: IMF, 2019).

69 See Working Group on E-CNY Research and Development of the People's Bank of China, *Progress of Research & Development of E-CNY in China* (see note 53), 4.

70 However, it remains to be seen what alternative reactions would occur in the event of such an unprecedented ban on cash. The emergence of cash substitutes would be conceivable: gold, tangible assets, crypto money, virtual gift vouchers, etc.

71 See in detail Yao Qian, "Central Bank Digital Currency: Optimisation of the Currency System and Its Issuance Design", *China Economic Journal* 12, no. 1 (2019): 1—15.

72 See *Digital Currencies*, ed. Duffie and Economy (see note 65), 37—38; Xu, "Developments and Implications of Central Bank Digital Currency" (see note 65), 247.

73 See *Digital Currencies*, ed. Duffie and Economy (see note 65), 85.

the e-CNY guarantees better data security and data protection vis-à-vis private third parties compared to private payment systems, and that small amounts are not traced.[74] However, there is no data protection vis-à-vis the PBoC and the security authorities. The PBoC has repeatedly made it clear in official announcements that the principle of controlled anonymity does not mean protection from criminal prosecution. In general, surveillance and law enforcement were always important political objectives associated with the introduction of the e-CNY. The Central Commission for Discipline Inspection — the powerful CCP organisational unit for combating corruption and ideological deviation — was involved in the digital currency project at an early stage.[75]

The Chinese security authorities are permitted to access data anywhere, at any time and without restriction at their discretion.

It is possible for the PBoC to view and trace CBDC transactions in real time. As a consequence, the state security agencies will be able to use the available transaction data for surveillance, prosecutions and repression, regardless of the official assurance of anonymity. The Chinese security authorities are permitted to access data anywhere, at any time and without restriction at their discretion. Criminal law is interpreted broadly, and accusations of money laundering or terrorist financing are repeatedly levelled against regime critics or unpopular individuals. Party cadres who have fallen out of favour are deliberately accused of tax evasion. In addition to the ubiquitous surveillance cameras equipped with intelligent facial recognition software, digital social security cards and the "Smart Cities" project, the e-CNY provides the party and the state with another effective digital tool for surveiling civil society and the party.[76]

In the future, the PBoC will also be able to link the payment data registered in its e-CNY data centre with information from the Credit Reference Centre,[77] which is also under its administration. By virtue of this responsibility and the control it offers over financial credit, the PBoC has always been an important player in China's social credit system. Going beyond traditional credit report bureaus, the social credit system comprehensively evaluates the people and firms of the People's Republic via a point system in order to provide incentives for socially desirable behaviour. The future role of the PBoC in China's social credit system could go beyond the collection and processing of personal and firm-related creditworthiness data and also include executive functions. For example, in order to sanction defaulting debtors, it could block access to e-CNY accounts for the "delinquents" concerned, refuse or even cancel certain payments. Or it could ensure that one is notified if the partner to a transaction is on a blacklist of "conspicuous" persons.[78]

Cross-border payment transactions using e-CNY could enable the PBoC to record transactions made abroad in e-CNY. China's authorities would be able to monitor, control and possibly even regulate the activities of Chinese companies abroad. Capital flight would be made more difficult. Foreigners would also have to fear that the Chinese apparatus could use the data it has obtained about them against them. It is even conceivable that the PBoC could issue a programme order to prevent e-CNY transfers from individuals or firms abroad. The Anti-Foreign Sanctions Law, which has been in force in China since June 2020, expressly provides for extraterritorial action when exercising state measures against operators and sponsors of foreign sanctions.[79] Such fears are the reason and motive for the creation of a bill in the US Congress. The "Chinese CBDC Prohibition Act", intro-

74 See Working Group on E-CNY Research and Development of the People's Bank of China, *Progress of Research & Development of E-CNY in China* (see note 53), 7.

75 See Yaya J. Fanusie and Emily Jin, *China's Digital Currency: Adding Financial Data to Digital Authoritarianism* (Washington, D.C.: Center for a New American Security, 2021), 11; Garnaut and Johnson, "Drivers of the PRC's Digital Currency Project" (see note 54), 10; Samantha Hoffman, "Securing the Foundation: Building the Physical Infrastructure of the Digital World", in *China's Digital Ambitions: A Global Strategy to Supplant the Liberal Order*, ed. Emily de La Bruyère, Doug Strub and Jonathon Marek, NBR Special Report 97 (Seattle, WA: The National Bureau of Asian Research, 2022), 11–13.

76 See *Digital Currencies*, ed. Duffie and Economy (see note 65), 39–43; Samantha Hoffman, "DC/EP and Surveillance", in *The Flipside of China's Central Bank Digital Currency* (see note 54), 11–13.

77 Credit Reference Centre of the People's Bank of China. See the PBoC website: http://www.pbccrc.org.cn/crc/zxgk/index_list_list.shtml (accessed 15 August 2023).

78 See Chorzempa, *The Cashless Revolution* (see note 51), 233; *Digital Currencies*, ed. Duffie and Economy (see note 65), 39; Fanusie and Jin, *China's Digital Currency* (see note 75), 12.

79 *Digital Currencies*, ed. Duffie and Economy (see note 65), 91, 95–97.

duced in August 2023 by Republican Senator Rick Scott, would prohibit American financial services companies from carrying out transactions with e-CNY. China's authorities would be denied access to the payment data of American citizens.[80]

Cross-border interoperability in international payment transactions

Cross-border payment transfers are notoriously time-consuming, cumbersome and costly. In order to establish a secure connection between different legal, regulatory and currency environments, commercial banks, correspondent banks and at least one clearing centre must be involved.[81] The World Bank put the global costs of international payment transactions for the first quarter of 2023 at 6.25 per cent of the transfer amounts, and for bank transfers as much as 12.10 per cent.[82] In developing and emerging countries, which often only have poorly developed banking systems, the costs, time and risks of international payment transactions are particularly high.

On a positive note: CBDCs and distributed ledger technology offer promising potential for cost savings and productivity gains that would benefit the Global South in particular. Digital payment platforms could be used to process cross-border transfers via blockchains, peer-to-peer, as well as in real time while bypassing the existing banking and clearing system at very low cost, and perhaps even free of charge in the future. The more consumers and companies become accustomed to efficient payment processes, the more politicians and central banks will come under pressure to enable cross-border digital transactions and the cost reductions that can be realised as a result.[83]

The technological expertise and practical experience gained during the rollout of the e-CNY offer China the opportunity to play a leading role in the future development of the infrastructure of a digital international payment system and to increase its autonomy in this area. In a quantum leap, so to speak, the RMB could gain international distribution and influence. The disruptive nature of this revolution in digital payments is fuelling ambitions in China that the country could go from being an outsider in the global financial system to an insider, or even a world leader. The technology and infrastructure of international payments could be China-centred in the future.[84]

The e-CNY is a retail CBDC that was developed for China's domestic payments. However, the design could easily be extended to wholesale processes and international transactions. The major hurdle for the acceptance of e-CNY in cross-border money transfers is the lack of interoperability with payment systems abroad. The strategic goal of the PBoC and Chinese financial policy must therefore be to establish this interoperability with as many foreign payment systems as possible and to enforce its own standards for multilateral solutions. The design of the infrastructure of international payment transactions is currently still completely open. From a Chinese perspective, initiatives for the development and promotion of an international payment system that is interoperable with the e-CNY must necessarily be broad and diverse. The motto seems to be "Let a thousand flowers bloom". China's e-CNY internationalisation projects include unilateral and multilateral initiatives, bilateral measures, disruptive innovations and the further development of existing payment systems.

Unilateral and multilateral initiatives

The Universal Digital Payment Network (UDPN) is a blockchain-based, decentralised network that provides standardised interoperable procedures for international transfers of CBDCs and stablecoins.[85] The UDPN is the most important project of the BSN plat-

80 See "Chinese CBDC Prohibition Act of 2023", 118th Congress, 1st Session, p. 3248, https://www.congress.gov/bill/118th-congress/senate-bill/3248/text?s=1&r=30 (accessed 7 February 2024). It is uncertain whether and, if so, in what form the bill will actually be passed and become law.
81 For details on the frictions and inefficiencies in cross-border payments, see Raphael Auer, Philipp Haene and Henry Holden, *Multi-CBDC-Arrangements and the Future of Cross-Border Payments*, BIS Papers 115/2021 (Basel: BIS, March 2021).
82 See The World Bank, "Remittances Prices Worldwide", *Remittance Prices Worldwide Quarterly* 45 (2023): 3, https://remittanceprices.worldbank.org/sites/default/files/rpw_main_report_and_annex_q123_final.pdf (accessed 18 August 2023).
83 For an overview of cross-border payments with CBDCs, see Deutsche Bundesbank, "Cross-border Interoperability of Central Bank Digital Currency", *Monthly Report* 74, no. 7 (2022): 59—76.
84 See Hoffman, "DC/EP and Surveillance" (see note 76), 14.
85 For the UDPN, see Universal Digital Payments Network, *Interoperable Payment Infrastructure for the Digital Currencies of Tomorrow* (2022), https://www.udpn.io/assets/pdf/UDPN-white%20paper-MM_170123.pdf (accessed 21 August 2023).

form ("Blockchain-based Service Network") to date. This network, developed in China, is a public infrastructure for the development, provision and maintenance of blockchain-distributed applications.[86] The UDPN project and the BSN platform form a unique ecosystem that will be practicable and presumably also very cost-effective for the concrete implementation of cross-border payment transactions in the future.[87] It could be an attractive option for private and state-run payment systems abroad to simply "dock on" to this platform. In the search for a suitable digital payment vehicle, the e-CNY would be the logical choice. The UDPN project could expedite the internationalisation of the RMB.

The Finance Gateway Information Service is a joint venture established in 2021 between SWIFT — the Brussels-based operator of the global communications network for financial transactions — and various subsidiaries of the PBoC, including the settlement centre and the Digital Currency Research Institute. According to the official announcement, the joint venture will improve the integration of SWIFT into China's financial system and develop messaging standards for Chinese financial institutions.[88] This will also involve enabling international payments with e-CNY via SWIFT.

mBridge is a project of China, Hong Kong, Thailand and the United Arab Emirates with the support of Hong Kong's BIS Innovation Hub Centre. With mBridge, the participating central banks have a tailored blockchain — the "mBridge Ledger" — and based on this a common multi-currency-capable "mbridge platform", via which they can issue and exchange their respective CBDCs. The jointly developed prototype enables transfers and currency exchanges of wholesale CBDCs in real time around the clock. It forms a "bridge" that connects the four national payment systems and exchanges currencies. In an initial practical test in 2022, in which 20 commercial banks took part alongside the four central banks, the mBridge platform issued CBDCs worth around USD 12 million and processed more than 160 payment and foreign exchange transactions totalling more than USD 22 million.[89] The mBridge project has shown that the interoperability of digital payment transactions between central banks is feasible. However, there is still a long way to go before it can be effectively implemented in practice. The parties involved will have to agree on the common governance of the platform and make difficult legal adjustments at the national level.

China's digital payment infrastructure could be particularly attractive for countries in the Global South.

Bilateral measures

It can be assumed that China will actively promote and encourage interoperability with the e-CNY with foreign governments, financial authorities and payment processors, similar to what has been done in the past for physical infrastructure projects under the BRI. China's digital payment infrastructure could be particularly attractive for those countries in the Global South that have close economic ties to China, whose banking and financial systems are underdeveloped, or that are politically and economically dependent on Beijing. The People's Republic is well-positioned with its offerings for efficient cross-border payment transactions, meaning that its initiatives are likely to be well-received abroad.[90]

- Blockchain-based transactions between the PRC and the Hong Kong Special Administrative Region are likely in the medium term, especially as the technical foundations have already been laid with

86 For the BSN, see BSN Development Association, *Blockchain-based Service Network (BSN): Introductory Whitepaper,* 5 February 2020, https://bsnbase.io/static/tmpFile/BSNIntroductionWhitepaper.pdf (accessed 21 August 2023).
87 See Mikk Raud and Eli MacKinnon, "China's Digital Currency and Blockchain Network: Disparate Projects or Two Sides of the Same Coin?", *DigiChina* (Stanford University), 8 March 2022, https://digichina.stanford.edu/work/chinas-digital-currency-and-blockchain-network-disparate-projects-or-two-sides-of-the-same-coin/ (accessed 21 August 2023).
88 See Eli MacKinnon, "Is SWIFT's Joint Venture with the People's Bank of China Related to the Digital Yuan?", *DigiChina* (Stanford University), 8 March 2022, https://digichina.stanford.edu/work/is-swifts-joint-venture-with-the-peoples-bank-of-china-related-to-the-digital-yuan/ (accessed 21 August 2023).
89 See BIS Innovation Hub, *Project mBridge: Connecting Economies through CBDC* (Basel: BIS, October 2022), 10.
90 On the following, see Rajesh Bansal and Somya Singh, *China's Digital Yuan: An Alternative to the Dollar-Dominated Financial System* (Washington, D.C.: Carnegie Endowment for International Peace, 2021), 12–15; *Digital Currencies*, ed. Duffie and Economy (see note 65), 56–65.

the mBridge project. In view of the existing broad financial integration that exists between China and Hong Kong, considerable efficiency gains and cost savings can be expected.

- Many BRI partner countries in Asia, Africa and Latin America have modernised their telecommunications infrastructure with Chinese components. Chinese smartphones are also widely held in these regions. It therefore makes sense to equip the cross-border payment infrastructure with Chinese software and adapt it to Chinese standards. China's CBDC, the e-CNY, can become a model and blueprint for the introduction of CBDCs in third countries. Beijing would offer technical support for the introduction of CBDCs and then insist on interoperability with the e-CNY in terms of implementation. Utilising the UDPN network could be the only viable option for blockchain-based cross-border payments for some time to come.
- Countries that fear being subjected to American or Western financial sanctions see the e-CNY as a practical alternative to the current international payment-transfer traffic based on SWIFT standards. Sanctioned countries such as Russia, Iran and North Korea are urging China to implement it soon.
- Pilot zones have been set up in provinces exposed to foreign trade to test cross-border payment transactions with e-CNY. In the "Guanxi Pilot Free Trade Zone", for example, a blockchain-based trade and finance platform for foreign trade with Vietnam, Thailand and Malaysia is to be set up. The "Silk Road Connect" platform in Wuhan will be used to test payment transactions with CBDCs on the digital Silk Road.[91]

Internationalisation of Chinese retail payment systems

The private digital payment platforms Alipay and WeChat Pay are now active in around 50 foreign markets. They enable Chinese tourists there to make purchases and payments using the payment systems they are familiar with at home. Although the use of a CBDC is not yet possible for Chinese people abroad, it could be easily realised by adapting the apps. In the future, payments could also be made in e-CNY at the foreign point-of-sale stations of the Chinese credit card company Union Pay, which is represented at 27 million points of sale in 73 countries. Under competitive conditions, Alipay, WeChat Pay and Union Pay have not been able to match their domestic commercial success abroad. Nevertheless, it is conceivable that e-CNY will become more widespread in transactions beyond China's borders via private Chinese retail payment systems. It can be assumed that there will be a corresponding demand, for example in intra-African trade or for guest worker remittances in the Global South. Technically, it would not be a problem to open the apps up to foreigners, especially as the standard user interfaces of Huawei smartphones, for example, already include an e-CNY application. However, foreign users would have to have an electronic e-CNY wallet with Alipay, WeChat Pay or a certified bank.[92] The granting of corresponding authorisations could result in currency substitution effects in the target country ("yuanisation"). Such an infringement of monetary sovereignty would be in striking contradiction to the principle of CBDC interoperability established by the BIS, to which the PBoC has also committed itself in its white paper.[93]

China is likely to play a leading role in setting international standards due to its pioneering approach.

Setting international standards

It is conceivable that non-Chinese jurisdictions will permit the cross-border use of the e-CNY in one way or another for reasons of practicality and simply unilaterally accept the standards that have been developed in China. However, the resulting dependencies vis-à-vis China suggest that most states are likely to refuse this type of unilateral approach. It is very likely that the establishment of a modern, efficient system for international CBDC transactions will only be realisable on a larger scale if financial authorities

91 See Kai von Carnap, "China's e-CNY as a Geopolitical Weapon: A New Era of Minilateralism in Asia's Digital Economy", in *Digitalisation and Geopolitics: Catalytic Forces in the (Future) International Monetary System*, ed. Nicola Bilotta and Fabrizio Botti (Rome: Edizioni Nuova Cultura, 2023), 130.

92 See Bansal and Singh, *China's Digital Yuan* (see note 90), 14–15; Chorzempa, *The Cashless Revolution* (see note 51), 165–82; *Digital Currencies*, ed. Duffie and Economy (see note 65), 65–66, 86–87.

93 Working Group on E-CNY Research and Development of the People's Bank of China, *Progress of Research & Development of E-CNY in China* (see note 53), 6.

and central banks agree bilaterally or multilaterally on an interoperable platform and the common standards on which it is based. The central banks involved would have to commit to uniform message standards, agree on rules for determining the finality of payments, define the technical interfaces that enable transactions via different systems and set up a clearing mechanism.[94] It is currently still unclear whether — and, if so, within what framework — multilaterally harmonised standardisation is possible. The modernisation of the international payment system is on the agenda of the G20, the G7, the IMF, the BIS, the OECD and the BRICS countries. China is active in the various efforts to set international standards in several ways. It is a member of the relevant standardisation committees of the Financial Stability Board of the G20, the Committee on Payment and Settlement Systems of the BIS and, as mentioned, has co-developed customised interoperability as part of the mBridge project.[95] The exchanges between the central banks of the United Kingdom (BOE), Canada (BOC), Japan (BOJ), Sweden (Riksbank), Switzerland (SNB), the United States (Fed) and the eurozone (ECB) on the fundamental questions regarding the design of CBDCs, in which China is not involved, could also be the starting point for setting international standards. Although it is not yet clear how the further coordination and discussions will advance, it is likely that China will play an important, perhaps even a leading role in setting international standards due to its pioneering approach, its expertise and the experience it has gained. However, it is also conceivable that it will not be possible to develop or implement uniform global standards. It can then be assumed that China will develop a multilateral payment system for its CBDC, the standards for which correspond to its own ideas and interests, but which will only be accepted for use by some of the states, and most likely not by the G7 countries.

94 See Deutsche Bundesbank, "Cross-border interoperability" (see note 83), 59, 64–65.
95 The mBridge project is just one of three multilateral BIS projects to develop and test cross-border digital payments, see BIS Innovation Hub, *About the BIS Innovation Hub*, https://www.bis.org/about/bisih/about.htm?m=3097 (accessed 18 August 2023).

Promoting the internationalisation of the renminbi?

There is widespread expectation in China that the e-CNY will provide a new and effective momentum for the broader international use of the RMB, especially as the escalation of the Sino-US rivalry has given political urgency and priority to the goal of RMB internationalisation.[96]

However, as already discussed, it is unclear whether, when and how an interoperable cross-border system for payment transactions will materialise. It is also likely that China's e-CNY will be met with great scepticism abroad. Regardless of these reservations, however, the People's Republic, with its technological expertise and political influence, could succeed in establishing the e-CNY as the payment means of choice in the inevitable digitalisation of international payments. The RMB would then gain status on a global level. For China itself, digital capital transactions with foreign countries would be easier to monitor, meaning that controls could be relaxed.

Higher percentage shares of the RMB in global payment transactions do not necessarily lead to a greater attractiveness for other monetary functions.

However, its use as a means of payment is only one of several monetary functions that determine the appeal of an international currency. Higher percentage shares of the RMB in global payment transactions — possibly also in global foreign exchange trading — do not necessarily translate into a greater attractiveness for other monetary functions, particularly as a private investment vehicle or reserve currency. Even if the interoperability of digital payment transaction systems is possible with e-CNY, the willingness of investors to hold large quantities of RMB will remain low as long as China continues to maintain capital controls and market access barriers to its domestic capital market. Not only does the PRC lack an open, deep and well-developed capital market where RMB could be invested freely and indefinitely, the available information on Chinese companies and debt instruments is not reliable. China's politics and institutions do not enjoy the trust of the global financial

96 See Mahima Duggal, *The Dawn of the Digital Yuan: China's Central Bank Digital Currency and Its Implications* (Stockholm: Institute for Security & Development Policy, June 2021), 37–42.

markets. There are doubts as to whether invested capital can be withdrawn from China even in financial crises. In view of the political and economic uncertainties in the People's Republic, it is uncertain how stable the value of the RMB will be in the long term.[97]

Ultimately, the e-CNY is not a new currency, but a technology and an infrastructure. The e-CNY gives Chinese central bank money a new, digital form. However, the issuance of e-CNY is not accompanied by an expansion of the money supply, which could potentially spread outside of China's borders. Conceptually, the e-CNY is 100 per cent backed sovereign money. It is therefore to be expected that, as long as China maintains capital controls, the RMB will continue to play only an outsider role as a global credit and investment vehicle.

Instrument of foreign and security policy

China's various efforts to achieve interoperability in cross-border digital payment transactions are proof that the e-CNY project has taken on a strong international focus beyond its original objective of protecting national monetary sovereignty. For China, digital currency policy is not only monetary and currency policy, but also, and above all, trade and industrial policy, as well as foreign and security policy. China's goal is to counteract its own disadvantages in the multilateral financial system, reduce its existing economic and political vulnerabilities, develop its own economically profitable industrial capacities, and, in the medium to long term, reshape the existing global structures in a way that they become compatible with China's authoritarian one-party system.

Digital central bank money offers China the opportunity for a new disruptive start.

From a Chinese perspective, the current system of international payments is not only costly and inefficient. It is also problematic in terms of foreign and security policy, as it gives America — its geostrategic rival — the power to exclude individuals, companies and countries from this international payment system. Individuals and companies from China, Hong Kong and Macao have already been the target of American financial sanctions on several occasions. Digital central bank money offers China the opportunity for a new disruptive start. An e-CNY that can be used in international business transactions would not only reduce vulnerability to Western financial sanctions. What's more, a new, innovative system of international payments that is based on an interoperable CBDC would no longer be dollar-centred. The newly emerging structures could create new dependencies in the future — now vis-à-vis the PRC. Beijing would gain new power resources and capabilities with a prospective China-centred infrastructure for payment transactions, and it would give it access to payment data worldwide.[98] A functioning infrastructure for cross-border payments with CBDCs under Chinese leadership could substantially improve China's geopolitical position in several respects:

- By participating in the new China-centred digital payment system, foreign companies and countries would become dependent on the new infrastructure, its reliability and the continual software updates that are required. China's approach of expanding its own sphere of influence abroad by exporting technology and infrastructure is well known, not least from the discussions about Huawei's telecommunications hardware and Chinese surveillance software. The willingness of

97 Also sceptical about the potential of China's new CBDC in promoting RMB internationalisation are Bansal and Singh, *China's Digital Yuan* (see note 90), 19—21; Eswar Prasad, "China's Digital Currency Will Rise, but Not Rule", *Brookings Institution* (online), 26 August 2020, https://www.brookings.edu/articles/chinas-digital-currency-will-rise-but-not-rule/; Paola Subacchi, "China's New Direction", *Project Syndicate*, 6 January 2023, https://www.project-syndicate.org/onpoint/china-new-direction-under-xi-by-paola-subacchi-2023-01?barrier=accesspaylog (both accessed 24 August 2023).

98 On the geopolitical component of China's CBDC policy, see Bansal and Singh, *China's Digital Yuan* (see note 90); *Digital Currencies*, ed. Duffie and Economy (see note 65), 79—99; Robert Greene, *Beijing's Global Ambitions for Central Bank Digital Currencies Are Growing Clearer* (Washington, D.C.: Carnegie Endowment for International Peace, 6 October 2021); Huang and Mayer, *Digital Currencies, Monetary Sovereignty* (see note 57), 324—47; Marc Lanteigne, "'e-breakout'? Weaponised Interdependence and the Strategic Dimensions of China's Digital Currency", *The Chinese Journal of International Politics* 15, no. 2 (2022): 154; Carnap, *China's e-CNY as a Geopolitical Weapon* (see note 91), 120.

countries that use these technologies to respond to Beijing's wishes for cooperation in politics and business — and also to refrain from criticising their Chinese partner — would inevitably increase.[99]

- As mentioned above, China's security and financial authorities would gain a new lever for extraterritorial control and surveillance. They could track international transactions and use the information obtained to take action against capital flight, crime and criticism of the regime. If blockchain-based programmability is available, Chinese authorities could even block or reverse certain payments. The new digital infrastructure for international payments "made in China" would also give Chinese authorities and digital companies privileged access to payment data within the new system. The Chinese state could use this wealth of data — combined with other personal or company-related information — for propaganda purposes or for coercive measures against foreign companies and states, for instance. For Chinese digital companies, the data could potentially be advantageous in international competition.[100]
- Circumventing Western financial sanctions would be easier and cheaper in the future with a functioning digital payment system. Transfers could be made outside of Western clearing houses and bypass the SWIFT system (which is blocked in the event of sanctions). It would also no longer be possible for the initiators of the sanctions to immediately identify, let alone prove, a breach of Western sanctions. However, the Western side could continue to respond to a breach of sanctions by imposing secondary sanctions. In this case, however, the secondary sanctions target would not be a Chinese company or commercial bank, but the state-owned PBoC itself. The Sino-American conflict would reach a new level of escalation. Given this kind of escalation risk, it is unlikely that the PRC would be willing to allow third countries to use the e-CNY in order to circumvent sanctions. China would probably want to reserve this option for itself.[101]

China's potential gains in power described here are currently only hypothetical. It is uncertain whether — and, if so, when — interoperability in cross-border payment transactions with CBDCs will be realised. The technical and regulatory obstacles as well as the difficulties regarding sovereignty are enormous. The majority of countries would probably also refuse to accept an infrastructure in which China had complete data sovereignty and could carry out all programming itself. However, there are also huge economic and political incentives to make international payment transactions more cost-effective and efficient and to protect them against Western threats of sanctions. It is rather likely that human ingenuity will solve the remaining implementation problems.

99 See *Digital Currencies*, ed. Duffie and Economy (see note 65), 70, 97—99.

100 See *Digital Currencies*, ed. Duffie and Economy (see note 65), 85, 91, 95—97; Hoffman, "DC/EP and Surveillance" (see note 76), 11—22.

101 See Barry Eichengreen, *Sanctions, SWIFT, and China's Cross-Border Interbank Payments System*, The Marshall Papers (Washington, D.C.: Center for Strategic & International Studies, May 2022); Kayla Izenman, "DC/EP's Potential Internationalisation and the Global Economy", in *The Flipside of China's Central Bank Digital Currency* (see note 54), 23—25.

Abbreviations

AIIB	Asian Infrastructure Investment Bank
ASEAN	Association of Southeast Asian Nations
BIS	Bank for International Settlements (*siehe auch* BIZ)
BOC	Bank of Canada
BOE	Bank of England
BOJ	Bank of Japan
BRI	Belt and Road Initiative
BRICS	Brazil, Russia, India, China, South Africa
BSN	Blockchain-based Service Network
CBDC	Central Bank Digital Currency
CCP	Chinese Communist Party
CIPS	Cross-Border Interbank Payment System
CNH	Chinese yuan (offshore renminbi/Hongkong)
CNY	Chinese yuan (onshore renminbi)
COFER	Currency Composition of Official Foreign Exchange Reserves
ECB	European Central Bank
e-CNY	Digital Chinese Yuan
EUR	Euro
Fed	Federal Reserve
GBP	British Pound
IMF	International Monetary Fund
JPY	Japanese Yen
NDB	New Development Bank
PBoC	People’s Bank of China
PRC	People’s Republic of China
RGI	Renminbi Globalisation Index
RMB	Renminbi (People’s Money)
SDR	Special Drawing Right
SNB	Swiss National Bank
SWIFT	Society for Worldwide Interbank Financial Telecommunications
UDPN	Universal Digital Payment Network
USD	US-Dollar