

The Reality and Costs of Dollar-Dominance: Where Do Alternatives Lie?

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Introduction

Discussing the future of the dollar is a recurrent exercise in times of crisis, especially when the US's national interest and domestic policies seem to conflict with international monetary stability. However, to paraphrase Mark Twain, the death of the dollar has been greatly exaggerated.¹ In 2011, days after the Obama administration narrowly averted a default, credit ratings firm Standard & Poor's took the unprecedented decision to downgrade the US from "AAA" to "AA-plus" because political polarisation was undermining progress to rein in public spending and "stabilize the government's medium-term debt dynamics."² But the downgrade had limited impact on the long-term value of the dollar (Chart 1). In the meantime, the US public debt has grown from 39% of GDP in 2008 to over 100% in 2023. In August 2023 Fitch Ratings, concerned about the debt "due to reach 118.4% [of GDP] by 2025",³ downgraded the US to "AA-plus" – the second ever downgrade in the

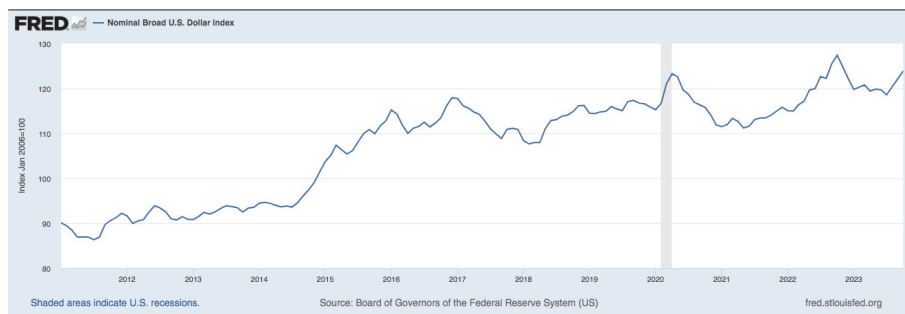
¹ On 2 June 1897 Mark Twain wrote in the *New York Journal*: "The report of my death was an exaggeration" in response to newspaper reports of being ill or dead. The confusion was due to the fact that James Ross Clemens, cousin of Samuel Langhorne Clemens (Mark Twain), was seriously ill in London. Oxford Dictionary of Quotations, 2009.

² Standard & Poor's, 2011, p. 3.

³ Fitch Ratings, 2023.

US's history.⁴ The downgrade had no impact on the dollar that reached a six-month high at the end of September 2023.

CHART 1
Nominal Broad US Dollar Index, 2011-2023



The resilience of the dollar comes from embodying all the three features of international money to an extent that no other international currency does. The dollar is the currency of choice in which most bilateral trade among countries others than the United States is invoiced and settled. Approximately half of global trade is currently invoiced in dollars.⁵ The dollar is also the preferred store of value. About half of all international debt securities and cross-border loans issued in the offshore funding markets are denominated in dollars.⁶ The dollar is used in 48% of global payments, followed by the euro with almost 23%, sterling with 7% and the Japanese yen with 3.6%.⁷

Liquidity, usability and network externalities have underpinned the dollar since the end of the Second World War and have kept it at

⁴ At the time of Fitch's decision the US debt credit rating was still AA-plus for Standard & Poor's; only Moody's, among the three private credit ratings firms maintained AAA.

⁵ https://www.bis.org/publ/qtrpdf/r_qt2212x.htm.

⁶ In the second quarter of 2022, the amount of debt and loans denominated in US dollar where neither the issuer/borrower nor the lender is a US resident is estimated to be 88% of total international US dollar-denominated debt and 65% of total international USD bank loans, https://www.bis.org/publ/qtrpdf/r_qt2212x.htm.

⁷ Figures August 2023, Swift, 2023.

the top of the currency pyramid.⁸ Early predictions of the euro's impact on the international currency situation, such as Robert Mundell positing that it "will challenge the status of the dollar and alter the power configuration of the [international monetary] system," proved to be off the mark, especially after the sovereign debt crisis that in the early 2010s brought the Euro area to the edge of collapse.⁹ While it is the currency used in the bilateral trade with the Eurozone – a market of 350 million people¹⁰ – the euro is a regional rather than a global currency. Similarly, the Chinese renminbi has expanded its use in settling China's bilateral trade – approximately 30% of the total – but its global use remains constrained because of the limitations on capital movements imposed by the Chinese monetary authorities.¹¹

Lack of comparable alternatives means that, while the dollar remains unchallenged, the United States enjoys the "exorbitant privilege"¹² that comes from the dollar being the anchor of the global financial system, namely that central banks hold dollars as official reserves and firms engaged in international trade hold dollars to settle their trade transactions. The "exorbitant privilege" allows the United States to continue running a large debt and pay relatively low interest rates on it.¹³ Furthermore, it allows the United States to run expansionary fiscal policies to stabilize the economy when a negative shock occurs without triggering an adverse reaction of foreign lenders, including, in particular, higher interest rates imposed by global capital markets.¹⁴

There is a powerful US debate about the decline of the dollar and the consequent demotion of the United States as the world's

⁸ Cohen, 2011, p. 13.

⁹ Subacchi, 2020; Tooze, 2018.

¹⁰ Eurostat, https://ec.europa.eu/eurostat/databrowser/view/DEMO_GIND__custom_7557310/default/table?lang=en.

¹¹ Subacchi, 2017; Eichengreen et al., 2018.

¹² As described by France's finance minister, Valéry Giscard-D'Estaing, in 1965. Subacchi and van den Noord, 2023; Eichengreen, 2010.

¹³ Triffin, 1960; Eichengreen, 2011.

¹⁴ Subacchi and van den Noord, 2023.

leading economic power. According to this narrative, sound fiscal policies to keep public debt on a sustainable path are necessary for the United States to retain the “exorbitant privilege.” The US debt is sustainable – this narrative goes – as long as foreign investors are willing to buy it, but they may stop underwriting it at the current conditions and require higher risk premium, pushing the borrowing costs up, making the debt even less sustainable and so weakening the dollar. A struggling dollar would then make it more difficult for the United States to retain its international influence and power.

But the dollar is not the sterling, and the United States is not post-war Britain. Both countries won the war and played a role in setting up the Bretton Woods system. Sterling, albeit by then less relevant than the dollar, was the other international currency on which international liquidity was dependent. In the 1950s and 1960s, however, the UK was the sick man of Europe, with relatively slow economic growth and recurrent balance of payments crises. The sterling balances were a further weakness, very much emphasised by Robert Triffin, who identified the root causes of the sterling crises in the gold exchange (or key currencies) standard.¹⁵ Efforts at sustaining Bretton Woods initially focused on defending sterling, as its international role was critical for the stability of the international economy.¹⁶ The US saw sterling as the dollar’s first line of defence. Triffin also emphasised the “catastrophic consequences” that a devaluation of sterling would entail.¹⁷ Despite the UK being able to attract considerable support, sterling was devalued in November 1967. This marked the final step in the demotion of sterling as the key international currency.

“Our currency, your problem”

As long as the dollar faces no strong competition and the United

¹⁵ Triffin, 1960.

¹⁶ Schenk, 2010.

¹⁷ Triffin, 1967.

States retains its “exorbitant privilege,” domestic policymakers feel few pressures from non-resident holders of dollars to contain the negative spillovers that are generated when domestic policies conflict with the role of the dollar as an international currency. In 2009, for instance, after the collapse of Lehman Brothers and the consequent banking and financial crisis, the United States experienced an adverse demand shock. The Federal Reserve eased monetary policy, first by bringing interest rates down to zero and then by quantitative easing, through market interventions. The main central banks – i.e. the issuers of the other reserve currencies: the euro, sterling and the yen – followed accordingly, albeit at different stages. But developing countries with open capital accounts and flexible exchange rates faced upward pressure on their exchange rates; they tried to resist currency appreciation by keeping their interest lower than they otherwise would have done, with the risk, however, of overheating their domestic economies or generating financial instability through their capital accounts.¹⁸ The policy trade-off was so stark that Guido Mantega, Brazil’s finance minister, talked about an “international currency war.”¹⁹ Being naturally protected against the impact of exchange-rate instability as foreign assets and liabilities are denominated in dollars and therefore there is no exchange-rate risk, the US policy response to the “international currency war” was one of “benign neglect.”

This was clearly a case of “our currency, your problem”, that is the default policy approach that goes together with the dollar’s “exorbitant privilege and is intrinsically related to the spillover impact on dollar-holders that comes from the domestic policy of the United States. In winter 1971, at a G10 countries meeting in Rome, after the United States had unilaterally suspended the dollar convertibility into gold, Treasury Secretary John Connolly made it clear that exchange rate stability wasn’t the United States’ problem, stating that “the dollar is our currency, but your problem.” The decision to sus-

¹⁸ Subacchi and van den Noord, 2012, pp. 463-464.

¹⁹ Wheatley and Garnham, 2010.

pend the dollar convertibility was triggered by domestic political pressure as the American public opinion was less willing to sacrifice its national objectives to support the international system that the United States had contributed to create. Increasing public spending on social programmes and the Vietnam War, inflation and gold losses on the back of the United States' social- and foreign-policy ambitions were eroding confidence in the dollar. Against this background the US government felt that it could no longer defend the dollar convertibility and in August 1971 closed the gold window, marking the end of the Bretton Woods system.

The problem of having a national currency – i.e. a currency issued by a sovereign state with its own domestic policy objectives – at the centre of the international monetary system came back on the international policy agenda when China *de facto* pegged the renminbi to the dollar in the early 1990s and then switched, in 2005, to a basket of currencies, among which the dollar was the most prominent. US Treasury Secretary John Snow publicly praised Beijing's decision, saying "I welcome China's announcement today that it is adopting a more flexible exchange rate regime."²⁰ The Chinese monetary authorities' main motivation, however, was not to please the United States, but to reduce China's exposure to the dollar and narrow its current account surplus through a more flexible, less dollar-dependent exchange rate arrangement.²¹

In March 2009, in the aftermath of the global financial crisis, Zhou Xiaochuan, the governor of the People's Bank of China (PBoC) – China's central bank – articulated the problem of having "a national currency" at the centre of the international monetary system – he carefully avoided mentioning the dollar in his speech. He went on to argue for a break-up of the dollar-dominated monetary system and suggested switching to a supranational currency. "A super-sovereign reserve currency managed by a global institution could be used to both create and control the global liquidity."²²

²⁰ BBC News, 2005.

²¹ Subacchi, 2017.

²² Zhou, 2009.

When Governor Zhou delivered his speech, China had almost US\$2.7 trillion in foreign reserves holding. In December 2010 the Bank for International Settlements (BIS) estimated China's potential losses on the official reserves at approximately 1.8 trillion renminbi in case of a 10% appreciation of the renminbi.²³ In addition, the US Treasury bills held in China's reserves were giving a return lower than it could be earned on domestic bonds while the PBoC was paying more on bonds that were issued to absorb dollar inflows than what it made from holding dollar-denominated assets – excess liquidity needed to be sterilised to avoid pressures on prices and dampen domestic credit expansion. In 2010 China's loss on sterilization was estimated at about 40 billion dollars.²⁴

In the years before the global financial crisis and the reverse of the US monetary policy China used to gain a profit of about 60 billion dollars a year from its sterilization operations. In August 2014, the one-year US Treasury bill was almost a zero-return investment with a yield at 0.11%. In the same period, China's one-year bills paid 3.77%. The United States, on the other hand, earned more from investments abroad than it had to pay to foreign investors for holding assets domestically. In 2011, interests and dividends paid to foreign investors were 500 billion dollars, lower than the 740 billion dollars that American investors received on the assets that they held overseas.²⁵ Holding dollars was effectively a subsidy to the United States; for developing countries – and China, with 12.7% of its population living below the poverty line²⁶ – this meant not using their resources for domestic development.

In the years after the global financial crisis the implications of relying on the dollar as the currency for international trade and financial transactions had become evident. In that period China was

²³ Cook and Yetman, 2012, pp. 37-38.

²⁴ Subacchi, 2017, pp. 90-92; p. 94.

²⁵ Subacchi, 2017, pp. 94-95.

²⁶ Poverty headcount ratio at national poverty lines (% of population), 2011, World Bank, DataBank, World Development Indicators.

expanding its international financial footprint through overseas investments and loans. In 2012 the Chinese leadership launched the Belt and Road Initiative (BRI), a plan for infrastructure investment in neighbouring countries; the creation of the Asian Infrastructure Development Bank (AIIB), a new multilateral development bank lead by China, followed through in 2015. All these initiatives revolved around the dollar – and they still are. Capital in AIIB was paid in dollars, and loans to countries on the BRI were made in dollars. The case for developing the renminbi as an international currency was starkly urgent.

Developing the renminbi

Since the late 2000s, China has been pursuing a policy of reducing its exposure to the dollar while at the same time it has been promoting the internationalisation of its own currency in cross-border transactions. In April 2009 the Standing Committee of the State Council approved a pilot scheme to allow the use of the renminbi for pricing, invoicing and settling international trade transactions. This plan aimed to “boost China’s trade with other trading partners, improve trading conditions, provide liquidity that had been severely curtailed by the financial crisis, lower exposure to foreign exchange fluctuations and maintain a high rate of growth in the trading sector.”²⁷ Ambitions were modest and the goal was to leverage the policy scheme on the existing informal use of the Chinese currency in the region.²⁸ China’s monetary authorities have been developing the strategy in a cautious, step-by-step way, through a sort of learning by doing, and will continue to do so. Reforms in China do not happen overnight, but progress through a steady and gradual path. “Crossing the river by feeling the stones,” as Deng Xiaoping de-

²⁷ Howard Chao and Sean Tai, “The Coming Age of the Renminbi”, in *The Deal Magazine*, November 2, 2009.

²⁸ Haihong Gao and Yongding Yu, *Internationalization of the Renminbi*, paper presented at BoK-BIS Seminar in Seoul March 19-20, 2009.

scribed it, meaning that policies are gradually implemented and tested, before being extended across the whole country.²⁹

China's renminbi policy has been predicated on two assumptions. First, as capital account movements, especially the outflows, can be gradually relaxed but not yet fully liberalised and convertibility needs to be managed, as Governor Zhou said in 2015,³⁰ the internationalisation of the renminbi would need to be policy-driven rather than market-driven. The second assumption is that supply-side measures would eventually drive demand, thus policies need to put in place the relevant infrastructure and so underpin the development of the market for renminbi. Both assumptions are unprecedented in the history of the major international currencies.

As expected, the renminbi internationalisation has made rapid progress whereas it can leverage on China's weight in international trade, but considerably less so in international finance. The renminbi is currently the fifth most used currency for global payments by value with a share of 3.4%. It is the third most used currency in trade finance (4.8%), after the dollar (83.9%) and the euro (6.4%).³¹ In October 2011 the renminbi was at around the 15th place among the world payment currencies – a significant improvement from being 35th in October 2010. The renminbi's share of the total payments value was 0.31%.³² As for the foreign-exchange reserves, the renminbi accounts for 2.6% of the world's allocated reserves – the dollar is about 58%, the euro is 20%, followed by the Japanese yen (5.5%) and sterling (4.9%). In 2010 the dollar accounted for more than 60% of the world's allocated foreign-exchange reserves; the euro was about 26%, the yen 3.6% and sterling 3.9%. Figures for the renminbi are available from 2016 when it became part of the basket of currencies that determine the value of the Special Drawing Rights (SDRs). In 2016 the renminbi was 1% of the world's allocated reserves.³³

²⁹ Subacchi, 2017, pp. 106-116.

³⁰ Zhou, 2015.

³¹ Figures August 2023, Swift, 2023.

³² Swift, 2011.

³³ IMF Data, Macroeconomic and Financial Data, Currency Composition of Official Foreign Exchange Reserves (COFER).

The renminbi has made good progress and has significantly expanded its international use since the launch of the renminbi strategy in 2010. The IMF's inclusion of the renminbi in the SDR basket was a turning point that recognised the renminbi's future potential, but also highlighted the gap with the dollar. There is no doubt that the renminbi won't replace the dollar as the leading international currency – and this is not, however, the policy priority of the Chinese leadership.³⁴ This doesn't mean that the pace of renminbi will slow down or even stop. The policy objective of reducing the dependence on the dollar has become more pressing, especially on the back of more hostile geopolitics and confrontational bilateralism. For China, and for other developing countries as well, the weaponisation of trade and finance is at the same time a reason of concern and reflection on the intrinsic fragility of their economies. Not surprisingly then, China has been pushing for some time the idea of a multi-currency international monetary system.

Moving away from the dollar

Against this background the dollar has become increasingly weaponised. Non-US resident holders of dollars feel the brunt of being overly exposed to the politics of the United States. Not that it was not the case before. At the peak of the global financial crisis in 2008-2009, many emerging market central banks turned to the Fed to get some dollar liquidity and have access to swap lines, only to be turned down. Only large emerging markets economies with financial links to US banks and financial institutions were offered dollar swaps. But the Fed's selectivity harboured resentment in the countries that were excluded and left to fend against financial instability by themselves. They had not forgotten that this instability was generated in the US market and exacerbated by the Fed's monetary policy. At the time of the "taper tantrum" in 2013, the Fed was even

³⁴ Subacchi, 2017, pp. 177-180.

more selective. The “fragile five” – Brazil, India, Indonesia, Turkey and South Africa – were not supported, prompting the governor of the Reserve Bank of India, Raghuram Rajan to call for greater international cooperation between central banks.³⁵

In recent years, and the turning point was 2017 with the beginning of the Trump administration, the United States has used the dollar as a coercive tool in an increasingly challenging geopolitical background. This has prompted a series of responses, often motivated by countries’ own geopolitical objectives. Russia, for example, in the years after the invasion of Crimea, and before the war on Ukraine, halved the central bank’s dollar holdings in favour of euros, renminbi and yen; in 2019 32% of Russian reserves were in euros against 22% in dollars,³⁶ while holdings of gold more than doubled between 2014 and 2019.³⁷ In 2014 the PBoC and the Central Bank of Russia (CBR) signed a bilateral swap arrangement of 150 billion renminbi (or 815 billion rubles) to facilitate bilateral trade and investment. In 2015-2016 the CBR used its swap line with China to reduce the impact of the American and European sanctions on its economy.

In April 2023 Brazil’s president Luiz Inacio Lula da Silva invited the BRICS to consider alternative currencies, notably the renminbi.³⁸ Similarly, in a meeting with president Xi Jinping, Russian president Vladimir Putin endorsed the broader international use of the renminbi, especially in payments between Russia and the countries of Asia, Africa and Latin America.³⁹ Both leaders voiced concerns about their countries’ vulnerability to financial sanctions and the risk of being cut off from using the SWIFT network. In September 2022 the Shanghai Cooperation Organisation, of which China and Russia are members, agreed to increase the use of national currencies in bilat-

³⁵ Wessel, 2014.

³⁶ Seddon, 2019.

³⁷ CBR Data: International Reserves of the Russian Federation.

³⁸ Iglesias, 2023.

³⁹ Stognei, 2023.

⁴⁰ Reuters Staff, 2022.

eral trade among member states.⁴⁰

The development of the renminbi has been welcomed in some countries as the opportunity to reduce the dependency on the dollar. The digital renminbi, where China has made significant strides, would allow cross-border payments using the renminbi. So far progress has been gradual through testing of cross-border use based on domestic practices and international demand in line with the principles of compliance, interoperability and no disruption. The monetary authorities have been clear that the e-CNY, at the current stage, is planned to be used for domestic retail transactions, not to rival the dollar.⁴¹

Speaking at the 2021 Boao Forum for Asia Annual Conference former PBoC deputy governor Li Bo made it clear that replacing the dollar was not the Chinese leadership's objective. "Our goal is [...] to let the market make choices to further facilitate international trade and investment."⁴² In addition, the shift to a multi-currency system would allow a rebalancing of the international monetary system and reduce the US's dominant position in monetary and financial affairs that comes from issuing the dollar. The digital renminbi would make this objective easier to achieve as it would be more easily distributed than the physical renminbi and would allow developing countries to access alternative cross-border payments systems and reduce their dependency on the dollar.⁴³

Conclusion

Despite the US's status as leading superpower increasingly being questioned as part of a more complex and multipolar geopolitical context, this has not translated into any serious threat to the US dollar's position as leading currency in the international monetary sys-

⁴¹ Zhou, 2021.

⁴² Wang 2021.

⁴³ Wan 2020, p. 6.

tem. The United States is therefore likely to maintain its “exorbitant privilege” for the foreseeable future. Not only does this mean that it will continue to be able to run larger debts and engage in far less costly expansionary fiscal policies, but also third countries will continue to face the problems associated with relying on a currency of another sovereign state often unsympathetic to their concerns. Although it has never been a goal of the Chinese state to attempt to supplant the dollar with the renminbi as the world’s leading currency, the costs of relying on the dollar to settle its trade has led the Chinese leadership to attempt to internationalise the renminbi. Increasing US-China tensions in recent years has given further impetus to this policy. Although measures such as the digital renminbi and the BRI have allowed China to settle ever-greater volumes of its trade in its own country, the Chinese leadership’s final goal – that of a multi-currency international monetary system – is still far from being a reality.

References

- BBC NEWS (2005), *China Launches Currency Shake-Up*, July 22, <http://news.bbc.co.uk/1/hi/business/4703477.stm>.
- COHEN B.J. (2011), *The Future of Global Currency. The Euro Versus the Dollar*, Routledge, London and New York.
- COOK D., YETMAN J. (2012), “Expanding Central Bank Balance Sheets in Emerging Asia: A Compendium of Risks and Some Evidence” in *Are Central Bank Balance Sheets in Asia Too Large?*, paper 66, Bank for International Settlements, Basel, pp. 30-75.
- EICHENGREEN B. (2011), *Exorbitant Privilege. The Rise and Fall of the Dollar*, Oxford University Press, Oxford and New York.
- (2010), *Exorbitant Privilege: The Rise and Fall of the Dollar and the Future of the International Monetary System*, Oxford University Press, Oxford.
- EICHENGREEN B., MEHL A., CHITU L. (2018), *How Global Currencies Work, Past, Present and Future*, Princeton University Press, Princeton, NJ.

- FITCH RATINGS (2023), "Fitch Downgrades the United States' Long-Term Ratings to 'AA+' from 'AAA'; Outlook Stable", in *Rating Action Commentary*, August 1, <https://www.fitchratings.com/research/sovereigns/fitch-downgrades-united-states-long-term-ratings-to-aa-from-aaa-outlook-stable-01-08-2023>.
- IGLESIAS S.P. (2023), "Lula backs BRICS Currency to Replace Dollar In Foreign Trade", in *Bloomberg*, April 13.
- OXFORD DICTIONARY OF QUOTATIONS (2009), Oxford University Press, Oxford.
- REUTERS STAFF (2022), *China-led SCO Bloc Agrees to Expand Trade in National Currencies*, Reuters, September 16.
- SCHENK C. (2010), *The Decline of Sterling: Managing the Retreat of an International Currency, 1945-1992*, Cambridge University Press, New York.
- SEDDON M. (2019), "Russia Ditched Dollar Holdings to Foil Us Sanctions" in *Financial Times*, January 10.
- STANDARD & POOR'S (2011), "United States of America Long-Term Rating Lowered To 'AA+' On Political Risks and Rising Debt Burden; Outlook Negative", in *Global Credit Portal, RatingsDirect*, August 5, https://www.washingtonpost.com/wp-srv/politics/documents/spratingreport_080611.pdf.
- STOGNEI A. (2023), "Russia Embraces China's Renminbi in Face of Western Sanctions", in *Financial Times*, March 26.
- SUBACCHI P. (2020), *The Cost of Free Money: How Unfettered Capital Threatens Our Economic Future*, Yale University Press, New Haven and London.
- (2017), *The People's Money: How China is Building a Global Currency*, Columbia University Press, New York.
 - "An Economic and Monetary 'Experiment' Gone Too Far?", in *Annals of the Fondazione Luigi Einaudi*, forthcoming.
- SUBACCHI P., VAN DEN NOORD P. (2023), "Exorbitant Privilege and Fiscal Autonomy", in *Oxford Review of Economic Policy*, Volume 39, Issue 2, pp. 283-99, <https://academic.oup.com/oxrep/article/39/2/283/7113973>.

- (2012), “Grappling With Global Imbalances: When Does International Cooperation Pay?”, in *Oxford Review of Economic Policy*, Volume 28, Issue 3, pp. 444–468, <https://doi.org/10.1093/oxrep/grs022>.
- SWIFT (2023), *RMB Tracker. Monthly Reporting and Statistics on Renminbi (RMB) Progress Towards Becoming an International Currency*, September.
- (2011), *RMB Tracker. Trend or Hiccup - Could the Internationalisation of the RMB Be Stalling*, November.
- TOOZE A. (2018), *Crashed. How a Decade of Financial Crises Changed the World*, Allen Lane, London.
- TRIFFIN R. (1967), *The International Monetary Problem after Rio, New Plan for International Monetary Reserves*, Hearings, 90th Congress of the United States, First Session, First Session, Part 1, November 22, pp. 128-157, US Government Printing Office Washington DC.
- (1960), *Gold and the Dollar Crisis. The Future of Convertibility*, Yale University Press, New Haven, CT.
- WAN W. (2020), *Opportunities and Challenges Facing Digital Currency Electronic Payment*, Institute of International and Strategic Studies Peking University, September 24.
- WANG O. (2021), “China’s Yuan Internationalisation Goal ‘Is Not to Replace US Dollar’, Top Banking Official Insists”, in *South China Morning Post*, April 19.
- WESSEL D. (2014), “India’s Rajan Calls for More International Monetary Cooperation”, in *Brookings*, April 10.
- WHEATLEY J., GARNHAM P. (2010), “Brazil in ‘Currency War’ Alert”, in *Financial Times*, September 27, <https://www.ft.com/content/33ff9624-ca48-11df-a860-00144feab49a>.
- WYPLOSZ C. (1999), “An International Role for the Euro?”, in J. Dermine, P. Hillion, *European Capital Markets with a Single Currency*, Oxford University Press, Oxford.
- ZHOU X. (2021), “China’s Choices for a Digital Currency System”, in *Nikkei Asia*, February 22.
- ZHOU X. (2015), *IMFC Statement by Zhou Xiaochuan, Governor, Peo-*

ple's Bank of China, Thirty-First Meeting of the International Monetary and Financial Committee, International Monetary Fund, Washington, DC, April 18.

- (2009), *Speech: Reform the International Monetary System*, March 23, <http://www.pbc.gov.cn/english/130724/2842945/index.html>.