

CHINA'S CENTRAL BANK AND MONETARY POLICY IN THE CONTEXT OF THE GLOBAL FINANCIAL CRISIS: A HISTORICAL VIEW

Shen Wei

Shanghai Jiao Tong University Law School, People's Republic of China

e-mail: shenwei@sjtu.edu.cn

Submitted: 21 December 2021 - Last revised: 1 January 2022 - Accepted: 8 January 2022

Abstract

Central banks have been said to take partial responsibility for the global financial crisis. In a broader sense, central banks play a key role in shaping monetary and economic policies. After the global financial crisis, central banks are burdened with more tasks of ensuring economic growth, employment, and financial stability. This article takes a historical view towards the policy landscape and monetary instruments the People's Bank of China, China's central bank, has been working on to achieve various policy initiative. Although the general consensus is that China's central bank may have more authority in policymaking, its multiple tasks, functions, and goals may constrain its capabilities and autonomy. China central bank's ambition to internationalise Renminbi may further complicate its policy agenda and the way it deploys monetary instruments.

Keywords: china central bank, monetary policy, financial crisis, economy growth

I. INTRODUCTION

It has been widely believed that some aspects of the conduct of monetary and credit policies contributed directly to the 2007 global financial crisis. In other words, it was the failure of the central bank that brought on the banking collapse leading to the global financial crisis.¹ Against this background, there have been some discussions about the appropriate role for central banks and the appropriate design of their policies in the aftermath of the financial crisis.² Meanwhile, central banks in major economies,³ though acting as government bankers and liquidity providers to the economy, have taken some reform initiatives or have been set on the course of some changes. For example, The

¹ Richard A. Posner, *The Crisis of Capitalist Democracy* (Cambridge, Mass.: Harvard Univ. Press, 2010), 3.

² Joseph E. Stiglitz, *The Stiglitz Report: Reforming the International Monetary and Financial Systems in the Wake of the Global Crisis* (New York: New Press, 2010), 38.

³ Ross Cranston et al., *Principles of Banking Law*, Third edition (Oxford: Oxford University Press, 2017), 132.

U.S. Federal Reserve has been expanding its policy mandate beyond price stability and full employment and has made financial stability an explicit goal.⁴ Bank of Japan (BoJ) for a long time has failed to defeat deflation. The BoJ, like other central banks, has been trying to maintain its independence⁵ by objecting to set an inflation target and to adopt more timid goals. The BoJ has also been reluctant to be seen to finance government spending directly since this would shield the government from raising taxes, cutting spending, and/or forcing a restructuring of industry. Setting a mandatory inflation target, however, is no radical departure from central bank orthodoxy. The Bank of England (BoE) “imported” a Canadian central banker and hopefully Canadian financial stability as well.⁶ This had some symbolic value indicating BoE’s extraordinary efforts to make some institutional changes.

The reassessment of the 2007 global financial crisis seems to suggest a causal link between a central bank’s failings in formulating effective monetary policies and the financial crisis. It is widely recognised that China’s central bank should supposedly have more control over its economy than other countries.⁷ Banking reform in China, however, has had its limits, which was manifested by the economic pattern affected by the monetary policy of the People’s Bank of China’s (PBOC), China’s central bank.

This article focuses on the monetary policies of the PBOC and some aspects of China’s central bank governance that may affect its formulation of various monetary policies. This article also attempts to “rationalise” PBOC’s monetary policies facing challenges in the context of Chinese and global economy. There are three sections. Section 1 mainly investigates monetary policies the PBOC has crafted in response to the latest global financial crisis.

⁴ Thomas Cooley et al., “The Power of Central Banks and the Future of the Federal Reserve System,” in *Regulating Wall Street : The Dodd-Frank Act and the New Architecture of Global Finance*, by Viral V. Acharya et al. (eds.) (Hoboken, NJ, USA: John Wiley & Sons, Inc., 2011), 51–71, 51, <https://doi.org/10.1002/9781118258231.ch2>.

⁵ The BoJ gained its independence from the finance ministry in the late 1990s when the economy could have done with closer co-ordination of fiscal and monetary policy to tackle deflation. Mure Dickie, “Japan’s Abe Issues Ultimatum to BoJ,” *Financial Times*, December 23, 2012, <https://www.ft.com/content/6395f758-4ce5-11e2-a99b-00144feab49a>. Maintaining the case of central bank independence is a less controversial principle compared with the case of independence for financial sector supervisors. Marc Quintyn, Silvia Ramirez, and Michael W. Taylor, “The Fear of Freedom : Politicians and the Independence and Accountability of Financial Sector Supervisors. IMF Working Paper WP/07/25,” IMF, 2007, <https://www.imf.org/en/Publications/WP/Issues/2016/12/31/The-Fear-of-Freedom-Politicians-and-the-Independence-and-Accountability-of-Financial-Sector-20155>.

⁶ Martin Wolf, “A Case to Reset Basis of Monetary Policy,” *Financial Times*, February 7, 2013, <https://www.ft.com/content/ae8b292a-6fc4-11e2-8785-00144feab49a>.

⁷ “China GDP – Decimal Points,” *Financial Times*, October 18, 2012, <https://www.ft.com/content/b2290ea4-1929-11e2-af88-00144feabdc0>.

Section 2 goes through major factors which affect the formulation of monetary policies by the PBOC. A short conclusion wraps up the article in Section 3.

II. MONETARY POLICIES IN RESPONSE TO THE FINANCIAL CRISIS

To fend off the financial crisis that gripped the US and most of Europe, China powered through the global financial crisis in large part thanks to an explosion of credit, both through its formal banking system and a series of “shadow banks” and off-balance-sheet vehicles. PBOC had consistently injected enough cash into the banking system through its regular bond auctions to maintain its money markets and lending rates within its target range. The side effect of this credit spree was a remarkable increase in leverage: the overall credit to gross domestic product ratio shot up from about 115% to nearly 173% during in five years after the global financial crisis.⁸ These financial strains are all of the government’s own making. This confirms the basic closed nature of Chinese banking system, which is controlled by the state, to a significant extent, by the credit crunch. Essentially, the credit of the Chinese government forms the backdrop of the entire Chinese financial system.⁹

The fiscal stimulus plan adopted by the Chinese government in November 2008 has a lot to show for the money it spent. Officially RMB 4,000 billion (but in fact more like RMB 11,000 billion) was spent. This figure does not include RMB 7,000 billions of local government spending, most of which went to finance infrastructure. Fiscal policy (either in the form of government subsidies or direct spending) have had unexpectedly pro-cyclical business cycle effects and destabilising features in the design of other government programs.¹⁰ China’s fiscal programs have reinforced existing economic imbalances. The government’s fiscal plan is a return to the past over-investment in state-owned enterprises (SOEs) and more overcapacity leading to reinforcement of an economic model that needs to shift towards services and domestic demand

⁸ Gavyn Davies, “China Faces A Difficult Credit Bubble Workout,” Financial Times, July 8, 2013, <https://www.ft.com/content/f76a5202-c241-11e2-87ec-00144feabdc0>.

⁹ US seems no exception to this given the emergency loans the state extended to the bankrupt financial institutions. Hester Peirce and James Broughel, eds., *Dodd-Frank: What It Does and Why It's Flawed* (Arlington, Virginia: Mercatus Center, George Mason University, 2012), 122-123.

¹⁰ Yair Listokin, *Law and Macroeconomics: Legal Remedies to Recessions* (Cambridge (Mass.): Harvard university press, 2019), 31.

instead.¹¹ Most analysts believe that China should have further boosted consumption rather than spending too much on infrastructure projects.¹²

A stimulus plan is often invoked by the government to rescue the economy from a serious recession. The US government, for instance, introduced “the most sweeping recovery package in [its] history,” and signed into law a US\$787 billion fiscal stimulus package in early 2009. This fiscal stimulus, accounting for over 5% of US GDP, included a mixture of subsidies, tax cuts, infrastructure spending, energy investments and emergency spending for unemployment benefits, health care and food aid.¹³ The governments of France, the United Kingdom, Japan, and Germany all unveiled their own versions of stimulus packages in various sizes and forms with the same aim of bringing the slowing economies back onto the right track. While a stimulus plan may help energise the economy and create more job opportunities, rescue operations are in part or whole financed from the public through bond sales, which may generate side effects of deficit spending and inflation.¹⁴ Thus, a stimulus plan is said to be financed by “printing money.” A host of unsettling issues follow and most of them may prove conducive to moral hazard on a grand scale. For example, monetary and fiscal policies infringe on the elected government’s power to spend money by swapping safe government bonds for toxic assets and holding these assets on its balance sheet.¹⁵

¹¹ The fiscal stimulus program is not necessarily helpful in the US as well. The recovery act in the US has not been a lasting catalyst for economic recovery due to the paucity of money for infrastructure in the US plan and due to the fact that the government-supported income transfers have not yielded to cuts and higher taxes. The bulk of the US fiscal stimulus went on transfer payments to state and local governments, tax cuts and an extension of unemployment benefits and programs for the poor such as food stamps. Besides, these government efforts were overwhelmed by corporate measures to preserve profit margin and revenues by laying off workers and controlling wages.

¹² This may not be true as high-speed trains and subways may generate social goods, i.e., reducing pollution. More money can be invested onto quality healthcare and food security in addition to railways and subways.

¹³ Robert Skidelsky, *Keynes: The Return of the Master*, Rev. and updated (New York: Public Affairs, 2010), 19.

¹⁴ This logical deduction between deficit spending and inflation is based on the mainstream classical efficient market model. This neutral money axiom is asserted as a universal truth that has not been theoretically proven to be true. Paul Davidson, *The Keynes Solution: The Path to Global Economic Prosperity*, 1st ed (New York, NY: Palgrave Macmillan, 2009), 65.

¹⁵ Nouriel Roubini and Stephen Mihm, *Crisis Economics: A Crash Course in the Future of Finance*, 1. publ. (New York, N.Y.: Penguin Press, 2010), 136-137.

In late 2008, China rolled out its massive economic stimulus package,¹⁶ equivalent to about 27% of China's economy.¹⁷ Chinese banks extended huge amounts of credit to local borrowers, a legacy of the lending spree in 2009 that helped fund China's 4-trillion-yuan stimulus package. Chinese banks, with the purpose of underpinning economic growth but ignoring potential future credit risks, issued a total Renminbi 9.6 trillion of credit in 2009, nearly double the minimum target of RMB 5 trillion. In 2010, Chinese banks further loaned Renminbi 8 trillion, exceeding Beijing's initial quota of Renminbi 7.5 trillion even though the Chinese Government had been trying to tighten monetary policy.¹⁸ In the first half of 2011, Chinese banks issued 4.17 trillion yuan of new credit, bringing total outstanding loans to 51.4 trillion yuan, an increase of 16.9% from the same period in 2010.¹⁹ PBOC released the data on the official webpage showing that total lending was to exceed Renminbi 8.5 trillion in 2012, up from Renminbi 7.47 trillion in 2011.²⁰ Chinese credit issuance rose to more than 22% year-on-year so far in 2013 while nominal gross domestic product growth dipped below 10%.²¹ China's banking sector assets increased by nearly US\$14 trillion from 2008 to 2012, which was almost equal to replicating the entire US commercial banking sector in just five years.²² Substantial increases in lending by Chinese banks resulted in widespread concerns over the rise of nonperforming loans²³ and default risks. Monetary stimulus has seen the

¹⁶ Reuters, "Lending to Local Banks to Decline: ICBC Chief," *South China Morning Post*, June 1, 2011, sec. B3. The latest estimate is that total bank loans to local governments reached 14.4 trillion yuan. Lulu Chen, "Regulator Clears Bids to Raise Capital," *South China Morning Post*, July 27, 2011, sec. B3. A large-scale of economic stimulus program was to ensure an 8% growth. Jamil Anderlini, "China Comfortable with Weaker Growth," *Financial Times*, October 18, 2012, <https://www.ft.com/content/f692a9e8-18ec-11e2-af4e-00144feabdc0>.

¹⁷ Based on the first national audit of regional finances published by Beijing on 26 June 2011. Robert Cookson, "Resilient Asia More Vulnerable to a Global Crisis," *Financial Times*, July 28, 2011, 23.

¹⁸ Daniel Ren, "Everbright Bank Lines Up Big Guns for HK Listing," *South China Morning Post*, July 27, 2011, sec. B3.

¹⁹ Lulu Chen, "Central Bank Reports Rise in Lending to Small Loans," *South China Morning Post*, July 27, 2011, sec. B3.

²⁰ Reuters, "China Loans Slow But Economic Recovery on Track," *South China Morning Post*, December 11, 2012. It was pointed out that credit growth, as measured by total social financing, may have peaked in the second half of 2012 and may decline in 2013. Jane Cai, "Mainland Banks Face Mounting Loan Dangers," *South China Morning Post*, January 16, 2013.

²¹ Simon Rabinovitch, "China's Central Bank Assures Financial Markets," *Financial Times*, June 28, 2013, <https://www.ft.com/content/06a73156-dfbb-11e2-bf9d-00144feab7de>.

²² Victoria Ruan, "Tough Tasks Await next PBOC Head," *South China Morning Post*, November 30, 2012, <https://www.scmp.com/business/banking-finance/article/1094078/tough-tasks-await-next-pboc-head>.

²³ However, it has to be pointed out that the non-performing loan rate in China was only 1.14% and capital ratios averaged 12.2%, both of which are better than their counterparts' in Europe and the US. Richard Lumb, "Branching Out," *South China Morning Post*, September 26, 2011, <https://www.scmp.com/article/980111/branching-out>.

mainland's broad money supply, or M2, balloon by 21.1% annually over the past three decades, fueling a long period of inflation and widening wealth disparity.

II.A. Monetary Policies Amid the Overheating Economy

In curbing its overheating economy, PBOC uses interest rates as the monetary tightening tool.²⁴ While low interest rates can help push up asset prices, they may create economic distortions, i.e., holding back economic growth and causing deflation, especially when real interest rates are low or negative. This is the dilemma in which the PBOC ends up from time to time.

The danger of low interest rates was apparent during financial meltdown of 2008. With low interest rates, investors may have switched their investment to more risky projects or assets seeking higher returns. The consequence was an explosion of lending to poor borrowers with the risk being packaged in high-yielding structured products. To increase the interest rate will change this mispricing of capital. PBOC sometimes was reluctant to raise interest rates, the rationale of which may be not to pose a risk for the poorly performing State-owned sector.²⁵

Meanwhile, PBOC implemented the stricter loan-to-deposit ratio requirements (the portion of deposits that lenders must hold in reserve at the central bank) in 2011 by requiring commercial banks to lock up more of their deposits as reserves in order to tackle commercial banks' record loans in the amount of Renminbi 9,600 billion, a large portion of which was rampant lending to local governments and property developers following China's monetary stimulus package of 2008-2009.²⁶ This new reserve requirements drained an estimated Renminbi 380 billion from the financial system.²⁷ PBOC lifted the bank reserve ratio six times in 2011. Up until August 2011, required

²⁴ Low interest rates have become seen as a panacea for economic ills in recent financial crisis. The US Federal Reserve has committed to holding rates around zero for a while and other central banks all try to follow.

²⁵ Keeping low interests would negatively affect economy as a whole. Take some examples here. Low rates deter savings thereby creating a disincentive for the capital accumulation that would reduce overall debt levels, even though low rates favor borrowing and encourage substitution of debt for equity in financing structures, which increase overall financial risk. At the macro level, along with low rates, there would be low earnings on savings, which in turn encourages spending and stimulate economic activity. The preserve risk, however, is more savings and less consumption and demand. Relying on low interest rates is ineffective in addressing the real economic issues. A sustained period of low rates makes it difficult to increase the cost of borrowing. Levels of debt resulting from low rates would become unsustainable. This further reinforces the financial distortions implicit in the policy.

²⁶ Patrick Jenkins, "State Lending Targets Are Grist to the Mill of History," *Financial Times*, May 24, 2011, 18.

²⁷ Simon Rabinovitch, "China Repo Rate at 3-Year High," *Financial Times*, June 23, 2011, 13.

reserves had already been at a record high of 21.5% for the largest Chinese banks.²⁸

Previously, the requirement had only been applicable to normal deposits but at that point it was applied to margin deposits,²⁹ which are often used by corporate clients to obtain bankers' acceptance notes, letters of guarantee, and letters of credit. The extension of the requirement to margin deposits, a vital source of off-balance-sheet lending, showed the PBOC's intention to stop lenders from finding loopholes to evade credit controls. The shift of policy focus from on-balance-sheet lending to off-balance-sheet lending matched the fact that the slowdown of on-balance-sheet lending was offset by other forms of financing such as off-balance-sheet lending in the shadow banking sector. The less favourable external economic environment made PBOC difficult in further lifting the bank reserve ratio to a higher level. Although PBOC's redefinition of the reserve requirement was applicable to all banks, it may have more severely hit small and mid-sized banks which had been more reliant on margin deposits to support loan growth. Small and mid-sized players are less competitive in the interbank chase for customer deposits.

PBOC's monetary policy, aimed at deal with the then rapid growth in off-balance sheet activity, however, had severe side effects. The higher central bank reserve requirements accumulated unusable cash. PBOC reserves once rose to US\$2,100 billion, one third more than the reserve balances at the US Federal Reserve.³⁰ The more rigid reserve requirements squeezed commercial banks' profitability. With a higher lock-up ratio, Chinese banks' earnings were just 1.62%.³¹ In addition, reserve requirements prevented Chinese banks from allocating a larger share of their portfolios to higher yield investments. Even worse, this can be seen as a regressive tax, disproportionately hurting small banks with weak deposit bases as well as small and medium sized enterprises facing a worse cash squeeze than during the global financial crisis in 2008.³²

The consequences of such a monetary tightening policy are twofold: a shortage of credit to those who need credit most and the disintermediation of the formal banking system. The reserve requirements further complicated and compromised the liquidity management of the central bank. Credit quotas, the main weapon in PBOC's monetary policy arsenal, limit the amount that a bank can lend. To get around the ceiling, banks have increasingly shifted lending operations off their balance sheets through wealth management products and

²⁸ Simon Rabinovitch, "Beijing Signals Intent to Curb Credit Loopholes," *Financial Times*, August 30, 2011, 3.

²⁹ Yonnex Li, "PBOC Widens Reserve Ratio Base," *Hong Kong Economic Journal*, August 30, 2011, 2.

³⁰ "People's Bank of China," *Financial Times*, May 24, 2011.

³¹ *Ibid.*

³² Rabinovitch, "China Repo Rate at 3-Year High."

bill acceptances. Consequently, one symptom is a rapid rise in margin deposits. In addition, the spill over effect was obvious. The amount of money and credit sloshing around the economy strongly influenced China's stock prices. PBOC's move to rein in bank lending or raise interest rates often hit the market hard, which was said to be the key reason for the Shanghai stock market's decline in 2010.³³

In short, in the wake of financial crisis, China adopted "a prudent monetary policy and a proactive fiscal policy." PBOC from time to time applied various monetary policies to sustain or balance the economic growth. PBOC expanded the basis used to calculate banks' required reserves in a move aimed at curbing off-balance-sheet lending.³⁴ In the battle against skyrocketing inflation, PBOC raised the benchmark interest rate five times from October 2011 to September 2012 and increased reserve ratio requirements six times. Stabilising prices was once the government's top priority, outweighing the prospect of an economic slowdown amid a deteriorating global economic environment.

II.B. Monetary Policies Amid the Economic Downturn

China had been experiencing its economic slow-down after the financial crisis. In a new economic downturn (a seven-quarter long cyclical downturn in China's growth, evidenced by slow industrial output and retail sales, ended in the third quarter of 2012), PBOC adopted various easing measures including cuts in interest rates and injecting more liquidity into the system through so-called reverse repo operations³⁵ to exert more direct influence.³⁶

In response to the disappointing industrial figures at that time, PBOC has lowered bank reserve ratios three times since late 2011 and cut the amount of cash banks must hold with the central bank. The cut in reserve requirements liberated existing deposits, allowing an extra 450 billion yuan to circulate in early 2012.³⁷ PBOC lowered the reserve requirement ratio to 5% for smaller banks (compared to a ratio of 20% for the larger banks) in an attempt to boost

³³ Robert Cookson, "Chinese Equities Recover as Beijing Battles Inflation," *Financial Times*, April 14, 2011.

³⁴ Rabinovitch, "Beijing Signals Intent to Curb Credit Loopholes."

³⁵ The sizeable balance sheet expansion was in the official sector, that is, the central banks. The Federal Reserve targeted a US\$11 trillion in asset purchases in 2013, representing a third of its existing balance sheet. The Bank of England, the Bank of Japan and the European Central Bank were all to expand their balance sheets in 2013. Mohamed El-Erian, "Beware the 'Central Bank Put,'" *Financial Times*, January 7, 2013, <https://www.ft.com/content/bb66425c-54cf-11e2-89e0-00144feab49a>.

³⁶ The central bank's direct influence is applied through direct market purchases and forward-looking policy guidance. Some assets however are outside the direct influence of central banks. These assets, among others, are high yield corporate bonds, equities, and certain highly leveraged products.

³⁷ "The Air Is Thinning," *The Economist*, May 19, 2012, <https://www.economist.com/china/2012/05/19/the-air-is-thinning>.

credit to small and medium-sized firms amid the slowing economy.³⁸ China cut the benchmark interest rates twice in 2012, and made repeated, large-scale liquidity injections into the financial system³⁹ to shore up slowing growth in the short-term.⁴⁰ The purpose of these measures was to boost credit demand (which can be in turn injected into infrastructure projects) and energise the economy.⁴¹ In the first seven months of 2013, PBOC continued to trim interest rates and banks' reserve requirements. Meanwhile, PBOC preferred to make ad hoc purchases of bank assets as their need for cash arose.⁴² While a rate cut indicates the central bank's expansionary intent, the injection of liquidity was easier to reverse.

In its 2012 third-quarter monetary policy report, PBOC mentioned its priority was to ensure the recovery in the Chinese economic growth engine

³⁸ Man-ki Kwong, "PBOC Sets Loan Reserve Ratios for Small Banks," South China Morning Post, November 3, 2012, <https://www.scmp.com/business/banking-finance/article/1074835/pboc-sets-loan-reserve-ratios-small-banks> (quoting the official China Securities Journal's report of 2 November 2012). The Basel Committee heeded bank concerns by revising the so-called liquidity coverage ratio that requires banks to hold enough cash or easy-to-sell assets (such as sovereign debt) to withstand a 30-day funds outflow. The change is to extend the original 2015 deadline for banks' compliance. Accordingly, the banks must meet 60% of the requirements by 2019 (the time for full implementation). Brooke Masters and Shahien Nasiripour, "Basel Tries Fluid Position on Liquidity," *Financial Times*, January 7, 2013, <https://www.ft.com/content/e9000f70-58d7-11e2-bd9e-00144feab49a>. The Basel Committee gave weaker banks four more years to meet the deadlines so they would feel less pressure to pull back on lending. The Committee also broadens the definition of high-quality liquid assets banks can hold. The definition now includes corporate debt rated A+ to BBB-, AA-rated residential mortgage-backed securities and certain equities but is subject to the requirement that these assets can make up only 40% of a bank's high quality liquidity assets. The rule changes affecting run-off rates are probably the most significant changes, which will make the liquidity requirement less likely to deter financing of activity in the real economy. "Basel III: Something Like Progress," *Financial Times*, January 6, 2013, <https://www.ft.com/content/c269b552-5830-11e2-90c6-00144feab49a>. Apparently, the regulator does not want to choke off the recovery by overburdening the banks. The significance of the second change is to allow banks to use some higher-yielding assets, and changed the calculation of the liquidity requirements, known as the run-off rates, for some corporate and retail business lines. But the downside of the change is that banks will still have to use sovereign bonds and central bank reserves for at least 60% of their liquidity buffers.

³⁹ PBOC injected 90 billion yuan into money markets through reserve bond repurchase agreements (a five-day reverse repos) on 6 January 2013. In the first week of 2013, PBOC conducted a net injection of 117 billion yuan into the market. Reuters, "PBOC Does 90 Bln Yuan Reverse Repos, Drains 20 Bln for Week," January 5, 2013, <https://www.scmp.com/business/article/1120454/pboc-does-90-bln-yuan-reverse-repos-drains-16-bln-week>.

⁴⁰ Reuters, "Inflation Fall Leaves Beijing Room to Ease Policy Further," Reuters, November 9, 2012.

⁴¹ Man-ki Kwong, "Agricultural Bank Q3 Results Beat Forecasts," South China Morning Post, October 27, 2012, 3, <https://www.scmp.com/business/banking-finance/article/1070735/agricultural-bank-q3-results-beat-forecasts>.

⁴² "An Understated Recovery," *The Economist*, December 15, 2012, <https://www.economist.com/china/2012/12/15/an-understated-recovery>.

above other needs.⁴³ This was the Chinese government's priority of achieving stable economic growth and preventing a further slowdown in 2013.⁴⁴ However, a massive stimulus program was unlikely to be adopted at that point. Premier Li Keqiang ruled out a large government-directed stimulus or investment boom in 2013.⁴⁵ Short-term stimulus measures were not taken in 2014 either.⁴⁶ There were various reasons for this policy move. Part of the reason was fairly sufficient employment and lack of major fluctuations.⁴⁷ In the bigger picture, the government prioritised job creation and new growth models in the medium to long run and refrained from the massive stimulus it revealed in the wake of the global financial crisis. A balanced and market-oriented approach seemed to be adopted to stabilise macroeconomic policies as the government had been aware that stimulatory policies are difficult to sustain and may even create new problems and risks. In addition, the government vowed to reduce red tape and make it easier for entrepreneurs to start small and medium-sized private businesses, which account for about 80% of employment in the country.⁴⁸

In reality, however, the Chinese government each time quietly initiated a stimulus that only became fully apparent months later. At the end of 2013 for example, China hit its growth target at the cost of efforts to cut its addiction to debt and infrastructure spending. The government was quietly taking piecemeal measures to cure the slowing economic growth, which may not only have threatened the government's top priority of creating jobs but also halted support for economic overhaul plans including but not limited to reforming state-owned enterprises and liberalizing interest rates. Low interest rates suggested the injection of liquidity into the market by the central bank to stimulate the economy. The decline of borrowing costs was a result of the injection of extra cash by the central bank. The fall in the exchange rate also benefited exporters. Lining up infrastructure spending to ease access to money was a conventional method. The government announced a series of initiatives to boost infrastructure spending to prop up flagging growth. Five railway projects were approved to spend 142.4 billion yuan, sending a signal

⁴³ China's export- and investment-powered economy sunk into the seventh straight quarter of slowdown between July and September 2012 as both domestic and foreign demands waned. Reuters, "PBOC to Prioritise Economic Growth, Recovery," South China Morning Post, November 2, 2012, <https://www.scmp.com/business/china-business/article/1074739/pboc-prioritise-economic-growth-recovery>.

⁴⁴ Victoria Ruan, "China's Leaders Pledge to Maintain Growth Momentum," South China Morning Post, April 26, 2013, <https://www.scmp.com/business/economy/article/1223286/top-leaders-vow-maintain-growth>.

⁴⁵ Jamil Anderlini, "Beijing Signals Concerns at Rising Unemployment," Financial Times, May 15, 2013, <https://www.ft.com/content/481dd63e-bd66-11e2-a735-00144feab7de>.

⁴⁶ Jamil Anderlini, "China Rules Out Mini-Stimulus," *Financial Times*, May 11, 2014.

⁴⁷ *Ibid.*

⁴⁸ Anderlini, "Beijing Signals Concerns at Rising Unemployment."

of stimulus.⁴⁹ In the first two months of 2014, China's electric grid companies increased spending by 22%.⁵⁰ The State Council decided to extend tax breaks for small and very small enterprises through 2016.

These measures, while helping soften the slowing growth, may not have eventually prevented growth from weakening progressively towards the 7% target after 2014 given the cyclical and structural headwinds. Chinese financial institutions slashed the supply of credit by US\$90 billion in the first quarter of 2014, which evinced the Chinese government's efforts to crack down on its vast shadow banking system. The scale of the monetary unwinding could pose a bigger threat to emerging market liquidity than the US Federal Reserve's program of reducing or "tapering" its asset purchases.⁵¹

While energising the economy by implementing more stimulating measures, PBOC may have to deal with the side effect of its monetary policy – price pressures and the trending inflation.⁵² Consequently, China's economy as well as PBOC's monetary policy may repeat its cycle.⁵³ It has been no secret that China is always caught between its worries about growth and its fears of excess. Accordingly, PBOC's policy will continue to be "prudent" and "fine-tuned". The Chinese government has been fine-tuning economic policy for some time to support growth. To ensure stable economic growth, PBOC maintained a loose stance by keeping the ongoing credit relaxation for a while so as to keep the economic recovery on track. A raft of measures including continuous interest rate cuts, reductions in bank reserve requirements, and faster approvals for infrastructure projects were taken to implement this loose monetary policy, setting free an estimated 1.2 trillion yuan for lending as part of a year-long program of policy fine-tuning.

A Euro-zone break-up and monetary loosening abroad may have put extra inflationary pressure on a recovering Chinese economy. In its fourth quarter monetary report of 2012, PBOC indicated its attention supposedly to be paid to the risks from potential imported inflation amid the major economies' stepped-up implementation of monetary easing.⁵⁴ According to the National

⁴⁹ Bob Davis and William Kazer, "China Takes Steps to Stem Slowdown," *The Wall Street Journal*, March 25, 2014, sec. A9.

⁵⁰ *Ibid.*

⁵¹ James Kynge, "Beijing's Crackdown on Credit Intensifies," *Financial Times*, April 16, 2014.

⁵² China's consumer price inflation eased to 1.9% in September 2012 from 2% in August 2012, an expected outcome given its recent economic growth. Kynge.

⁵³ American is said to experience the same cycle that has followed a predictable path: recession, economic growth, boom, the Fed's hiking interest rates, and soft landing of an overheating economy. Roubini and Mihm, *Crisis Economics*. 137

⁵⁴ Daniel Ren and Sean Kennedy, "People's Bank of China Sounds Alarm over Inflationary Pressures | South China Morning Post," South China Morning Post, accessed December 30, 2021, <https://www.scmp.com/business/economy/article/1145149/inflation-likely-cast-pall-over-china-2013>.

Bureau of Statistics, consumer prices in January 2013 were 2% higher than the same period in 2012 and down from 2.5% in December 2012.⁵⁵ The shortage of labour caused price increases in labour-intensive and service industries. If the inflation rate had continued to show signs of surging again, the market expected an interest rate rise or “policy fine-tuning” in the second half of 2013.

Amid its shaky economic recovery, China’s monetary policy continued to be further loosened. The monetary easing policy pushed for an increase in credit issuance which was aimed at reviving the economy while the government stepped up the pace of infrastructure investment. As a result, the banks were given a green light to lend more, some of which was done through off-balance-sheet channels.

Instead of quickly raising the benchmark interest rate, Chinese authorities were more accustomed to imposing quotas on the amount of credit banks could extend. PBOC’s first tightening action was to withdraw as much as Renminbi 900 billion from lenders’ hands in 2011. Administrative measures can bring prompt effects to cure economic problems. The government’s tight grip on lending produced immediate effects to lower inflation rates. However, administrative measures also have weaknesses – they are easier to be circumvented. In the credit crunch, lending was flowing from the banking system into the informal “shadow” market. To curb explosive lending, the policymakers needed to raise interest rates to change the nature of cheap capital for business.

A looser policy may adjust the level of interest rates and banks’ reserve requirements to increase investment and in turn “heat up” the economy. Further, the continuously falling inflation reduced the likelihood of “big bang” stimulus measures.⁵⁶ Alternatively, the central bank could keep the credit supply – the total social financing. Injecting a large amount of short-term liquidity into the financial system via its open-market operations is a measure repeatedly taken by China’s central bank to push for more infrastructure investment. Short-term cash can not only ease credit strains but also relieve

⁵⁵ Paggie Leung, “Mainland Inflation Down But Signs of Rising Pressure,” South China Morning Post, February 9, 2013, <https://www.scmp.com/business/economy/article/1146394/mainland-inflation-down-signs-rising-pressure>.

⁵⁶ Jane Cai, “China’s Economy Hits ‘Turning Point,’” South China Morning Post, November 10, 2012, <https://www.scmp.com/business/global-economy/article/1078991/chinas-economy-hits-turning-point>. (citing the National Bureau of Statistics’ report on 9 November 2012). There is unlikely to be a repeat of anything remotely like the 4 trillion yuan stimulus package that guided the Chinese economy through the 2008/09 global financial crisis. Rather there may be smaller, more targeted spending plans that do not make cheap credit available across the country. Reuters, “Analysis: Foreign Investors Rush to Ride China Rebound,” South China Morning Post, November 26, 2012.

concerns over renewed property and inflation risks. However, the inflation rate may be beyond control. Out of control inflation would eventually trigger a new round of tightening monetary policies.

Flooding the banking system with liquidity to boost lending is the PBOC's conventional response to a slowing economy. The steps involve cutting the deposits banks are required to hold in reserve. The central bank resorted to the reserve-requirement reduction by introducing a half-percentage-point reduction in the reserve requirement ratio, which potentially released 678 billion in funds for banks to loan out.⁵⁷ The side effect of injecting more liquidity could have added to the depreciation pressure on the yuan. Compared to this, the more urgent concern is the yuan funds being drained from the financial system.

Changes in Chinese interest rates have had substantial impacts on economic activity and inflation but changes in credit conditions such as shocks to M2 or lending levels do not create such impacts. The empirical research confirms the similarity of monetary policy transmission channels between Chinese and Western market economies.⁵⁸

There have been some criticisms over the central bank's reliance on open-market operations because of the short-term nature of the instruments, with most maturing in only seven days. In addition, the increased interest rate volatility has also defeated the very purpose of this use as a liquidity management tool. The counter proposal is to cut banks' required reserves as a way of generating a more long-term liquidity boost for the economy. Reserve requirements are an inefficient way to achieve protection against bank runs. Reserve requirements specify a minimum fraction of a bank's deposits, or equivalency of its assets, be held as reserves in the form of a liquid asset. A bank must have sufficient liquid funds to meet the demand for withdrawals by depositors at any time since deposits have to be paid back on demand rather than a predetermined date. The regulators are unlikely to impose a 100% reserve requirement even though full protection against bank runs can be achieved since a bank can no longer invest any deposits in the illiquid assets, thus forgoing any returns from holding deposits. However, the required minimum reserve is supposed to be available for withdrawals by depositors in the non-bank-run equilibrium and does not prevent a bank from bank runs under extraordinary circumstances. The side effect of the low reserve requirements, however, is to fuel a return of

⁵⁷ Lingling Wei, "China Plans Liquidity Boost to Counter Yuan Weakness," *The Wall Street Journal*, August 24, 2015.

⁵⁸ John Fernald, Mark M. Spiegel, and Eric T. Swanson, "Monetary Policy Effectiveness in China: Evidence from a FAVAR Model," *Federal Reserve Bank of San Francisco*, Working Paper Series, July 2014, 37.

inflation. In terms of the concern over inflation, the central bank can reverse its recent liquidity injections on short notice by letting the bond repurchase agreements expire. It appears that both policy tools have pros and cons.

III. PBOC'S MAJOR CHALLENGES IN FORMULATING MONETARY POLICY

It has been pointed out by IMF in its report on the Chinese financial system – People's Republic of China: Financial System Stability Assessment⁵⁹ that Chinese regulators use more market-based monetary policy instruments, i.e., using interest rates as the main instrument to govern credit expansion, rather than administrative measures.⁶⁰ This section focuses on some factors that shape the central bank's monetary policy.

III.A. Inflation

In response to a flare-up in property prices and consumer inflation, the Chinese government holds off on more aggressive easing, opting to pump short-term cash into money markets to ease credit strains. Further monetary easing stimulates borrowing and bolsters the economy. The central bank is unlikely to aggressively ease monetary policy if there is no major pressure to see a big inflation rebound. When the economic data signalled that price pressure may be gaining momentum, the central bank may have to tighten its policy to choke off inflation in order to maintain its 4% annual target. Cutting rates, together with sluggish domestic demand, can help stem capital inflows and spur domestic demand. A modest consumer price index increase allows the central bank to ease its policy by reducing rate differentials.

The PBOC may also unwind some of its earlier credit easing measures if necessary. Liquidity tightening is designed to help control shadow banking activities. The Chinese leadership in its annual economic conference in the end of 2012 set out the roadmap to maintain a prudent monetary policy and proactive fiscal policy in 2013, leaving room to manoeuvre in the face of global economic risks while deepening reforms to support long-term growth.

III.B. Exchange Rate

The other critical challenge facing PBOC is the floating of Renminbi's exchange rate. The operation of this new foreign exchange rate regime is said to be a reform in "a self-initiated, controllable and gradual manner," and is very much

⁵⁹ "IMF Country Report No. 11/321," November 2011.

⁶⁰ "IMF Calls for Further Reforms in China's Financial System, Press Release No. 11/409," IMF, November 14, 2011, <https://www.imf.org/en/News/Articles/2015/09/14/01/49/pr11409>.

mixed together with China's foreign trade policy. More balanced trade would be meant to address the main source of disruption in China's trade relations with the US and would promote the appreciation of the Chinese currency to at a faster pace against the dollar. Amid the global economic downturn, the rise in Renminbi has slowed to a crawl as a drop-off in demand in more advanced economies has hit Chinese exports. The Chinese government has made commitments not to deliberately pursue a trade surplus,⁶¹ which, as a matter of fact, was set to decline in recent years leading to a more balanced trade relationship with other countries.

PBOC wields control over Renminbi and is able to guide the exchange rate in line with the daily reference rate. Renminbi is now allowed to float within a band, up or down 1% from PBOC's daily midpoint, a daily reference rate against the dollar that is set by PBOC. The band was increased from 0.5% in April 2012.⁶²

A series of periods of appreciation after the Renminbi repeatedly hit the strong end. To prevent Renminbi from appreciating outside the band, PBOC has been forced to buy large amounts of foreign exchange, having caused the country's foreign exchange reserves to reach US\$3.44 trillion in the first quarter of 2013,⁶³ the world's largest and roughly the size of the entire German economy. PBOC suffered paper losses worth more than US\$270 billion from holding reserves dominated by US dollars during the eight years from 2003 to 2011. The central bank's tolerance to let Renminbi drift higher seems contrary to the biggest bias of central bank that Renminbi has been near equilibrium value given a smaller current account surplus and capital outflows.⁶⁴ Thus, PBOC's policy was to press ahead with currency reforms to turn the yuan into a more freely traded currency while retaining yuan's controlled exchange rate.⁶⁵ Nevertheless, the indication of flexibility was premised on an economic ground – exports appeared to be recovering. More importantly, the central

⁶¹ Kathrin Hille and Simon Rabinovitch, "Hu Commits Beijing to More Balanced Foreign Trade Relations," *Financial Times*, December 12, 2011. p. 1.

⁶² Reuters, "Yuan Continues to Test Trading Edge," South China Morning Post, October 27, 2012.

⁶³ Simon Rabinovitch, "China's Forex Reserves Reach \$3.4tn," *Financial Times*, April 11, 2013, <https://www.ft.com/content/d0fdafbe-a255-11e2-ad0c-00144feabdc0>; Jane Cai, "Boost to China's Money Supply Brightens Outlook," South China Morning Post, April 11, 2013, <https://www.scmp.com/business/banking-finance/article/1212217/boost-chinas-money-supply-brightens-outlook>.

⁶⁴ The contribution of the capital and financial account surplus to China's GDP rose from 0.9% in 2008 to 4.8% in 2010, and then dipped to 3% in 2011 before further dropping to 0.4% in the first half of 2012. Jane Cai, "Yuan Gains Tipped to Run out of Puff Next Year," South China Morning Post, December 31, 2012, <https://www.scmp.com/business/banking-finance/article/1116166/yuan-gains-tipped-run-out-puff-next-year>. It is getting more difficult to argue that Renminbi is substantially undervalued as the current account surplus is likely to stay low.

⁶⁵ Reuters, "China Central Bank Eyes More Flexible Yuan," South China Morning Post, March 6, 2013.

bank needs to use a stronger Renminbi to lure speculative funds to China after a strong capital outflows.⁶⁶ The PBOC's aggressive fix was also a response to a fall in the dollar while the Euro rose sharply against the dollar. PBOC typically set its fixing stronger in response to an overnight weakening of the dollar index, which tracks the greenback's value against a basket of currencies dominated by the Euro.⁶⁷ Inflation also presses the central bank to boost its tolerance for yuan appreciation as a stronger currency would ease price growth by lowering yuan-denominated prices for imported goods. These factors have led to the PBOC's more willingness to permit yuan appreciation.

This dilemma shows that China's monetary policy remains at the mercy of its rigid exchange rate system. The PBOC, unlike its counterpart in the US, does not have the ability to control an independent monetary policy. It is so because buying or selling the yuan to influence its exchange rate would affect domestic liquidity, forcing the central bank to adjust its monetary policy as a result. In the past decade, the PBOC has sold yuan and bought dollars to keep the yuan from rising too fast, which resulted in a massive foreign-exchange reserve and led the central bank to soak up the liquidity by raising the reserve-requirement ratio for banks.

III.C. Capital Controls

Another layer of complication lays in capital flow controls. China has been on the receiving end of hot money inflows because of loose monetary policy in developed economics. There were net capital inflows to China in September and October 2012, which were not sustain for a longer period due to Renminbi's more stabilising exchange rate and global economic uncertainty.⁶⁸ However, China has grappled with capital flight since October 2012. PBOC reported in March 2013 that companies and individuals sold Renminbi 684 billion worth of foreign exchange and bought an equivalent amount of Chinese currency in January 2013, a record for a single month.⁶⁹

⁶⁶ Simon Rabinovitch, "China Steers Renminbi Two-Way Trade," *Financial Times*, October 26, 2012, <https://www.ft.com/content/018d7b38-1f5b-11e2-b2ad-00144feabdc0>. A strong capital outflow has been associated with concerns over China's economic slowdown and an end to expectations of one-sided yuan appreciation.

⁶⁷ Other incidental factors also have some impacts. There may be a US election impact. China may be to counter US allegations that Renminbi is undervalued as Romney has been supporting the idea of labeling China a currency manipulator.

⁶⁸ In the first three quarters of 2012, capital outflows were net, which further deepened China's economic slowdown. Jane Cai, "Mainland Forex Regulator Warns of Big Swings in Capital Flows," *South China Morning Post*, January 26, 2013, <https://www.scmp.com/business/banking-finance/article/1135959/mainland-forex-regulator-warns-big-swings-capital-flows>.

⁶⁹ Leslie Hook and Simon Rabinovitch, "China Warns over Fresh Currency Tensions," *Financial Times*, March 8, 2013, <https://www.ft.com/content/930f90e6-87ca-11e2-b011-00144feabdc0>.

Inflows of capital are expected to generate higher demand for the yuan, which may increase the mainland's consumer inflation, and add to pressure for the yuan to strengthen. Strong inflows led to 1.6% appreciation in the Renminbi against the dollar in the first half of 2013. Unlike the two-way movements in the yuan exchange rate or capital outflows in 2012, it was more likely to see greater risks of capital inflows to China largely associated with funds stemming from quantitative easing in developed economies betting on faster economic growth in emerging economies or foreign capital inflows betting on yuan appreciation.

China holds more than US\$3 trillion in foreign exchange reserves making it particularly vulnerable to depreciation-related losses. Trade surpluses and net foreign direct investment pointed to substantial capital outflow. Accordingly, financial institutions are keen to increase their foreign exchange holdings.⁷⁰ China has used swelling offshore holdings of its tightly managed currency (worth around 1 trillion yuan) to justify a shift in tactics to relax capital controls.⁷¹ PBOC and Chinese commercial banks sometimes buy yuan and foreign exchange. A drop of the net purchase of Renminbi is affected by various factors. The US Federal Reserve's third round of quantitative easing as well as China's pickup in exports and rebound in economy may shrink a demand of yuan. The US "fiscal cliff" may drive more capital out of the mainland China to find a safer shelter. Compared to other economies, China is better placed to withstand the impact of cross-border money flows due to its tight grip on capital controls.

The capital control rule is under scrutiny due to a certain level of ambiguity and difficulty. First, China's capital account is not entirely closed. Short-term financial investment is welcome, within limits, by "qualified" investors. Meanwhile, many unqualified investors succeed in moving capital in and out (with the help of transactional structures and the use of grey areas under current laws). A full liberalisation of capital flows does not guarantee a full opening-up of capital account transactions. It may replace bureaucratic impediments to capital mobility with price-based deterrents such as taxes on foreign holdings. The net effect on the exchange rate, the cost of capital and demand may be modest. Second, outflows of capital are hard to track. For instance, inflows of foreign exchange from China's trade surplus and (net) foreign direct investment amounted to about US\$108 billion in the third quarter of 2012. However, only US\$28 billion showed up in China's foreign exchange reserves. Roughly US\$80

⁷⁰ According to the SAFE, Chinese banks bought US\$1.57 trillion in foreign currencies and sold US\$1.46 trillion.

⁷¹ Reuters, "China Central Bank Eyes More Flexible Yuan."

billion either flowed in the opposite direction or were unrecorded.⁷² Capital controls can partially block the cashflows and can stop neither multinational companies from repatriating profits nor wealthy individuals from traveling frequently, holding foreign bank accounts and running their own cross-border businesses.

China's capital controls prevent punters from directly pouring money into domestic financial markets, but creative speculators have long devised ways to skirt these controls. One popular method has been to inflate export invoices on difficult-to-value goods such as electronic circuits, to book speculative cash as trade receipts and convert dollars to renminbi under current accounts. Companies can understate their exports but over report their imports to keep the remainder overseas. Economists at Global Financial Integrity, an American research group that campaigns against illicit financial flows, have spotted huge discrepancies between (i) China's reported exports to the world and the world's stated imports from China; and (ii) China's purchases from the world and the world's exports to China. This rampant mis-invoicing indicates that China may have understated its exports and overstated its imports by a combined US\$430 billion in 2011.⁷³ These discrepancies partially confirm the difficulty of curbing the cross-border flow of capital in China, a country with such a heavy cross-border flow of goods.

III.D. Exports

China's exports were badly affected by slackening demand amid the European debt crisis in 2012. While China's exports were expected to turn moderately better in an improved world economy in 2013, the trade surplus in the medium or long term still declined. Foreign investment, the other key dynamic of strengthening the Renminbi, was less predictable. China's attraction to labour-intensive industrial sectors decreased with China's increasing level of labour and environment protections. The reasonable expectation is that the pace of capital inflows may slow down even though the overall foreign investment may grow.

⁷² According to a SAFE report released in 2012, China's balance of payments had recorded a deficit in the second quarter of 2012, for the first time since 1998. The balance of payments records two different kinds of transactions: cross-border payments for goods and services (i.e., exports and imports), which are recorded in the "current account", and cross-border payments for assets. Because exports exceed imports, China's current account is still in surplus. However, inflows of foreign exchange (including foreign direct investment) were outdone by a record of outflow of other kinds of capital, amounting to a net US\$110 billion, leaving China's overall balance of payments in deficit. This roughly diminished China's international reserves by US\$11.8 billion. "BoP until You Drop," *The Economist*, August 4, 2012, <https://www.economist.com/china/2012/08/04/bop-until-you-drop>.

⁷³ "The Flight of the Renminbi," *The Economist*, October 27, 2012, <https://www.economist.com/china/2012/10/27/the-flight-of-the-renminbi>.

Normally the trade surplus creates appreciation pressure as corporations sell dollars and buy Renminbi. Companies may lose confidence in the appreciation narrative and start holding their foreign trade receipts in dollar deposits rather than converting them. Foreign exchange deposits held at onshore Chinese banks may rise. Demand for Chinese exports has been strong recently as the US economy gathers steam while imports have lagged behind on weak domestic demand. That has swelled the country's trade surplus.

III.E. Capital Markets

In response to the collapse of China's stock market, the central bank was flooding the banking system with liquidity to increase lending. PBOC has injected the liquidity into the market to bolster the fragile stock market since June 2015.

Through a pump-priming exercise, the central bank poured cash into the financial system, offering commercial lenders 150 billion yuan in loans known as seven-day reverse repurchase agreements, as part of routine money-market operations.⁷⁴ The central bank cut the banks' half-percentage-point (50bp) reserve-ratio requirements on 6 September 2015 so that banks could keep a lower share of their deposits on reserve at the central bank. This helped pump about 678 billion yuan into the banking system. Billions of yuan in funds therefore could flow from banks in the form of loans. It was rare for the PBOC to simultaneously cut interest rates and banks' reserve requirements. However, the Shanghai and Shenzhen indexes continued to sink.⁷⁵

III.F. Economic Growth

Signs of weakness in China's domestic economy determine the PBOC's monetary policy. Government efforts to stabilise economic growth have helped deliver a solid GDP growth rate.

Some believe that China's economy is worsening and many worry that risks from spiralling debt and wasteful investment are propelling the country towards a financial crisis. Capital flows to these sceptics are reflective of waning confidence. Outflows will drain liquidity from the domestic economy. Oppositely, capital outflows can be viewed as evidence that China is liberalising capital controls and abandoning its mercantilist obsession with accumulating foreign reserves. The domestic liquidity concerns are unwarranted as the central bank appears to have sufficient means to expand the money supply and to replace the liquidity once created by foreign capital flows. The trend of

⁷⁴ Chao Deng, "Nikkei Drops but Other Asian Shares Shrug Off China," *The Wall Street Journal*, August 26, 2016. 14.

⁷⁵ Josh Noble, "Shanghai and Shenzhen Sink Despite Rate Cut," *Financial Times*, August 27, 2015. 18.

rising outflows reflects policy measures to facilitate outward investment and make up for the lack of stable domestic investment opportunities.

III.G. Global Impact

The global economic environment, i.e., central banks lowering interest rates world-wide, can create mounting pressure on PBOC to follow suit. PBOC may allow commercial banks to raise their deposit rates to up to 1.2 times the benchmark rate, which would not only push forward interest rate liberalisation but also reduce the possibility of a negative real interest rate. Nevertheless, China's widening interest rate gap with Western nations has added pressure on the yuan to rise, promoting the foreign exchange regulators to tighten rules on banks holding foreign exchange assets.

PBOC's monetary policies such as increases, or cuts to interest rates now have global implications.⁷⁶ For instance, the Reserve Bank of Australia left interest rates on hold by referencing Chinese authorities.⁷⁷ As a matter of fact, Australian currency is often seen as a proxy for Chinese growth due to strong trade links between the two countries. Australia is one of the biggest beneficiaries of China's domestic response to the financial crisis. The Australian financial market indeed followed signals from China but not so much the US. This is not surprising given the close trading relationship between China and Australia. China has become Australia's largest trading partner. The extent to which China designs and implements its economic or fiscal policies will have potential consequences that could resonate far beyond China itself, and influence growth and the price of commodities in other countries.

III.H. Renminbi Internationalisation Strategy

Moving away from mercantilist currency manipulation should eliminate China's contribution to the global savings glut, one of the causes of the 2008 crash. The justification for a weaker renminbi at this juncture is a strong one. China lost competitiveness at a time when its economy has markedly weakened while the US dollar was rising against many other currencies. China's stock market dropped, its exports have flagged, and its economy is undergoing restructuring. Naturally, the Renminbi is included in the mix of solutions to the slowing economy.

China's move was also viewed by the market as bolstering its case for inclusion of the Renminbi in the elite basket of currencies to set the value

⁷⁶ Internationally, low interest rates distort currency values and encourage volatile and destabilising short-term capital flows as investors look for higher yields.

⁷⁷ Peter Smith and Geoff Dyer, "Australia Holds Rates with Beijing in Mind," *Financial Times*, February 3, 2010. 6.

of the IMF's de facto currency, its special drawing rights. The key areas of concern for the IMF have been whether China is prepared to let the market play a bigger role in determining the value of the Renminbi and resist the temptation to continue to tightly manage its trading band. At the technical level, the key concern is whether its currency was sufficiently freely usable.

The PBOC said it would set the daily midpoint for the renminbi's trading band in line with where the currency closed the previous day, thereby handing the market greater influence. This amounted to a response to IMF doubts and bolstered China's bid. The PBOC has effectively defanged potential critics such as the US and the IMF by offering just what has been asking of it – more currency flexibility. A more flexible currency regime is one of the conditions for SDR entry.

The IMF offered a cautious endorsement of China's move to let the market play a greater role in setting the value of its currency. The IMF said in the statement that China's new pricing regime was "a welcome step as it should allow market forces to have a greater role in determining the exchange rate." This could help China's attempt to win much-prized reserve currency status for the Renminbi alongside the Dollar, Euro, Yen and Pound sterling.

Meanwhile, the IMF insisted that the changes announced by China have "no direct implications" for the criteria it would use to determine whether to include the Renminbi in the SDR basket. It conceded that "a more market-determined exchange rate would facilitate SDR operations in case the renminbi was included in the currency basket." China's move is far from the last China will have to undertake if it wants to see the Renminbi embraced by the IMF, which made this clear that: "We believe that China can, and should, aim to achieve an effectively floating exchange-rate system within two or three years."⁷⁸

The IMF later deferred its seal of approval until 2016 and decided not to include the renminbi in its so-called special drawing rights basket, which is supposed to add to the Renminbi's international luster.⁷⁹

IV. PBOC'S NEW LENDING REFERENCE RATE REFORMS

Various monetary policies implemented by central banks may have different impacts on the economic performance of their respective economies. The Federal Reserve encouraged more bond purchases in an unprecedented manner and have kept interest rates at near zero since 2008 to boost the economy. Meanwhile, the Federal Reserve purchased US\$40 billion of mortgage securities a month until the US labour market recovered. The outcome of

⁷⁸ Shawn Donnan, "IMF Cautiously Welcomes China Currency Move," *Financial Times*, August 13, 2015. 3.

⁷⁹ Jeff Sommer, "A Short Step in China's Long Advance," *International New York Times*, August 24, 2015. 17.

the PBOC's interest rates cuts and bank reserve requirement ratios reductions freed an estimated 1.2 trillion yuan for lending as part of a year-long program of policy fine-tuning.

Although the PBOC should have various tools in its chest to ensure steady and appropriate growth in credit and money supply, the real monetary instruments are the liberalisations of interest rates and yuan's exchange rates as well as the reform of the deposit insurance system. Financial liberalisation may be one of the instruments China can make use of or rely on to tackle these imbalances, but these necessary reforms may depress demand. Liberalising the yuan could in the near term impede the promotion of the usage of the currency in international trade.

The new leadership after CCP's 18th National Congress adopted new policies to reform the financial markets. The new policies include liberalising the interest rate policy away from setting deposit and lending rates to targeting short-term money market rates.⁸⁰ Unlike the U.S. Federal Reserve, the PBOC, instead of relying on a single primary monetary policy tool, uses multiple methods to control money supply and setting interest rates is one of them.

From August 20, 2019, loans must be priced "mainly" with reference to a revamped benchmark that tracks the price of credit to banks' most creditworthy customers, the so-called Loan Prime Rate (LPR). In turn, that rate is linked to the price the PBOC charges lenders for cash over one year. The PBOC is to replace its existing fixed benchmark lending rate with this new LPR, the fluctuation of which will better reflect changes in market rates.

The reform centres on making the one-year and five-year LPRs more reflective of actual lending. The new LPRs will become the benchmark for commercial lenders to price new loans. The PBOC's new policy will make the following changes:

1. Commercial lenders are to use the LPR, instead of the benchmark lending rate, as a reference to price new loans.
2. Increase financial institutions, from 10 to 18, with the types of lenders expanded to include city and rural commercial lenders, foreign lenders with operations in China,⁸¹ and privately-owned lenders, which can now participate in submitting LPR quotations.
3. PBOC sets the LPR on the 20th of every month, instead of daily. The new system will enable the PBOC to lower lending rates in a flexible and frequent manner via open-market operations.

⁸⁰ Credit Agricole Report, cited in Toh Han Shih, "Winds of Change 'to Blow Through' China's Economy," *South China Morning Post*, November 27, 2012, <https://www.scmp.com/business/economy/article/1091489/winds-change-blow-through-chinas-economy>.

⁸¹ Citibank China Co Ltd. and Standard Chartered Bank China Ltd. are the two foreign lenders on the panel.

4. The panel banks are required to link their LPR quotations to the rate of Medium-term Lending facilities (MLF), a funding facility the PBOC extends to commercial lenders.⁸² The use of the MLF rate in forming the new LPR is likely to be temporary.⁸³

The PBOC's interest rate reform, aligning official rates with those of the market, push China's financial system further toward being truly market-led, and away from the Communist-era command economy where PBOC officials set both the price and quantity of credit. The reform can bring down borrowing costs and the Chinese economy is in great need of more monetary policy support at a time when the Chinese economy is being challenged by the trade war with the U.S.

Globally, central banks in major economies are cutting interest rates to head off recession. China's interest rate reforms can be viewed as part of the global campaign but certainly in China's own way. The reform will make the overall lending rate for the real economy move downward, which will achieve an impact similar to that of cutting interest rates. The PBOC, through its interest rate reform, joins an 'easing camp' as the use of the LPR effectively amounts to a rate cut. Certainly, there is a risk attached to this type of reform. The PBOC may stoke fears about the economic downturn. This may be the reason that the PBOC has not lowered or even entirely abolished the benchmark lending rate.⁸⁴

The LPR, first introduced in October 2013, was adopted to better reflect market demand for funds compared to the benchmark rate, which is set by the PBOC alone. Many Chinese banks however refused to price their loans based on the LPR, which was much lower than the benchmark lending rate, to protect their profit margins. As a result, the LPR, that is charged to the best and least risky customers, became the unofficial minimum interest rate on bank loans in China. This is also a technical reason why overall borrowing costs in China remain high albeit that the implicit lower boundary of bank lending rates which are more sensitive to market demand as supply has decreased.

⁸² Commercial lenders submitting prices for the calculation of the new LPR will report in terms of a spread on top of the interest rate of the PBOC's medium-term lending operations, currently at 3.3%. As the current benchmark 1-year lending rate stands at 4.35%, new loans priced from the LPR could carry a significant discount. To ensure a lower lending rate, the PBOC can either cut MLF rates or use the window guidance to narrow the spread between banks' LPR quotations and the MLF rate.

⁸³ PBOC indicates that the 1-year lending rate, which sets borrowing costs economy wide, will ultimately be abolished. For now, interest rates on existing loans and mortgages won't be changed, according to the central bank.

⁸⁴ Likely, lowering the benchmark rate would have immediately reignited the property market and accelerated debt growth.

The other monetary policy tool the PBOC uses is the MLF rate, which is more aligned to supply-demand dynamics in China's money markets. The one-year rate for the MLF is roughly 3.3%, much lower than the PBOC's benchmark lending rate of 4.35%. Linking the new LPR to the MLF rate can bring down the LPR, leading to a decline in overall borrowing costs. Immediately after the PBOC's announcement, the new one-year LPR was set at 4.25%,⁸⁵ lower than the previous LPR of 4.31%,⁸⁶ while the newly introduced five-year LPR was fixed at 4.85%, below the five-year benchmark rate of 4.9%.

This interest rate reform does not guarantee a lower borrowing cost as commercial banks may be reluctant to immediately pass on large reductions in borrowing costs as they will want to maintain margins under pressure from the economic downturn. The participating banks on the panel have no strong incentive to lower their rates against narrowed net interest margins.

China's interest rate system has long been criticised for failing to pass on lower rates to borrowers in the corporate sector. Habitually, Chinese banks prefer to lend to state-backed companies because of the lower risk. That means the private sector, which has been hit hardest by the economic slowdown and the trade war, is usually underserved by the credit market. Therefore, widespread financial inclusion is hard to achieve in China's context.

Although China calls its own economy a socialist market-oriented one, its monetary policy is a command one often seen in a centrally planned economy. Basically, the PBOC dictates what interest rates for bank loans and deposits should be. However, the command-based interest rate does not necessarily work well as the Chinese economy has increasingly been engaged in the global marketplace, and the PBOC's benchmark rate is unable to accurately reflect the demand and supply equilibrium. Commercial lenders still prefer to use the PBOC's benchmark rates as a reference to price their loans to ensure profitability.

PBOC is trying to be in-line with international practices when it comes to setting interest rates and exchange rates. Central banks in major economies mainly adjust interest rates on short-term funds to influence borrowing costs in the broader economy. Still, PBOC has a rich policy toolkit with which to manage the supply of money. Apart from setting the interest rate, it is able to cut the reserve requirement ratio, encouraging banks to lend more. PBOC has also indicated its plan to merge its system of fixed and floating rates. PBOC may move toward a system where the short-term lending rate to banks is the PBOC's main monetary tool. The PBOC's reform of its lending rate pricing mechanism is a welcome effort as it moves towards a more market-oriented financial monetary system reflective of true demand and supply equilibrium.

⁸⁵ Reported by the National Interbank Funding Centre, a unit of the PBOC.

⁸⁶ It is also lower than the old benchmark lending rate of 4.35%.

V. CONCLUDING REMARKS

In face of a financial crisis, financial regulators face a choice between adherence to the free-market fundamentalism and the realistic dimension of the financial meltdown.⁸⁷ The global financial crisis reminds us of a central bank's key role in making a nation's banking system and, in a wider context, economic growth, work.⁸⁸ Among others, unsound monetary policies may open a Pandora's Box and result in a collapse of the banking system. In the Chinese context, it is no doubt that PBOC is both a referee and a player in many respects,⁸⁹ which has introduced additional complexities into the regulatory regime.

China's financial market is unique. In terms of financial regulation, China's foreign exchange and capital control policies are said to be closely related to China's trade imbalances with the rest of the world, in particular, the US.⁹⁰ The new leadership after the 18th CCP's focused more on boosting domestic demand, shifting from the investment and export-oriented economic development model. However, while consumption may grow steadily, it is difficult to expect consumption to be an independent driver of the cycle. In other words, the export-oriented manufacturing sector (or net exports) may still be the big drag on national economic growth. Making a shift from the export-oriented to the domestically oriented economy is not easy and requires a complete overhaul of the investment-led growth model that has been fuelled by more than a decade of rapacious external demand for cheap Chinese exports.

The reform of the exchange rate mechanism is "relatively easy" compared with other changes such as liberalising interest rates and opening the capital accounts as those carry higher financial risks. For example, PBOC should not rush to free up the capital accounts as the world's central banks kept printing money to cope with a global economic downturn, which may cause a flood of capital into China. It is worth noting that PBOC's control over the banking sector is weaker than before with foreign banks surging into China and commercial banks introducing various new financial products through securitisation.

While China's stabilising foreign exchange reserves is a strong indicator of China's economy being well-managed, the fact that China's mountain of

⁸⁷ Michael S. Barr, Howell E. Jackson, and Margaret E. Tahyar, *Financial Regulation: Law and Policy*, University Casebook Series (St. Paul, MN: Foundation Press, 2016), 921 (citing Timothy F. Geithner, *Stress Test: Reflections on Financial Crises*, First edition (New York: Crown Publishers, 2014), 208

⁸⁸ Posner, *The Crisis of Capitalist Democracy*, 3.

⁸⁹ PBOC can be viewed as a market player in a liquidity crisis for which a central bank's role as "lender of last resort" is designed. Posner, 65

⁹⁰ Hal S. Scott and Anna Gelpern, *International Finance: Transactions, Policy, and Regulation*, 23rd edition, University Casebook Series (St. Paul, MN: Foundation Press, 2020), 1251.

reserves means that China is still facing the imbalances and its economy and is still facing heavy and unwanted capital inflows. China's failure to tackle these imbalances has reinforced them when it exits from recession. China continues to accumulate its own bubble of debt, which needs a sharp shift of policy to address. Otherwise, China may be unable to sustain a high rate of growth in the long run.

It has been recognized that stimulus, while reviving demand and economy, had some damaging structural side effects on the economy: it flooded the economy with too much liquidity, it skewed the economy in favour of investment, in particular, construction projects; it made a mess of local government financings; it forced banks to serve government needs (thereby inhibiting their evolution into commercial banks); and most importantly, it delayed further economic reforms. Excessive and redundant investment (48% of the GDP, far more than needed) resulted in inflation, which basically wiped out the cost advantages Chinese products have over other exports. The failure to tackle these imbalances after the break-out of the financial crisis actually took China in the wrong direction. Now, China's monetary policymakers are in a tough position to balance short-term growth stability and long-term economic health. The increase of foreign exchange reserves and credit issuance has put more pressure on the Chinese government to restore balance to the economy. Ballooning local government debt and the rise of the shadow banking system have been testing the wits of regulators and policymakers. Given the side effect of monetary stimulus, the government needs to change its strategy and rely more on structural reforms through upgrading the structure of the economy across the Chinese economy, welfare provisions and income distribution to achieve better quality and performance.

REFERENCES

- Acharya, Viral V. *Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance*. Wiley Finance Series. Hoboken, N.J: John Wiley, 2011.
- "An Understated Recovery." *The Economist*, December 15, 2012. <https://www.economist.com/china/2012/12/15/an-understated-recovery>.
- Anderlini, Jamil. "Beijing Signals Concerns at Rising Unemployment." *Financial Times*, May 15, 2013. <https://www.ft.com/content/481dd63e-bd66-11e2-a735-00144feab7de>.
- . "China Comfortable with Weaker Growth." *Financial Times*, October 18, 2012. <https://www.ft.com/content/f692a9e8-18ec-11e2-af4e-00144feabdc0>.
- . "China Rules Out Mini-Stimulus." *Financial Times*, May 11, 2014.

- Barr, Michael S., Howell E. Jackson, and Margaret E. Tahyar. *Financial Regulation: Law and Policy*. University Casebook Series. St. Paul, MN: Foundation Press, 2016.
- “Basel III: Something Like Progress.” *Financial Times*, January 6, 2013. <https://www.ft.com/content/c269b552-5830-11e2-90c6-00144feab49a>.
- “BoP until You Drop.” *The Economist*, August 4, 2012. <https://www.economist.com/china/2012/08/04/bop-until-you-drop>.
- Cai, Jane. “Boost to China’s Money Supply Brightens Outlook.” *South China Morning Post*, April 11, 2013. <https://www.scmp.com/business/banking-finance/article/1212217/boost-chinas-money-supply-brightens-outlook>.
- . “China’s Economy Hits Turning Point.” *South China Morning Post*, November 10, 2012. <https://www.scmp.com/business/global-economy/article/1078991/chinas-economy-hits-turning-point>.
- . “Mainland Banks Face Mounting Loan Dangers.” *South China Morning Post*, January 16, 2013.
- . “Mainland Forex Regulator Warns of Big Swings in Capital Flows.” *South China Morning Post*, January 26, 2013. <https://www.scmp.com/business/banking-finance/article/1135959/mainland-forex-regulator-warns-big-swings-capital-flows>.
- . “Yuan Gains Tipped to Run out of Puff Next Year.” *South China Morning Post*, December 31, 2012. <https://www.scmp.com/business/banking-finance/article/1116166/yuan-gains-tipped-run-out-puff-next-year>.
- Chen, Lulu. “Central Bank Reports Rise in Lending to Small Loans.” *South China Morning Post*, July 27, 2011, sec. B3.
- . “Regulator Clears Bids to Raise Capital.” *South China Morning Post*, July 27, 2011, sec. B3.
- Financial Times. “China GDP – Decimal Points,” October 18, 2012. <https://www.ft.com/content/b2290ea4-1929-11e2-af88-00144feabdc0>.
- Cookson, Robert. “Chinese Equities Recover as Beijing Battles Inflation.” *Financial Times*, April 14, 2011.
- . “Resilient Asia More Vulnerable to a Global Crisis.” *Financial Times*, July 28, 2011.
- Cooley, Thomas, Kermit Schoenholtz, George David Smith, Richard Sylla, and Paul Wachtel. “The Power of Central Banks and the Future of the Federal Reserve System.” In *Regulating Wall Street*, by Viral V. Acharya, Thomas F. Cooley, Matthew Richardson, and Ingo Walter, 51–71. Hoboken, NJ, USA: John Wiley & Sons, Inc., 2011. <https://doi.org/10.1002/9781118258231.ch2>.

- Cranston, Ross, Emiliós Avgouleas, Kristin van Zwieten, Christopher Hare, and Theodor Van Sante. *Principles of Banking Law*. Third edition. Oxford: Oxford University Press, 2017.
- Davidson, Paul. *The Keynes Solution: The Path to Global Economic Prosperity*. 1st ed. New York, NY: Palgrave Macmillan, 2009.
- Davies, Gavyn. "China Faces A Difficult Credit Bubble Workout." *Financial Times*, July 8, 2013. <https://www.ft.com/content/f76a5202-e241-11e2-87ec-00144feabdc0>.
- Davis, Bob, and William Kazer. "China Takes Steps to Stem Slowdown." *The Wall Street Journal*, March 25, 2014, sec. A9.
- Deng, Chao. "Nikkei Drops but Other Asian Shares Shrug Off China." *The Wall Street Journal*, August 26, 2016.
- Dickie, Mure. "Japan's Abe Issues Ultimatum to BoJ." *Financial Times*, December 23, 2012. <https://www.ft.com/content/6395f758-4ce5-11e2-a99b-00144feab49a>.
- Donnan, Shawn. "IMF Cautiously Welcomes China Currency Move." *Financial Times*, August 13, 2015.
- El-Erian, Mohamed. "Beware the 'Central Bank Put.'" *Financial Times*, January 7, 2013. <https://www.ft.com/content/bb66425c-54cf-11e2-89e0-00144feab49a>.
- Fernald, John, Mark M. Spiegel, and Eric T. Swanson. "Monetary Policy Effectiveness in China: Evidence from a FAVAR Model." *Federal Reserve Bank of San Francisco*, Working Paper Series, July 2014, 37.
- Geithner, Timothy F. *Stress Test: Reflections on Financial Crises*. First edition. New York: Crown Publishers, 2014.
- Hille, Kathrin, and Simon Rabinovitch. "Hu Commits Beijing to More Balanced Foreign Trade Relations." *Financial Times*, December 12, 2011.
- Hook, Leslie, and Simon Rabinovitch. "China Warns over Fresh Currency Tensions." *Financial Times*, March 8, 2013. <https://www.ft.com/content/930f90e6-87ca-11e2-b011-00144feabdc0>.
- IMF. "IMF Calls for Further Reforms in China's Financial System, Press Release No. 11/409," November 14, 2011. <https://www.imf.org/en/News/Articles/2015/09/14/01/49/pr11409>.
- "IMF Country Report No. 11/321," November 2011.
- Jenkins, Patrick. "State Lending Targets Are Grist to the Mill of History." *Financial Times*, May 24, 2011.
- Kwong, Man-ki. "Agricultural Bank Q3 Results Beat Forecasts." *South China Morning Post*, October 27, 2012. <https://www.scmp.com/business/banking-finance/article/1070735/agricultural-bank-q3-results-beat-forecasts>.

- . “PBOC Sets Loan Reserve Ratios for Small Banks.” *South China Morning Post*, November 3, 2012. <https://www.scmp.com/business/banking-finance/article/1074835/pboc-sets-loan-reserve-ratios-small-banks>.
- Kynge, James. “Beijing’s Crackdown on Credit Intensifies.” *Financial Times*, April 16, 2014.
- Leung, Paggie. “Mainland Inflation Down But Signs of Rising Pressure.” *South China Morning Post*, February 9, 2013. <https://www.scmp.com/business/economy/article/1146394/mainland-inflation-down-signs-rising-pressure>.
- Li, Yonnex. “PBOC Widens Reserve Ratio Base.” *Hong Kong Economic Journal*, August 30, 2011.
- Listokin, Yair. *Law and Macroeconomics: Legal Remedies to Recessions*. Cambridge (Mass.): Harvard university press, 2019.
- Lumb, Richard. “Branching Out.” *South China Morning Post*, September 26, 2011. <https://www.scmp.com/article/980111/branching-out>.
- Masters, Brooke, and Shahien Nasiripour. “Basel Tries Fluid Position on Liquidity.” *Financial Times*, January 7, 2013. <https://www.ft.com/content/e9000f70-58d7-11e2-bd9e-00144feab49a>.
- Noble, Josh. “Shanghai and Shenzhen Sink Despite Rate Cut.” *Financial Times*, August 27, 2015.
- Peirce, Hester, and James Broughel, eds. *Dodd-Frank: What It Does and Why It’s Flawed*. Arlington, Virginia: Mercatus Center, George Mason University, 2012.
- “People’s Bank of China.” *Financial Times*, May 24, 2011.
- Posner, Richard A. *The Crisis of Capitalist Democracy*. Cambridge, Mass.: Harvard Univ. Press, 2010.
- Quintyn, Marc, Silvia Ramirez, and Michael W. Taylor. “The Fear of Freedom : Politicians and the Independence and Accountability of Financial Sector Supervisors. IMF Working Paper WP/07/25.” IMF, 2007. <https://www.imf.org/en/Publications/WP/Issues/2016/12/31/The-Fear-of-Freedom-Politicians-and-the-Independence-and-Accountability-of-Financial-Sector-20155>.
- Rabinovitch, Simon. “Beijing Signals Intent to Curb Credit Loopholes.” *Financial Times*, August 30, 2011.
- . “China Repo Rate at 3-Year High.” *Financial Times*, June 23, 2011.
- . “China Steers Renminbi Two-Way Trade.” *Financial Times*, October 26, 2012. <https://www.ft.com/content/018d7b38-1f5b-11e2-b2ad-00144feabdc0>.

- . “China’s Central Bank Assures Financial Markets.” *Financial Times*, June 28, 2013. <https://www.ft.com/content/06a73156-dfbb-11e2-bf9d-00144feab7de>.
- . “China’s Forex Reserves Reach \$3.4tn.” *Financial Times*, April 11, 2013. <https://www.ft.com/content/d0fdafbe-a255-11e2-ad0c-00144feabdc0>.
- Ren, Daniel. “Everbright Bank Lines Up Big Guns for HK Listing.” *South China Morning Post*, July 27, 2011, sec. B3.
- Ren, Daniel, and Sean Kennedy. “People’s Bank of China Sounds Alarm over Inflationary Pressures | South China Morning Post.” *South China Morning Post*. Accessed December 30, 2021. <https://www.scmp.com/business/economy/article/1145149/inflation-likely-cast-pall-over-china-2013>.
- Reuters. “Analysis: Foreign Investors Rush to Ride China Rebound.” *South China Morning Post*, November 26, 2012.
- . “China Central Bank Eyes More Flexible Yuan.” *South China Morning Post*, March 6, 2013.
- . “China Loans Slow But Economic Recovery on Track.” *South China Morning Post*, December 11, 2012.
- . “Inflation Fall Leaves Beijing Room to Ease Policy Further.” *Reuters*, November 9, 2012.
- . “Lending to Local Banks to Decline: ICBC Chief.” *South China Morning Post*, June 1, 2011, sec. B3.
- . “PBOC Does 90 Bln Yuan Reverse Repos, Drains 20 Bln for Week,” January 5, 2013. <https://www.scmp.com/business/article/1120454/pboc-does-90-bln-yuan-reverse-repos-drains-16-bln-week>.
- . “PBOC to Prioritise Economic Growth, Recovery.” *South China Morning Post*, November 2, 2012. <https://www.scmp.com/business/china-business/article/1074739/pboc-prioritise-economic-growth-recovery>.
- . “Yuan Continues to Test Trading Edge.” *South China Morning Post*, October 27, 2012.
- Roubini, Nouriel, and Stephen Mihm. *Crisis Economics: A Crash Course in the Future of Finance*. 1. publ. New York, N.Y.: Penguin Press, 2010.
- Ruan, Victoria. “China’s Leaders Pledge to Maintain Growth Momentum.” *South China Morning Post*, April 26, 2013. <https://www.scmp.com/business/economy/article/1223286/top-leaders-vow-maintain-growth>.
- . “Tough Tasks Await next PBOC Head.” *South China Morning Post*, November 30, 2012. <https://www.scmp.com/business/banking-finance/article/1094078/tough-tasks-await-next-pboc-head>.
- Scott, Hal S., and Anna Gelpern. *International Finance: Transactions, Policy, and Regulation*. 23rd edition. University Casebook Series. St. Paul, MN: Foundation Press, 2020.

- Shih, Toh Han. "Winds of Change 'to Blow Through' China's Economy." South China Morning Post, November 27, 2012. <https://www.scmp.com/business/economy/article/1091489/winds-change-blow-through-chinas-economy>.
- Skidelsky, Robert. *Keynes: The Return of the Master*. Rev. and Updated. New York: PublicAffairs, 2010.
- Smith, Peter, and Geoff Dyer. "Australia Holds Rates with Beijing in Mind." *Financial Times*, February 3, 2010.
- Sommer, Jeff. "A Short Step in China's Long Advance." *International New York Times*, August 24, 2015.
- Stiglitz, Joseph E. *The Stiglitz Report: Reforming the International Monetary and Financial Systems in the Wake of the Global Crisis*. New York: New Press, 2010.
- The Economist. "The Air Is Thinning," May 19, 2012. <https://www.economist.com/china/2012/05/19/the-air-is-thinning>.
- "The Flight of the Renminbi." *The Economist*, October 27, 2012. <https://www.economist.com/china/2012/10/27/the-flight-of-the-renminbi>.
- Wei, Lingling. "China Plans Liquidity Boost to Counter Yuan Weakness." *The Wall Street Journal*, August 24, 2015.
- Wolf, Martin. "A Case to Reset Basis of Monetary Policy." *Financial Times*, February 7, 2013. <https://www.ft.com/content/ae8b292a-6fc4-11e2-8785-00144feab49a>.

This page is intentionally left blank