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Deciphering the Chinese Economic Miracle: The Resolution of an Age-Old Economists' Debate — and its Central Role in Rapid Economic Development

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ABSTRACT

We offer an account of China's unparalleled economic rise by considering evidence on public banks and their role in decentralizing the resource allocation task of a growing economy. Chinese economic and banking history since the post-Mao reforms reveals an ingenious integration by the local policymakers of Currency (public money supply) and Banking School (decentralized money creation) policy recommendations previously thought incompatible, resulting in a *social democracy with Chinese characteristics*. Our theoretical and historical discussions offer policy insights into the constructive role of *quantitative public bank easing* in economic development.

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1. Introduction

After China emerged from economic isolation half a century ago, it took the nation less than 40 years to reinvent herself as a leading economic power (Xu 2011; Goodhart and Xu 1996). During these four decades she grew from a largely agrarian society to foremost industrial power. The government policies are presently dominated by two strategic plans:

- (1) Made in China 2025 (Chinese: 中国制造 2025) (Wei et al. 2017), and
- (2) The Belt and Road Initiative (Chinese: 一带一路) (Huang 2016).

These initiatives are leveraged to prepare the world's most populous country for a new innovation-led growth model that enables China 'to regain its former standing among the world's largest economies' (Brandt et al. 2014, p. 45). Thanks to solicitous industrial policy, by 2014 the world's previously sleeping giant had become the leading nation with the highest GDP (PPP adjusted, IMF 2018).

The great transformation is attributed to the structural reforms under the aegis of the architect of modern China: Deng Xiaoping. His market liberalization policies

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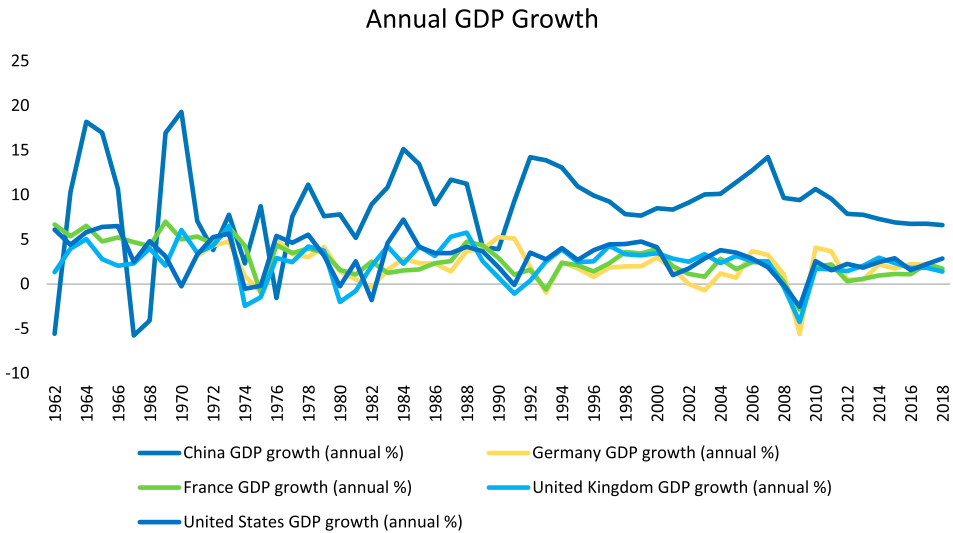


Figure 1. Annual GDP Growth (China, Germany, USA, France and UK). Source: World Bank Data.

commencing in late 1978 led to a high and stable annual growth rate outshining established market economies such as the USA, UK, Germany, and France (see Figure 1) with a traditional institutional order (North and Weingast 1989; Acemoglu and Robinson 2012, 2019). The World Bank (2019) recognized that China's unmatched growth is 'the fastest sustained expansion by a major economy in history'. With an astounding double-digit annual growth rate, China doubled the size of the economy every seven or so years: 'real per capita income increased by a cumulative rate of 1,759 percent, from \$714 in 1980 to \$13,277 in 2015' (Wei et al. 2017, p. 49). In the event, more than 850 million people were lifted out of extreme poverty (i.e., living on less than \$1.9 per day), more than ever before. The poverty rate fell from 88 per cent in 1981–0.7 per cent in 2015. The country is thus well on track to eliminate absolute poverty. Nonetheless, an estimated 373 million people face the middle-income trap as they live below the upper middle-income line of poverty (\$5.50 a day) (Naughton 2007; World Bank 2019).

The great leap in her economic development led to a by-product: income and wealth inequality both at individual and provincial level (Novokmet et al. 2019). This issue challenges the Chinese Communist Party's (CCP) vision to create a 'harmonious society' (Chinese: 和谐社会) on the one hand. Its stunning economic development, on the other, raises an overwhelming challenge to Occidental economists to decipher it. Washington Consensus economics (North and Weingast 1989; Acemoglu and Robinson 2012, 2019) accounts feebly for the Sino-capitalist success as the nation's 'weak institutions are ill suited to achieve economic development' (Xu 2011, p. 1077) and high growth is relegated to being 'merely' due to 'capital accumulation' that could have happened anywhere (Krugman's 1994, argument against the existence of an 'Asian miracle') — but didn't.

Others have pointed to industrial policy and mergers and acquisitions (e.g., Barbieri et al. 2021), although it is not clear how this debate is different from the debate concerning the German and later Japanese industrial policy to encourage mergers and the creation of cartels, given the specific weakness of the type of corporate governance

established, namely ‘excess competition’, which had to be tamed through encouraging cartels and concentration, while reaping economies of scale (Werner 2003).

Yet others have pointed to productivity as the apparent explanation for high Chinese growth. By definition, productivity growth due to technology has inevitably been a key factor in China’s rapid economic growth, as Brondino (2019) confirmed. Earlier, Abramowitz (1956) and Solow (1957) found that US economic growth was due mainly to technology — a factor entirely left out of English-language growth economics until the late 1980s.¹ Likewise, German productivity has been higher than UK productivity for over a century. But such analyses merely beg the question of just how some countries have succeeded in raising productivity. Werner (2013) and Mear and Werner (2020) point out that German firms obtain funding rapidly and amply from their small local banks, while in the UK small and medium-sized enterprises face a monolithic banking sector consisting of four megabanks uninterested in lending to small firms. No doubt, the structure of the banking system has implications for productivity, and thus growth. Fortunately, this was apparent to Chinese leaders, as we shall see.

According to the Washington approach, a successful capitalist order demands a market-based, privately-run economy. A proper institutional order is, by definition, provided by a multiparty, democratic political system guaranteeing private property rights and an independent judiciary system, which enforces debt contracts between market participants (Djankov et al. 2003; La Porta et al. 1998). However, what is the role of the banking sector and, specifically, the choice of alternative institutional arrangements within it? That is the question we focus on.

A paradigm of proper institutional change is, we are told, post-1688 Britain (North and Weingast 1989). Structural changes as prescribed by the Washington Consensus set the British realm on the path to the Industrial Revolution, it is said (Allen 2009). From this follows that without such reforms, China’s reformation is incomplete, suffering from a non-democratic political system and weak legal framework, despite the dumbfounding record in poverty alleviation and economic growth (Brandt et al. 2014; Allen et al. 2005; Xu 2011). However, the existence of a ‘China puzzle’ indicates a gap in the scholarly understanding of a link between ‘poor institutions’ and economic growth. The Chinese leadership will explain that their success was due to ‘a strategy known as ‘crossing the river by feeling stones’” (World Bank 2012, 4), a saying made known by Deng Xiaoping, who had argued that instead of ideology, China’s development should be guided by the methodology of ‘seeking truth from facts’ (實事求是). This led to ‘continuous and decentralized trial-by-error exploration’, which meant that ‘institutional arrangements evolved as new and different challenges needed resolution’ (World Bank 2012). What then are the key institutional changes and arrangements that fuelled China’s unprecedented economic expansion?

US-based analysts have been advising policy-makers to implement deregulation, liberalization and other market-oriented reforms. Often Chinese success is all too quickly attributed to such claimed reforms. Concerning the banking sector, the Western advice has been to reduce government intervention and change resource flows to take

¹Hence the euphemistic ex-post labelling of the Harrod Domar or Solow Swan growth models as ‘exogenous growth’ theories, i.e. theories of growth that do not explain growth. It would have been more honest to admit that English-language neoclassical and new classical economics has not been able to handle economic growth as these are static frameworks about efficient resource allocation.

place ‘through fiscal rather than banking channels’, as this was to ‘promote greater transparency and reduce collateral distortions in other markets’ (Leipziger and Thomas 1993). However, there is little evidence that the Chinese leadership listened to such advice. Quite the contrary, as we shall see.

While the World Bank (2012) report noted as a key achievement for China that two of the top-ten banks in the world were Chinese, the report lacks an analysis of the role and institutional arrangements of the banking sector. A few years later, the four largest banks in the world were Chinese and there were five Chinese banks in the top-ten. By 2012, despite ‘recent efforts to promote direct financing, bank credit still accounts for close to 90 percent of funds raised by the corporate sector’ (op. cit., 123). Yet, there is a dearth of analysis on the role of the banking sector, which surprises, given its demonstrably central function in the rapid economic development of Japan, Korea and Taiwan (Werner 2018; World Bank 2003). The World Bank (2012) almost grudgingly acknowledges that ‘Banks have been used as instruments of the government’s macroeconomic and sectoral policy goals’, but hastens to add that this carries significant pitfalls, as banks

have not always been in a position to lend prudently. While this may have facilitated accomplishment of policy goals [such as lifting more people out of poverty than anywhere in history and becoming the top economy!], it has also exposed banks to a greater risk of deteriorating loan portfolios, increasing the ultimate costs of such public policies ... The financial system is fragile and vulnerable to potential instability. (124)

It is apparent that many less developed countries would happily switch positions with China, despite such stern warnings from Washington. This negative and grudging tone is even more dominant in the journalistic coverage of China’s economy in the UK weekly opinion paper *The Economist*, which has been warning of the imminent collapse of China’s economy and banking system for much of the past thirty years. It is almost as if developing countries are being discouraged from objectively examining the role of banks in economic development in China. Even the landmark World Bank (2003) study on the East Asian Economic Miracle, admitting the central role of the banking sector, was only produced on the insistence of the Japanese Ministry of Finance, which also had to fund it, and its final version had been ‘watered down’ in Washington, according to Finance Ministry sources, as apparently the Washington institutions had shown little enthusiasm for highlighting the constructive role the domestic banking sector can play in economic development.

Thus we focus on the role of institutional arrangements in the financial sector in China’s economic success involving banks. We attempt to decipher the Chinese economic miracle through a theory of public banks. Interest in this topic has grown with recent publications (Marshall and Rochon 2019, 2022). We place the spotlight on the institutional arrangements in banking and their impact on economic development, identifying a special role for public banking, by drawing on an examination of the Middle Kingdom’s recent economic and banking history (see Section Three). We provide evidence that China’s economic success is embedded in the judicious unification and practical implementation of Currency and Banking School proposals (see Section Two). Table 1 maps out how the modern Chinese credit system fits into the taxonomy of these two schools. Section Four knits all strands together and presents policy recommendations about the constructive role of *Quantitative Public Bank Easing* in economic development.

Table 1. Desegregating the currency — banking school proposals: the Chinese banking system.

	Main proponents	Currency school	Banking school	Chinese banking system
Money seigniorage	Ricardo (1824); Fisher (1935); Jackson and Dyson (2012); Wolf (2014a, 2014b); Laina (2015); Dyson et al. (2016);	✓		✓
Decentralized lending	Law (1705); Fontana and Sawyer (2016); Nerisyan and Wray (2016); Goodhart (2017); Decker and Goodhart (2018).		✓	✓
Lending to the real economy		✓	✓	✓

2. The Currency — Banking School Debate: A Brief Review of the Economic Theory

In the aftermath of the Global Financial Crisis, the Currency vs. Banking School debate re-emerged, as so often after banking crises (Goodhart and Jensen 2015; Laina 2015; Dyson et al. 2016; Ingham 2016; Dow 2016; Wolf 2014a, 2014b).²

2.1. Contemporary Theories

Before presenting in the next two sub-sections a concise summary of the theories underpinning both belief systems of the Currency and Banking Schools, we briefly remind the reader of the debates in contemporary economic theory: While the neoclassical models exhibit no need for banks or money, and thus require either financial frictions or informational reasons for the existence of financial intermediaries, the question of what makes banks ‘special’ (as empirical data seems to suggest) has remained an open one in this literature. By contrast, Post-Keynesian, Austrian and empirically-based authors have recognized the money creation function of banks, as reflected in the endogenous money supply argument (see Moore 1988; Jao 1989; Rochon 2006, for Post-Keynesian analyses; Werner 2005, for the empirically-based approach), and as recently empirically confirmed (Werner 2014a, 2016).³ As we shall see, it is this money creation privilege of banks that is at the centre of the controversy between the Currency and Banking Schools. Based on Keynes’ recognition that ‘banks hold the key position in the transition from a lower to a higher scale of activity’ (Keynes 1937, p. 668), Marshall and Rochon (2019) have argued that the Post-Keynesian neglect of credit policy has resulted in gaps in the analysis.⁴ Moore (1988) had argued that the Keynesian fiscal multiplier is undermined by the reality of bank credit creation (p. 309ff). This was shown to be generally true by

²A quick examination of the history of economic thought over the last two centuries suggests Kondratieff waves with an approximate 100-year cycle.

³In this Post-Keynesian analysis, the risk transformation process is viewed ‘precisely in the opposite way conventional literature does’ (Garcia 2007, p. 83). While neoclassical writers Freixas and Rochet (1997, p. 18) view banks as transforming ‘deposits of convenient maturity, such as demand deposits, into nonmarketed loans (with a longer maturity and in larger amounts, and with credit risk)’, the Post Keynesian literature, ‘views asset (risk) transformation as a process which goes from assets (loans) to liabilities (deposits)’ (Garcia 2007, p. 83): ‘The business of banks consists of transforming potential credit into money’ (Screpanti 1997, p. 123).

⁴... post-Keynesians have for the most part overlooked credit policy. As we hope to show, this lack of attention, while easily understood, nevertheless limits academic discourse regarding the benefits and pitfalls of monetary and fiscal spending’ (Marshall and Rochon 2019, p. 61).

Werner (1997, 2005, 2012a, 2014c) who constructed an empirically-based macroeconomic model of growth and development, centred on a rationed credit market dominated by credit creating banks and their regulators and proposing the method of *Enhanced Debt Management* to render fiscal policy highly effective (Werner 2014c). The important role of banks for fiscal policy effectiveness was also recognized by Rochon (2017). Marshall and Rochon (2019) then formulated the Post-Keynesian view on public banking:

we will make the case for public banking as a powerful policy option, both in good and bad economic times. Public banks are a policy tool that can be used with much more precision than fiscal and monetary policy, and their social and economic utility is therefore even more dependent on who wields them. (61)

Our analysis of Chinese economic development provides further support for this view, especially when seen in the context of the debate between the Currency and Banking Schools. In their most recent iteration, the Currency School's main point of contention, in short, is that credit creation is a public privilege: the excessive privatized profits from money printing must be returned to national coffers (Huber and Robertson 2000; Jackson and Dyson 2012; Dyson et al. 2016). Their antagonists, the Banking School, postulate that an elastic money supply by a decentralized banking system is key for robust economic growth. Both schools of economic thinkers agree that a return of bank lending to the real economy is mandatory in order to alleviate asset inflation and end business cycles (Werner 2003, 2005; Goodhart and Jensen 2015; Goodhart 2017; Decker and Goodhart 2018; Bezemer et al. 2018; Minsky 1993). Let us dissect the key arguments of each school of thought in turn, starting with the Currency School.

2.2. Currency School

David Ricardo (1824) was one of the first to advance the idea of nationalizing the money supply. The financier envisaged the money issuing function to be delegated exclusively to five independent commissioners at a *nationalized* Bank of England, whilst removing the money issuing power of all other London and county banks. His original plan reduced all banks to mere financial intermediaries as modern orthodoxy preaches (Allen and Santomero 2001; Adrian and Shin 2010). Two decades later, in 1844, the Bank Charter Act partially achieved this goal: delegated monopoly power over banknote issuance was given to the Bank of England, solidifying the private firm's strong position at the summit of the British bank mechanism (Anson et al. 2019).

A century later, in the aftermath of the Great Depression, the subsequent round of debates between the schools featured the Chicago Plan, led by Irving Fisher, Henry Simons and supported by over 40 economists. In it they restated the Ricardian plan that had not been fully implemented by the 1844 legal changes and proposed that a 'full reserve banking' system should be introduced, which would deliver six distinctive advantages over the reality in which banks create deposits *ex nihilo* (Werner 2014a; McLeay et al. 2014; Fisher 1935; De Soto 2006), namely such a system would:

- (1) end bank runs
- (2) reduce the number of bank failures
- (3) reduce government debt

Table 2. Summary of currency school proposals (19th to twenty-first century).

	nineteenth century	twentieth Century	twenty-first Century
Trigger	1797 Crisis	The Great Depression	The Global Financial Crisis
Crisis Period	1797 – 1820s	1930s	GFC
Affected Countries	UK	USA, Europe, Japan	Worldwide
Major Proponents	Ricardo (1824)	Chicago Plan economists (e.g., Fisher, 1935)	Jackson and Dyson (2012); Benes and Kumhof (2012); Wolf (2014a, 2014b); Laina (2015).
Main arguments against private money creation	<ol style="list-style-type: none"> 1. End bank runs. 2. Reduce (Repay) national debt. 3. Central bank independence and Credit Committee. 4. Simplify monetary system. 5. Differentiate between money creation and intermediation. 	<ol style="list-style-type: none"> 1. End bank runs. 2. Reduce government debt. 3. Simplify the monetary system. 4. Mitigate credit booms and busts. 5. Differentiate between money creation and intermediation. 	<ol style="list-style-type: none"> 1. End bank runs. 2. Reduce government debt. 3. Simplify the monetary system. 4. Mitigate credit booms and busts. 5. Differentiate between money creation and intermediation. 6. Central bank independence and Credit Committee.
Recommendation	Nationalise money creation	Nationalise money creation	Nationalise money creation
Changes to Monetary System	Bank Act (1844)	Glass-Steagall Act (1936)	Basel III (2009)

- (4) simplify the monetary system
- (5) eliminate inflation and deflation periods
- (6) mitigate economic cycles.

The most appealing element of such a full reserve system is the clear division between the locus of public money creation (with the central bank) and the task of financial intermediation (undertaken by the shareholder banks, then reduced to non-bank intermediary status) (Laina 2015; Ricardo 1824; Jackson and Dyson 2012; Bjerg et al. 2017; Macfarlane et al. 2017). Huber and Robertson (2000, p. 46) point out:

After seigniorage reform it will be illegal for banks to create non-cash money denominated in the official currency. Credit broking will be permissible, credit creation will not — and will not be feasible.

Table 2 delineates the striking similarities between the Currency School solutions to resolve credit-driven economic cycles over the last three centuries (Werner 2005).

Shadowing earlier 19th and 20th century rounds, the present-day policy advocacy group ‘Positive Money’ proposed a sovereign monetary system in the UK and other countries. The public would, they claim, recuperate its rightful privilege over money creation and allocation by delegating the task exclusively to the experts of the Monetary Policy Committee (MPC) in the UK and the Federal Open Market Committee in the US (Jackson and Dyson, 2012). Their proposal mirrors Ricardo (1824, p. 15): credit creation must be delegated centrally to five commissioners ‘in whom the full power of issuing all the paper money of the country shall be exclusively vested’. That central credit committee will ‘no longer ... adjust the policy interest rate, but ... adjust the rate of money creation’ (Dyson et al. 2016, p. 1354).⁵

⁵Interest rates are of secondary importance in navigating the macroeconomy as they follow the country’s economic performance fuelled by the expansion and contraction of bank credit (Schumpeter 1939). For an empirical analysis, see Lee

The planned segregation of money creation and intermediation functions prompted Goodhart and Jensen (2015) to quiz Currency School advocates about how authorities would determine the optimum money stock level and growth rate. The Currency School response is clear: ‘an inflation / employment target’ in alignment with which ‘[monetary experts] would always increase money creation (and therefore spending)’ (Dyson et al. 2016, p. 1357). Earlier Currency School proponents advanced a variegated list of proposals for money stock policy, with Ricardo (1824) backing a gold standard rule, Fisher (1935), analogously to Dyson et al. (2016), favouring a price level rule, and Friedman (1960) a k-rule.

2.3. Banking School

In contrast to the Currency School’s theoretical approach, Banking School proponents typically take a more practical view. As a result, Goodhart and Jensen (2015) face a more challenging task to summarize their propositions. A point of concern has been the lucrativeness of the money printing business (Macfarlane et al. 2017). Over 90 per cent of all money circulating in advanced economies is supplied by private banks in the lending process as earlier attempts to centralize money creation in public hands were unsuccessful (Werner 2005; King 2016; Goodhart 2017; Goodhart and Jensen 2015). The high profit stakes incentivize commercial banks to engage in financial engineering within an incomplete legal system to reengineer money creation. A pertinent example is the practices adopted by British banks in the post-1844 period by extending both sides of their balance sheets with ‘accounting’ money when granting loans (Werner 1997, 2003, 2005, 2014a, 2014b; Bezemer 2016; Ryan-Collins et al. 2012). The newly-issued bank credit is indistinguishable from and exchangeable at par with base money (i.e., sovereign banknotes) to-date. Goodhart and Jensen (2015) thus conclude: ‘the Banking School may lose a few battles (as in 1844), but usually wins the war’, evidenced by the current high proportion of private money circulating in 21st century economies (King 2016; Macfarlane et al. 2017).

Through a modern-day lens, the rise of unregulated cryptocurrencies and technological giants experimenting with the issuance of virtual currencies may enable credit manufacturers to broaden the payment possibilities offered to debt consumers and thus escape a 100 per cent reserve rule (Fontana and Sawyer 2016).

Discounting the possibility of the private bank sector engaging in such fintech exploits to perpetuate their survival horizon, a shift to narrow banking would not impose a restriction on profit-seeking credit firms to extend both sides of their balance sheet through short-term, for example, 7-day deposits at the expense of demand deposits as done currently (Goodhart and Jensen 2015; Dyson et al. 2016).⁶

Another impracticality of the Currency School proposition in the eyes of their antagonists is that a full reserve system will be inherently pro-cyclical, which is a recipe for disaster as a former chief Bank of England economist classifies it (Goodhart 2017): a full reserve system will ‘run [the] economy into the ground’ (Nersisyan and Wray

and Werner (2018). It is quantities of money (credit) and their subsequent purpose which dictate performance (Werner 2005).

⁶Of course there is a way to end bank credit creation for good, which has nothing to do with reserve requirements, as Werner (2012b) had pointed out and Werner (2014b) explained in detail: in the UK legal domain the ability of banks to create money is based on their exemption from the Client Money Rule, which could simply be revoked.

2016, p. 25). Fontana and Sawyer (2016) concur. Depositors will rush to narrow banks at times of uncertainty, while arbitraging to ‘wider’ banks at times of economic expansion to gain interest rate income. Dyson et al. (2016) question the claim. In their theoretical paradigm, the Currency School champions highlight that ‘the central bank can always create money to finance lending to the real economy’ avoiding boom and bust cycles. This is indeed a point of overlap between the two schools: The call for a return of lending to the real economy, shortening the inherent self-created asset-liability mismatch in the banking book forms a pillar in the public policy recommended by Banking School proponents, too (Law 1705; Goodhart 2017; Goodhart and Jensen 2015).

Contemporary bank legislation inadvertently heightens speculative asset-inflating lending (e.g., residential mortgages on existing dwellings, amalgamations) through lower risk weights (Ryan-Collins 2018; Bezemer et al. 2017; Jordà et al. 2017) compared to lending to the real economy (e.g., SMEs) (King and Levine 1993; Werner 2005; Bezemer 2016). The excessive lending for financial transactions since the 1980s, following the quantity theory of disaggregated credit (Werner 1997, 2003, 2005), results in credit booms, asset inflation and subsequent banking crises. This is why Werner (1997) warned that.

it is imperative [for policy makers] to monitor the allocation of credit and intervene, if credit creation for unproductive, especially speculative purposes takes place to a significant degree. Once an asset bubble has occurred, excess credit creation must turn into bad debt that tends to cripple the banking system and create a credit crunch. ... Our findings suggest that central bank targeting of credit aggregates is likely to be more successful than traditional monetary or interest rate targeting. They also call for comprehensive disclosure by central banks of timely and detailed credit data. (305)

This was echoed by subsequent empirical research deploying Werner’s disaggregated credit framework.⁷ The very shift by private commercial banks away from patient lending to the real economy to financing speculative asset transactions is a recipe for disaster as Currency School protagonists agree (Wolf 2014a, 2014b; Jackson and Dyson 2012; Dyson et al. 2016).

We shall next consider how the points of agreement between the two schools of thought can, and indeed, have in practice been synthesized, by returning to the case of China’s meteoric rise.

3. Banking Reforms in China and the Synthesis

Despite the rise of academic interest in China’s economic history over the last decade, she continues to be an unpolished gem with untapped potential to inform developmental policy (Brandt et al. 2014; Pomeranz 2000; Maddison 2007; Lin 2010). To decipher the Chinese rise, we focus on the decentralized banking system (Xu 2011; Goodhart and Xu 1996; Wei et al. 2017; Allen et al. 2012; Zhu 2012).

3.1. The Structural Transformation of the Chinese Banking System

China’s comprehensive reform, commenced under Deng Xiaoping’s leadership in late 1978, was centred on a structural transformation of her banking system: starting out

⁷See for instance Bezemer (2016); Bezemer et al. (2018); Bezemer and Zheng (2019).

with almost a Soviet-style monobank economy in the early 1950s, with the People's Bank of China (PBoC) discharging both a commercial and a policy mandate, the new leader Deng Xiaoping acted on the key insights he gathered from his foreign research and earlier experience, and chose to decentralize the banking system by creating thousands of banks. This was in adoption of the Prussian subsidiarity principle of greatest possible delegation and decentralization of detailed tasks to the lowest possible level, which had been proven to be as productive in the economy as in the army (Mear and Werner 2020). The process started in the 1980s with the new legal status of the central bank in 1983 and the founding of four state-owned policy banks (PBs), the Agricultural Bank of China (ABC), the China Construction Bank (CCB), the Bank of China (BOC) and the Industrial & Commercial Bank of China (ICBC) with each specializing in a specific credit market.

In the following decade, the decentralization efforts continued with the creation of three further PBs — the China Development Bank (CDB), the Import and Export Bank of China (CEXIM) and the Agricultural Development Bank of China (ADBC). Concurrently, a law was enacted to transform the ABC, BOC, CCB, and ICBC from specialist, monopolistic lenders, which generated high levels of non-performing loans (NPLs) (as high as 30 per cent, Huang 2006), to competitive state-owned commercial banks (SOCBs). To clean the NPLs up from the banks' balance sheet without burden to the tax payer, the central bank endowed four asset management companies, which bought the toxic assets (Turner et al. 2012; in line with recommendations by Werner 2002b). The asset sale restored the four original PBs to a healthy position.

To supply the nation, in particular, the liberated private entrepreneurs and enlivened SOEs, with bank credit, the central government oversaw the establishment of thousands of city and rural banks to reinforce the domestic regional competitiveness (Goodhart and Xu 1996; Xu 2011, Luo 2016). The list includes more than 100 regional ('city commercial') banks and over one thousand rural commercial banks, each forming a pillar in the Chinese banking system.⁸ Public money creators servicing the growing financial needs of an increasingly sophisticated industrial complex mushroomed Figure 2.

Over the past four decades the Chinese banking system was therefore transformed from a near-monobank system to a four-pillar system consisting of (1) state-owned commercial banks (SOCBs), (2) joint stock commercial banks (JSCBs), (3) city commercial banks (CCBs) and (4) rural commercial banks (RCBs). Nevertheless, the state remains a major shareholder in most bank enterprises. A significant interest is held in the five SOCBs through China's sovereign wealth fund. The Ministry of Finance and other SOEs also hold equity stakes in the 5 SOCBs, which hold more than half of the assets in the country. The public interest in each is in the vicinity of 60 to 90 per cent. The 3 new PBs are wholly-owned government firms. The CCBs are under public control through controlling stakes held by the central / local governments. Consequently, as a majority shareholder in the bank system, the CCP appoints the senior management in all these key capitalist institutions for economic growth (King and Levine, 1993; Schumpeter 1912, 1939). Thus the majority of China's banks can be classified as public banks.

⁸Foreign banks have so far failed to penetrate the market significantly (Zhu 2018) and hold less than 2% of all assets (Allen et al. 2012).

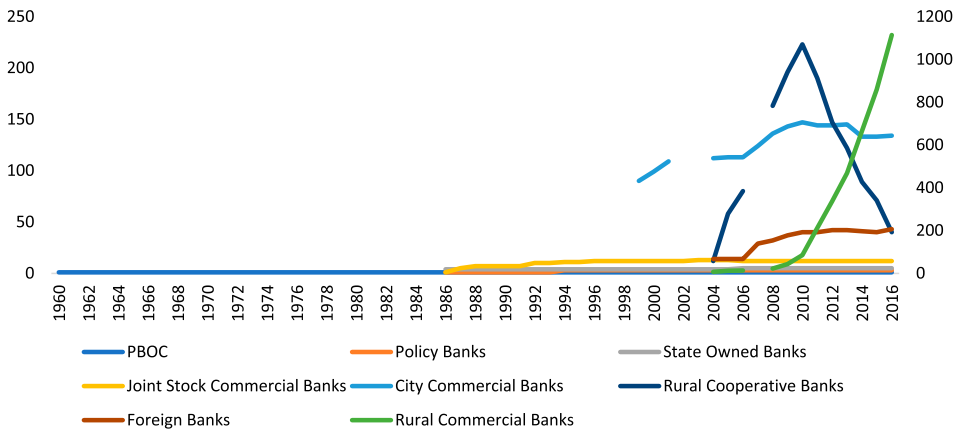


Figure 2. The Chinese Banking System (1960–2016). Source: Zhu (2018); right axis: Rural Commercial Banks; left axis: all other variables.

Table 3. Institutional and functional characteristics of the Chinese banking system.

	PBs	SOCBs	JSCBs	RCC
Institutional characteristics				
<i>Main Lending Task</i>	Policy	Commercial	Commercial	Commercial
<i>Ownership</i>	State	State	Mixed	Collective
<i>Political independence</i>	Low	Low-medium	High	Medium
Functional characteristics				
<i>Major loan recipients</i>	SOEs, government agencies	SOEs, partly privatized joint stock firms	SOEs, partly privatized joint stock firms	TVEs and rural households
<i>Loan size</i>	0.5–10 bn CNY	4–7 million CNY	n.a.	1–2 thousand CNY
<i>Main purpose</i>	Capital construction	Industrial sector	Industrial sector	Agricultural sector
<i>Market</i>	National	National	National	Local

Source: Andersson, Burzynska, and Opper (2016).

Beating the German ‘three pillar’ banking system with its ‘four pillar’ system, China’s banking system should be a prime target for empirical research and lessons to learn for developing economies. There is a dearth of research on this topic, which does not seem popular at the leading international institutions based in Washington, which guide development processes across the world. This also applies to the policy tools deployed by the central bank to ensure that bank credit supports economic growth, and not asset bubbles, which we examine in the following section [Table 3](#).⁹

⁹An exception is a number of studies on the comparative merits of the different types of banks in enhancing growth or exhibiting efficiency. For instance, Andersson et al. (2016) examined which types of banks promote economic growth most, using a novel data set covering the 1997–2008 period. Applying a Granger causality test to estimate the finance-growth nexus, they find that both PBs and JSCBs promote economic growth, while the reverse was found for SOCBs and RCC, which may have been hampered by required preferential treatment of SOEs. Allen et al. (2012) estimate that ‘SOEs accounted for 85% ... of all bank loans in 2009’ with a significant amount of outstanding loans unserviced. This saddles the SOCBs with higher levels of NPLs, whilst small-scale entrepreneurs may still be credit rationed: ‘only 1.35 million [SMEs] can secure bank loans ...’ (Gang 2018). Another exception is Fungacova et al. (2020) analysed a sample of 166 Chinese banks over the period 2008–2015 and found that efficiency needed to be enhanced at China’s Big Five banks. Their results are consistent ‘with prior evidence on ownership and efficiency [in China]: joint-stock banks (national and city-based), on average, appear to be more cost — and profit-efficient than state-owned banks while

3.2. Window Guidance

Research on the East Asian high growth economic system has shown that at its centre is a mechanism for guiding bank credit to such use as is most conducive for economic growth and development, called ‘credit guidance’, or, ‘window guidance’ (World Bank 1993; Werner 1998, 1999, 2002a, 2003, 2005). This is a form of central bank intervention in bank activity that is frowned upon and actively discouraged by the Washington institutions (e.g., World Bank 1989), but makes sense, if one keeps in mind the General Quantity Theory (Werner 1997, 2005, 2012b): The traditional quantity equation.

$$MV = PY \quad (1)$$

was revealed to be a special case, as it holds true only when all money is used exclusively for GDP-transactions. Werner (1992, 1997, 2005, 2012b) pointed out that whenever money creation is used for non-GDP transactions, such as financial asset or real estate purchases, equation (1) creates the impression of a ‘velocity decline’, which however is due to the neglect of the correct general formulation of the link between money and the economy: This was formulated in the Quantity Theory of Disaggregated Credit. Such a disaggregation into money creation used for ‘real economy’ and ‘financial’ (i.e., non-GDP, asset) transactions is possible, when deploying the credit counterparts, which are in any case more useful than deposit aggregates, as bank credit creation is the source of money (see Ryan-Collins et al. 2012):

$$C = C_R + C_F \quad (2)$$

Considering growth we obtain the two general quantity equations:

$$\Delta C_R V_R = \Delta(P_R Y) \quad (3)$$

$$\Delta C_F V_F = \Delta(P_F A) \quad (4)$$

From equations (3) and (4), three scenarios emerge (Werner 1997, 2005): Bank credit creation for financial or asset transactions (ΔC_F) will raise asset prices and, if sufficiently large in aggregate, will create asset inflation and subsequent banking crises (Werner 2003). Bank credit creation for the ‘real economy’ can result in consumer price inflation, if it is used for consumption (as witnessed in 2020, resulting in inflation in 2021 and 2022 in many industrialized countries). But bank credit creation for the ‘real economy’ (ΔC_R) that is extended for business investment, implementing new technologies, increasing productivity or otherwise creating higher value added goods or services, can happen without inflation, delivering higher economic growth, even at full employment. This framework is not based on the canonical assumptions required for equilibrium, and applies in the absence of equilibrium, which means under the short-side principle: In the credit market, the short-side is determined by the suppliers of credit, the banks (Stiglitz and Weiss 1981; Werner 2005; Jiménez et al. 2012). Hence the incentive for the government or central bank to intervene and ‘guide’ bank credit, to avoid

medium-sized banks are significantly more efficient than small and large banks’ (Ariff and Can 2008, p. 260). These findings run contrary to populist accounts referring to government banks as the engine behind China’s growth (Andrianova et al. 2008). Equally, their lower returns on equity and assets, compared sector vis-à-vis their private counterparts, reaffirm the wider mandate of public banks (Mynsky et al. 1993), namely to ensure and enhance economic growth and development.

consumer price inflation, asset inflation and banking crises, and instead ensure high economic growth by guiding bank credit towards productive use and away from consumer loans and lending to purchase assets (Werner 2005, 2021).

The PBoC deployed such direct quantitative measures to steer the economy. The original four PBs, due to their size, had been under the tight ‘credit planning scheme’ until their restructuring to competitive banks in 1996. From 1998 onwards, the SOCBs were officially permitted to ‘conduct lending business based on their own management policy’ (Fukumoto et al. 2010, p. 2), although they became subject to the general window guidance, resembling the Japanese model (Chen and Werner 2011). For a time, ‘window guidance’, adopting the original Japanese expression (窗口指導) in Chinese, was public, reported in the PBoC’s *Quarterly Monetary Policy Reports* and on its website. Like in Japan, later official documents would on occasion make light of credit guidance in order not to contradict too openly the demands of the ‘international community’ for market economic principles, which did not include credit guidance. US economists had been self-confident enough to advise the Chinese central bank on how to run monetary policy properly, and this centred on the advice to move from quantitative policy and guidance to the official international standard narrative of ‘interest rate policy’ (e.g., Goodfriend and Prasad 2006; Laurens and Maino 2007). That kind of pressure had already prompted the Japanese central bank to move its window guidance from official policy to secret tool in 1982 (Werner 2003) and is likely the reason for the propaganda piece by Fukumoto et al. (2010), which, against all evidence, denies an important role for window guidance in the creation of the Japanese bubble and incorrectly suggests it is an inefficient tool.¹⁰ Table 4 compares the PBoC’s window guidance framework with lesser monetary policy instruments (i.e., interest rates, Lee and Werner 2018) in the contemporary red capitalist order (Chinese: 中国特色社会主义市场经济). In the words of Governor Gang (2018):

We work to support commercial banks in issuing loans to small and micro businesses (SMBs) and private enterprises by increasing the quota of central bank lending and central bank discount. Yi Gang, Governor, People’s Bank of China, 2018

Ikeya (2002) had pointed out that Chinese window guidance was adopted from Japan (see also Geiger 2006, p. 14), where it had been shown to have been highly effective since introduction in 1942 (Werner 2002a), and was only abandoned in the early 1990s when the central bank switched to a low growth policy (Werner 2003, 2005; Fukomoto et al. 2010). In China effectiveness is facilitated by the public ownership of a large proportion of the banks, in contrast to other East Asian economies, such as Japan. Nevertheless, neo-classical economists, including those setting the tone at development organizations such as the World Bank and IMF, frown on credit guidance, which is formally justified by citing their theoretical general equilibrium models in which market forces are efficient and already operating optimally so that intervention of any kind, including via credit guidance,

¹⁰Window guidance is a tool that can be used for good or bad. Werner (2002a, 2003) showed that it is highly effective, and was so also in Japan in the 1980s. What has been lacking during the 1980s and ever since has been effective central bank policies to deliver stable growth in Japan. It seems to us that influential US voices ordered the highly misleading Fukamoto et al. piece to be written so that other developing countries would not copy this powerful tool used by all of the East Asian economic miracle countries.

Table 4. Window guidance framework.

Framework	Description
Setting window guidance targets	The PBoC determines the target for lending growth in the bank system at the beginning of the year
Scope	Allocating bank lending based on industry type, counterparty size and loan growth. Commercial banks encouraged to lend to SMEs, consumption and employment creation.
Communication	Monthly meetings with commercial banks and ad-hoc meetings to clarify written instructions.
Scoped Institutions	All state-owned banks and commercial banks.
Penalties	Central bank intervention to control rapid expansion of the lending books of 'rogue' banks.

Source: PBoC and Fukomoto et al. (2010).

could only create distortions. The usual advice is thus to abandon credit guidance, liberalize the banking sector, allow foreign banks and expand the role of direct financing via bonds, equity issuance and venture capital at the expense of indirect funding by local banks. Such policies to 'move towards a market economy', we are told, should trigger even faster economic growth (Laurens and Maino 2007; Luo 2016; Allen et al. 2012; Allen et al. 2018; Ariff and Can 2008; Acemoglu and Robinson 2012; Zhu 2018).

However, if one dispenses with the canonical assumptions required to form such a theoretical world of perfect markets, in the real world window guidance is an efficient tool to generate high economic growth. Yet, the deep mistrust of public sector involvement in credit allocation continues to persist in academic policy circles 'much more than in the credit allocation decisions made by commercial banks ... despite the financial crisis of 2007–08 demonstrating the huge dangers of a deregulated credit market' (Ryan-Collins 2018). Indeed, a planning process for credit allocation also takes place in the liberal market economies — it is however driven by different parameters and not aimed at maximizing economic growth: Rather than directed by a central bank (with an economic development mandate), in Europe and North America, private commercial banks effectively conduct the economic and industrial planning for their nations through the annual ritual of the production of an Internal Capital Adequacy Assessment Plan (ICAAP), required by bank regulators, and which details the planned asset acquisition via the setting of risk appetite for a suite of assets (e.g., sovereign lending, residential mortgages, bond purchases, residential mortgages, SME lending, commercial real estate) over the following three to five years. The risk appetite is naturally restrained and guided by the international regulatory framework (i.e., Basel III) whereby different risk weights are assigned to specific asset brackets. These exogenous parameters define and limit the horizon of choice faced by delegated managers at Occidental banks in order to deliver returns in a low interest rate environment to their shareholders. During this annual procedure, shadowing Soviet-style *petiletkas*, the structure of national economies is demarcated by privately-appointed, profit-seeking technocrats with no economic growth mandate. The risk weights proscribed by the Basel authors favour unproductive and unsustainable asset lending with real estate as collateral. The omnipresent failure to plan the credit allocation to the real economy over lending for financial transactions drives this 'planning for failure' in the *freer* market economies. The low economic growth in Occidental countries since the 1980s is a testimony to this fact (see Figure 1). Nonetheless, the broken social, industrial and housing systems

should not be summarily discounted as the result of their forceful but invisible hand (Bezemer et al. 2018; Ryan-Collins 2017).

3.3. Post-Keynesian Economic Theory on Public Banks and Credit Policy

Deng Xiaoping knew that ‘finance is very important and is the core of the modern economy’ (Wei 2015). Central bank staff in China also were aware of the key role of bank lending in economic development. In the words of the Governor of the People’s Bank of China (PBoC), Mr Gang (2018):

The monetary policy can practice both quantity and price control. Quantity control is a simple tool, as quantity can be specified clearly ... Price control sounds like a fine tool, but sometimes it is not very efficient and may not achieve regulatory goals. (3)

Another Chinese central banker pointed out that under

the pre-1978 Stalinist model of a centrally planned economy, bank credit was not utilized in an efficient way because the central bank’s planning measures simply could not stand up to the society’s demand for funds. (Li 1991, p. 424)

The Western economists, especially since the fall of the Soviet Union, had responded to the failure of central planning by demanding complete deregulation and a free-for-all *laissez faire* system as the alternative. This is shown to be superior in a theoretical state of perfect markets, general equilibrium in all markets and when a long list of highly unrealistic assumptions (such as perfect information, complete markets, perfect competition, perfectly flexible prices, zero transaction costs, etc.) hold. However, when instead considering economic reality, a third possibility becomes apparent, as had long been argued by some continental European economists in the first half of the 20th century (see Werner 2003). In that case, the central planners are better advised to focus on decentralizing their interventions, adopting the subsidiarity principle (Mear and Werner 2020). Applied in the crucial banking sector, which creates and allocates the money supply, this means the need for a two-tier banking system (a central bank dealing with banks, and banks dealing with the private sector) and the creation of thousands of banks, with tens of thousands of bank branches and hundreds of thousands or indeed millions of loan officers checking out business plans, viability and ability to repay loans of millions of small firms in the real economy. It is obvious that a small committee of experts, as suggested by Ricardo, could not beat such an army of experienced loan officers. Furthermore, a decentralized banking system is more resilient and stable in times of uncertainty or shocks. The former central planners can therefore delegate the bulk of the resource allocation work to the bankers in the credit market, and focus on the important task of top-down guidance of bank credit categories, such as restricting credit for consumption and for asset purchases, which have significant macroeconomic drawbacks, and boosting bank credit for productive business investment (Werner 1997).

Deng Xiaoping was not a follower of neoclassical economics and its axiomatic-deductive methodology of operating in fictional worlds, but instead had adopted the empirical research methodology (Werner 2018). This led Deng Xiaoping to argue that ‘a market economy is ... a credit economy’ (Lin 2004), that banks should be placed at the centre

of Chinese economic development, and that the ‘special role of banks to provide financial power’ should be utilized ‘as levers for economic development and technological innovation’ (Lin 2004), that banks should provide funding to SMEs, not the government, and that ‘guidance of bank credit’ should be practiced to achieve the policy aims. In so doing, he was the first and most senior official to publicly refer to bank credit guidance in China (Werner, forthcoming).

In contrast to mainstream economists faithfully following the discredited loanable funds theory, post-Keynesians have long recognized the credit creating abilities of the bank sector (see Rochon 2001 for a discussion). Post-Keynesian economists firmly believe that the commercial banks hold the ‘key position in the transition from a lower to a higher scale of activity’ as Keynes (1937, p. 668) advanced. For them, bank credit creation *ex nihilo* ‘is the pavement along which production travels ...’ (Keynes 1930, p. VI: 197) and thus can lead to full employment and economic growth, just as Deng Xiaoping also believed.

Yet, as we saw, post-Keynesian literature on the role of public banks and their credit policies in attaining full employment and high(er) economic output is still insubstantial, as Marshall and Rochon (2019, p. 61) argue, depriving ‘policy debate of the potentially transformative role of public banking in fulfilling Keynes’s goals of full employment ... and generalized prosperity through the unlocking of the non-scarcity of credit and money’. According to Marshall and Rochon, this may be due to the modest and little-known historical experience with public banks in English-speaking countries, in which the post-Keynesian theory originated (Marshall and Rochon 2019, p. 63). This is where Deng Xiaoping’s eagerness to learn from other countries helped. By the latest with the adoption of the 1995 People’s Bank of China Act, the role of the central bank to maintain currency stability but also to ‘support economic growth’ had been well established and it used its power over the banking system to harness bank credit as the most powerful economic tool to promote high growth, full employment and a general lifting of living standards.

While the Chinese policy architects may not have been aware of it (a topic that requires further research), they competently integrated key aspects of both Currency (i.e., public money supply) and Banking School (i.e., decentralized credit creating monetary system) proposals to establish a decentralized public bank system leveraged to support the liberated industrial complex along Keynes’ understanding of a monetary production economy (see Fontana and Realfonzo 2005), focusing on credit extension to the real economy — the point of agreement between the two Schools.

We conclude that the simple principle of lending to the real economy by a decentralized, publicly-owned credit system underpins *the social democratic order with Chinese characteristics* (Zhang 2001; Naughton 2007; Gang 2018), gold-plated by the economic development mandate of the central bank (Gang 2018). The comprehensive market reforms in China laid the foundations for a highly successful banking and industrial system. The former was reorganized from a monobank to a four-pillar two-tier banking ecosystem, dominated by a multitude of public banks (Zhu 2018; Allen et al. 2018). The scores of newly-founded public banks act as the engine to credit-fuel the liberated industrial complex: local entrepreneurs in SMEs and the enlivened SOEs (Adriano et al. 2012; Anderson et al. 2016). All of this was under the watchful guard of the PBoC, mandated to promote economic growth and able to achieve this when its task

was simplified by merely having to focus on credit aggregates and sectoral allocation within their window guidance tool, leaving the detailed credit allocation in the hands of the hundreds of thousands of loan officers on the ground, ‘kicking tyres’ at tiny firms across the vast expanse of China.

Thus it came that the Middle Kingdom’s vast population was lifted out of poverty, by balancing private and state entrepreneurship whilst retaining any seigniorage profits in public hands (World Bank 2019; Laina 2015; Macfarlane et al. 2017; Ryan-Collins 2017; Goodhart and Jensen 2015; Benes and Kumhof 2012; Werner 2005, 2014a, 2016). We defer to the assessment made by the main architect of the Chinese high growth system, Deng Xiaoping, who contended that his banking and credit guidance reforms were the ‘secret of success’ and the main explanatory variable for the unprecedented economic expansion in China: what we call the *quantitative easing of public banks supporting the real economy*. It is this masterful unification of cutting-edge proposals advanced by Currency vs. Banking School champions that enabled the implementation of *social democracy with Chinese characteristics* (Goodhart and Jensen 2015; Laina 2015; Ingham et al. 2016; Fontana and Sawyer 2016; Benes and Kumhof 2012).

4. Conclusions and Policy Implications

Our paper offers theoretical and historical evidence that China’s unmatched economic growth, which is proxied by GDP, can be explained by merging key Currency and Banking School proposals. Specifically, it is the *quantitative public bank easing* fuelling the real economy through window guidance that elevates the Chinese industrial complex from economic backwaters to the 21st century technological frontier (Adriano et al. 2012; Laina 2015; Jackson and Dyson 2012; Dyson et al. 2016; Ingham et al. 2016; Fontana and Sawyer 2016; Goodhart and Jensen 2015; De Soto 2006). It took China less than 40 years to realise her meteoric rise, leaving behind the painful memories of the great humanitarian crisis earlier inflicted by a centrally-planned communist system. Our results carry multiple public policy implications about the (re-)organization of banking sectors, both in China and elsewhere (e.g., the UK, transition and developing countries; any country with growth ambitions).

First, we can now reconsider the proposition by the modern-day Currency School (Jackson and Dyson 2012; Dyson et al. 2016; Ricardo 1824) to centralize money creation into the hands of a small number of technocrats: This is the system used by the Stalinist Soviet Union and in Mao’s China. Such a proposal must be rejected on the grounds of the historical record of great inefficiency and risks of such concentrated central planning (De Soto 2006; Hayek 1944). In the words of a Chinese reformer:

Under the conditions of the planned economy, two problems will inevitably arise, insufficient incentives and improper allocation. ... The former Soviet Union tried to find a breakthrough in the resource allocation mechanism, pioneered the input-output analysis method, and further refined the plan to cover all aspects of the national economy. But total state control also stifled economic dynamism, and eventually the national economy of the former Soviet Union came to the brink of collapse. (Cao 2018)

Instead, a decentralization of the banking sector, shortening the distance between public banks and debtors, as proclaimed by Banking School proponents (Goodhart and Jensen 2015; Arnon 2011; Fontana and Sawyer 2016) may form a new pillar in the efforts to

reimagine the British banking landscape, whereby the Currency School policy goal of a public money allocation mechanism can be honoured in the form of many public banks and not-for-profit community banks that may play a pivotal role, as is in 21st century China (Adrianova et al. 2012; Ryan-Collins 2017). History has shown that such a system strikes a fine balance between private and public interest, resulting in favourable economic performance. As the creation of many small banks would spur lending to SMEs in the UK (Mkhaiber and Werner 2021), the long-standing challenge of low UK productivity could likely be solved.

Secondly, our results shed a critical light on the ECB's stance concerning the allegedly 'over-banked' European banking sector (Draghi 2016; Dombret 2017, 2018; Fernandez-Bollo, 2021). If our hypothesis holds, then the policy favouring a consolidation of banking power should be reassessed. Instead, the revival of public and community banks across the Old Continent, through the creation of new such entities, is advisable: Twenty years of ECB banking policies, forcing small banks to meet the same Basel requirements as global giants (unlike in the US, where small banks have their own regulator and lighter regulations), have reduced profit margins and raised regulatory burdens sharply, resulting in a drastic consolidation of the banking sector, killing 5,000 banks and leaving European businesses at the mercy of much larger banks. Since large banks are not interested in lending to small firms (Mkhaiber and Werner, 2021), the creation of new small banks is the obvious solution. This could also revive the capitalist 'golden age' Europe enjoyed until the 1970s (Hobsbawm 1994, pp. 257–258).

Thirdly, the policy implication for China: China faces structural challenges, including a looming reduction of its trade surplus (Bekkers et al. *Forthcoming*), albeit triggered by strict public health policies. Researchers have been ambiguous or even negative about the role of development zones in China's success (Zheng et al. 2016). However, we identified a tool that has been unambiguously helpful, indeed crucial for high growth. Faced with new challenges, the PBoC may engage in a round of quantitative (public) bank easing for productive business investment to discharge her economic growth mandate. This will enable the credit-rationed local entrepreneurs to access cheap credit allowing an expansion of production, employment and salaries (Gang 2018). The new endogenous capital would be channelled to the real industry to produce higher value-added goods and services, creating jobs, prosperity and sustainable high growth (Werner 2005). For example, the industries outlined under 'Made in China 2025' by new (public) banks established along the New Silk Road (Huang 2016; Wei et al. 2017) could allow the CCP to navigate the Middle Kingdom away from 'the middle-income trap' (Naughton 2007), whilst supporting firms of all sizes in the process. The newly-founded banks should be of a diverse nature to ensure biodiversity and genuine competition in the bank market between public and private interests, and they don't need not be foreign (Allen et al. 2012, 2019; Ariff and Can 2008; Werner 2014a; Bermejo and Werner 2018).

Fourthly, the successful instituting of a decentralized public-dominated banking system lending to the real economy, delivering high growth, evidences public policies that may easily be adopted by less developed and transition countries (Allen et al. 2019; Luo 2016; North and Weingast 1989). A quantitative public bank easing with a resultant expansion of the locally-denominated monetary aggregates (Turner et al. 2012) fuels the real industry, stimulating employment, production and consumption, creating a virtuous business cycle (Werner 2003, 2005).

Fifthly, window guidance can be instrumental in resolving excessive inflation and deflation periods by channelling the credit creation to the real economy as in the Chinese case and as was the case in other East Asian Tigers (e.g., Japan; Werner 2003, 2005; Fukumoto et al. 2010; Bezemer 2016; Bezemer et al. 2018). The return of industrial policy, combined with the mandate of decentralized public banks may play an important role in the shift of public policymaking, as the exclusive reliance on private and ever more concentrated big banks to optimize the allocation of credit to the real economy has proven mis-guided (Ryan-Collins 2017, 2018; Andrianova et al. 2008).

In conclusion, our paper, resting on economic history and economic theory reveals the benefits of a *quantitative public bank easing* supporting the real economy advanced by post-Mao gradualists (Geiger 2006; Fukumoto et al. 2010). The local reformers succeeded to merge what were thought to be clashing policy recommendations by Currency and Banking School proponents in their attempts to establish a harmonious society under a social democratic order with Chinese characteristics. The results are spectacular. It remains to be seen if the Chinese government is to follow the fortunes of its East Asian neighbours or if it will take note and avoid their mistakes (Werner 2003, 2005).

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