

Addressing heterogeneity via structural monetary policy: China's practices

People's Bank of China

Central banks have been increasingly attentive to how heterogeneity across economic entities impacts monetary policy. On the household side, the changes in a broad range of indicators, such as an ageing population, declining fertility, population mobility, income and wealth, and employment, all affect monetary policy transmission. On the business side, heterogeneity in firm sizes, industries and regions poses challenges for the effectiveness of monetary policy.

China is a vast and culturally diverse country with a huge population, and its economy is at the critical stage of high-quality development and transition. The growing prominence and continuous evolution of heterogeneity across households and firms may affect its monetary policy transmission and trigger market distortions and resource mismatches. To address this, the People's Bank of China (PBOC) has innovatively launched a series of monetary policy tools to adjust and optimise economic structure (structural monetary policy).¹ By smoothing the monetary policy transmission mechanism and giving full play to the role of structural monetary policies in providing liquidity in a targeted manner, the PBOC aims to channel liquidity to the important yet weak links in the national economy, and fosters a favourable monetary and financial environment, which enriches the global monetary policy framework with China's theoretical and empirical experiences in addressing the challenges of heterogeneity.

1. The evolving features of heterogeneity for Chinese households and firms

1.1 Growing prominence of household heterogeneity

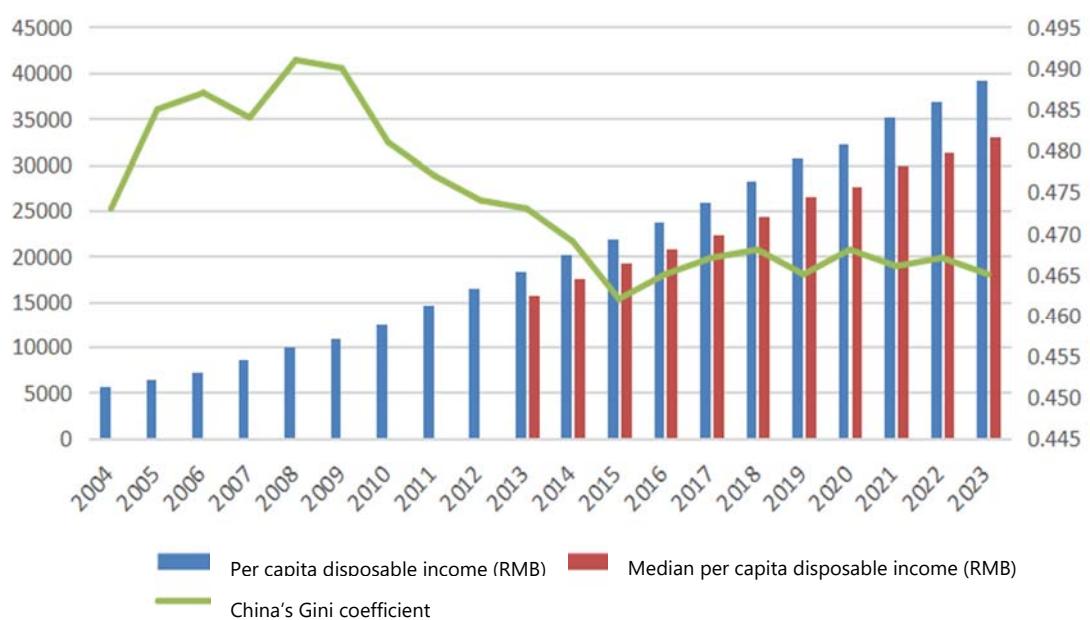
First, population ageing is accelerating while fertility intentions are declining. As of end-2023, China is a deeply ageing society, with 15.4% of its population aged 65 years or above. Meanwhile, declining fertility has become even more pronounced. In 2023, China's birth rate registered 6.39‰, with a natural growth rate of –1.48‰.

¹ The PBOC defines "structural monetary policy" as "monetary policy that channels fund flows to specific areas of the economy based on market-oriented resource allocation through an appropriate incentive mechanism". Structural monetary policy not only adjusts economic structure, but is accompanied by a carefully designed incentive-compatible mechanism to link the incentive funds of the PBOC with targeted credit support to specific areas by the financial institutions, thereby delivering targeted and direct support. In addition, structural monetary policy also impacts monetary aggregates through the injection of base money to maintain banking liquidity at a reasonable and adequate level and to support the steady growth of credit.

Second, household income continues to grow while the Gini coefficient is moving sideways. As of end-2020, China had reached its poverty alleviation target for the new era on schedule and eradicated absolute poverty. With respect to household disposable incomes,² both the average and median per capita disposable incomes have grown significantly, and incomes across the five groups have continued to grow. The income of the low-income group is growing at a faster pace, and the income ratio between the lowest and highest earners has picked up from 9.3:100 to 9.7:100. This narrowed gap is reflected in the coefficient's overall decline amid fluctuations as it first rose, then fell and then started to move sideways, lingering above the international warning line of 0.4.

Yearly per capita disposable income and Gini coefficient in China

Graph 1



Per capita disposable income of Chinese households

Table 1

Per capita disposable income (RMB)	Year 2023	Year-on-year growth in 2023	Year 2014	Year-on-year growth in 2014
Low	9,215	7.14%	4,747	7.84%
Lower-middle	20,442	5.90%	10,887	12.77%
Middle	32,195	5.22%	17,631	12.31%
Upper-middle	50,220	5.96%	26,937	10.57%
High	95,055	5.48%	50,968	7.40%

² Chinese households under survey are evenly classified into five income groups (each group accounts for 20%), based on the average disposable income per capita: low, lower-middle, middle, upper-middle and high income.

1.2 Firm heterogeneity in sizes, industries and regions

First, size heterogeneity is becoming strikingly apparent. Chinese firms are enormous in number, and vary greatly in size. On the one hand, large firms are growing steadily in size and number. In 2023, the total assets of Chinese companies on the Fortune Global 500 list reached RMB 399.77 trillion, and the number of companies whose revenues exceeded RMB 100 billion rose to 254, a net increase of 10. On the other hand, micro, small and medium-sized enterprises (MSMEs) remain an important support for employment growth and economic development. At end-2018, assets of MSMEs registered RMB 402.6 trillion. As of end-2022, the number of MSMEs in China exceeded 52 million, representing an increase of 23,800 on a daily basis.

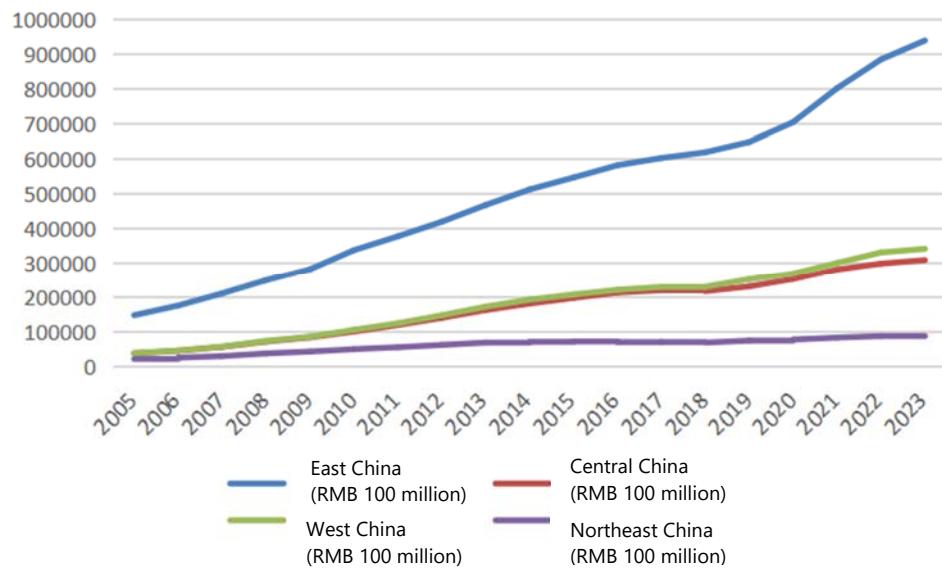
Second, industry heterogeneity is growing amid fluctuations over economic cycles. According to the United Nations' standards, China has the most complete industrial categories and the most comprehensive supporting system.³ Against the ongoing innovation-driven development of China's key industries, the problem of unbalanced and inadequate development across industries is gradually arising. Especially in the context of increased fluctuations over economic cycles, the difference and divergence between asset-heavy industries such as the real estate and emerging tech industries have gained prominence, profoundly affecting the implementation and transmission of monetary policy.

Third, regional heterogeneity is evolving and gaining prominence. Over the past 40 years of reform and opening-up, the Chinese economy has developed significantly across different regions, with the coastal areas developing first and the interior picking up over time. Nevertheless, imbalance has emerged in productivity, market orientation, financial development and industrial structure, among others. Affected by supply chain clustering, transport cost and other factors, inter-region divergence among firms has become all the more striking. This has become one of the key considerations in the formulation and implementation of monetary policy.

³ According to the *Industrial Classification for National Economic Activities GB/T 4754-2017*, China's industries basically cover all categories of the United Nations' *International Standard Industrial Classification of All Economic Activities (ISIC)*, Rev.4.

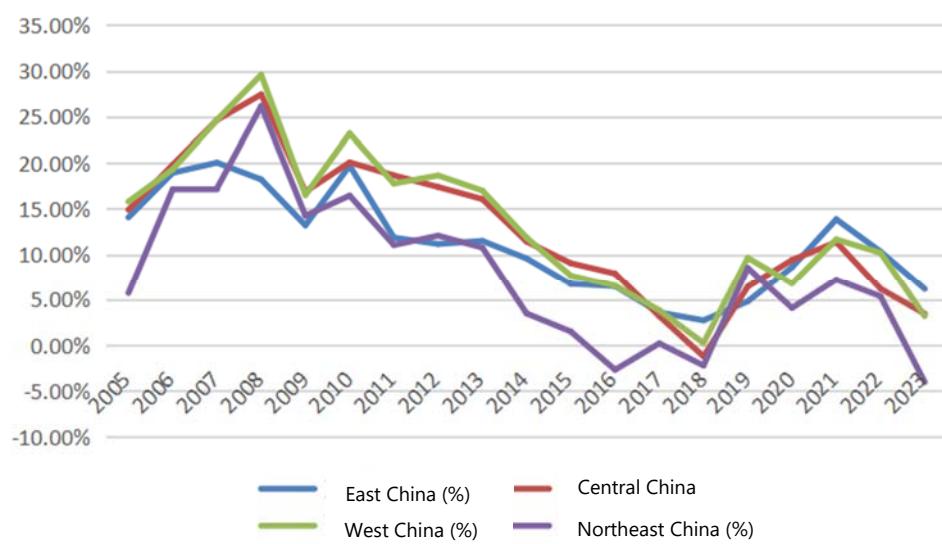
Regional breakdown of total assets of China's industrial firms above designated size

Graph 2



Regional breakdown of asset growth of China's industrial firms above designated size

Graph 3



2. Practices and achievements of China's structural monetary policy in addressing the challenges of heterogeneity

In the process of making monetary policy decisions, China has increasingly taken into account the implications of household and firm heterogeneity, explored relevant theories and practices, and established structural monetary policy tools tailored to the heterogeneous characteristics of important industries.

China's earliest structural monetary policy tools trace back to central bank lending,⁴ which was established initially to support inclusive finance. Subsequently, the PBOC established structural monetary policy tools such as central bank discount (established in 1986 and taking on a structural role from 2008), central bank lending for the agricultural sector (1999), central bank lending for small businesses (2014) and pledged supplementary lending (2014), mobilising capital flows to key areas and weak links in the national economy such as agriculture, rural areas and farmers (the "three rural issues"), micro and small businesses (MSBs) and private firms.

Recent years have witnessed further innovations in China's structural monetary policy, with a richer toolkit of policies. **On the one hand**, the areas supported by policies have been expanded. Besides inclusive finance, they now also include fields related to new development concepts, such as green transformation, scientific and technological innovation, inclusive elderly care, etc. The Central Financial Work Conference in October 2023 emphasised the need to "make significant efforts in five key areas: scientific and technology finance, green finance, inclusive finance, elderly care finance, and digital finance". Currently, structural monetary policy has basically covered these areas. **On the other hand**, transaction methods have been innovated, with the PBOC optimising the credit structure through transactions with commercial banks. Agreements have been signed on top of central bank lending. After commercial banks fulfil the obligations stipulated in the agreements (for instance, an increase in outstanding inclusive MSB loans), the PBOC provides funding support to them.

As of end-Q3 2024, the PBOC had established 18 structural monetary policy tools with a balance of RMB 6.7 trillion, or 14.63% of its total assets, among them 10 current and eight expired tools, respectively. These tools have played targeted and direct roles in addressing the challenges of heterogeneity by mainly supporting inclusive finance, elderly care finance, green development, scientific and technological innovation, and the steady and healthy development of the real estate industry, thus achieving a basic coverage of the "five key areas".

First, structural monetary policy supports households in eradicating poverty. In 2016, the central bank lending facility for poverty alleviation started to provide low-cost funds for locally incorporated institutions in poverty-stricken areas, guiding them to scale up lending there. Since the launch of the battle against poverty,

⁴ Central bank lending, ie loans issued by the PBOC to commercial banks, is a time-honoured and traditional tool that has been used for many years, tracing back to the central bank's inception. Initially serving as an aggregate tool and as the most important channel for the PBOC to inject and withdraw base money, central bank lending has shifted to play a structural role.

a total of RMB 668.8 billion of central bank loans have been issued under this lending facility, and RMB 45.8 billion of central bank loans have been issued under the special central bank lending facility for deeply poverty-stricken areas in the "Three Regions and Three Prefectures",⁵ ensuring financial support for poverty alleviation. In 2020, China secured a comprehensive victory in this battle.

Second, structural monetary policy has proved effective in helping counter the impact of the Covid-19 pandemic. In view of the severe challenges posed by the pandemic, the PBOC launched a series of innovative new tools. In addition to cutting the reserve requirement ratio to keep the liquidity of financial institutions reasonably adequate, it introduced two monetary policy tools providing direct support for the real economy, ie the facility for deferred repayments on inclusive MSB loans and the support scheme for inclusive unsecured MSB loans. Moreover, the quotas were increased for the central bank discount facility and the central bank lending facilities for the agricultural sector and small businesses. The PBOC also launched new facilities, such as central bank lending for sci-tech innovation. Based on the characteristics of different bank types, it offered different guidance to banks for the issuance of loans at preferential interest rates, so that more support was extended to MSMEs in line with market-oriented principles and the rule of law to help them resume production. These measures worked out effectively and were highly appraised by market entities.

Third, structural monetary policy is helping foster an inclusive domestic elderly care market. The PBOC, together with the National Development and Reform Commission (NDRC), kicked off the pilot central bank lending programme for inclusive elderly care services in April 2022, with a view to encouraging financial institutions to offer preferential loans to elderly care service providers, helping foster inclusive elderly care models, and delivering a quick response to an ageing population. As of end-Q3 2024, central bank lending for inclusive elderly care outstanding was RMB 2.1 billion.

Fourth, structural monetary policy supports scientific and technological innovation and the development of the digital economy. In response to the strategy of building a "scientific and technological powerhouse" and to promote scientific and technological advances, the PBOC established a central bank lending facility for sci-tech innovations in April 2022, guiding financial institutions to ramp up credit support to tech firms. It established a central bank lending facility for equipment upgrading and renovation in September 2022, guiding financial institutions to grant loans to support equipment upgrading in manufacturing, social services and MSMEs and by self-employed individuals. Continuous efforts have been made to incentivise financial institutions to scale up credit support for science and technology. As of end-Q3 2023, the outstanding amount of the aforementioned facilities stood at RMB 86.5 billion (sci-tech innovations) and RMB 155.7 (equipment upgrading) respectively. A total of 262,100 technology-based small and medium-sized enterprises (SMEs) have received loan support nationwide, with the loan

⁵ "Three Regions" refers to the Xizang Autonomous Region, the Zang nationality areas of Qinghai, Sichuan, Gansu and Yunnan provinces, as well as Hetian, Aksu, Kashi and Kizilsu Kyrgyz in the south of the Xinjiang Uygur Autonomous Region. "Three Prefectures" refers to Liangshan prefecture in Sichuan, Nujiang prefecture in Yunnan and Linxia prefecture in Gansu.

granting ratio rising by 0.1 percentage points year on year to 46.8% and outstanding loans increasing by 20.8% year on year to RMB 3.19 trillion.

Fifth, structural monetary policy is helpful in advancing the green transformation of economic and social development. To help achieve the goals of carbon peaking and carbon neutrality and the steady transformation of the energy structure, in November 2021 the PBOC launched the carbon emissions reduction facility (CERF) and the special central bank lending facility for clean and efficient coal use, which provided funding support equivalent to 60% and 100% of the principal of eligible loans for the respective areas. As of end-Q3 2024, the CERF posted an outstanding balance of RMB 535.1 billion, having incentivised the issuance of over RMB 1.2 trillion in carbon emissions reduction loans for the relevant key technological areas. The special central bank lending facility for clean and efficient coal use, which registered RMB 211.6 billion outstanding, had supported the issuance of RMB 262.4 billion of loans by financial institutions. With the support of structural tools, green loans have seen rapid growth. As of end-Q3 2024, China's green loans outstanding registered a year-on-year increase of 25.1% and stood at RMB 36.8 trillion, 66.8% of which were loans for projects that directly or indirectly reduce carbon emissions.

Sixth, structural monetary policy is supportive of the development of long-term mechanisms for the provision of inclusive financial services. As the PBOC's long-standing instruments for inclusive finance, the central bank lending facilities for the agricultural sector and small businesses and the central bank discount facility have supported the development of long-term mechanisms for the provision of inclusive financial services. In recent years, the PBOC has been stepping up the use of structural monetary policy to support agriculture, rural areas, farmers, MSBs and other areas of inclusive finance. Apart from expanding the quotas for the central bank discount facility and the central bank lending facilities for the agricultural sector and small businesses, it launched short-term instruments, such as the inclusive MSB lending facility and the facility for interest rate reductions on inclusive MSB loans. As of end-Q3 2024, the central bank lending facilities for the agricultural sector and small businesses and the central bank discount facility recorded a total outstanding balance of RMB 2.9 trillion; the pledged supplementary lending posted RMB 2.6 trillion outstanding; and the funds provided as incentives via the inclusive MSB lending facility reached RMB 67.4 billion, leading to a cumulative increase of RMB 4.5 trillion in inclusive MSB loans issued by locally incorporated financial institutions. Additionally, a total of RMB 26.9 billion was provided via the short-term facility for interest rate reductions on inclusive MSB loans. With the support of structural tools, inclusive financial services have witnessed higher volumes, wider coverage and lower costs. As of end-Q3 2024, China's inclusive MSB loans recorded a year-on-year increase of 14.5% and an outstanding amount of RMB 32.9 trillion, extending support to 62.03 million MSBs, up by 1.6% year on year. The interest rates on inclusive MSB loans issued across the country over the first three quarters of 2024 averaged 4.42%, down by 0.35 percentage points from 2023.

Seventh, structural monetary policy provides support for the sound development of the property market. Four relevant facilities have been put in place: the loan support scheme for timely deliveries of presold housing projects; the loan support scheme for rental housing, which aims to support the development of the rental housing market in pilot cities; the special central bank lending facility for easing the difficulties facing property developers through mergers and acquisitions of

relevant projects; and the facility for bond financing of private firms (Phase II), which supports bond financing of private firms in the property sector.

Eighth, structural monetary policy provides support for the stable development of the capital market. In collaboration with the China Securities Regulatory Commission, the PBOC has established the securities, funds and insurance companies swap facility (SFISF) and the central bank lending facility for share buybacks and shareholding increases, with the aim of motivating long-term capital inflows and supporting the stable development of the stock market. Designed to be totally market-oriented and based on successful international practices, these two facilities showcase the efforts of the PBOC to expand and explore the central bank mandate of maintaining financial stability.

3. Policy suggestions

In recent years, there have been many discussions internationally on how to use monetary policy to address heterogeneity. Below are some policy suggestions based on China's theoretical and empirical experiences in this field.

1. **In terms of function, structural monetary policy is complementary to conventional monetary policy.** The role of conventional monetary policy mainly lies in adjusting short-term aggregate demand. Based on national circumstances and multiple constraints, the PBOC has adhered to an accommodative monetary policy stance while winding down its focus on quantitative targets and taking into consideration aggregates, structure and prices in a coordinated manner. In coping with heterogeneity issues, structural monetary policy stands as a useful complement to aggregate monetary policy. Its main function is to channel funds reasonably to different entities that need to be supported and to help optimise the credit structure. Moreover, also having an effect on aggregates, structural monetary policy is instrumental in creating a favourable monetary environment.
2. **In terms of transmission, market-oriented resource allocation should play a decisive role.** Structural monetary policy tools mainly consist of central bank lending facilities, for which market-oriented operation is fundamental. By providing funds at preferential interest rates via its lending facilities, the central bank incentivises banks to readily allocate credit resources to targeted areas. In the process, banks select projects and issue loans according to their own professional judgment and bear the credit risks on their own, thus allocating financial resources effectively to the highly efficient sectors or firms. That means structural monetary policy tools don't subsidise firms directly in addressing heterogeneity, so as to avoid rent-seeking and achieve effective policy transmission.
3. **In terms of policy coordination, structural monetary policy should join forces with fiscal and industrial policies to achieve synergy.** In addressing heterogeneity issues in economic development, structural monetary policy is subject to the influence of various factors. To achieve better and quicker effects, work needs to be done to coordinate structural monetary policy, aggregate credit policy, and various reform measures such as those on market development

and financial reform. Once having delivered the intended effect, structural monetary policy should exit in a timely manner, as the establishment of long-term mechanisms supporting different firms and households should count on credit policy and reform measures. In particular, structural monetary policy should focus primarily on improving the credit structure. It should join forces with fiscal and industrial policies, whose support needs to be ramped up for different firms and households on the financing side, thereby promoting transformation and upgrading of the economic structure and advancing high-quality economic development.

Box 1

Using structural monetary policy tools to support pandemic relief efforts: China's practices and their effects

In coping with the crisis caused by the Covid-19 pandemic, monetary authorities of the major economies reached broad consensus on using structural monetary policy tools for targeted liquidity injections into the financial system and the real economy. In China, structural monetary policy tools have played a significant role in providing direct financial support for the real economy to bolster key fields and weak links in national economic development. They represent important monetary policy practices to address heterogeneity.

The establishment of an incentive-compatible mechanism brought into play the unique advantages of structural monetary policy tools in providing targeted support for the real economy. Following the outbreak of Covid-19, the PBOC launched a series of innovative structural monetary policy tools. In 2020, it rolled out policies on central bank lending for the agricultural sector and small businesses and on central bank discounts as well, with a total quota of RMB 1.8 trillion. It also launched two monetary policy tools that provided direct support for the real economy. In 2021, these two monetary policy tools were converted into other forms.⁶ In 2022, apart from supportive measures for inclusive finance, the PBOC stepped up support, via central bank lending and discount facilities, for the industries hit hard by the pandemic, such as retail, wholesale, hospitality, catering, logistics, transport, culture and tourism.

Embedded in all of these structural monetary policy tools was an incentive-compatible mechanism, which had been thoughtfully designed so that the funds issued by the PBOC were linked directly and quantitatively with the targeted credit support provided by financial institutions. Such an internal drive enabled quick and effective implementation of these tools. As a result, fund flows were directed precisely to the weak links in economic development, and differentiated financial support was provided for the industries heavily affected by the pandemic. In this way, financial resources were channelled to the vital areas of the economy. In practice, structural monetary policy tools proved effective in increasing the volume of inclusive MSB loans, expanding their coverage, and reducing their costs. As of end-2022, China's inclusive MSB loans posted a year-on-year increase of 24% and an outstanding amount of RMB 24 trillion, which gave credit support to 56.52 million MSBs, up by 26.8% year on year. China's loans to enterprises recorded a weighted average interest rate of 4.17% for 2022, a low level historically, down by 34 basis points year on year.

At the same time, structural monetary policy tools were helpful in keeping liquidity in the banking system adequate at a reasonable level to support credit growth. With the orderly implementation of structural monetary policy tools, base money was injected continuously into the financial system. From the beginning of 2020 to end-Q1 2022, injections of base money via structural monetary policy tools totalled RMB 2.3 trillion, which was conducive to keeping liquidity in the banking system adequate at a reasonable level so as to support generally stable growth in credit. Structural monetary policy tools have duly played their role in "moving a thousand pounds with four ounces" and provided effective support for economic recovery.

⁶ The facility for deferred repayments on inclusive MSB loans was converted into the inclusive MSB lending facility, with incentives provided in an amount equivalent to 1% of the increase in inclusive MSB loans outstanding. The support scheme for inclusive unsecured MSB loans was incorporated into the central bank lending facilities for the agricultural sector and small businesses.