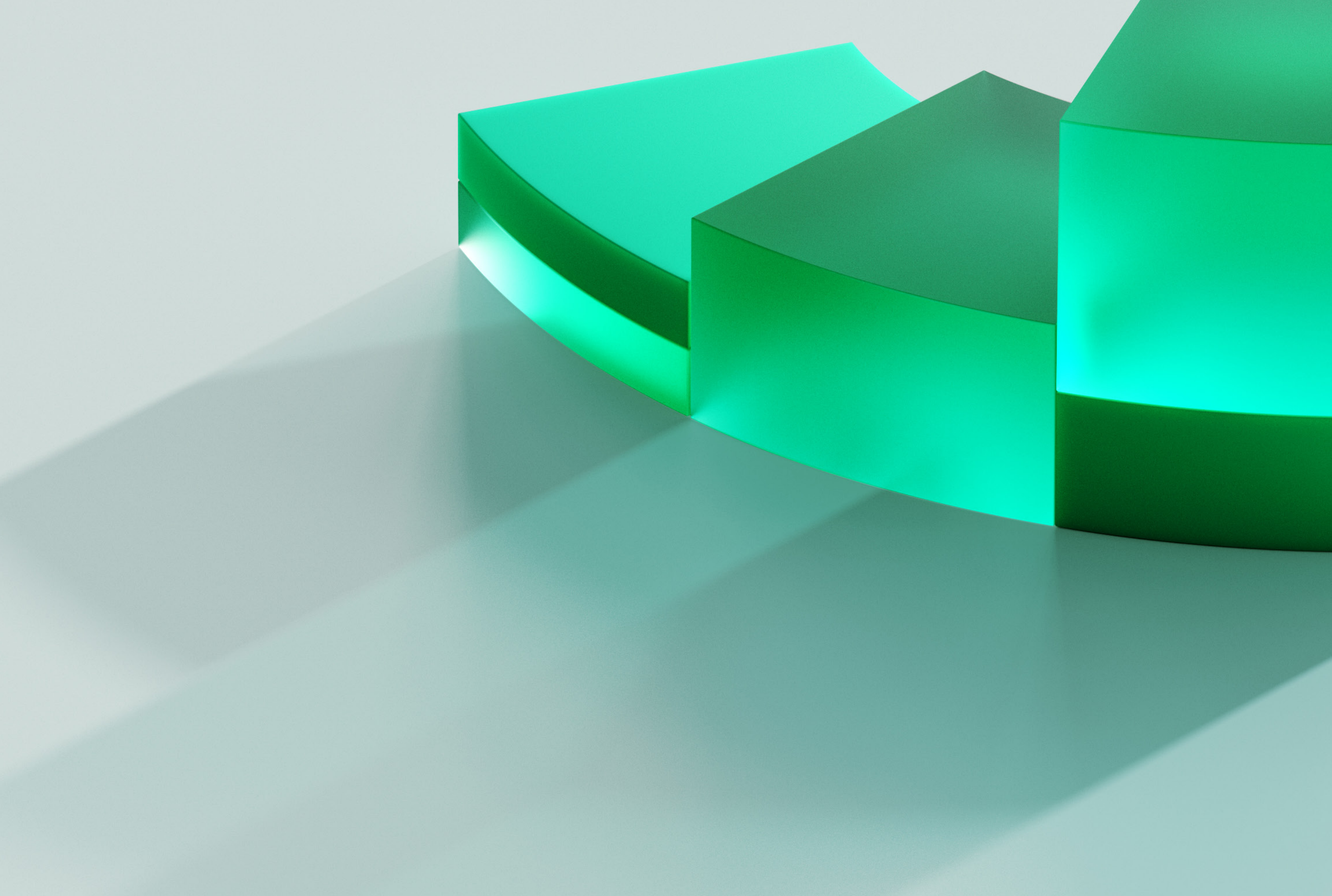

LIQUIDITY INSIGHTS

China’s repo markets

Appendix B: New developments

Since the first edition of this white paper was published in September 2015, several significant changes have affected the operation, regulations and size of China’s repo markets. Another evolution has been the growing importance of the quasi-monetary policy tools used by the People’s Bank of China (PBoC), which depend on the repo markets for implementation. This update covers these important developments.

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J.P.Morgan
ASSET MANAGEMENT

Market Update: Volume shifts and new entrants

China's bond market is the third largest in the world, with total bonds outstanding at USD 9.1 trillion, an increase of 50% since the first edition of this publication.[1] The interbank market remains the dominant trading platform for fixed income securities and repo contracts, but its share of total bonds outstanding has declined from 94% in 2015 to 89% today. Meanwhile, the Shanghai Stock Exchange's share of total bonds outstanding has increased from 6% to 13%.[2]

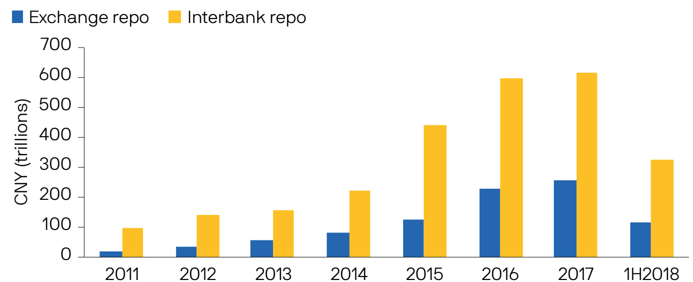
The repo market continues to be a very important source of funding. Total interbank and stock exchange repo annual trading volume turnover hit a record high of CNY 8.3 trillion in 2017 (**Exhibit B1**), although trading volume relative to market size has declined slightly. Interbank repo trading (representing 74% of total repo trading volume) recorded a large increase between 2015 and 2017 as Chinese commercial banks took advantage of low wholesale funding rates to finance asset growth and boost revenues. However, in late 2017 and 2018, the combination of higher funding costs, tighter monetary policies and regulatory changes slowed banks' repo leverage.

Government entities, including the PBoC and the policy banks, alongside the largest, cash-rich domestic commercial banks, are still the biggest users, as cash providers, of reverse repo contracts (**Exhibit B2**). Smaller domestic banks, which are dependent on wholesale funding, are the dominant users of repo contracts as cash borrowers. Mutual funds, investment schemes and trust product providers have also emerged as major users of both repo and reverse repo contracts, using the facilities to fund cash flow and boost leverage to magnify returns.

Interest rate bonds issued by the government and policy banks remain the dominant form of collateral in interbank repo contracts (**Exhibit B3**). However, the use of credit bonds as collateral has increased due to the growing presence of mutual funds, wealth management products and trust product counterparties, which typically only own higher-yielding credit bonds. While these new entrants have boosted repo market liquidity, transparency has declined and managing counterparty exposures has become more challenging.

The interbank market remains the dominant trading platform for repos

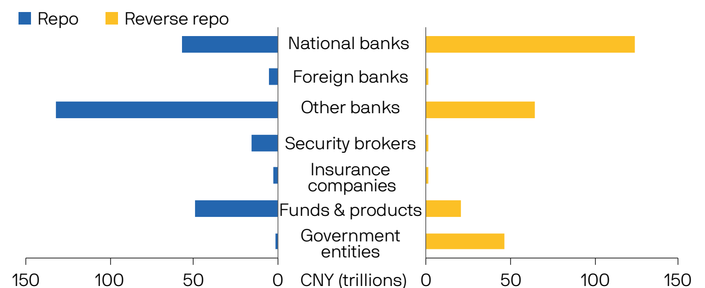
Exhibit B1: Repo trading volumes, Shanghai Stock Exchange and interbank market



Source: Wind Information Co. Ltd., China Central Depository & Clearing Co. Ltd.; data as of June 30, 2018.

Participants in China's repo market have changed

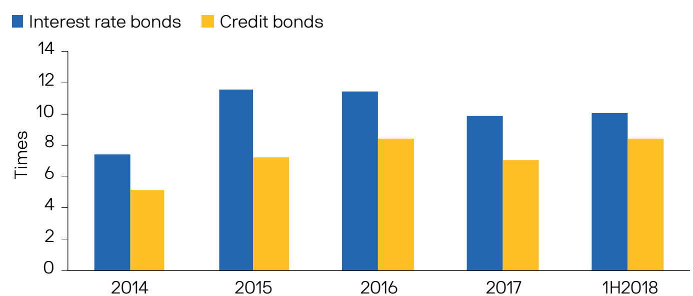
Exhibit B2: Interbank pledged repo transactions in 2017, by participants



Source: Wind Information Co. Ltd., China Central Depository & Clearing Co. Ltd.; data as of June 30, 2018.

Interest rate bonds still predominate as interbank repo collateral

Exhibit B3: Repo transactions relative to bonds outstanding



Source: ChinaBond.com, Bloomberg; data as of June 30, 2018.

[1] Asian Development Bank, AsianBondsOnline; as of March 31, 2018.
[2] Wind Information Co. Ltd.; as of December 31, 2017.

Although interbank and stock market repo volatility remain high relative to other countries, overall volatility has declined during the past 18 months, as improved PBoC liquidity management and communication have served to stabilize liquidity conditions, especially around major Chinese holidays. Nevertheless, the central bank's monetary policy stance, seasonal factors and recent regulatory changes regarding asset management products[3] all exacerbated volatility in 2018.

The stock exchange has adjusted its day-count conventions, switching from trading days to actual days. Combined with tightened rules on acceptable collateral and repo margins (**Exhibit B4**), and new rules on repo contracts, this has helped reduced volatility and risk.

Stock exchange repo haircuts have been widened

Exhibit B4: Repo issuer and issue ratings and discount rates, Shanghai Stock Exchange

Issuer	Issuer rating	Issue rating	Discount rate
Government bonds, policy bank bonds, local government bonds	AAA	AAA	98%
Corporate bonds	AAA	AAA	90%
	AA+	AAA	80%
	AA	AAA	75%
	AA-	AA+	70%
	AA	AA+	60%
	AA	AA	50%

Source: Shanghai Stock Exchange; data as of June 30, 2018.

Repo contract update: New structures and rates

The pledged repo contract remains the dominant type of repo in both the interbank and stock exchange markets. Several new types of repos have been introduced in the past few years: the outright repo, X-repo, D-repo and agreed repo. We outline their characteristics below:

Types of repo contracts

Market	Repo	Details
Interbank	Pledged repo	• The dominant repo type by transaction volume • The repo buyer has possession of the collateral but not ownership unless default occurs • The pledged collateral is returned to the repo seller when all conditions of the repo agreement have been satisfied
	Outright repo	• Transfers ownership of collateral from repo seller to repo buyer • Cash lenders can use collateral for other purposes, although they need to return it to the repo seller at the agreed time • Less popular, with volume 20 times lower than interbank pledged repo
	X-repo	• Offers a standardized pledged repo contract with anonymous counterparties • Proven useful when the PBoC requires anonymous liquidity injections
	D-repo	• Pledged repo exclusively for deposit-taking financial institutions • The PBoC conducts open market operations via this type of repo, making it an important indicator of liquidity conditions • Interest rates generally lower than standard interbank pledged repo due to better access to funding
Stock exchange	Pledged repo	• Stock exchange facilitates transactions and acts as counterparty to all repo buyers and sellers • Terms and conditions are standardized; individual counterparties are anonymous
	Agreed repo	• Stock exchange facilitates transactions; like interbank repo contracts, counterparties directly negotiate terms and conditions • Currently represents only 3% of total stock exchange repos

Source: J.P. Morgan Asset Management; as of June 30, 2018. For illustrative purposes only.

[3] Published by the Financial Stability and Development Committee; as of April 27, 2018.

Monetary Policy Update

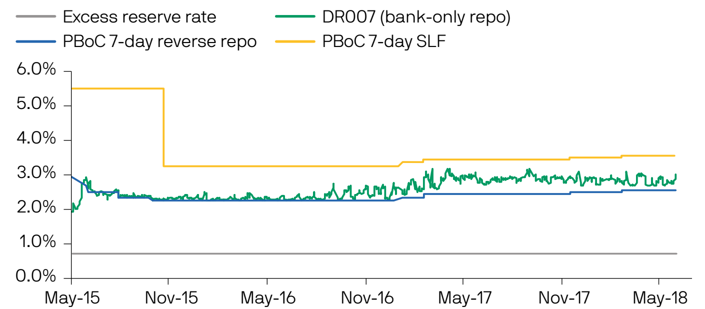
Historically, the PBoC's main policy tool was adjusting borrowing and lending rates.[4] These actions directly impacted markets, while sending a strong monetary policy signal. However, in October 2015, the central bank finally liberalized these rates by removing the requirement that commercial banks operate within the PBoC's deposit and lending rate target range.

Since then, the PBoC has used a constantly expanding range of quasi monetary policy tools to direct interest rate. In the past two years, total open market operations outstanding have almost doubled to CNY 8 trillion.[5] Amid the proliferation of new policy tools, interbank reverse repo remains a critical instrument for the PBoC to control the short end of the curve. By proactively controlling the amount, tenor and interest rate of these instruments, the PBoC can manipulate monetary policy, liquidity conditions and market behavior. Commercial banks have increasingly relied on this funding source to sustain their lending activities.

The central bank's focus on quasi-monetary policy tools has allowed it to create an interest rate corridor, with the standing lending facility forming the ceiling and the excess reserves rate creating the floor. This represents an important step on the path toward a market-based monetary policy regime. Within this wide band, the seven-day interbank reverse repo rate provides a narrower, effective trading range for the seven-day D-repo (DR007) rate (**Exhibit B5**). Changes to the corridor provide an important signal of the PBoC's monetary policy stance; meanwhile, the seven-day D-repo rate will likely become the central bank's key operational target rate as interest rate markets liberalize further.

Dramatically increased PBoC net open market operations have created an interest rate corridor, a step toward market-based policy

Exhibit B5: PBoC interest rate corridor



Source: PBoC, Bloomberg; data as of May 31, 2018.

Conclusion: Repos' expanding role for investors and as a key monetary policy indicator

The interbank and stock exchange repo markets remain critical parts of the Chinese financial system. The repo markets' size, depth and breadth continue to grow as more institutions and investors participate, and as the range of repo contracts expands. In addition, the repo market has gained importance with the PBoC's increased use of quasi-monetary policy tools, many of which are implemented via the interbank repo markets and through its focus on D-repo for managing the price of liquidity. Alongside their importance to institutions and investors, repos continue to play an ever more important role in monetary policy.

[4] Aidan Shevlin and Lan Wu, "Liquidity Insights: China: The path to interest rate liberalization," J.P. Morgan Asset Management, September 2014, https://am.jpmorgan.com/blob-gim/1383216432861/83456/WP-GL-China-The-path-to-interest-rate-liberalization.pdf.
[5] Short-term lending facility (SLF), medium-term lending facility (MLF) and pledged supplementary lending (PSL).

Next steps

Contact your client advisor for more information.

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