



China's Inclusion in Benchmark Indices

MONETARY AND CAPITAL MARKETS DEPARTMENT

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- *The inclusion of China in the global bond and equity market indices may lead to portfolio inflows of around USD 450 bn or 3.4% of GDP over the next 2-3 years.*
- *Inflows can be even larger if (i) China's bond index weight increases further on the back of rising public debt or (ii) investors become overweight China due to attractive risk adjusted yields or (iii) FX reserve managers and sovereign wealth funds increase their RMB holdings.*
- *Index inclusions will subject China to greater market scrutiny and may eventually lead to higher correlation between RMB and global assets. Foreign portfolio flows may also become an increasingly important source of financing of China's expected current account deficit.*
- *China's inclusion in EM local bond indices will have implications for other emerging markets, potentially leading to reduction in fund allocations of \$1-3 bn each for most issuers. Index characteristics are also likely to change due to China's higher rating and lower volatility.*

Starting April 1, China's RMB-denominated central government and policy bank bonds have become part of the Bloomberg Barclays Global Aggregate (Global Agg) index. Inclusion will be phased in over 20 months. Once fully phased in, local currency Chinese bonds will be the fourth largest currency component in the Global Agg index, following the US dollar, the euro and the yen, representing around 6% of the index. This follows the first wave of inclusions of Chinese onshore A-shares in the MSCI equity indices that started in 2018 (see Table 1).

Table 1. Timeline of main index Inclusions for Chinese Assets

| Equities | |
|--------------|--|
| May 2017 | MSCI announced upcoming inclusion of China's A-shares at 5% inclusion ratio |
| May 2018 | MSCI implemented the first 2.5% A-shares inclusion |
| Aug 2018 | MSCI implemented the second 2.5% A-shares inclusion |
| Sep 2018 | FTSE announced to include additional A-shares starting June 2019 |
| Feb 2019 | MSCI announced upcoming increase in inclusion factor from 5 to 20% |
| May 2019 | MSCI to implement 5% A-shares inclusion to 10% |
| Jun 2019 | FTSE will include A shares into its global indices |
| Aug 2019 | MSCI to implement 5% A-shares inclusion to 15% |
| Nov 2019 | MSCI to implement 5% A-shares inclusion to 20% |
| ?? | 20 to 50 to 100% A-Shares inclusion? |
| Fixed Income | |
| Feb 2018 | Bloomberg announced upcoming inclusion of RMB bonds in the Global Agg. index |
| Jan 2019 | S&P becomes the first international rating agency able to rate domestic RMB bonds |
| Apr 2019 | Phasing-in of RMB treasuries/policy bonds in the Global Agg. index over 20 months |
| Q2/Q3 2019 | JP Morgan seeking investor feedback for GBI-EM Global inclusion for RMB treasuries |
| H2 2019 | FTSE WGBI signalling for index inclusion expected |
| ?? | Inclusion of RMB Corporate bonds rated by S&P/Moody's/Fitch? |

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Inclusion in the global bond and equity indices could bring around \$450bn of benchmark-driven portfolio flows in the next 2-3 years

How large are expected index-driven inflows?

- With about \$2.5 tn of estimated assets under management (AUM) tracking the Global Agg index and an expected country weight of around 6%, inclusion could bring up to \$150 bn of additional inflows to China by 2020.
- Similarly, flows from MSCI (equity) inclusion could eventually equal around \$120 bn.
- Analysts expect FTSE/JPM to follow with index inclusions announcements in 2019.
- Cumulatively, this implies total inflows of about \$450 bn (or 3.4% of GDP) over the next few years.

Which bonds will be included?

- Since 2008, the amount of outstanding RMB bonds has risen 4.5x to RMB 86 tn by the end of 2018. Relative to China's nominal GDP, the size of China's domestic bond market climbed from 49% in 2008 to 95% in 2018.
- Government bonds continue to dominate the bond market: government/quasi-government bonds make up more than 60% of the market.
- Initially, the Global Agg Index will only include Policy Bank and Treasury bonds, while WGBI and JP Morgan indices will only include treasuries.

Which stocks will be included?

- Currently, the MSCI index includes 85% of H-shares, B shares, R-chips, P-chips and ADRs. It also includes 5% of large cap A-shares.
- The onshore A-Shares market is by far the largest and its inclusion factor is set to increase from 5% currently, to 20% by November 2019 and potentially to 50% or more in the coming years.
- Unlike other types of Chinese equities already included in indices, A-Shares are RMB denominated and refer to companies incorporated in China.

Chart 1. Expected Benchmark-Driven Flows to China related to index inclusion in the next 2-3 years

| | AUMs tracking the index | China Weight | | Cum. Inflows assuming the target weight | |
|--|-------------------------|----------------------------|-----------------------------|---|-------|
| | USD tn | Current | Target weight | USD bn | % GDP |
| Benchmark-Driven Investors | | | | | |
| Global Agg (Announced) | 2.5 | 0% | <div><div></div></div> 6% | <div><div></div></div> 150 | 1.1% |
| FTSE WGBI (Potential inclusion in 2019) | 2.5 | 0% | <div><div></div></div> 6% | <div><div></div></div> 150 | 1.1% |
| GBI - EM (Potential inclusion in 2019) | 0.3 | 0% | <div><div></div></div> 10% | <div><div></div></div> 30 | 0.2% |
| MSCI EM* | 1.9 | <div><div></div></div> 32% | <div><div></div></div> 36% | <div><div></div></div> 87 | 0.6% |
| MSCI AC World* | 4.1 | <div><div></div></div> 4% | <div><div></div></div> 4.6% | <div><div></div></div> 34 | 0.3% |
| Total | | | | 450 | 3.4% |

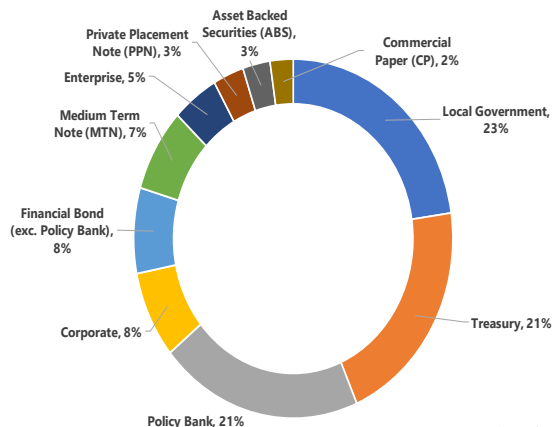
*50% inclusion is assumed of which 20% is announced already

**Inflows assume investors passively follow weights. In reality active funds can deviate substantially from index weights.

Source: JP Morgan, analyst reports, IMF Staff Estimates

Chart 2. China's Local Currency Bond Market

(Percent of total)



Source: WIND Economic Database, IMF Staff

Chart 3. China's Stock Market Structure

| Share Class | Country of Incorporation | Country of Listing | Trading Currency | % of China's equity mkt cap |
|-------------|--------------------------------|--------------------|------------------|-----------------------------|
| A Share | China | China | CNY | 71 |
| B Share | China | China | USD / HKD | 0 |
| H Share | China | Hong Kong | HKD | 7 |
| Red Chip | Outside China (SOE firms only) | Hong Kong | HKD | 6 |
| P Chip | Outside China (Non SOE firms) | Hong Kong | HKD | 9 |
| N Share | Outside China | United States | USD | 7 |

MSCI China Includes

85% of non A-share categories +

Currently: 5% of large cap A-shares

By Nov 2019: 20% of large cap + mid cap A-shares

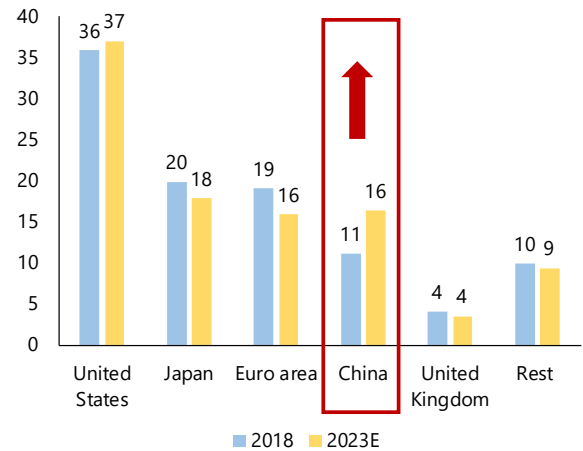
Source: Schroders (end 2017), FTSE Russell, IMF Staff

Potential Upside: China's higher debt + Higher Risk-adj yields + non-BDI Investors

China's index weight can increase, if public debt rises or if other types of bonds are added

- Since global index weights are based on debt outstanding, China's weight will rise if its stock of public debt rises faster than that of other index constituents. Based on Oct 2018 WEO debt projections, China's share in the Global Agg Index may increase significantly in the next 5 years (see Chart 4)
- More securities could be added to indices in the future, provided they satisfy the index inclusion criteria. For example, the local government market has become the largest segment of the local bond market, driven by the swap program and policies to rely on local government bond market for financing. Onshore corporate bonds could also be a major source of inflows over the next decade.

Chart 4. Share of government debt stock of eligible countries in Bloomberg Global Aggregate Index
(share of total debt, using October 18 WEO forecasts)



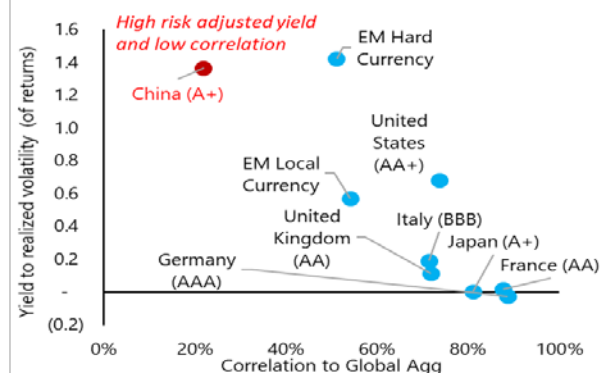
Source: IMF WEO, IMF Staff Estimates

Note: staff estimates based on published WEO debt forecasts

... and investors may hold more than the benchmark allocations.

- Given its large size, high credit rating, relatively high yield (compared to other similarly rated sovereigns) and low correlation with other bond markets, China's local currency bond market is seen as an attractive destination for foreign investors.

Chart 5. Yield to realized vol and rolling correlation to Bloomberg Global Aggregate (Percent)

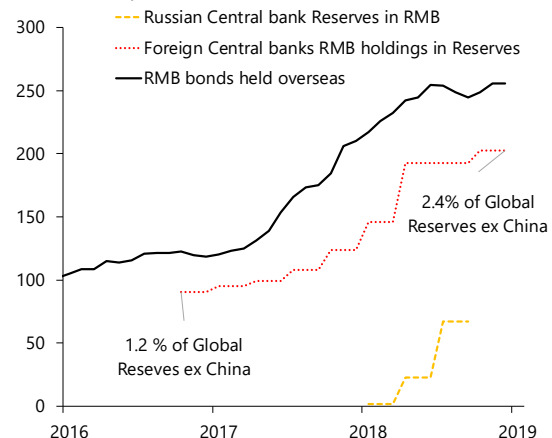


Source: Bloomberg, IMF Staff Note: S&P ratings are in paranthesis

Central banks and sovereign wealth funds will likely increase their RMB allocations as well.

- FX reserve managers have significant scope to increase allocations to RMB. Despite being the world's largest trading partner in goods, only 2.4% of allocated global reserves (ex-China) are in RMB. Market analysts expect this allocation to rise steadily.
- Sovereign wealth funds, with about \$7 tn of AUM also have significant catching-up to do in terms of their investments in Chinese assets. For example, Norges Bank's reported allocation includes less than 1% of RMB bonds and highlights around 70-85% allocation overlap with the benchmark indices.

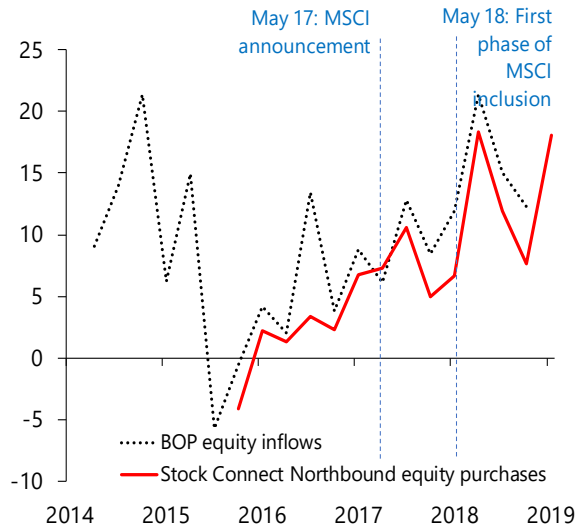
Chart 6. Global FX Reserves and the Share of RMB
(US dollar in bn)



Source: Bloomberg, Haver Analytics, ING, IMF Staff

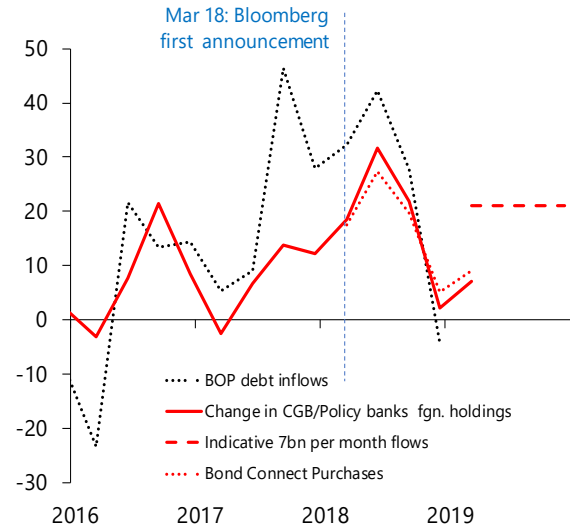
Portfolio flows are getting incrementally more important for China's financing needs

Chart 7. Equity Portfolio inflows to China
(US dollar, bn)



Source: Bloomberg, Haver Analytics, IMF Staff

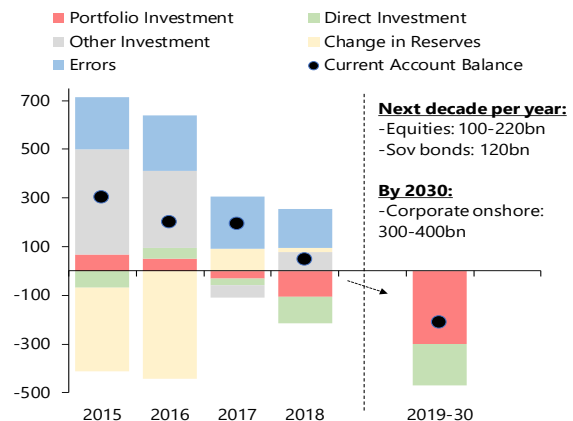
Chart 8. Debt Portfolio inflows to China
(US dollar, bn)



Source: Bloomberg, BondConnect Haver, IMF Staff estimates

- Portfolio inflows have increased steadily in the last few quarters. Equity purchases (A-shares), in particular, dominated the BOP portfolio flows following the inclusion in the MSCI index (Chart 7). Adjusting for increased allocation from global reserve managers, RMB denominated debt (CGBs) portfolio flows do not seem to have picked up ahead of the index inclusion in April 2019 (Chart 8)
- In March 2019, the number of participating investors in Bond Connect rose to 711 versus 508 in Dec 2018 and 288 a year ago. Purchases of CGBs and Policy Bank bonds were 66% of the turnover compared to 37% in Dec 2018.
- During the next decade, market analysts (Morgan Stanley) expect about \$120 bn flows in government bonds and \$100-220 bn in equity inflows in 2020-30, per year. Onshore corporate bonds could also be a major source of inflows over the next decade. (\$300-400 bn per year by 2030).
- As market analysts expect China's current account surplus to turn into deficit in the coming years, these portfolio investments are likely to become an important source of financing for China's current account (Chart 9).

Chart 9. China Current Account and Financing
(projection based on MS estimates)



Source: Haver Analytics, Morgan Stanley Estimates; Note: not all components of the financial account are shown in the forecast.

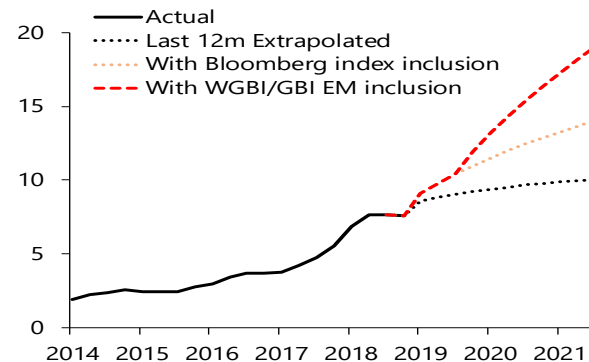
Other benefits for China include better market liquidity and more transparency

Foreign participation in RMB bond market can go up to 20% in the next few years ...

- Further inclusion of China's government bonds (CGBs) in the global benchmark indices will lead to a higher share of holdings of RMB denominated bonds by global investors. However, the increase in the foreign ownership due to index inclusions will likely be gradual given phase-in provisions.

Chart 10. Foreign ownership of CGBs

(share of total)

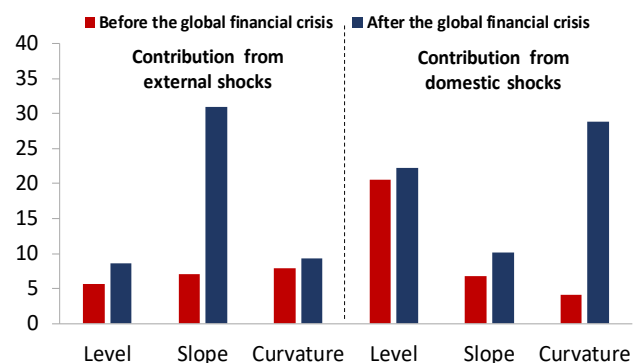


Source: Haver Analytics; numbers based on linear projections (not forecasts)

... leading to higher correlation between China's and global bond markets over time ...

- Staff estimates suggest that the most liquid segment of the CGB market is becoming more sensitive to global developments.¹ Greater foreign participation and a more diversified investor base will likely provide a conduit for two-way information flows and spillovers to and from China, including the transmission of domestic and international shocks.

Chart 11. Contribution of shocks to yield curve forecast error
(percent)



Source: IMF staff calculation.

... as well as greater transparent and market liquidity.

- Inclusion in global benchmarks will subject China to increased market scrutiny, including commitment to global standards for corporate governance, and transparent and freely tradeable markets.

Chart 12. Selected index inclusion Criteria for Global Bond Investment Grade Indices

| Index | Global Bond Indices | |
|--------------------------|---|--|
| | Bbg Global Agg | FTSE WGBI |
| Barriers to Entry | No accessibility hurdles such as capital or exchange controls | Market should actively encourage foreign investor participation |
| FX | Freely tradable and convertible, & not exposed to FX controls; Established fwd. or NDF market | Freely convertible spot and forward Established fwd. market or NDFs |
| Regulatory | No capital controls, quotas, investment restrictions | No capital controls, quotas; Sustainable issuance; transparent monetary policy |
| Fixed Income Derivatives | Sufficiently developed and liquid fixed income derivative markets | |
| Settlement | Global Clearing (e.g. Euroclear) preferred | |

Source: JP Morgan, Analyst Reports, IMF Staff

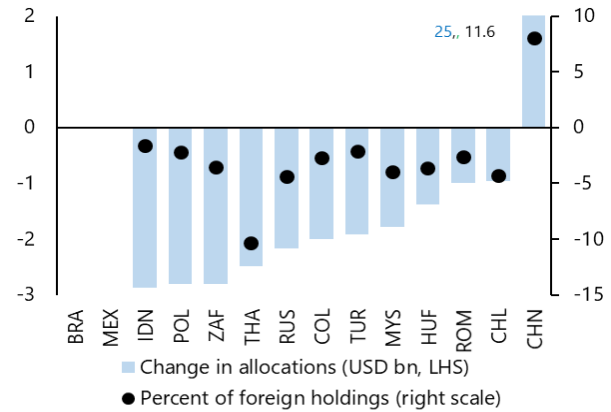
¹ For more information on the analysis, please see Chen, Sally., Kevin Chow, ZHANG Longmei, Thomas Harjes and Nathan Porter, 2019, "Sovereign Bonds: What the Sovereign Yield Curve Tells Us?" in Alfred Schipke, Markus Rodlauer, and ZHANG Longmei, eds., *The Future of China's Bond Market*, Washington, D.C. (IMF) 2019.

Implications of China's index inclusions for other Emerging Markets

China's inclusion in EM indices may lead to some reallocation away from other Ems.

- China's inclusion in the local EM indices may also lead to a potential reduction in fund allocations of \$1 bn to \$3 bn each for key EM sovereign issuers as a result of the mechanical rebalancing of index weights. These fund flows can be larger for some countries, where benchmark-driven holdings constitute a significant amount of their foreign debt holdings.
- In reality, the adjustment process is likely to be gradual and achieved by re-directing new flows rather than by adjusting the existing exposures. Furthermore, the effects of rebalancing may be mitigated by an increase in total assets under management of funds tracking these indices.
- The inclusion of China will alter the risk-return characteristics of the main indices for EM local debt (e.g. higher credit rating, lower index yield), and lead to further increase in the importance of China for the overall performance of the EM debt asset class.

Chart 13. Estimated change in allocations due to China's inclusion in JPM GBI-EM
(bn of dollars; percent)



Source: JP Morgan, IMF Staff Estimates