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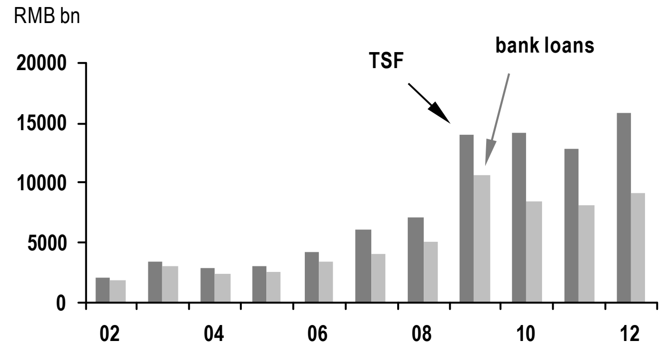
Economic Research Note

China: the concept of total social financing

- **Nonbank financing expanded dramatically in 2012**
- **Total social financing is a flow not a stock concept**
- **Nonbank financing is closely related to shadow banking business**
- **TSF linkages with key macro indicators have increased in recent years**
- **Our forecast of 2013 TSF stands at 16.5 trillion yuan**

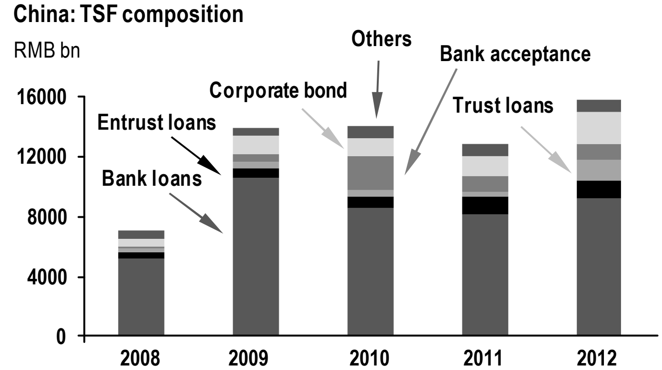
China's monetary policy includes both price (interest rates) and quantity (RRR, OMO, loan growth) measures. In recent years, a broader concept than bank loans, the so-called total social financing (TSF), has received increasing attention. In 2012, CNY loans increased by 8.2 trillion yuan (up 15%oya), but TSF posted a historical high of 15.76 trillion yuan. Nonbank financing, led by corporate bond financing and trust loans, expanded dramatically and arguably contributed to the recovery in economic activity. Entering 2013, TSF continued to be strong. January's reading of 2.54 trillion yuan TSF was a new record monthly high.

China: TSF and new loan creation



Source: PBOC

China: TSF composition



Source: PBOC

What is TSF?

TSF is a relatively new concept constructed by the PBOC to reflect the magnitude of liquidity support from the entire financial system to the real economy. Traditionally, bank loans represented the most important funding source. However, with the growing diversity of financial institutions, financial instruments, and businesses, the appropriateness of bank loans in reflecting aggregate liquidity is being called into question. Accordingly, TSF has become a standard part of official data releases.

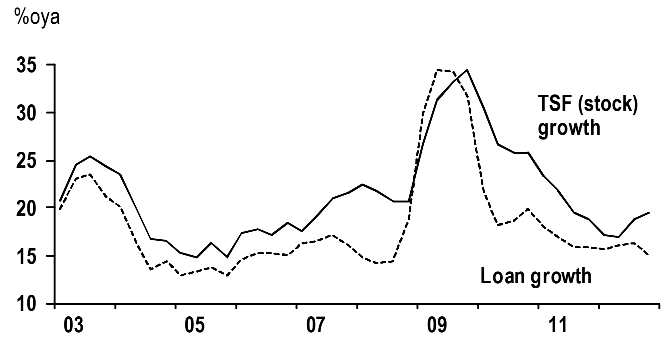
TSF refers to the total amount of financing that the real economy can access via the financial sector during a given period. It includes funding provided by financial institutions, such as banks, security firms, and insurance companies, and by markets, including the credit market, bond market, equity market, banks' off-balance sheet items, and other intermediary markets. To be more specific, it includes bank loans (both CNY and foreign currency loans), trust and entrust loans, bank acceptance bills, corporate bond financing, nonfinancial enterprise equity financing, and other funding sources (e.g., insurance, micro lending, industry funds).

TSF is constructed as a "flow" concept, i.e., net increases in each component in given time period. The TSF data have been available since January 2002 on a monthly basis. However, the PBOC does not provide official data on the TSF "stock." In practice, one could derive the TSF amount based on a simplified assumption that the nonbank financing component was close to zero prior to 2002 (nonbank financing was small prior to 2002). Based on this assumption, the TSF amount stood at 100 trillion yuan and rose 21.1%oya in January 2013.

In a breakdown, bank loans remain the biggest component of TSF, but the share has been declining in recent years. New bank loans accounted for 95.5% of TSF flows in 2002, but the share dropped to 57.9% in 2012 (46.1% in 4Q12), suggesting that nonbank financing has become increasingly important over the past decade.

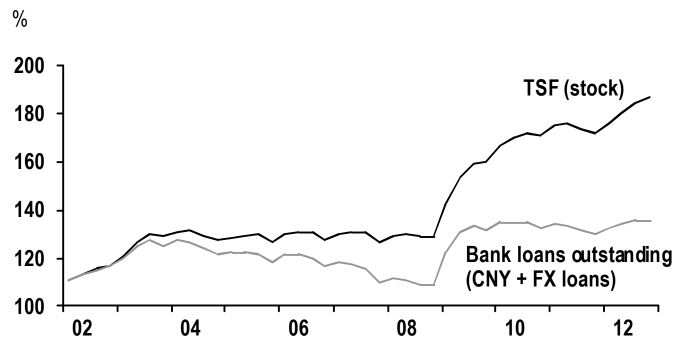
Bank acceptances are a short-term debt instrument issued by a firm that is guaranteed by a commercial bank, typically as part of a commercial transaction. It is an off-balance-sheet item for banks and thus not included in the bank loan data. Bank acceptances can be traded at a discount from face value in the secondary market. If accepted by a bank, the instrument becomes a short term credit and is counted in the bank loan data (called "bill financing"). In the PBOC statistics, bill financing is excluded from bank acceptance data to avoid double-counting.

China: loan growth vs. TSF growth



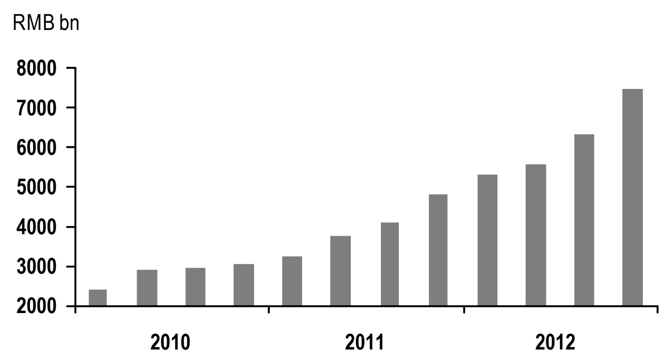
Source: PBOC, J.P. Morgan

China: credit/GDP ratios



Source: PBOC, J.P. Morgan

China: asset under management (AUM) in trust industry



Source: China Trustee Association

Trust loans are a direct form of financing in which the trustee (a trust company) invests client funds (from wealthy individuals and cash-rich companies) according to a pre-specified objective, purpose, amount, maturity, and interest rates. They can be invested as loans to the real sector (e.g., to enterprises, real estate companies, or local government entities), or in financial assets. The trust loan component in TSF refers to the loan use category but not financial assets.

Entrust loans are similar to trust loans except that the fund usage (target borrower, amount, maturity, and interest rate) is specified by the trustor in entrust loans. By contrast, in trust loans the trustee (trust company) can decide on fund usage based on pre-specified guidelines.

Corporate bond and equity financing in TSF refer to corporate bonds and nonfinancial enterprise equity held by financial institutions.

The composition of liquidity support by the financial sector has changed noticeably in the past decade. For most of the past decade (except in 2009 when bank loans increased by more than 30% to support the large policy stimulus), growth in nonbank financing has been much higher than the growth in bank loans. Based on our calculation, since 2008 bank loans (CNY loans) have increased by 107% (from 32.2 trillion yuan in end-2008 to 66.4 trillion in January 2013), but trust loans outstanding have increased by 444% (from 567 billion to 3.1 trillion yuan), bank acceptance bills by 529% (from 1.0 trillion to 6.5 trillion yuan), and corporate bond financing (outstanding) by 459% (from 1.3 trillion to 7.5 trillion yuan).

The rapid growth in nonbank financing could be associated with a new source of financial stability concerns for policymakers. As BIS and IMF have argued, rapid increases in credit/GDP ratios could be a leading warning signal for the financial system. Using only bank credit, China's credit/GDP ratio jumped from 109% in end-2008 to 131% in end-2009, but has since then remained stable due to normalization in bank credit policy. However, using the TSF (stock) measure, the credit/GDP ratio has continued to climb, rising from 129% in end-2008 to 187% in end-2012, and the ratio rose by 15%-pt in 2012 alone.

TSF and shadow banking

While total social financing is a broader concept than bank loans, it too has caveats.

First, the TSF concept does not distinguish the degree of support of various components to the real economy. For instance, a bank acceptance is similar to a letter of credit; it is a type of guarantee or commitment banks provide for the real economy. It is not a real loan unless banks need to make the payment or banks accept it in the secondary market (in that case it will be re-labeled as bill financing on banks' balance sheets). Therefore, it has weaker support compared with other components when assessing the degree of funding support to the real economy.

Second, there are some items missing from the TSF concept, for example some interbank assets. One example is interbank reverse repurchase agreements, which use bills and loans as collateral and are effectively bank loans sold through interbank markets (but they were not included in bank loans in practice). Another example is interbank payment services

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in which one bank is responsible for another bank's credit commitments (e.g., domestic letter of credit). This is counted as interbank assets rather than bank loans. According to our banking analyst, Katherine Lei, interbank assets reached 5.4 trillion yuan in 1H12, up 32%oya.

Although closely related, TSF is a separate concept from the shadow banking business in China. Whereas the definition of shadow banking varies across countries, in China it mainly consists of trust funds, wealth management products (WMP), and underground lending. Obviously underground lending is not included in the TSF statistics, but there are other important differences between TSF and shadow banking statistics.

First, TSF is defined based on the asset side of the balance sheets of banks and financial institutions. By contrast, shadow banking is more vaguely defined and focuses on various nonbank financial businesses, and some components could overlap with each other. For instance, WMP could be the funding sources (liability) for trust funds. So, the size of shadow banking would be overstated by simply adding trust fund loans to funding by WMPs.

Second, fund usage is different. TSF focuses on support for real economic activity, whereas shadow banking has a wider range of investment options. For instance, according to China Trust Association, assets under management in the trust industry rose by 2.66 trillion yuan to 7.47 trillion yuan in 2012, but in TSF statistics trust loans increased only by 1.29 trillion yuan. This is because the TSF statistics only take into account the trust funds loans, not their financial assets (bond and equity holdings by financial institutions are reported in separate categories in TSF).

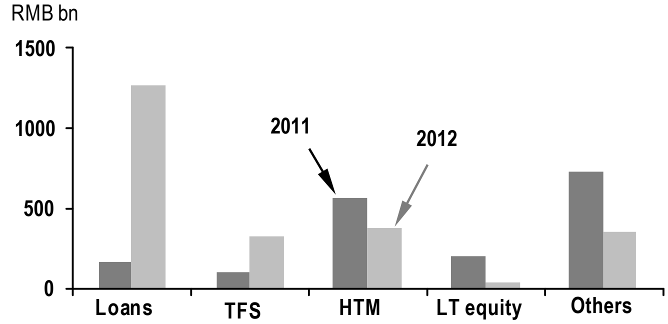
TSF and economic activity

The PBOC has been promoting the concept of TSF in recent years, because it is a more comprehensive indicator of aggregate liquidity and it is more closely related to key macro variables (see "The connotation and practical meaning of total social financing volume," PBOC Statistics Department, Feb 2011). It is proposed that TSF could become an intermediary target of monetary policy in China.

Using our estimate of TSF's volume and oya growth rate, we examine its relationship with key macroeconomic variables (GDP, FAI, retail sales, and inflation) and compare it to the relationship of these variables to loan growth and M2 growth. The results are somewhat mixed.

Preliminary analysis suggests that TSF is related to key macro variables. TSF has a contemporaneous positive relationship with FAI activity, and it leads GDP growth and retail sale growth by three to four quarters and leads inflation by about six

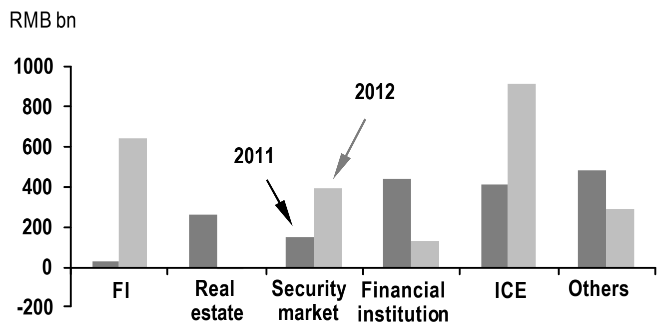
Increases in trust AUM by forms of investment



TSF: transaction financial assets; HTM: available for sales& held to maturity investment; LT equity: long-term equity investment

Source: China Trustee Association

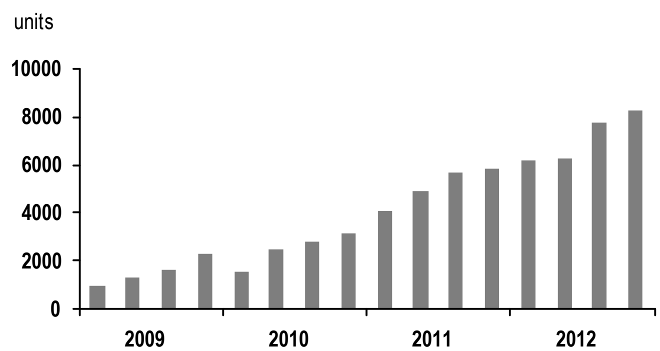
Increases in trust AUM by industries of investment



FI: foundational industries; ICE: industrial& commercial enterprises

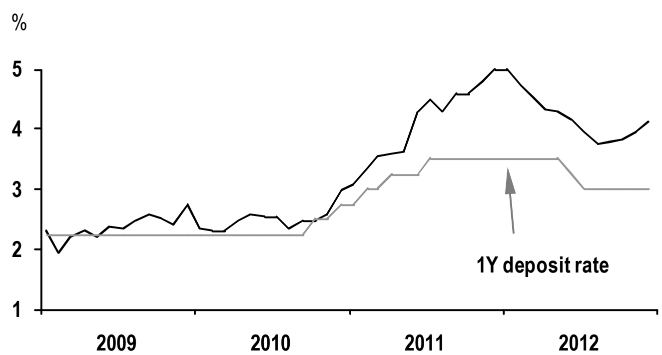
Source: China Trustee Association

China: bank WMP issuance



Source: CEIC

Banks' WMP weighted average rate of return



Source: CEIC

quarters (similar for bank loans and M2 growth). Importantly, the relationship between TSF and macro variables has increased significantly after the 2007-08 global financial crisis.

However, it is too early to conclude that TSF dominates bank loans and M2 growth in policy assessment. Even in the post-GFC period when the macro relevance of the TSF measure increased significantly, we find similar degree of relevance for loan growth and M2 growth. To that extent, we think it is appropriate to include the TSF as an additional indicator in economic analysis, but the importance of bank loan and M2 growth should not be diminished.

Looking ahead, we expect China will continue to make progress in financial reform, including interest rate liberalization and increased development of capital markets (especially bond financing). Market-based interest rates are tending to play a more important role in China's monetary policy framework. As the PBOC gradually moves away from quantitative measures toward interest rate policy, we expect the importance of M2/bank loans/TSF as intermediary policy targets will gradually decline over time.

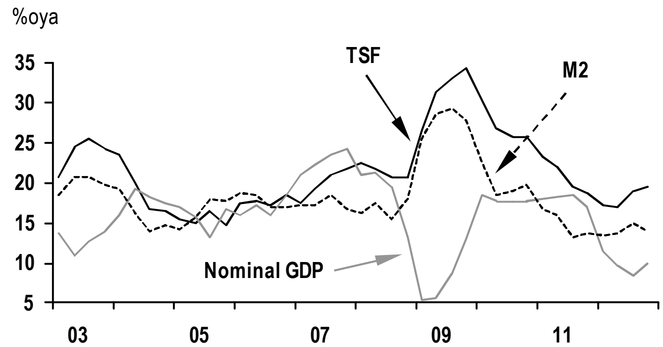
What to expect in 2013?

The rapid growth in nonbank financing in recent years is an important part of China's financial reform, which aims to encourage capital market developments and to diversify risk in the financial system. Nonetheless, it also raises new sources of financial stability concern, especially as the size of nonbank financing is growing quickly but is less regulated and supervised than bank lending.

At this stage, we think that the default risk involved in nonbank financing is relatively low and remains manageable. A major risk in 2013 is policy risk (or regulatory risk). A particular area of concern is wealth management products. Accordingly to Katherine Lei, WMP related to banks reached 7.1 trillion yuan at end-2012, equivalent to 7.5% of bank deposits. A large portion of WMPs involves maturity transformation, and in many cases banks and investors have different views regarding banks' financial responsibility if a WMP defaults. Idiosyncratic defaults could trigger regulatory responses and generate liquidity-related turbulence in the market, and by extension will affect trust funds and commercial banks.

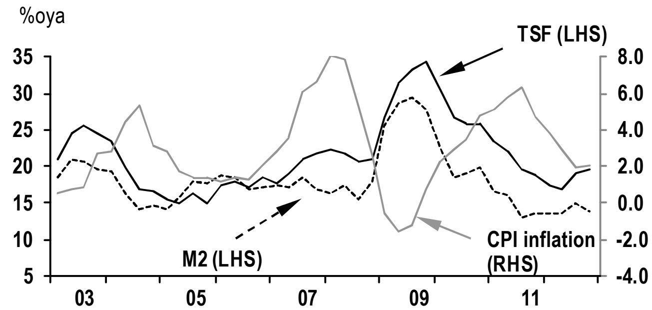
Overall, we expect bank loans to increase by 14.5% in 2013, and nonbank financing components of TSF to see some slowdown. Our forecast for 2013 TSF stands at 16.5 trillion yuan, or approximately 17% growth in volume terms. Although still accommodative, this would be the slowest growth since 2006, and compared to 19.4% growth in 2012.

China: liquidity and GDP growth



Source: PBOC, NBS

China: liquidity and CPI inflation



Source: PBOC, NBS

China: macro linkages of TSF, bank loans, and M2
Bilateral correlation coefficients

		Nominal GDP growth	FAI growth	Retail sales growth	CPI inflation
TSF growth					
2003-12:	maximum correlation	0.09	0.32	0.36	0.21
	lead (quarters)	3	0	2	3
2008-12:	maximum correlation	0.56	0.67	0.36	0.35
	lead (quarters)	3	0	3	6
Loan growth					
2003-12:	maximum correlation	0.31	0.42	0.43	0.37
	lead (quarters)	4	0	4	5
2008-12:	maximum correlation	0.55	0.69	0.38	0.39
	lead (quarters)	4	0	4	7
M2 growth					
2003-12:	maximum correlation	0.41	0.46	0.46	0.41
	lead (quarters)	4	0	5	6
2008-12:	maximum correlation	0.52	0.74	0.36	0.34
	lead (quarters)	4	0	4	7

Source: J.P. Morgan

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