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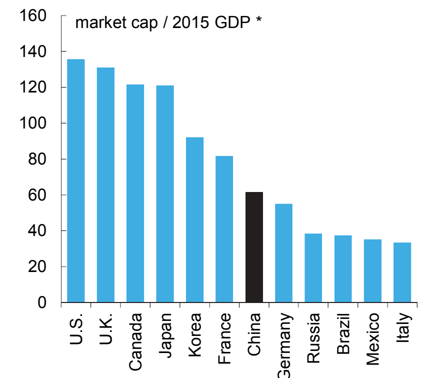
China's Equity Correction To Carry Limited Macro Effects

Chinese stocks have been hammered of late with the Shanghai Composite's cumulative loss since the June 12th peak now at 28%, and both the Shanghai 'free float' excluding the illiquid state-owned portion of the market and the Shenzhen index down by about one-third. Policymakers are actively attempting to prop up the market but so far have had only limited success. However, while these are large percentage declines, they only take the Shanghai Composite back to mid-April levels and the Shenzhen Composite back to late-March valuations and hence around the time we issued this paper saying valuations at that time were not yet a bubble. The market then added another nearly 40% gain by the time it topped in mid-June and that clearly changed our minds by very rapidly stretching valuations into uncharted waters.

Chart 1: Market Capitalization To GDP Ratio



Source: Scotiabank Economics, IMF, Bloomberg.
* IMF April 2015 WEO forecast.

Yet, with the ensuing correction to date, the Shanghai Composite is still up by over 80% and the Shenzhen higher by over 70% since the end of last June when the rallies began in earnest and off valuation levels that made mainland Chinese equities among the cheapest in the world. While this may be a correction waiting for further policy support beyond the recent rate cuts, regulatory changes and pledges to provide liquidity, **it remains premature to call this a bursting bubble of epic proportions with risks akin to the 2007 collapse**.

Chart 2: Mainland Equities: Market Cap to GDP

Source: Scotiabank Economics, Bloomberg.

Of greater interest are the knock-on effects of large equity market swings on the broader Chinese economy. The potential implications are wide, ranging from forecasting the Chinese economy to cross-correlations with other securities like Treasuries. On balance, the arguments that follow position our current thinking around modestly negative and fairly short-lived effects of the current stock market correction on growth.

It's A Much Smaller 'Bubble' This Time

China's stock market is much smaller relative to its economy than those in countries like the US, UK and Canada. Indeed, it is less than half as large relative to the size of the economy than in each of those three countries implying that, when scaled to the size of the economy, China's economy is less vulnerable to a correction (chart 1).

It is true that if one removes the state owned enterprises (SOEs) and especially the banks from mainland China's indices, namely the biggest listings in Shanghai, then today's shares are more highly valued than they were during the 2007 bubble. That measure of breadth is important but does not negate the fact that the macroeconomic focus should be on the size of the market relative to the economy.

Further, as chart 2 demonstrates, this is not like the 2007 stock market bubble when the market capitalization of mainland Chinese equities soared to over 160% of the size of the economy and then plunged to about 50% of the economy. Today's ratio is about one-third of that prior peak. Consistent with this observation is the fact that as rich as

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Chinese stocks have become over the past year, the p/e ratio on the Shanghai Composite is now 19.0 times (down from the peak of 25 times in mid-June) in clear contrast to the 70 times ratio in 2007. This 'bubble' thereby pales in comparison.

IPOs And Start-Ups Will Be Hurt, But Equity Issuance Is Low

Likely the largest negative direct effect of a pronounced stock market decline will be a slowdown in IPO activity. At the end of June, rumours began circulating that Chinese regulators were considering suspending IPOs in an effort to stabilize stock market prices and, on July 4th, 28 companies individually announced that they would be suspending their planned IPO offerings. This (and potentially future suspensions) will likely hurt company sentiment, investment and hiring plans among those firms affected. Then again, reduced IPO activity also means less incremental supply forthcoming on the market, and the recent IPO suspension may well have been actively encouraged by policymakers in a direct attempt to support equities.

However, as chart 3 demonstrates, notwithstanding big events like Alibaba's IPO, equity issuance is a very small part of aggregate financing activity in China. It has recently accounted for only about 5% of aggregate financing which is much more dominated by local currency denominated loans and corporate bonds. We actually see the potential for equity financing to rise over the longer term as Chinese company capital structures remain among the most debt dependent anywhere and policymakers have pushed ahead fairly aggressively with regulatory reform to rectify this issue through initiatives like the Shanghai-Hong Kong Connect, greater yuan convertibility and inclusion in the IMF's SDRs basket, and pending inclusion of Shanghai's 'A shares' in the MSCI emerging markets stock index.

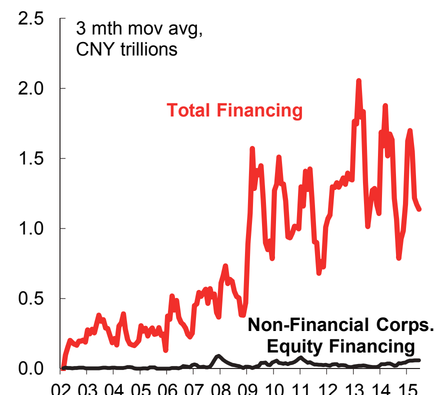
Consumer Spending Is Not Highly Tied To Equity Gains (Or Losses)

How will consumption be helped by gains or hurt by losses in the equity market and, further, how will that translate to overall growth? Our take is that household consumption will likely be only marginally affected in either direction in the short and medium-term, though the situation merits close monitoring. So far, Chinese consumers have not spent their stock market gains in any obvious manner. For example, as chart 4 depicts, retail sales growth has decelerated during the period since last summer when equities soared. Moreover, while a transition to a consumer-based economy is a key long-run policy objective, household consumption remains a relatively small share of total Chinese growth (chart 5). Chinese household consumption expenditure accounts for less than 40% of GDP whereas the U.S. household consumer makes up more than two-thirds of the U.S. economy. This lower weight times little if any obvious wealth effect on spending gives mild cause for concern about broader economic growth.

Why aren't consumers spending equity gains?

1. There is not an extensive body of research documenting the Chinese stock market wealth effect (in part because of the relative nascence of the market, but also due to data availability), but what research does exist shows **a weak wealth effect at best**. For example, the ECB found here that a 10% *sustained* rise in stock prices only increases consumption by 0.12% in China (implying at most about a 1% increase at the peak of the rally). Several other and more recent studies (e.g., Lin Xia *et al* (2010)) have even found a possible *negative* wealth effect, suggesting that stock market gains actually crowd out other forms of returns and that cash can be diverted to equity purchases in lieu of consumption. We would, however, caution that the bulk of the wealth effect research was performed prior to the ramp-up in margin lending which may heighten the wealth effect to a certain extent.

Chart 3: Chinese Company Financing Is Minimally Driven By Equity Issuance

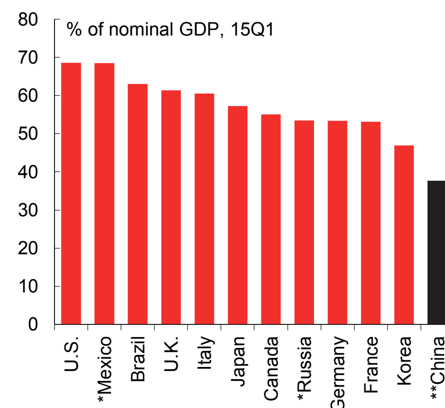


Source: Scotiabank Economics, National Bureau of Statistics of China.

Chart 4: Chinese Consumers Not Spending Equity Gains

Source: Scotiabank Economics, National Bureau of Statistics of China.

Chart 5: Household Consumption Expenditures



Source: Scotiabank Economics, National Statistical Agencies. *14Q4 **2014.

2. There is still **only a very small proportion of Chinese households that are directly invested in the equity market**, even if that share is growing. Valid accounts numbered 175 million at the end of May but, given the removal of the "one investor, one account" rule in mid-April, that number likely overestimates the number of individuals invested in the stock market. The China Securities Depository and Clearing Corporation instead lists 90 million investors in mid-June. With about 1.14 billion citizens aged 15 or older in China, that would imply only 8% of 'adults' had any exposures. Then, there's the complicating factor that, in mid-June, only 55% of the 90 million investor accounts actually contained any securities, suggesting that active investor participation is even lower. That's in sharp contrast to the roughly 50% of Americans who are invested in stocks, according to the Federal Reserve's Survey of Consumer Finances, and 36% of Hong Kongers, according to the Hong Kong Stock Exchange. That said, these national averages do a poor job of highlighting the regional disparities in stock ownership. For example, previous China Household Finance Surveys have estimated stock market participation at less than 2% in rural households and as high as 16% in urban regions.

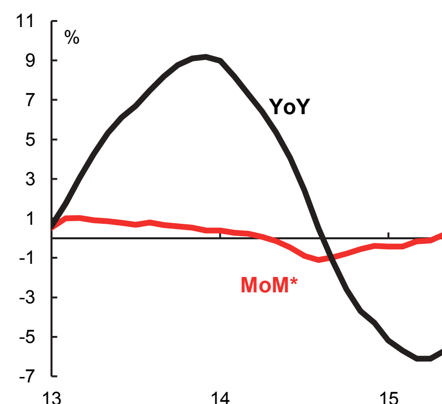
3. If a wealth effect does indeed exist that is not captured in prior studies, **the long and variable lags on consumption** typically found in other markets have not been given enough time to materialize given that all of the equity rally and then correction has occurred within the past year and much of it had occurred since the start of this calendar year. This same recency argument could make it unlikely that there will be a big negative consumption effect on the downside of markets.

Consumers are also facing a variety of other key macro forces that likely trump equity market moves:

1. **Income growth has softened over the past year** and has been decelerating since the end of 2011 when it was rising by about 15% in nominal per capita disposable income terms. More recently, in 2014Q4, income growth was flat in y/y terms and averaged only about 5% y/y over the prior three quarters. Wealth effects can work wonders, but if income growth is waning, then consumers face two choices: smooth consumption by substituting a wealth effect for an income effect; or hoard the gains in wealth to smooth out the balance-sheet effects. Softness in retail sales growth would support the latter interpretation.

2. **The property market remains the largest source of household wealth** and is still fairly weak with prices continuing to fall on a year-over-year basis. A 2014 Peking University study found that 74.7% of Chinese household wealth came directly from owning *real estate* (vs. about 28% in the U.S.). That direct tie has recently been a major policy concern given that the property market — well understood to be oversupplied — has been ailing for well over a year (chart 6). Asset price inflation via the stock market has been a convenient offset for some, and we expect that some enthusiasm about opening new accounts arose from the corresponding pessimism about property as an investment. However, the stock market run has not completely occurred at the expense of property. Instead, the property market began to show signs of life at the peak of stock market gains: m/m seasonally unadjusted prices were positive for the first time in 13 months in May, and the value of home sales has now carved out a bottom and is growing at 16% y/y. A revival in the property market would likely provide a broader and more direct boost to household wealth and, should the Shanghai Composite correction continue, soften some of the blow to national figures. Interestingly, in China, the wealth effect from property has been found to be greater for areas that are less economically developed (see Wang *et al* (2014)) whereas the stock market wealth effect is larger in areas of greater economic development. For policymakers, who are keen to develop Tier 2 and Tier 3 provinces, a rebound in the property market is likely more relevant to national growth.

Chart 6: Chinese Property Prices Bottoming?



*MoM data is not seasonally adjusted.
Source: Scotiabank Economics, National Bureau of Statistics of China.

Chart 7: Is Chinese Consumer Confidence Now Tied To Equities?

Source: Scotiabank Economics, Bloomberg, National Bureau of Statistics of China.

While we don't expect a strong direct wealth effect, there may be indirect effects from stock market fluctuations on households, namely via the confidence channel (chart 7). Recently, Chinese consumer

confidence has surged despite ailing economic fundamentals and appears to have coupled with the Shanghai Composite bull run. Though there may be few households actually invested in the market, the policy focus on the rally has emphasized the modernization and internationalization of China's financial system. A larger and more liquid stock market also implies greater emphasis on equity vs. debt issuance, a key policy objective, and is a boon for China's corporate sector, which would also likely flow through to household confidence. The bad news (or good news in a stock market correction), however, is that confidence doesn't necessarily translate to spending behaviour.

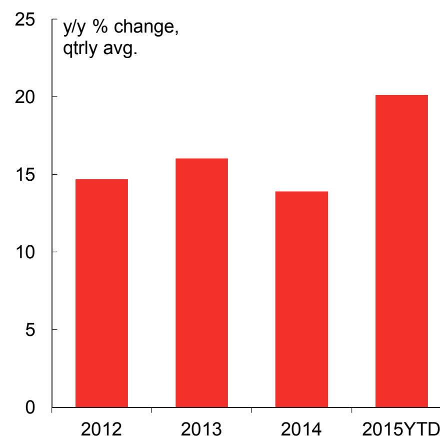
Only A Modest Impact On Financial Industry GDP

Whereas wealth effects on consumption look at the macroeconomic effects of China's stock market on the expenditure side of the GDP accounts, an alternative method entails considering the income side of the accounts. For this, we use GDP by sector and home in on the financial sector's contribution to GDP and what may be driving it. On this count, **it is often assumed that a surge in the financial intermediary sector of Chinese GDP in Q1 was driven by equity market strength that lifted the brokerage sector.** Therefore brokerages boosted what may have otherwise been a weaker Q1 growth rate and, if equities are now sustainably tanking with considerably more to come, this might knock a significant amount off of growth. **We think this view is exaggerated for several reasons**.

As a starting point, all comments on what drove the Q1 surge in financial intermediary output are largely conjecture because there is no data that disaggregates the financial sector in China's quarterly GDP accounts. We therefore cannot tell with hard data if the surge was found at brokerages, banks, life insurers or other elements within the shadow sector.

Second, growth in financial intermediation in Q1 is not as impressive as often portrayed when it is compared to the pre- and post-equity rally trend. Year-ago growth in financial intermediation GDP climbed to 20% y/y in Q1 but had averaged 14% in 2014, 16% in 2013 and 15% in 2012 (chart 8). Thus, financial intermediation growth was already strong prior to the beginning of the equity market rally. With about a six percentage point weight for financial intermediation in Chinese GDP, an acceleration of four to six percentage points in the year-ago growth rate compared to the prior norm would amount to about an extra 0.3% to headline GDP growth in Q1 compared to the trend rate for year-ago growth in broad GDP. That's not insignificant, but it is hardly something that would prompt a sustained hard landing.

Chart 8: Chinese Financial Intermediation



Source: Scotiabank Economics, National Bureau of Statistics of China.

Further, the evidence on the linkage between GDP in the financial intermediation sector and volume measures of stock market activity like trading volumes or margin credit growth is tenuous at best. Note that these stock market trading volume measures recorded explosive growth in Q4 of last year and yet Q4 financial intermediary growth did not surge as it did the ensuing quarter. A test may nevertheless present itself on July 14th when China releases its estimate for Q2 growth. Given that volume measures in the brokerage sector particularly accelerated in Q2 including new account openings and trading volumes on the Shanghai exchange, one might expect even more rapid growth in the financial intermediation sector.

There are also other possible candidates for explaining the surge in financial intermediation value added during Q1. We don't know the price deflators for this sector and hence whether there is evidence of instability in how China accounted for real versus nominal GDP in the financial sector. Additional contributions to Q1 financial intermediation GDP could have included the effects of financial liberalization particularly on the rates side of the picture. Regardless, other sectors could well accelerate to mitigate the effects of a cooler financial sector. A pick up in Eurozone and US growth, for instance, would pull more Chinese exports and lift multiple sectors, which we expect to occur, and a property market revival would also help.

Margin Calls Do Not Yet Pose Systemic Risk

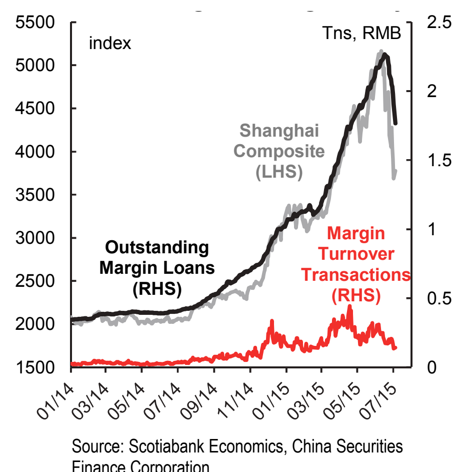
According to China Securities Finance Co. data, the number of investors in margin transactions reached 3.7mn at the end of May, and the outstanding balance of margin loans grew to as high as RMB 2.27tn on June 18th before dropping back to RMB1.771tn over the following two weeks (chart 9). Of note, is that outstanding margin loans have now fallen by 22% from their peak value but are still 150% larger than they were in November 2014 in a market that was only launched in March 2010 via a pilot program. **The fear now is that pronounced stock market losses will trigger a series of margin calls that**

push investors to sell equities, depressing the stock market further and snowballing losses. Given the extent of margin growth coupled with the inexperience, we continue to see heightened leverage as a risk to further equity market volatility and losses. However, **our sense is that it is too early to fear mass margin calls and particularly a large macroeconomic impact from them.**

Firstly, **policymakers are clearly focused on preventing systemically disruptive margin calls.** Critically, on July 2nd, regulators significantly adjusted margin trading by cancelling the rule that investors need to add collateral within two days or face forced liquidation should the ratio of the market value of collateral to stocks bought by their loan (i.e., the maintenance ratio) fall below 130%. In essence, they removed the hard limit that would automatically trigger margin calls. Now, brokers can discuss circumstances on a one-to-one basis instead of a compulsory sell-off, and may roll over margin trading contracts for up to 6 months. The move provides investors (and brokers) with a longer-term window to generate gains, thereby reducing the short-term volatility associated with margin calls. For a momentum-driven market, that is a significant policy move. Then, on July 5th, the PBOC also committed to providing additional liquidity to the China Securities Finance Corp, which manages short selling and margin trading, likely in an proactive attempt to stem larger systemic risk. Policymakers also appear to be very closely monitoring margin call activity. While the rest of the world has limited data, the China Securities Regulatory Commission said on June 29th that margin calls had totaled only 2.2bn yuan that day, and were thus still a "fraction" of transaction values and "nowhere near" dangerous levels. Of course, there is a policy incentive to downplay panic selling, but the advantage of heavily involved policymakers is that they have the will and the ways to backstop this type of market activity should it dangerously accelerate.

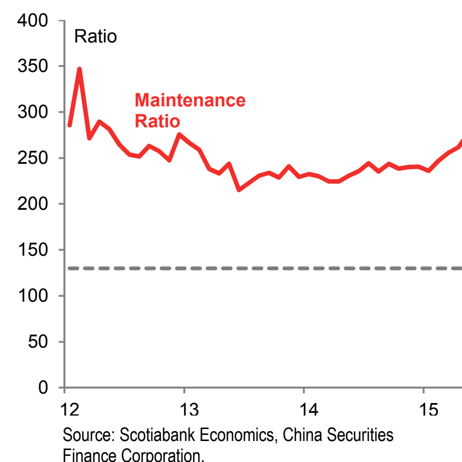
Secondly, if we consider that 130% is a benchmark maintenance ratio, even if it has now been removed, the average margin maintenance ratio in the system was running at 277% at the end of May, according to China Securities Finance Co. data available here. This measure matters more to us than margin debt to the free float (i.e., excluding equities owned by the state that do not trade) since it more closely reflects underlying collateralization. That number will have since fallen now that equities are down 20% since the last day in May, but it's suggestive that overall macro risk of margin calls is still low.

Chart 9: China's Margin Trading Activity



Source: Scotiabank Economics, China Securities Finance Corporation.

Chart 10: Average Margin Maintenance Ratio Well Above 130%



Source: Scotiabank Economics, China Securities Finance Corporation.

There are, however, a few reasons why we should be cautious about relying on the reported maintenance ratio. First, we only have access to the 'average' maintenance ratio, and the presence of a fat tail or cluster of brokerages with lower maintenance ratios may mean the average data is misrepresentative. The speed at which regulators jumped in to remove the 130% requirement suggests they saw current or future risk around that level. Second, it is the broker's responsibility to mark-to-market securities relevant to the maintenance ratio. Third, margin financing via brokerages isn't the only way that investors have been levering up: umbrella trusts, wealth management products, peer-to-peer lending, and other financing companies are thought to be providing loans tied to stock performance, though these are far less transparent, regulated or influenced by policymakers.

Third, the direct exposure of the key banking sector to margin loans is fairly small as observed by Fitch in its recent assessment here.

In conclusion, we're not unconcerned about the macroeconomic effects of correcting Chinese equity markets but not sufficiently worried to view it as hard landing material versus a relatively minor and short-lived drag on economic growth and financial stability.