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North America

Short-End Notes

Basel III Supplementary Leverage and Short-Term Markets

- **Supplementary leverage ratio** — The Federal Reserve announced that 8 large bank holding companies will have to comply with a 5% "supplementary leverage ratio" based on a ratio of capital / total assets with no risk-weighting scheme.
- **More balance sheet pressure for repo** — Banks will either need to raise equity or reduce assets to comply with the new leverage ratio. We think banks are likely to reduce repo assets and consequently reduce repo liabilities. The reduction in investable repo may lead to a decrease in short-term rates.
- **More regulation to come** — We note that Federal Reserve member comments continue to suggest a desire to do more to disincentivize repo matched book activity at banks. This could take the form of a special capital surcharge applied to short-term securities funding transactions.

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Basel III Leverage and Short-Term Markets

The "supplementary leverage" ratio is likely to shift the perspective on bank balance sheets from return on risk-weighted assets to return on assets. In our view, this will lead to more balance sheet pressure on repo and short-term books, leading to lower rates for short-term investors, and higher cost of repo leverage.

8 large banks will be subject to a 5% total leverage ratio.

On July 2 the Federal Reserve adopted a final rule implementing Basel III capital adequacy ratios.[1] It is being proposed that the 8 globally systemic important bank holding companies (G-SIBs) be subject to a 5% minimum "supplementary leverage ratio."[2] Rather than a tier-1 capital / risk-weighted asset ratio (tier-1 ratio), the supplementary leverage ratio would measure tier-1 capital / total assets without taking into consideration the relative risks inherent in the assets. Regulators envision the two ratios serving complementary functions: the tier-1 ratio is meant to discourage banks from keeping leverage low and buying risky assets, while the supplementary leverage ratio is meant to ensure that capital is adequate even if risk-weighting schemes do not appropriately reflect the relative riskiness of assets.

Banks need to either raise $63 billion in equity or sell $1.3 trillion in assets.

In recent years, the tier-1 capital ratio has been seen as the binding constraint and G-SIBs have looked at their balance sheets from a return on risk-weighted assets perspective. Tier-1 ratios are now well in excess of the 6% that will be required under the recently adopted rule. On the other hand, Citi equity analysts estimate that most G-SIBs are either below or only slightly above the minimum 5% supplementary leverage ratio requirement. (Figure 1) Regulators have stated that G-SIBs would need $63 billion in additional capital to meet the 5% supplementary leverage ratio. Alternatively, if G-SIBs do not raise equity, they would need to reduce assets by around $1.3 trillion or 12% of total assets. While the new leverage ratio does not come into effect until 2018, banks will likely want to comply early.

Focus on return on risk-weighted assets may shift to simple return on assets.

With the supplementary leverage ratio as a potentially binding constraint, we expect the focus at G-SIBs to move away from return on risk-weighted assets and toward return on assets. This is important for short-term markets as assets like Fed reserves, T-bills and reverse repo agreements carry low or no risk weight, but will be counted as assets under the supplementary leverage ratio measure. Since these assets typically offer low returns and can easily be sold or naturally allowed to run off, we think it is likely that banks will shrink their asset holdings in these areas.

Figure 1. "Supplementary Leverage" ratio may pressure bank balance sheets

G-SIBs	Tier-1 Ratio	Leverage Ratio	Assets	Cash + Deposits (Asset)	Reverse Repo (Asset)	Repo (Liability)
Bank of America	12.3%	4.9%	2,174	113	221	248
Bank of New York	13.6%	3.9%	356	83	7	9
Citigroup	13.1%	NA	1,882	174	270	222
Goldman Sachs	14.4%	5.3%	959	104	159	155
J.P. Morgan	11.6%	4.9%	2,389	303	218	248
Morgan Stanley	13.9%	3.9%	801	74	140	119
Wells Fargo	11.8%	6.8%	1,437	16	143	38
State Street	18.0%	5.0%	218	44	9	12
Avg or Total	**13.6%**	**5.0%**	**10,216**	**911**	**1,167**	**1,051**

Source: Citi Research, Company filings, leverage ratios are estimates from Citi bank analyst Keith Horowitz

[1] This rule was adopted by the other coordinating agencies, the OCC and FDIC on July 9.

[2] 5% is the proposed ratio for bank holding companies, with insured depository institution subsidiaries separately required to meet a 6% ratio. Non G-SIB banks must comply with a 3% ratio. Regulatory capital ratios are typically stated as Capital / Assets (e.g. 5% implies 20x leverage).

Decreased repo assets likely matched by decrease in repo liabilities.

Balance sheet pressure will not fall only on the asset side, as the reduction in assets will be met with a simultaneous decrease in liabilities. For example, a bank today might borrow $1 billion cash at 5bp from a money market mutual fund in the tri-party repo market and place the cash at the Fed to earn 25bp IOER. From a risk-weighted assets perspective, the trade generates 20bp on low or no risk-weighted assets. However, from a supplementary leverage ratio perspective the trade negatively impacts leverage by the same amount as a $1 billion investment in a higher risk, higher yielding asset. Under the new leverage ratio, the 20bp return on the IOER arbitrage is unlikely to meet the bank's hurdle rate, and we would expect banks to reduce both their holdings of Federal reserves and their repo liabilities. As the investable universe of repo available shrinks, we expect repo rates for cash investors, like money funds, to decline further from their already low levels.

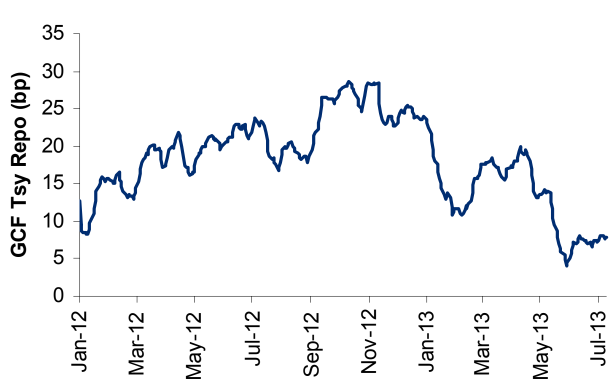
US offices of foreign banks may continue to increase their presence in short-term markets.

The example presents an interesting dilemma as the total supply of Federal reserves is, for the most part, set by the Fed and hence the banking system can not in aggregate reduce its holdings of reserves. Since we expect US banks to hold less reserves, the residual has to be made up by US offices of foreign banks which can earn IOER but are not subject to the US implementation of Basel III. Similar to when the FDIC imposed a fee on assets in 2011 we expect an increasingly large share of Fed reserves to build up on foreign bank balance sheets. (Figure 3) However, foreign banks typically cannot raise deposits in the US and we could see increased issuance of USD CP and repo borrowing from foreign banks. On the other hand, as Federal Reserve Governor Daniel Tarullo emphasized in his July 11 congressional testimony, the Fed has proposed requiring US operations of foreign banks to conform to US regulation and limit their reliance on short-term wholesale funding.

Cost of leverage may increase as dealer matched book activity comes under pressure.

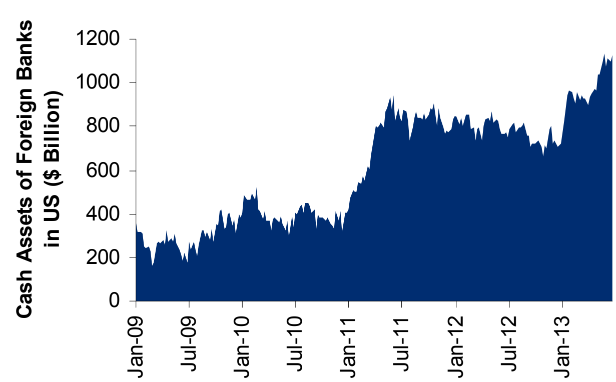
While those investing in repo are likely to face lower rates under the supplementary leverage ratio, investors who source leverage in repo markets may see somewhat higher rates and a reduction in overall leverage available. While we expect balance sheet pressure to reduce dealer matched book activity, this should be moderated by the fact that netted repo agreements that are off-balance sheet are not counted in assets under the current proposal.[3]

Figure 2. Repo rates may decline as banks reduce liabilities



Source: Citi Research

Figure 3. US offices of foreign banks likely to hold more Fed reserves



Source: Citi Research

[3] The rule is somewhat noncommittal in leaving repo off-balance sheet stating "With regard to commenters requesting a modification of the proposed treatment for repo-style transactions, the agencies do not believe that the proposed modifications are warranted at this time because international discussions and quantitative analysis of the exposure measure for repo-style transactions are still ongoing."

More capital for repo matched books?

Tarullo has argued for a capital surcharge on repo transactions.

While the supplementary leverage ratio may indirectly dissuade banks from overreliance on short-term securities financing transactions (SFTs), several regulators continue to argue for more direct regulations of SFTs. In his July 11 testimony Tarullo stated that “SFTs, particularly large matched books of SFTs, create sizable macroprudential risks, including vulnerabilities to runs and asset fire sales.” In previous comments and in his congressional testimony, Tarullo has advocated imposing a direct capital surcharge on SFTs. On May 2013 he stated that a “capital charge applied to SFTs might be a useful piece of a complementary set of macroprudential measures, though an indirect measure like a capital charge might have to be quite large to create adequate incentives to temper the use of short-term wholesale funding.”

Other Federal Reserve members have supported liquidity funds and minimum haircuts.

Tarullo’s is not the only proposal that has been floated for regulating SFTs. Federal Reserve Vice Chairman Janet Yellen has proposed, in addition to increased capital, applying consistent minimum haircuts across all lending collateralized by each asset class. Another recommendation from Federal Reserve Bank of New York President William Dudley is to create a liquidity fund for repo collateral that would potentially be capitalized by a surcharge on repo transactions.

While it is too early to say exactly what form future regulation of repo markets will take, we expect that the Fed will propose further regulation to disincentivize banks from running large matched books.

Appendix A-1

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