Note: The following is an abridged version of *Top of Mind: Regulatory Rollback* published July 26, 2017.

Goldman Sachs | Global Macro Research

ISSUE 59 | July 26, 2017

TOP of MIND

REGULATORY ROLLBACK

Potential regulatory rollback in the US financial sector—outlined in the Treasury Department's report issued last month—and its implications are Top of Mind. We debate the merits and shortfalls of the current regulatory framework and the Treasury's proposed changes with Michael Barr, a key architect of the Dodd-Frank Act, and Steve Strongin, Head of GS Research. Our respective bank equity and credit analysts, Richard Ramsden and Louise Pitt, assess the implications for bank investors: positive for shareholders, although interest-rate normalization is most important, and negative (albeit manageable) for bondholders. We also ask GS Chief US Equity Strategist David Kostin how to think about drivers of upside in his two overweight sector recommendations: Financials and Tech. Finally, we look at the broader investing implications of deregulation, including the potential return of arbitrage profits and a likely tailwind for low-vol assets as funding conditions improve.

"Some areas of the [Treasury] report perhaps didn't strike the right balance—where I thought we should be seeking tougher rather than weaker rules—and still others I found altogether unsettling and misguided.

- Michael Barr, former Assistant Secretary for Financial Institutions, US Department of the Treasury

[These proposed changes] are about making it easier for people who need banking services to get those services at a price that correctly reflects the risk involved.

- Steve Strongin, Head of Goldman Sachs Research"

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Regulatory rollback

US Financials stocks surged post the US election on expectations of rising interest rates, tax reform, and regulatory rollback. Since then, the policy and regulatory outlook has remained a key driver of bank performance—most recently with the release of a report by the Treasury Department last month that proposed changes to capital and liquidity rules, bank stress testing, and other post-crisis regulatory frameworks. The implications of these proposals for the financial system, the markets, and the economy—not to mention the banks—are Top of Mind.

We kick off by putting Steve Strongin, Head of GS Research, in the hot seat, asking the question on many people's minds: Wouldn't easing regulation just be a boon for the banks, jeopardizing the health of the financial system to boot? His answer: If the tradeoff really boiled down to bank profits versus bank safety, the latter would win hands down. The impetus for revisiting regulation isn't its impact on banks, but its impact on the flow of bank credit within the economy, which has put small firms at a disadvantage to large ones. Longer-term, these effects raise concerns about US competitiveness, productivity and dynamism.

As for whether post-crisis regulation has made us safer today, Strongin argues that while some rules—such as high capital requirements and rigorous stress tests—have made banks safer, post-crisis regulation in aggregate has created new vulnerabilities in the financial system. In his view, rules that don't take into account the different risk profiles of bank assets—the Supplementary Leverage Ratio (SLR), for example— limit banks' ability to engage in even safe activities, which could actually worsen periods of market stress. He therefore contends that adjusting the current rules to make it easier for banks to engage in low-risk activities would make the system more resilient.

In contrast, Michael Barr, former Assistant Secretary for Financial Institutions at the Treasury Department and a key architect of the Dodd-Frank Act, balks at the notion that the system might be less resilient under current rules; in his view, there is little doubt that firms with more equity funding are better able to withstand a crisis and therefore better positioned to step in to help moderate its effects. And while he agrees that the flow of credit to small businesses is not where we'd want it to be, he sees little evidence that regulation is to blame. In short, Barr generally disagrees with the notion that current rules have gone too far and should be rolled back.

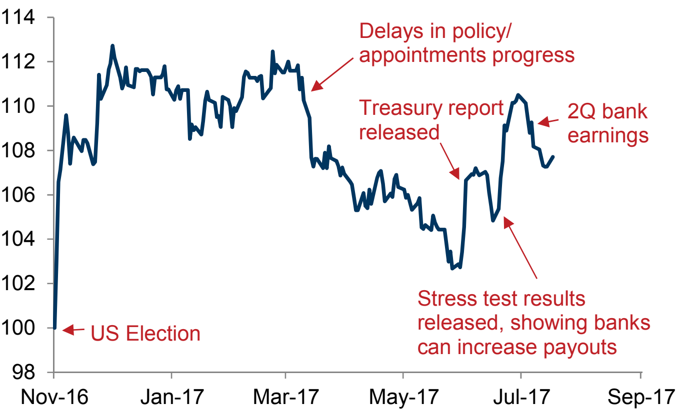
All that said, the likelihood of at least some rollback is relatively high, according to GS Chief US Political Economist Alec Phillips. That's because the majority of the proposed changes only require regulatory agencies to re-interpret existing rules or create new ones, rather than Congress passing new legislation. While implementation is likely to be slow—starting in 2H18 at the earliest—such non-legislative changes should face relatively few obstacles as the administration fills vacant agency leadership seats with people supportive of its agenda.

So what—if anything—does this mean for investors? Fresh off of 2Q17 bank earnings results, we sit down with GS Large-Cap Banks Analyst Richard Ramsden to discuss how much impact investors can expect deregulation to have on US bank earnings and equity performance. He sees roughly 13-14% earnings upside for the sector from re-interpreting and re-writing rules alone, which could extend to 25% upside for the largest banks if less-likely legislative changes also occur.

However, Ramsden emphasizes that interest-rate normalization, not regulatory rollback, will likely be the largest driver of earnings growth. He also expects support from buybacks, which shareholders will continue to prefer to re-investment as long as banks' return on equity (ROE) remains below the c.10% threshold that investors typically demand. Although low inflation and policy uncertainty pose risks to Ramsden's relatively sanguine sector view, he maintains that that the risk/reward on banks remains compelling, especially with their reasonable dividend yield relative to the S&P 500. Chief US Equity Strategist David Kostin agrees, recommending an overweight on Financials; see pg. 13 for his comparison of Financials versus Tech, his other overweight recommendation.

Banks' bumpy ride

US Financials sector vs. S&P 500, indexed to November 8



Source: FactSet, Goldman Sachs Global Investment Research.

But the news is not as upbeat for all bank investors. GS Head of Global Banks Credit Research Louise Pitt argues that a somewhat less stringent regulatory framework would likely be a net negative for US bank bondholders, who have substantially benefitted from strong regulatory oversight in the post-crisis period. Although she sees the impact of proposed regulatory changes on credit profiles as manageable, they are one reason she believes we are past peak credit strength in US banks.

While bank investors have a lot at stake, a much broader group of investors could also feel the impacts of regulatory rollback. GS Senior Mortgage Strategist Marty Young and Head of Credit Research Lotfi Karoui explain how an improvement in funding conditions (via a revival of repo lending) resulting from regulatory changes may return arbitrage profits to short-term investors, while enabling longer-term investors to use leverage to shift allocations towards lower-volatility asset classes.

Finally, for those who could use some background before digging in: See pgs. 15-16 for a refresher on current rules and regulations, pg. 6 for an overview of key Treasury proposals, and pg. 9 for a long history of US financial regulation.

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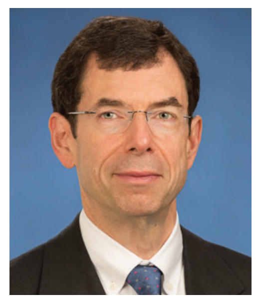
Interview with Steve Strongin

Steve Strongin is Head of Goldman Sachs Research. Below, he argues that a subset of post-crisis capital and liquidity rules—intended to enhance safety and soundness—have unintentionally made it more difficult for banks to service investors and small businesses.



Allison Nathan: Is the financial system safer under the post-crisis regulatory framework?

Steve Strongin: Banks are clearly safer, particularly the big banks. But whether the financial system as a whole is safer is less clear. The rules have ensured that individual participants have less risk. The big banks, for example, are much better capitalized. They have more stable funding. Their balance sheets are more transparent and are easier for investors to assess. Perhaps most importantly, regulators are in a position—even in a period of market stress—to assess bank solvency and to force banks to address any inadequacies without putting government funds at meaningful risk. What's more, all of this can be accomplished in a much faster, more complete, and far more transparent manner than in the past.

At the same time, the post-crisis rules appear to have created new vulnerabilities in the financial system by constraining what participants can do when the system is stressed. For example, the new rules significantly limit banks' ability to respond to market dislocations, either directly as risk-takers or indirectly as intermediaries on behalf of other participants. The key issue is that the overlap of capital, leverage, and liquidity requirements, as well as restrictions under the Volcker Rule, may keep banks from providing needed services. This is not because banks don't have enough capital or liquidity. Rather, it is because constraints from the Supplementary Leverage Ratio (SLR) or the Liquidity Coverage Ratio (LCR) prevent them from using those resources when their clients and the markets need them most. The problem is that these rules are not risk-based and can actually become binding even as banks or their clients are attempting to reduce risk in periods of stress.

A simple example shows how this could happen. During a period of market stress, clients often choose to rotate out of risky securities into cash. If they were to deposit that cash at a large bank, those deposits would use up capital under the SLR, even if the bank were to deposit those funds at the Federal Reserve or hold them in Treasury bills. Similarly, if other clients wish to pledge Treasury bonds in order to purchase the securities, the SLR and LCR would constrain the bank's ability to provide the necessary funding, even if the purchases were over-collateralized.

Pre-crisis, banks would have simply expanded their balance sheets to allow the first set of clients in the example to reduce their risk and the second set to assume that risk. In fact, it was not uncommon in periods of stress for the Federal Reserve to strongly encourage such actions, perhaps most famously after the 1987 market crash. Under the current rules, however, banks would find their ability to provide these services constrained by the non-risk-based rules, forcing clients to execute trades less efficiently and with less surety. This would incentivize sellers to rush to claim limited market capacity, and would prevent buyers from getting to market in the same size and speed, which could generate significantly greater market stress and larger price dislocations than in the past.

Allison Nathan: Won't we be jeopardizing the level of safety we've achieved if we adjust the rules to give banks more flexibility?

Steve Strongin: Adjusting the rules so that banks aren't charged for safe activities like holding cash on their balance sheets, keeping cash reserves at the Federal Reserve, maintaining good collateral, or holding well-managed margin would help make the system safer. The current rules have created a situation in which even activities that are widely considered "safe" have been dis-incentivized. I don't think anyone intended for the leverage rules to bind in this way; the risk-based capital rules were designed to ensure that there is enough capital to deal with a bank's risk, and the leverage rules were supposed to provide back-up. But, in reality, there have been unintended consequences from having overlapping regulatory frameworks.

Allison Nathan: But is there merit to the idea that we need rules that are not risk-based, given that risk weightings aren't perfect?

Steve Strongin: Risk-weighted metrics are not perfect. But stress tests provide a very sensible and risk-based cross-check on banks' internal models. Rules like the SLR, however, are based on the notion that a simple non-risk-based system can improve risk management, which is flawed logic. In the end, any non-risk-based system punishes low-risk activities while rewarding high-risk ones. That can't be the right answer.

The demand for non-risk-weighted metrics originally came from the belief that such systems would have helped us avert the recent financial crisis. In particular, the view was that these metrics create a transparent cross-check on regulators, particularly across international borders. A decade ago, these concerns were warranted. Today, various forms of public stress tests have created a much more transparent way of assessing whether regulators are meeting their obligations both within and across jurisdictions. Whether non-risked-based systems would have helped avoid the financial crisis isn't clear; the perverse incentives they create and their inferiority to public stress tests is far clearer.

Allison Nathan: Even setting aside specific rules, it's hard to get away from the sense that proposals to roll back financial regulation would just be a boon for the banks. What are your thoughts?

Steve Strongin: This is not about what's good or bad for banks. In fact, the policy debate seems to have gone awry because it has come down to a narrow question of choosing between bank profits and bank safety. If that were really the tradeoff, we would obviously just opt for bank safety. What this

is really about is how the post-crisis rules have played out in the economy, particularly on a micro level. The answer, unfortunately, is that the confluence of the new rules has restricted the flow of bank finance through the economy, with consumers and small businesses shouldering the brunt of this change. In fact, for the entrepreneurs and small businesses that are still able to access bank financing, loans now come at rates that are uncompetitive with rates large corporates can obtain through the public debt markets. What this means is that we've effectively seen the financing costs of large corporations decline relative to small businesses. This in part explains why large companies have experienced a stronger recovery than smaller ones—and why the US economy is increasingly becoming dependent on the largest businesses.

This dynamic has contributed to broader problems in the economy because large, public corporations are typically at the high end of automation and the low end of employment. In contrast, smaller firms are typically more dynamic, more engaged in new product development, and generally employ more people per unit of capital—and often people with less formal education—than do large firms. So the way banks are regulated today is implicitly rearranging who wins and who loses on a micro level. This is a problem in and of itself. But what amounts to relative winners and losers today could translate into a loss for the economy over the longer run in terms of competitiveness, productivity, and dynamism.

Allison Nathan: Surveys of small businesses actually show that bank financing is readily available. Doesn't this suggest that the slowdown in small-business growth owes more to a relatively weak economy?

Steve Strongin: Financing is available, but, again, at what price? The issue is relative prices and how they affect relative performance. Spreads on small-business bank loans are anywhere from 200-400bp higher than the spreads that large corporations pay through the public debt markets. But those higher costs may be less important than the tighter restrictions on credit cards and second mortgages, since small business formation is more dependent on consumer credit than on business credit. More broadly, I don't think you can blame the economy for the weakness in small-business growth. The economy was hit just as hard in the 1980s, but small businesses actually led us out of that recession—the opposite of what we are seeing today. The difference is that in the '80s substantial effort was made to ensure that bank finance remained available and cheap—perhaps too cheap. But the end result was a lot of small-business growth.

Allison Nathan: Banks seem to have a lot of excess cash to channel into dividends or buybacks. So why can't they just charge less for loans?

Steve Strongin: It's a reasonable question. A large part of the reason banks return capital through dividends and buybacks is because their businesses aren't generating a high enough return on equity (ROE) to attract new shareholders. To take a simplified view of the markets: assume investors demand a 10% ROE. If a company or industry is earning less than that, it will return capital—or will be denied fresh capital by investors—until its aggregate ROE rises to 10%; conversely, if a company or industry is earning more than 10%, it will raise capital or reinvest earnings until the ROE falls back to 10%. In short, companies with an ROE above 10% will keep raising new capital until their industries grow, and the ones below 10% will keep returning capital until they shrink.

While the 10% ROE threshold we use in the example is obviously an oversimplification, it does provide a rough guide of what we're seeing today. US economic growth during this recovery has been slower than the historical trend, but the corporate side of the economy has actually expanded much faster than average. Large corporations with a higher rate of return have been able to raise capital by selling equity and bonds and have therefore expanded their businesses. On the other hand, smaller businesses that aren't earning a sufficient ROE have been shrinking. If you want competitive financing for small businesses, banks need to be able to lend to them at lower rates while earning an adequate ROE for bank shareholders.

Allison Nathan: Banks and other market participants have voiced substantial concerns about a decline in market liquidity under the current rules. Would the Treasury's suggested changes alleviate those concerns?

Steve Strongin: The rules have reduced liquidity in two main ways. First, banks' inability to warehouse risk has made it harder for them to manage risk for clients. For example, banks haven't been able to facilitate client transactions in relatively illiquid assets or in areas where there is significant basis risk as easily and cheaply as they could have historically. The recent Treasury proposals should help somewhat with this issue.

Second, banks have not been in a position to provide balance sheet to help clients with these same trades. As we discussed, banks either can't provide funding to clients to take on risk secured by collateral, or they must charge far more to do so. In order to restore liquidity to the markets, this will have to change. Even collateral where positions are easily marked and subject to daily variation margin are treated as having significant risk both by the liquidity and the counterparty rules. The Treasury has proposed recalibrating the liquidity rules to address this issue, but the rules are fairly subtle and will take time to rework. New collateral rules with much more detail than what the Treasury proposal covers would also be required. But the proposals certainly open the door to correcting those problems.

Allison Nathan: Looking across the Treasury's proposals, can you summarize what measures you see as necessary?

Steve Strongin: The key revisions are: first, ensuring that risk-based capital rules, particularly the Fed's Comprehensive Capital Analysis and Review (CCAR), are correctly calibrated and transparent. Second, restructuring the non-risk-based leverage and liquidity rules to make them less binding—as originally intended—so that low-risk activities return to the system in an orderly fashion, will provide liquidity. These changes aren't about increasing the risk in the system, or about making it easier to run a bank. They are about making it easier for the people who need banking services to get those services, and at a price that correctly reflects the risk involved.

Regulatory reform: what and when?

Alec Phillips writes that many proposed changes to bank regulation appear likely

In its June 12 report on financial regulation, the Treasury Department proposed a variety of changes to the US implementation of Basel and the Dodd-Frank Act. Unlike many other policy proposals out of Washington, the relatively detailed nature of the Treasury's recommendations, along with the turnover expected at federal regulatory agencies and the ability of regulators to implement most of the changes without congressional approval, suggests that many of the changes will be made. But it may take some time before that occurs.

What's on the table?

In general, there are three categories of potential changes:

- **Supervision:** On a day-to-day basis, regulators will make decisions that do not rise to the level of formal rulemaking, involving incremental changes within the range of outcomes envisioned in existing regulations. For example, the changes to modeling or certain assumptions used in the CCAR stress-test envisioned in the Treasury report might be possible without new rulemaking; the additional discretion under the Volcker Rule that the report raises might also be possible via changes to guidance and examination procedures.
- **Regulation:** Issues that are broader in scope or would result in a more meaningful policy change would generally require a formal rulemaking process. This includes the bulk of the Treasury's recommendations, including some of the proposed changes to the CCAR stress test process, changes to capital, liquidity, and leverage requirements, as well as more substantial changes to the Volcker Rule (such as eliminating the presumption that positions held less than 60 days amount to proprietary trading).
- **Legislation:** Changes that would conflict with existing law would need to run through Congress but this appears to include only a few segments of the Treasury's proposals. First, some proposed organizational changes would need congressional approval, like restructuring the Consumer Financial Protection Board (CFPB) and the Financial Stability Oversight Council (FSOC). Second, the asset thresholds used to tier banks for various requirements—stress tests, living wills, Volcker Rule coverage, or FSOC designation—would take legislation to change. Third, some Dodd-Frank rules were specific enough that modifications would require legislation, like mortgage risk-retention rules. Fourth, the Treasury raises the possibility that institutions meeting a certain capital threshold should be able to opt out of all capital and liquidity requirements and "nearly all" Dodd-Frank requirements, including the Volcker Rule. This is similar to the "off ramp" envisioned in the House-passed Financial CHOICE Act, and would clearly require legislation.

What's likely?

Many of the proposed changes appear likely. We expect that President Trump will nominate individuals to fill key financial regulatory positions who agree with the recommendations laid out in the Treasury's report. If so, most of the changes that are possible via the rulemaking process, including changes to capital and liquidity rules, the Volcker Rule, and the CCAR process, should eventually be implemented.

That being said, regulators will need to decide which changes to prioritize. Recalibration of the Supplementary Leverage Rules (SLR) appears to be a priority, potentially with an exclusion of certain types of assets from the calculation (though we expect that excluding Fed deposits could have broader support among regulators than excluding Treasuries). Streamlining the Volcker Rule also appears toward the top of the agenda; Acting Comptroller of the Currency Keith Noreika has announced that the agency would solicit comments on potential changes to the rule, for example. Changes to the CCAR process are also likely, particularly in light of the fact that the Fed can make changes unilaterally without coordination with other regulatory agencies.

Meanwhile, legislative changes are less likely and will probably focus on smaller banks. The House has already passed the Financial CHOICE Act along party lines, but the bill would require 60 votes in the Senate and is unlikely to gain bipartisan support. Senate Banking Committee Chairman Mike Crapo is likely to seek a bipartisan agreement on a much more modest set of reforms that is unlikely to include most of the Treasury's legislative recommendations. Reducing regulation of small and community banks has the broadest support among any of the issues that the Treasury report raises; while important, such changes are apt to have a smaller financial market impact.

How soon?

Neither the regulatory nor legislative processes are likely to result in quick implementation of many of the proposed adjustments. Most of the changes must be made through a joint rulemaking process at federal agencies, which seems unlikely to begin in earnest until key regulatory appointments have been made. This includes filling vacant positions on the Federal Reserve Board, including Randal Quarles's nomination for the role of vice chair for supervision, and potentially replacing officials whose terms will soon expire, like Fed Chair Janet Yellen (term expires January 2018), FDIC Chairman Martin Gruenberg (late November 2017), and CFPB Director Richard Cordray (July 2018).

The issues that require joint rulemaking with other financial regulators—which include most of the capital and liquidity rules—are unlikely to see much regulatory action before next year, in our view, as it is likely to take new personnel at least a few months to develop proposals and release a proposed rule, another few months to collect and respond to comments and publish a final rule, and another 60 days thereafter before the changes take effect. Legislation is likely to take just as long, as we don't expect the Senate to begin to move financial regulatory legislation until later this year, at the earliest.

Overall, while many of the Treasury's proposed changes seem poised to move forward, they are unlikely to be implemented before the second half of 2018.

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A look at key Treasury proposals

	Background	Treasury's Proposed Change(s)	Key Arguments in Favor of the Change ✓	Key Arguments Against the Change ✗
SLR	The **Supplementary Leverage Ratio (SLR)** sets a minimum level of capital relative to total assets, in contrast to rules that measure capital against risk-weighted assets. An enhanced SLR (eSLR) applies to US BHCs and their IDI subsidiaries.	• Exclude cash held with the Fed, US Treasuries, and customer initial margin from the denominator of the SLR (this would reduce the capital a bank needs to hold to meet the SLR minimum). • Revisit the eSLR.	• The SLR should be a backstop to risk-based rules but is sometimes binding. • It disincentivizes relatively "safe" activities. • It has reduced banks' balance-sheet capacity for client business. • The eSLR goes beyond the international standard and thus puts US banks at a disadvantage.	• Risk weights can prove flawed and/or could be manipulated. • Excluding assets from the SLR creates a slippery slope for other exceptions. • Higher standards like the eSLR are warranted for the largest banks.
LCR	The **Liquidity Coverage Ratio (LCR)** requires banks to hold a minimum amount of high-quality liquid assets (HQLA) to cover their total net cash outflows over a 30-day stress scenario.	• Only subject internationally active banks to the LCR and apply a less-stringent standard for non-G-SIBs. • Expand the definition of HQLA (e.g., include high-grade municipal bonds).	• US LCR is stricter than international standard and thus puts US banks at a disadvantage. • The LCR could constrain banks from accepting deposits at a time of stress. • Investing in lower-yielding HQLA reduces net interest income, which can be challenging for smaller BHCs.	• Banks must be prepared for a sharp deterioration in their liquidity positions. • Predicting market interactions during a crisis is challenging, and safeguards like the LCR are therefore warranted. • Reducing LCR requirements for smaller banks adds potential liquidity risk to the system.
TLAC	G-SIBs are required to hold a minimum level of **Total Loss-Absorbing Capacity (TLAC)**—high-quality capital and a specific amount of "plain vanilla" long-term debt—relative to either risk-weighted assets or total leverage exposure.	• Revisit the mandatory minimum debt ratio in the TLAC and minimum debt rule. • Recalibrate TLAC requirements for foreign banks based on the foreign parent's ability to provide capital/liquidity to the US IHC.	• The US TLAC standard is higher than the international standard and puts US banks at a disadvantage.	• US banks' importance to the global financial system justifies a higher standard to be sure that they can adequately absorb losses in a crisis.
G-SIB Surcharge	The **G-SIB surcharge** is an extra capital requirement for global systemically important banks or G-SIBs. It tiers banks according to systemic importance. The US surcharge also considers banks' reliance on short-term wholesale funding.	• Reevaluate/recalibrate the surcharge, including the component that measures reliance on short-term wholesale funding.	• US G-SIB surcharge is stricter than the international standard and therefore harms US banks' competitiveness. • The current rule penalizes US G-SIBs for short-term wholesale funding. • The current rule uses a capital metric to address a liquidity concern.	• A higher US surcharge encourages G-SIBs to reduce their systemic footprint. • Short-term wholesale funding is less stable; reliance on such funding must be considered, as it could make banks more vulnerable to fire sales.
Volcker Rule	The **Volcker Rule** prohibits proprietary trading (with some exemptions for activities such as underwriting and market-making) and bank ownership/sponsorship of hedge funds or private equity funds.	• Exempt banks with ≤$10bn in assets and any larger entities within certain limitations on trading assets/liabilities. • Narrow and simplify the definition of proprietary trading. • Reduce the compliance burden for hedging. • Improve regulatory coordination on the rule.	• The Volcker rule is overly complex and creates undue compliance burdens, particularly for smaller banks. • It has reduced market liquidity and could exacerbate volatility. • Exempting community banks from the rule will not increase systemic risk.	• Dialing back the rule opens the door for riskier activities. • If market liquidity has indeed declined, it is difficult to identify the causes. Market liquidity pre-crisis may have been excessive in any case.
CCAR	The **Comprehensive Capital Analysis and Review (CCAR)** is the Fed's annual process for evaluating the largest US banks' capital adequacy/planning. It includes a qualitative review and a quantitative stress test.	• Raise the threshold for bank participation. • Subject CCAR frameworks/scenarios to public notice and comment. • Adjust the qualitative assessment to a different review process already used for some banks with ≤$250bn in assets. • Move CCAR to a two-year cycle.	• The process is exceptionally onerous and unnecessary for smaller banks that are unlikely to pose systemic risk. • A two-year cycle will not compromise the quality of the review process. • CCAR is not objective or transparent, and therefore should not be the sole reason for the Fed to reject a bank's capital plan.	• The tests provide transparency and are key to ensuring bank soundness; the proposed changes would be moving in the wrong direction. • Subjecting CCAR to public comment may allow banks to make temporary adjustments to pass the tests. • A two-year cycle would lock banks into a capital plan even if the environment changes.

Acronyms not defined above: BHC = bank holding company. G-SIB = global systemically important bank. IDI = insured depository institution. IHC = intermediate holding company. For more detail on the rules discussed here, see pgs. 15-16.

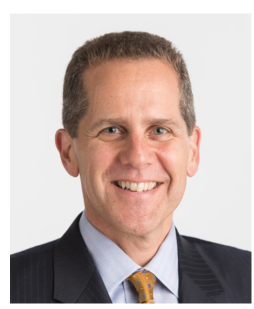
Source: "A Financial System that Creates Economic Opportunities: Banks and Credit Unions," US Department of the Treasury, June 2017. Goldman Sachs Global Investment Research.

Special thanks to Sonya Banerjee and the US Banks team for their contributions to this exhibit.

Interview with Michael Barr

Michael S. Barr is former Assistant Secretary for Financial Institutions at the US Department of the Treasury under Treasury Secretary Timothy F. Geithner (2009-2010). In this capacity, he was a key architect of the Dodd-Frank Act. His prior positions in government include Special Assistant to Treasury Secretary Robert Rubin, Deputy Assistant Secretary of the Treasury, and Special Adviser to President William J. Clinton. He is currently a professor of law and public policy at the University of Michigan, where he directs the Center on Finance, Law, and Policy. He has just been named the next Dean of the Gerald R. Ford School of Public Policy at the University of Michigan. Below, he discusses the risks from rolling back bank regulation.

The views stated herein are those of the interviewee and do not necessarily reflect those of Goldman Sachs.



Allison Nathan: You were one of the key architects of the 2010 Dodd-Frank Act. Seven years later, how would you describe its impact on the financial system?

Michael Barr: Overall, I think it's helped make the financial system safer and fairer than it was in 2008. I don't think it's entirely where it needs to be, but it's made significant progress. You can see that in the health and strength of the financial system as a whole and in the way that the system is working to support the economy.

Allison Nathan: Have there been any drawbacks or unintended consequences from Dodd-Frank?

Michael Barr: My primary concern is that regulation can open up new opportunities for problems in the future. Whenever you regulate one set of institutions, there will be others that engage in the same activity. So part of the unfinished business of financial reform is paying attention to new sets of shadow banking activities and systems. For example, I think further progress on securities financing transactions, both inside and outside the banking system, is critical, and that money market mutual funds continue to pose a run risk to the system that's not fully addressed by SEC rules. But the main issue is making sure that as you change the things in front of you, you don't generate new risks just outside that line.

Allison Nathan: Is there merit to the argument that post-crisis rules have weighed on economic growth? In particular, some observers argue that the rules have constrained the flow of bank credit, holding back small businesses that depend on bank lending while large corporates benefit from non-bank sources of finance.

Michael Barr: I don't think that argument has merit or that it is supported by the weight of empirical evidence. The US economy as a whole has been growing with the support of the financial sector, and that growth has been faster and more consistent than in countries that were slower to respond to the financial crisis. US institutions are generally healthier and stronger than, say, European institutions. It's true that the availability of credit for US small businesses is not as strong as one would like. That is partly a demand-side problem and partly a reflection of the fact that we lack efficient and varied ways to help small businesses in our economy. I think we should continue working on fostering innovation and entrepreneurship, growing that part of the economy and increasing the flow of credit to it. But I don't think there is strong evidence that Dodd-Frank rules have been a significant inhibitor of growth.

Allison Nathan: Some market participants argue that regulation has impaired market liquidity, making it harder and more costly to transact. What's your view?

Michael Barr: I think the evidence on the liquidity front is inconclusive. There is a reduction of liquidity in some areas, but in most instances it's hard to trace why that's the case. It's also a little hard to know whether the reduction is good or bad; there's been some reduction in what you can think of as "excess liquidity" that was contributing to excess volatility before the crisis. This is an area that's worthy of continued careful empirical work, including on the overall impact of regulation and the interaction among the different regulatory provisions. That said, I think it's still a little bit early to know what the overall effects of regulation on liquidity have been.

Allison Nathan: There are also concerns that capital and leverage requirements are too onerous and could actually exacerbate market instability, i.e., non-risk-based rules could impede banks from stepping into the markets in periods of stress. Are these concerns warranted?

Michael Barr: I disagree with the view that capital requirements are excessive. Leading up to the 2008 crisis, firms had a lot of what they thought of as excess capital, but it was so low-quality and so mis-measured that it didn't really count for anything when the crisis hit. Today, there is no good argument that capital rules have inhibited growth, liquidity, or the health and safety of the financial system. As I said before, I think it's quite the opposite: Stronger capital rules have made the system both safer and more efficient at allocating capital. Historical evidence—and basic logic—supports the idea that strongly capitalized institutions have a much easier time weathering financial panics and economic downturns without experiencing a credit crunch. Firms that have more equity funding are better able to withstand a crisis and therefore *better* positioned to step in during that crisis to keep the economy going. So I think that overall, the capital rules are liquidity-enhancing. If all the rules did was establish a minimum capital requirement that always had to be met in a stressed environment, I might be able to see bank limitations adding to market stress, but that's not the way the rules work. There are many other areas of regulation that I see as more nuanced, but the idea that capital requirements are harming the economy or the financial system is entirely backward.

Allison Nathan: What were your initial impressions of the changes proposed in the recent Treasury report?

Michael Barr: I think the document was a bit schizophrenic. Some parts of it made reasonable arguments for the administration's view, which seems to be that post-crisis regulation went too far and needs adjusting. I think those arguments are incorrect, but they addressed areas where one can take reasonable positions in each direction. But other parts of it almost seemed parachuted in by another team of thinkers who were very strident in their tone and approach. There was a section, for example, that was a full-throttled attack on the Consumer Financial Protection Bureau that I found quite surprising for a Treasury document. Another example is the proposal for a regulatory "off-ramp" that would exempt banks that meet certain simple leverage requirements from a wide range of prudential rules and risk-based capital requirements. That was exactly contrary to other parts of the document that said we need more nuanced capital rules and not just a leverage rule with simple terms. So some areas of the report perhaps didn't strike the right balance—where I thought we should be seeking tougher rather than weaker rules—and still others that I found altogether unsettling and quite misguided.

Allison Nathan: Several proposals touched on the capital and liquidity rules, including deducting relatively safe assets (cash, Treasuries, etc.) from the supplementary leverage ratio (SLR) and expanding the definition of high-quality liquid assets (HQLA) used to meet liquidity requirements. Do you agree with these changes?

Michael Barr: I think there is some room for adjustment with respect to excluding Treasuries and cash from the SLR. The further you get from cash and the more you get towards cash-like instruments, the less appropriate I think that would be, and those who want to exempt Treasuries should think carefully about the implications with respect to the sovereign debt of other countries, whose risk profiles are quite different. Reasonable people could disagree where exactly to draw that line, but I do think there may be room for careful, modest adjustment. I would be even more cautious on the proposal to expand the definition of HQLA. If people are concerned about liquidity requirements—i.e., the liquidity coverage ratio (LCR)—being too tight, they should look at the rule overall rather than immediately moving towards expanding the range of HQLA.

Allison Nathan: Would it make sense to apply the LCR only to the global systemically important banks (G-SIBs)—or recalibrate it altogether—as the Treasury has suggested?

Michael Barr: I don't think it makes sense to limit LCR only to **G-SIBs**. Liquidity issues can arise throughout the financial market; you can make serious mistakes if you focus regulatory oversight on just the very largest firms. Now, could you recalibrate LCR as a whole? Perhaps, but, as I said, I'd like to see more empirical evidence on structural changes in market liquidity related to the rule before considering any changes.

Allison Nathan: For both the LCR and the additional capital requirements imposed on G-SIBs, US regulators apply stricter rules than what the Basel framework entails. Is this gold-plating harming the competitiveness of US banks?

Michael Barr: I actually think it's good that the US has higher standards, and I'm in favor of a differentiated, higher US standard for G-SIBs. I think the US should have standards that make sense for the safety and soundness of its financial system. Other countries can also adapt standards to their particular circumstances. International variation is good in and of itself, as long as the floor is sufficiently high; it makes it less likely that the whole international system locks in on a standard that doesn't make sense or creates a new blind spot. The largest US firms are extremely competitive internationally, and that's in part because they have good, strong domestic regulation. So I think a higher equity cushion that is protective of the US financial system is consistent with international competitiveness, not contrary to it.

Allison Nathan: The Treasury report also proposes making bank stress tests more transparent, less frequent, and exempting smaller banks. Are these changes warranted?

Michael Barr: Stress tests have played an absolutely essential role in enhancing the safety and soundness of the US financial system. If anything, I would want to refine them in ways that would make them more robust, not weaker or less frequent. For example, most observers would agree that they're too static to account for the dynamic interactions among financial institutions. So they could definitely benefit from a greater diversity of analytic techniques that better captures this interaction, such as network theory and agent-based modeling. But the Treasury's recommendations tend to make the stress tests less robust, which would be a mistake. In particular, I would not limit them to the very largest firms. If there are a couple of dozen firms below the Treasury's proposed threshold engaging in the same activities as the largest firms, we need to be watching them and thinking about how they might interact in a financial crisis. Otherwise, we're incredibly blinded.

Allison Nathan: What is your view on the Treasury's proposed exemptions from the Volcker Rule, and proposed changes to the definition of proprietary trading?

Michael Barr: There is value in significantly simplifying and clarifying the rule. I also think exempting community banks would be appropriate and helpful; I don't think anybody ever intended to pull those firms into the mix. I'm less convinced that the rest of the suggestions related to Volcker make sense. Structural reforms like the Volcker Rule and the Vickers approach in the UK help to create vertical buffers in the system that slow the transmission of systemic risk, and have the added benefit of simplifying firm risk management as well as making resolution easier.

Allison Nathan: Looking at the regulatory landscape today, and particularly its impact on banks' role as financial intermediaries, have we have struck the right balance?

Michael Barr: Overall, I think the balance is good. The financial system, including the banking system, is healthy and strong and is playing an essential role in financial intermediation. There may be specific things that I would change. In some cases, I would strengthen the oversight of banks, non-banking institutions and shadow banking activities; in others, I might moderate it a bit. But I think overall we have quite a healthy and vibrant banking system in the United States today.

A history of US bank regulation

1782-1913: "Wildcat" banking and frequent crises

Recessions and bank panics occur frequently. Between the 1830s and 1864, bank regulation is extremely lax and varies widely by state. Thereafter, a dual system evolves, with regulation and chartering at the federal and state levels.

1782: The first chartered US bank opens to help finance the Revolutionary War.

1791-1811: First Bank of the USA effectively serves as the country's first central bank. It holds gold and silver reserves and acts as a lender of last resort to state banks. In 1811, the bank's charter is allowed to expire amid political opposition to the perceived concentration of power at the federal level. Following a similar experience with another federal charter, banking is left entirely to the states.

1863-64: The government faces new financing pressures during the Civil War. Congress establishes a single national currency. The Office of the Comptroller of the Currency is created to handle federal chartering, administer regular bank examinations, and collect data more frequently from banks.

1907: A failed attempt by speculators to corner the market on a mining company's stock leads to the collapse of the country's third-largest trust company and a massive bank panic. These events provide the impetus for establishing a central bank.

1913: The Federal Reserve is established, with regulatory authority over national banks as well as any state banks that are members of the Fed.

1781 1791 1801 1811 1821 1831 1841 1851 1861 1871 1881 1891 1901 1911

1913-1980: New rules, restrictions, reporting

Bank regulation becomes more rigorous, particularly in the wake of the Great Depression. The Fed's powers expand. Bank crises become far less frequent. Restrictions limit bank branching and activities, albeit with major loopholes.

1927: The McFadden Act allows national banks to establish branches in the state where they are headquartered, under states' terms for state banks. National banks often face resistance from states and local communities.

1933-35: The Glass-Steagall Act separates commercial and investment banking, grants the Fed additional powers, and establishes the Federal Deposit Insurance Corporation in an effort to prevent bank runs. Congress establishes the Securities and Exchange Commission. "Regulation Q" prohibits banks from paying interest on demand deposits and caps interest rates on deposits.[1]

1956: The Bank Holding Company (BHC) Act grants the Fed new powers to regulate BHCs and control their geographic expansion. BHCs are required to divest non-bank operations. However, banks exploit loopholes in the act until legislation closes them in 1970 and 1987.

1966: Interest-rate ceilings are applied to thrift institutions.

1978: International Banking Act applies domestic bank regulation to any foreign banks operating in the US.

Late 1970s: Regulators ease interest-rate ceilings on some deposits amid rising inflation and market interest rates. In 1980, Congress decides to phase out the ceilings over the course of several years.

1913 1918 1923 1928 1933 1938 1943 1948 1953 1958 1963 1968 1973 1978

1980s-Present: Regulatory swings

Deregulation paves the way for the savings and loan (S&L) crisis. Relaxation of old rules enables industry consolidation. The 2008 crisis prompts a new wave of reforms. Along the way, regulation adjusts to increased securitization and globalization.

Early 1980s: Restrictions on interstate banking are relaxed. Thrift institutions, under pressure from asset-liability mismatch, are permitted to expand their activities. International debt crises prompt capital adequacy requirements.

Late 1980s-early 1990s: Falling property values trigger an S&L crisis during which hundreds of institutions fail. Regulation is tightened again as the crisis is resolved.
1987: The Fed eases Glass-Steagall by allowing some large commercial banks to underwrite securities.
1988: Basel I sets international capital standards.

1994: Riegle-Neal Act removes remaining restrictions on interstate banking/branching, opening the door for increased M&A.

1999: Gramm-Leach-Bliley Act removes the separation of commercial and investment banking established by Glass-Steagall.

2000: Commodity Futures Modernization Act removes most over-the-counter derivatives from regulation by the Commodity Futures Trading Commission.

2004: Basel II rules encourage banks to grow and diversify.

2007-2008: Subprime mortgage crisis. Bear Stearns bailout. Lehman Brothers failure. Global financial crisis.

2010: Basel III increases capital requirements and introduces new liquidity rules.
2010: Congress passes complex and far-reaching financial-market reforms under the Dodd-Frank Act.

2017: Treasury Department releases recommendations for regulatory rollback.

1980 1985 1990 1995 2000 2005 2010 2015

Denotes major bank panic/crisis

[1] These restrictions were aimed at encouraging banks to provide credit to their communities rather than invest it with larger banks. They also sought to prevent banks from competing up the rates paid on deposits, which was thought to encourage riskier activity to compensate for the hit to profits. The ban on paying interest on demand deposits remained in effect until 2011.

Source: Dean Anderson, "Summing it Up: A Brief History of the Economy, Regulations and Bank Data," Federal Reserve Bank of Atlanta, December 6, 2016; FDIC; Federal Reserve History; compiled by Goldman Sachs Global Investment Research.

Deregulation: far-reaching for funding

Marty Young and Lotfi Karoui argue that easier repo funding is likely to impact asset pricing across markets

Changes to bank regulations recommended in the Treasury Department's recent report clearly have the potential to impact bank equity and debt securities (see pgs. 11-12, 14). But regulatory changes could also indirectly affect price behavior in other financial markets, either because banks operate in those markets directly as investors, or because the banks facilitate other parties' investments via repo lending.

The return of arbitrage

A notable market development in the post-crisis era has been the persistence of arbitrage gaps in the pricing of key basis relationships. Take swap spreads—the difference between the rate on a Treasury bond and the fixed rate of an interest rate swap of comparable maturity. Pre-crisis, swap spreads were slightly positive, with swap rates above Treasury rates, reflecting the liquidity and credit advantages of Treasury bonds. However, post-crisis, swap spreads became negative, and in 2015 became significantly negative, with the 30-year swap spread reaching -50bp, so that Treasury yields offered a significant premium over swaps. Much of this tightening probably owed to bank capital and liquidity regulatory pressures. Given the large increases in bank required capital, what would once have been an attractive arbitrage profit—a historically large 50bp—was still not large enough to provide an attractive return on equity (ROE) for banks. Further, current rules have made it unattractive for banks to participate in low-return-on-asset (ROA) businesses like Treasury repo, so banks have little incentive to offer repo funding that other arbitrageurs would need to exploit the pricing discrepancy. However, following the recent Treasury Department announcement, 30-year swap spreads widened (became less negative) as the market priced in an improved outlook on funding Treasury bonds.

Basis relationships re-normalizing

30-year swap spread and USD/JPY cross-currency basis, bp

Source: Reuters, Goldman Sachs Global Investment Research.

Cross-currency basis is a similar market where arbitrage opportunities appeared to emerge post-crisis. The covered interest rate parity (CIRP) principle suggests that spot and forward exchange rates should be linked to interest rate differentials in the two currencies, and that violations of the principle provide arbitrage opportunities. Pre-crisis, the CIRP held closely, but violations emerged post-crisis and strengthened in 2014-2016 as bank capital and liquidity regulations tightened. Cross-currency basis arbitrage opportunities, like negative swap spreads, have the potential to normalize further if financial regulatory changes increase bank balance-sheet capacity (and thereby enable banks to provide more short-term financing). More generally, arbitrage trading, where banks or other investors using bank repo funding seek to exploit small price differences in comparable securities, has scope to pick up if funding conditions continue to improve.

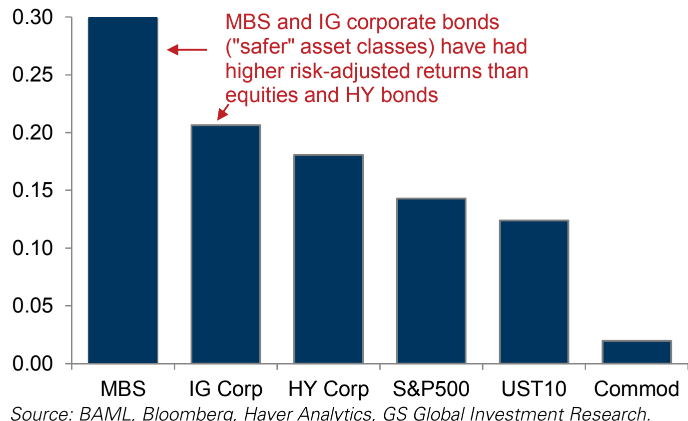
Levering up low vol

Another area that could be affected by improved access to funding is the relative pricing of high-volatility versus lower-volatility asset classes. Investors with high return targets face a choice of either over-weighting high-vol/high-return assets, or investing in lower-vol/lower-return assets and boosting returns with leverage. Across different time periods and markets, relatively "safe" asset classes such as IG corporate bonds and agency MBS have historically had higher risk-adjusted returns than have "riskier" asset classes such as equities or HY corporate bonds.[1] But many investors are unwilling or unable to apply leverage, which may drive them to over-buy the higher risk assets. Easier funding conditions will likely increase the appeal of strategies that seek to deploy leverage on safer assets. This would align with our tactical preference for IG vs. HY in US corporate credit, and for over-weighting bonds at the top of the capital structure within US structured products.

In short, the prospect of easier funding conditions under the Treasury's proposals may return arbitrage profits to short-term investors, while enabling longer-term investors to shift allocations towards lower-volatility asset classes.

A recap of risk vs. reward

Monthly Sharpe ratios by asset class, 1987-2017



Source: BAML, Bloomberg, Haver Analytics, GS Global Investment Research.

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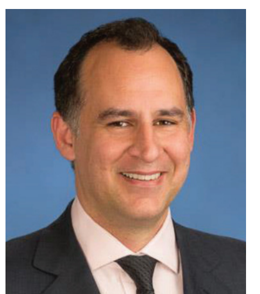
[1] "Leverage Aversion and Risk Parity", Financial Analysts Journal, Jan-Feb 2012, Vol. 68, No. 1.

Interview with Richard Ramsden

Richard Ramsden is the business unit leader of the Financials Group in Goldman Sachs Research. Below, he argues that deregulation could boost large-cap banks' earnings by as much as 25%, but that rising interest rates will remain the more important growth driver.



Allison Nathan: It's been argued that banks have become more like utilities since the financial crisis. Has there really been a fundamental shift in how banks operate—and therefore in their earnings prospects—due to post-crisis regulation?

Richard Ramsden: Banks earnings trends are typically heavily levered to the economic cycle. That hasn't changed. What *has* changed is the amount of leverage within the banking system, the amount of liquidity banks have to hold, and the composition of their balance sheet from a risk perspective. Over the last eight years, you've seen a significant de-levering; capital in the banking industry has almost doubled, and roughly 17% of bank assets are now held in cash or cash equivalents to protect against unexpected outflows.

Another significant change relates to the size and complexity of banks. The Basel II standards issued in 2004 effectively embedded the concept that bigger and more diversified banks are less risky. So in the run-up to the financial crisis, banks actually had a very strong incentive to grow and diversify, which allowed them to run with more leverage and generate higher returns. Basel III rules issued in 2010 completely reversed that concept; the mindset now is that as banks get larger and more complex, they become more systemically important and therefore need to hold more capital. That fundamentally changed the way in which banks think about their systemic footprint, the global nature of their operations, and the number of business lines in which they operate. These changes have undoubtedly weighed on the unlevered returns that banks can generate across their balance sheet.

Allison Nathan: Has gold-plating US regulation—i.e., adopting stricter rules than prescribed by Basel—put US banks at a competitive disadvantage internationally?

Richard Ramsden: Yes, there is no question of that in my mind. Forcing US banks to hold more capital and liquidity than foreign banks against an identical risk by definition puts US banks at a competitive disadvantage. US banks must either price those more stringent requirements into their lending decisions or accept a lower return, i.e., by underpricing the business on a relative basis to be able to win it. That said, this only really matters for the large banks that are active in global capital markets; regional banks in the US don't compete much with regional banks in Europe and Asia.

Allison Nathan: How much of an earnings boost can we expect from changes to bank regulation such as those recently proposed by the Treasury Department?

Richard Ramsden: It depends on how much gets done. There are essentially three sets of potential changes: changes that just require a re-interpretation of existing rules, changes that require regulators to rewrite the rules, and changes that require legislative action. We estimate that about two-thirds of the proposed changes fall into the former two categories. This is important because changes that regulators can implement themselves are more likely to happen, especially since the administration is likely to fill 19 of the 22 key regulatory leadership positions that will turn over through the end of 2018 with people broadly supportive of its regulatory agenda. We estimate that these changes could add 13-14% to the earnings power of the US banking system. Adding in legislative changes would translate to an earnings uplift of an additional 1% over time. The bigger banks would benefit disproportionately for the simple reason that they are subject to more of these rules, so they could see an estimated 25% earnings uplift in the most optimistic scenario.

Allison Nathan: So how much of your positive earnings outlook for banks can be attributed to deregulation? And how does that compare with other drivers?

Richard Ramsden: We do not currently include deregulatory benefits in our earnings outlook given the lack of clarity on the timing and magnitude of potential changes to the regulatory environment; however, deregulation could result in material upside to banks by freeing up excess capital and liquidity, improving revenue opportunities, and reducing compliance-related expenses.

The main underlying source of growth from here is the normalization of interest rates. We think that's worth about 5pp through 2018 based on current market rate expectations, which have fallen over the course of the year. Quantitative easing (QE) and very low rates around the globe since the crisis have hurt banks considerably, with US banks experiencing a 10% reduction in their net interest margins since 2009 (-35bp), even as funding costs fell materially. So we think most of the top-line growth in the banking system will come from rising rates and in particular a steepening of the curve. This has an immediate benefit for shareholders because banks only pass on a percentage of interest rate increases to deposit clients. We are already witnessing wider deposit margins and net interest margins beginning to translate into higher net interest income.

Potential corporate tax reform is likely to be another positive contributor. Banks have the highest marginal tax rate of just about any sector in the S&P 500, and 90% of their earnings are domestic, so they would benefit disproportionately from potential corporate tax reform.

But beyond these developments in the external environment, banks are also taking their own actions to boost earnings growth. Over the last two to three years banks have substantially improved operational efficiency, especially on the cost side of the equation. They have been using more technology in their distribution to consumers, and have begun to reduce branches and ATMs as the world moves to more mobile channels. And banks are returning substantial amounts of capital to their shareholders. For several banks, total capital

returns are above 100% of earnings, with much of that going to buybacks; some banks are buying back anywhere between 2-9% of the company each year, resulting in a reduction in share count. So even if earnings are not growing, lower share counts will still generate growth in earnings per share going forward.

Allison Nathan: But is that really the best use of cash? Shouldn't banks be investing in future growth as opposed to just returning capital to shareholders?

Richard Ramsden: Most of the banks are investing everything they can back into the business. The problem is a dearth of opportunities. Loan growth remains very weak across the financial system; you haven't seen the increased demand for loans, especially from corporates that many people were hoping for with renewed business confidence post the election. So there is intense competition as a lot of capital chases a limited amount of lending.

Historically, in periods characterized by excess capital and low loan growth, banks would deploy capital for acquisitions; in the 20 years preceding the 2008 financial crisis, the top five banks accounted for roughly 80% of all consolidation, which was a very significant source of earnings growth. But acquisitions are simply not an option today for most of the largest banks. Many of them are near or above the 10% deposits cap, which prohibits them from feasibly acquiring other FDIC-insured institutions. And even if they are not above that deposits cap, they are finding that the increased capital requirements associated with an acquisition may be cost-prohibitive.

All that said, it is important to emphasize that shareholders today actually express a strong preference for capital returns over investing in the business. Many investors have a 10% hurdle for their required rate of return, which most banks have been unable to meet in the post-crisis regulatory environment. So these shareholders are saying, "If you can't produce more than a marginal ROE of 10% on the capital that you generate, we'd rather you return the capital."

Allison Nathan: What about the prospect of increasing returns by reducing the balance sheet and divesting unprofitable businesses? Is there still scope for that?

Richard Ramsden: Over the last eight years, many banks have implemented a large number of divestitures and rationalizations. They've shifted their geographic footprint or their business lines based on their perceived core strengths. But I think that process is now largely complete, and most banks are now looking for opportunities to grow.

Allison Nathan: So how much of your expected upside from deregulation, tax reform, and rising rates is already priced into the stocks at this point?

Richard Ramsden: Banks stocks have risen about 30% since the US election. We estimate that the change in interest rate expectations since the election can explain roughly 19-20% of this move, which basically leaves what we see as a 10-11% option premium around deregulation and corporate tax reform. Given the uncertainty in terms of scope and timing of these catalysts, the market is only willing to pay a fraction of the roughly 25% upside we see there.

Allison Nathan: How concerned are you about the risks around these drivers, especially given that inflation continues to disappoint and the policy outlook remains very uncertain?

Richard Ramsden: We have one more rate hike built in for this year and another for next year. If interest rates don't rise from here, that would shave roughly 3pp from our estimated upside for the sector. The hit would be relatively small since the value of rising rates fades considerably with each subsequent hike. This is because we assume that banks will need to pass on a greater share of rate hikes to depositors over time—from roughly 15% today to close to 50% over time—as competition for deposits grows.

As far as deregulation and tax reform are concerned, the risk-reward still looks very attractive; as I said, there is 10-11% downside if these changes don't come through versus up to 25% upside. We believe both are likely to happen, but if they do take longer to come to fruition, there is still good reason to own bank stocks. A reasonable dividend yield relative to the S&P 500 is an important and compelling part of the value proposition of banks today.

Allison Nathan: Where are you getting the most pushback on your relative sanguine bank views?

Richard Ramsden: Clients are expressing two major concerns. The biggest is one you mentioned above—the uncertainty around policy-related changes. In particular, everybody agrees that the impact of regulation on the bank sector isn't going to get worse and is mostly likely going to get better; the question is how long it is going to be before we see some degree of simplification of the regulatory environment.

The second concern is whether we will see a normalization of credit quality along with a normalization of interest rates. Credit quality in the banking system is near the best it's been in 30 years; credit losses are extremely low, partly because banks have been very risk-averse but also because interest rates have been so low. We assume that as rates normalize, credit losses will rise only gradually, generating operating leverage. But the risk is that the benefit of higher rates is offset by higher losses on loan books, especially if rates rise more quickly than expected.

Allison Nathan: What will you be watching most closely in the second half of this year?

Richard Ramsden: By far the most important development will be the agenda that Randal Quarles, the nominee for Fed vice chair of bank supervision, sets out if he is confirmed by the Senate. Second will be developments on corporate tax reform. And third will be any changes in the operating environment in terms of the normalization of interest rates, loan growth, and market volatility, all of which would likely be positive catalysts for the banks sector.

Financials vs. Tech

David Kostin argues that growth will drive outperformance of both US Financials and Information Technology, but in different ways

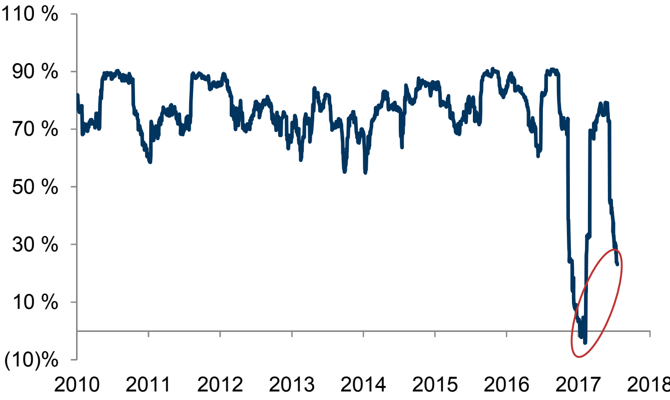
After seven years of consistently high return correlation, US Financials and Information Technology sectors have posted significantly divergent performance twice since the US election, largely driven by policy uncertainty in the new administration. Looking forward, we expect growth will lead both sectors to outperform the S&P 500, but in different ways.

Collapsing correlation

The three-month correlation of daily returns between Financials and Tech was actually slightly *negative* in early 1Q for the first time since at least 2001. Financials surged by 21% during 4Q while Information Technology climbed by a slight 1% and the overall S&P 500 rose by 4%. After a brief return to normalcy in early 2Q, correlations have slumped again. During the three months ending May, Financials dropped by 5% while Tech stocks rallied by 10%. A similar pattern exists when looking at one-month return correlations between the two sectors.

Collapsing correlation

3-month correlation between Info Tech and Financials returns, %



Source: FactSet, Goldman Sachs Global Investment Research.

Outperformance all about growth

With the typical stock at the 99th percentile of historical valuation, equity investors will need to rely on growth rather than valuation expansion to generate outperformance. But growth opportunities are limited given that nominal US GDP is expanding at a rate of about 4% (2% real GDP growth plus inflation that is trending towards 2%), and revenue growth for many firms is roughly equal to nominal GDP growth.

Both Financials and Technology have attractive growth prospects—but in different ways—that will likely drive outperformance and a return to the more normal positive correlation between the two sectors. Put simply, absolute growth will drive Technology share prices higher while change in growth will support the performance of Financials, in our view. The Tech sector will likely benefit from robust expected sales growth relative to the rest of the market while the prospect of higher interest rates and the ability to return capital to shareholders should lead to an increase in returns that would benefit Financials valuations.

Revving up revenues in Tech

We forecast the Information Technology sector will register sales growth nearly twice as fast as most of the market: 9% in 2017 and 7% in 2018. Several large prominent Tech stocks will lead the way with revenue growth above 20%, or 4x the growth rate of the S&P 500. The Tech sector also has profit margins twice as high as the rest of the market (20% vs. 10%). This superior growth potential will drive Tech outperformance.

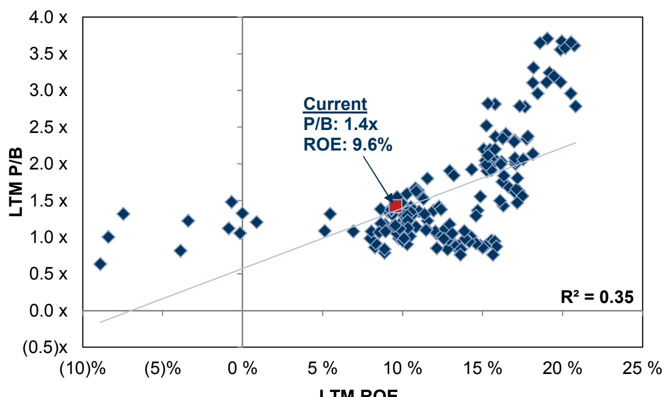
Paying out in Financials will pay off

Following the release of the most recent CCAR results, Financials firms announced their intention—with the approval of the regulators—to boost the amount of capital returned to shareholders during the next year by 40% or $40 billion. Aggregate dividends and buybacks will jump from $92 billion to $132 billion. Money Center banks will lift payouts by more than 50%, regional banks by more than 35% and Trust banks by more than 20%. Total payouts for many firms will exceed 100% of net income. We forecast 21% dividend growth for Financials in 2017, or three times greater than the 6% dividend growth for the overall S&P 500.

On top of larger shareholder payouts, deregulation and higher interest rates represent potential tailwinds for Financials. Financials is the sector most sensitive to changes in bond yields, as higher rates should boost net interest margins (NIM). Goldman Sachs interest rate strategists expect that the 10-year US Treasury yield will rise by 50bp to 2.75% by year-end.

More capital returns = higher returns = higher valuation

Financials LTM ROE (x-axis, %), vs. LTM P/B (y-axis, multiples)



Source: Compustat, Goldman Sachs Global Investment Research.

Increased capital returns to shareholders and higher interest rates should raise the Financials sector's ROE, which is currently 9.6%, well below the long-term average of 13%. A higher ROE should in turn support a higher valuation (current Price/Book or P/B is 1.4x). Indeed, valuation looks inexpensive relative to the market today: The sector trades at 0.8x relative forward P/E multiple vs. the S&P 500 (14x vs. 18x), below the 10-year average of 0.9x. So while Tech outperformance will stem from absolute sales and revenue growth, Financials outperformance will result from more capital being returned to shareholders that will boost returns and lift valuations.

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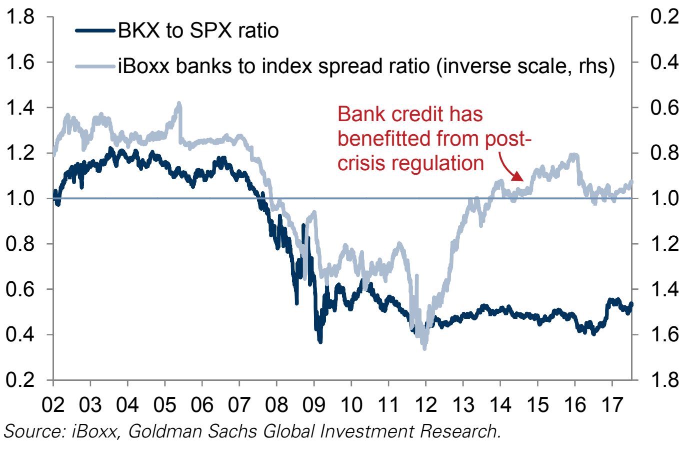
Reduced regs: bad news for bank credit

Louise Pitt explains why proposed regulatory changes are net negative for US bank credits—one reason why we are likely past peak credit strength in US banks

A less stringent regulatory framework would be a clear positive for US bank shareholders, who welcome the potential for higher earnings growth and/or capital return. However, we view some of the proposals as negative for US bank bondholders, who have substantially benefitted from strong regulatory oversight in the post-crisis period, as well as the US "gold-plating" of global capital and liquidity requirements. Although the impact of the Treasury Department's proposals to change regulatory rules should be manageable for bank credit profiles, we believe that we are past the peak of credit fundamental strength in the US bank sector.

Credit rewards for regulation

Spread ratio of banks to the broader IG index vs. the normalized price ratio of BKX to the S&P 500



Source: iBoxx, Goldman Sachs Global Investment Research.

Details on the possible negatives

The recent proposals include a number of issues that are important—and potentially negative—for bondholders:

- **Changes to the Supplementary Leverage Ratio (SLR).** Excluding cash, equivalents and Treasuries, among other items, could reduce the absolute amount of capital banks have to hold in order to meet their leverage requirement. This will allow them to potentially return more capital to shareholders—often against bondholders' interests.
- **Removing the qualitative assessment from the Comprehensive Capital Analysis and Review (CCAR) and moving this process to a two-year cycle.** The resulting reduced transparency into bank balance sheets could lead investors to demand higher compensation for buying bank bonds. And in periods of market stress, this reduced transparency could impair access to liquidity (i.e., bondholders could stop buying new bond issues altogether) when banks would likely need it the most.
- **Revisiting some US rules that are more stringent compared to international standards.** This includes additional capital buffers and higher leverage ratios for global systemically important banks (G-SIBs) and minimum debt requirements under Total Loss Absorbing Capacity (TLAC). Again, any changes that result in reduced regulatory requirements would be credit negative.

Past the peak of US bank credit strength

Despite the anticipated headwinds to credit from deregulation, bank credit spreads should remain supported over the near term. An industry shift toward or even above 100% capital payout ratios evidenced in this year's CCAR releases was largely expected by investors given strong improvement and buffers over regulatory minimum levels, in our view. Further, credit technicals remain supportive given anticipated low new issuance in 2H17 after strong supply in 1H17, low shortfalls to current TLAC requirements that will limit new issuance, continued access to non-dollar issuance markets to diversify investor bases, higher event risk in non-financial sectors within the IG space, such as healthcare, and still-low interest rates.

More broadly, regulatory oversight of banks is likely to remain stringent, ensuring that credit fundamentals remain strong on a medium term basis. However, if and when the regulatory adjustments take hold, this may be coupled with volatility around US interest rate rises, withdrawal of central bank support globally and higher capital return programs. As such, the bank credit outlook may weaken. Thus, we believe we are past the peak of credit strength in US banks.

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A reference on rules and regulations

Note: Key terms/acronyms are bolded and defined the first time they appear in this table.

CAPITAL

Basel	**Basel Framework**[2] A set of standards and guidelines for banking supervision developed by the **Basel Committee on Banking Supervision (BCBS)**, a body established in 1974 by the governors of G10 central banks that has since expanded to include representatives from 28 member economies. The committee's efforts to establish international standards for capital adequacy led to the 1988 Basel Accord, now known as Basel I, which called for banks to meet a **risk-based capital requirement**, i.e., maintain a minimum ratio of capital to **risk-weighted assets (RWA)**, of 8%. RWA is a measure of on- and off-balance sheet risk, which adjusts bank assets based on the level of risk associated with them. Basel has since evolved to include expanded capital rules, liquidity rules, disclosure rules, and new supervisory processes under Basel II (released in 2004) and, most recently, Basel III (released in 2010). National regulators are responsible for adopting Basel standards, so implementation can vary. National regulators can and often do adopt more stringent rules.
Basel III	**Basel III** The latest set of bank rules, which aim to enhance bank governance, risk management, and transparency, as well as improve the banking sector's resilience to shocks. • Basel III increased risk-based capital requirements, raising the minimum level of **Tier 1 capital**—high-quality capital consisting of common stock, disclosed reserves, and some forms of preferred stock—to 6% of RWA from 4% previously. Basel III also introduced a 4.5% requirement for **Common Equity Tier 1 (CET1) capital**, the highest-quality capital (i.e., primarily common equity). These requirements, known as the Advanced Approach, came into full force in 2015. US banks must comply with the greater of the requirements under the Advanced Approach or the US Standardized Approach, a different ratio mandated under the Dodd-Frank Act. • Basel III calls for capital "buffers" above the minimum capital ratios. Banks that fail to maintain a 2.5% **capital conservation buffer** of common equity will face restrictions on capital distributions and discretionary bonuses. National regulators could also require a **countercyclical buffer** if/when they deem aggregate credit growth to be excessive (it is currently set at 0% in the US). Both buffers will be phased in by 2019. • Basel III introduced stricter definitions of capital, stipulating a phase-out of non-core Tier 1 capital and lesser-quality Tier 2 capital over a 10-year period that began in 2013. At the same time, Basel III made the measurement of assets more conservative, increasing the risk weights for certain assets including derivatives. • Basel III also introduced new rules intended to limit excessive bank leverage and strengthen banks' liquidity profiles (see leverage ratio, liquidity coverage ratio, and net stable funding ratio below).
G-SIB Framework	**Global Systemically Important Bank (G-SIB) Framework** A 2011 Basel framework calling for additional capital buffers for **global systemically important banks (G-SIBs)**, sometimes described as the G-SIB surcharge. Currently, 30 banks are designated as G-SIBs. The framework demands an additional 1.0-2.5% of CET1 capital as a share of RWA. Each bank falls into a "bucket" within this range based on its systemic importance, taking into account size, interconnectedness, cross-border activity, substitutability, and complexity. An initially empty 3.5% bucket exists to deter banks from becoming more systemically important, but this upper bound can increase if systemic-importance scores rise. Surcharges are to be fully phased in by 2019. In the US, the G-SIB rule requires banks to calculate their surcharge using both the Basel gauge of systemic importance and a separate method that uses similar inputs but replaces the *substitutability* component with a measure of the firm's reliance on short-term wholesale funding. G-SIBs must use the higher surcharge of the two. Eight US **bank holding companies (BHCs)** currently qualify as G-SIBs, with surcharges of 1.0-3.5% of RWA.
TLAC	**Total Loss-Absorbing Capacity (TLAC)** A requirement applied to G-SIBs by the **Financial Stability Board (FSB)**, an international body that works closely with the BCBS, to ensure that they can absorb losses before/during resolution and maintain systemically critical functions without resorting to taxpayer support or imperiling financial stability. TLAC must be made up of Tier 1 capital and a minimum amount of "plain vanilla" long-term debt. As of January 1, 2019, G-SIBs will need to hold TLAC equivalent to 16% of RWA and 6% of total leverage exposure.[3] In January 2022, these minimums will increase to 18% and 6.75%, respectively. US G-SIBs will need to comply with the greater of: 18% of RWA (not including the G-SIB surcharge and the countercyclical buffer); or 7.5% of leverage exposure (not including a 2% buffer). As part of this requirement, US G-SIBs must hold a minimum amount of long-term debt worth 6% of RWA (not including the US G-SIB surcharge), or 4.5% of leverage exposure. US TLAC requirements come into force on June 1, 2019.
Leverage Ratio	**Leverage Ratio** A component of Basel III that sets a 3% minimum for Tier 1 capital as a share of balance sheet, plus add-ons for a percentage of the value of derivatives, repurchase agreements, and lending commitments. By not distinguishing between lower/higher-risk assets, the ratio is intended to serve as a backstop for risk-based capital requirements. However, it can be binding in practice.[4] Full enforcement is expected in 2018. In the US, this requirement is called the **supplementary leverage ratio (SLR)** to distinguish it from an existing US leverage-ratio rule (called the Tier 1 Leverage ratio, which only compares Tier 1 capital vs. a bank's balance sheet). An **enhanced supplementary leverage ratio (eSLR)** requirement applies to US G-SIBs and their insured depository institution subsidiaries, for a minimum of 5% and 6%, respectively.

[2] Unless otherwise specified, requirements and dates of implementation refer to Basel guidelines. National implementation may differ.
[3] As quantified in the denominator of the Basel III leverage ratio.
[4] "As regulation shifts to leverage & liquidity, short-term financing markets may get squeezed," *Goldman Sachs Global Investment Research,* May 4, 2014.

CCAR	**Comprehensive Capital Analysis and Review (CCAR)** The Federal Reserve's process for evaluating the capital planning and capital adequacy of the largest BHCs operating in the US, which is based on two components: a qualitative and a quantitative assessment (i.e., stress test). BHCs submit capital plans annually to the Fed with details on their implementation of capital adequacy standards and a forward-looking assessment of their capital positions, including plans for dividend payments or share repurchases. CCAR is often binding vs. risk-based capital requirements.[5] The Fed may object to a bank's capital plan on either qualitative or quantitative grounds, requiring the bank to submit a revised version. CCAR's stress test is based on the **Dodd-Frank Act Stress Testing (D-FAST), which the Fed conducts** in parallel with CCAR. BHCs also conduct their own tests under the Fed's stress scenarios.

LIQUIDITY

LCR	**Liquidity Coverage Ratio (LCR)** A component of Basel III aimed at improving banks' short-term resilience to liquidity stress. Banks meet the LCR requirement by holding enough **high-quality liquid assets (HQLA)** to cover their total net cash outflows over a 30-day stress scenario (however, the BCBS has recommended allowing the LCR to temporarily fall below 100% during severe market stress). HQLA consist of cash or assets that can be converted into cash with little or no loss in value, tiered according to their liquidity. In the US, the LCR uses a stricter approach to deriving HQLA and net cash outflows. The LCR applies to large internationally active banking organizations and to their consolidated bank or savings association subsidiaries, depending on their asset size and level of foreign exposure. Qualifying institutions must report their LCR to federal regulators on either a daily or monthly basis as of January 1, 2017, disclosures of which will be made public in August 2017.
NSFR	**Net Stable Funding Requirement (NSFR)** A component of Basel III aimed at strengthening banks' longer-term liquidity profiles by ensuring they can meet all of their stable funding requirements over a one-year period. Stable funding requirements are based on a weighted calculation that considers the maturity of a bank's liabilities and the likelihood of its funding sources being withdrawn. Available stable funding used to meet the requirement is based on the tenor, quality, and liquidity of bank assets, among other criteria. In the US, the proposed NSFR would apply to large and internationally active banking organizations. A final rule has not been issued, but the proposed rule was expected to take effect on January 1, 2018.
CLAR	**Comprehensive Liquidity Analysis and Review (CLAR)** The Federal Reserve's annual process for assessing banks' liquidity profiles, based on a similar premise as CCAR. CLAR was first implemented in 2012 for a group of systemically important banks. It includes a liquidity stress test and an assessment of banks' liquidity planning processes (e.g., their approach to managing a liquidity crisis).[6]

ACTIVITY

Dodd-Frank	**Dodd-Frank Wall Street Reform and Consumer Protection Act (US)** Complex and far-reaching US financial market legislation developed in the wake of the Global Financial Crisis and passed by Congress in 2010. The Act includes measures to reform regulation and bank supervision (particularly for **systemically important financial institutions or SIFIs**), improve transparency and accountability in certain financial instruments, and strengthen consumer protection.
Exposure Limits	**Exposure Limits** Rules to limit interconnectedness—particularly among SIFIs—and thereby reduce the risk of contagion. The Basel framework sets rules for reporting large exposures to individual counterparties and limits them to 25% of Tier 1 capital (15% for exposures between G-SIBs). Exposures to sovereigns are exempt. These rules are scheduled to come into effect in 2019. The proposed US rule applies similar standards, with compliance required one to two years after the rule becomes effective, depending on an institution's size. A final US rule has not been issued, but the proposed rule was expected to take effect on January 1, 2019.
Short Sales	**Short-Selling Regulations** Rules in many major developed markets that restrict short-selling (the sale of a security that the seller does not own, which becomes profitable when the price of that security falls). These rules often ban or heavily restrict naked short-selling (when the seller has not borrowed or arranged to borrow the security being sold).
Volcker Rule	**Volcker Rule** A component of Dodd-Frank that prohibits US banks and US subsidiaries of non-US banks from engaging in proprietary trading, or trading for their own account, with exemptions for activities such as underwriting, market making, hedging to mitigate risk, trading in US government debt, and certain on-balance sheet investments. The rule also prohibits bank ownership or sponsorship of hedge funds or private equity funds.
Title VII	**Title VII** A section of Dodd-Frank that calls for stricter regulation of over-the-counter (OTC) derivatives markets, including requirements for clearing and exchange-trading of clearable derivatives contracts; increased reporting and transparency; higher margin requirements; and mandatory registration by swap market participants. Title VII rules apply to a broad definition of US persons and entities, with extraterritorial application to many types of cross-border transactions.[7]

Special thanks to Sonya Banerjee and the US Banks team for their contributions to this glossary.

[5] "The regulatory reform agenda: Bank regulation through a growth lens," *Goldman Sachs Global Investment Research*, March 7, 2017.
[6] Elliott, Douglas, "Bank Liquidity Requirements: An Introduction and Overview," *The Brookings Institution*, June 23, 2014.
[7] Kenadjian, Patrick S., Annette L. Nazareth, Gabriel D. Rosenberg, "The Cross-border Impact of the Dodd-Frank Act," October 22, 2013.

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Reg AC

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