GreenPoint>
Financial

Perspectives on Financial Institutions Summer 2017

Table of Contents

1. Publisher's Note 3
2. Editor's Introduction. 4
3. Summary of Articles 5
4. Embrace Disruption and Partner with FinTech 7
5. Q&A with John Stacconi 10
6. Prepare for Growing Threats of Mobile Security 13
7. New Margin Requirements Sweep the OTC World 16
8. Will the Volcker Rule Survive Under the Trump Administration?. 19
9. Top 10 SEC Enforcement Highlights of 2016. 24
10. Navigating New Cybersecurity Rules: Impact on Insurance Companies 30
11. Basel Under Trump 32
12. Financial Deregulation Under Trump. 36
13. Basel III to Stay on Course 40
14. To FRTB and Beyond. 43
15. Regulatory Trading Desk (RTD) Optimization Under FRTB 50
16. Author Biographies 53
17. About GreenPoint Financial 56

Publisher's Note

Rocks and Bridges

The banking industry is undergoing a transformation that started a decade ago. From the heady days when the global universal bank model drove unabated acquisitions and financial innovation, we moved to the post-crisis trends of **transparency** and **manageability**. The global pecking order, measured in terms of size, growth and profitability, underwent unprecedented shifts as banks grappled with increased regulation, tepid global economic growth, low interest rates, shifting political winds, and perceived competition from new entrants. If the latest quarterly results from the banking universe can be viewed as a leading indicator, then the industry's future is looking up again. The tide may be turning now for banks and institutions that took a hard look at the circumstances surrounding the global financial crises and invested in transforming their frameworks. For others that have been slow to transform, visible signs of their progress may be further away.

Currently, banks are faced with tepid global economic growth, continued challenges of implementing new regulation, perceived competition from FinTech companies and associated disintermediation. The industry is pushing forward, albeit painfully, with implementing and conforming to new regulations and technologies. However, it is critical to recognize if banks are to serve their primary function as financial intermediaries and propagators of economic policy, then they need resilience **as well as** flexibility.

Do we want our financial institutions to be like rocks – stable but inflexible – or like bridges – more flexible, but still built to a very high degree of reliability and threatened only under implausible events? Rock-like structures can be made resistant to floods and high winds when built, but come at a cost of rigidity, brittleness, increasing maintenance requirements, and ultimately the need for costly replacement. Bridges, on the other hand, are more flexible, less costly to build, and easier and less costly to maintain. Banking organizations and frameworks follow these same trends: rock-likes are not responsive when changes occur – such as radical changes in regulations and legislative policies. Bridges will work well until the unexpected earthquake – known in banking circles as a systemic event – takes them down.

So how can balancing the optimal mix of strength and flexibility for financial institutions be assured? Is there a role for FinTech and will it challenge banks? Maybe yes, in bits and pieces. Here, it is important to recognize that the foundational role of banks as financial intermediaries comes down to transacting, lending, and collecting. The first two can be redefined, automated, and networked with big data, artificial intelligence, and machine learning. However, the institutional knowledge, experience and expertise that banks have in the lifecycle from lending to collecting is the moat that is hard to cross. The critical role of banks as intermediaries, as the original economic "network orchestrators" between savers and borrowers, remains the foundation of economic systems.

Innovation in financial technology has been embraced by banks for decades before FinTech became a buzzword and perceived as a competitive threat to banks. Indeed, the first ATM was tested and adopted as far back as 1967, and the concept of value-at-risk (VaR) emerged from a simple question raised by a bank's CEO "How much money could we lose tomorrow?" The list of financial innovation adapted by banks is indeed long and continues that path.

Yet, many banks have failed to keep up with technology. Bank systems must adapt to lightning fast changes in technology that is changing the paradigm of sophistication and ease of use. It would have been hard to imagine as recent as a decade ago that the super computer we all carry in our pockets will get an upgrade with new features and capabilities as we sleep, and still sound the wake up alarm.

A bank's destiny lies in its flexibility to adapt to shifting winds, and a few earthquakes in between. The rhetorical notion of changing an engine while the plane is flying is considered to be the most challenging task an organization can undertake. Yet, this is exactly what banks have been grappling with over the last decade. Most have come through with good – if not flying – colors and the rest will likely follow. Our collective mission as industry stakeholders should be to assist in that transformation. A large proportion of banks around the world own their destiny and will continue to do so for the foreseeable future.

We are proud to present the first issue of GreenPoint perspectives that we expect will be a semiannual publication. In this inaugural issue, we cover the challenges of complying with emerging regulatory requirements and managing the likely prospect of the sunset of others. We also cover the areas of FinTech, cyber threats and other challenges that financial institutions will face for the foreseeable future.

We hope that you find this publication helpful.

We look forward to receiving your feedback and ideas.

Sanjay Sharma, Ph.D.
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Editor's Introduction

We find ourselves in the spring of 2017 with a renewed energy in the financial world fueled by stabilizing regulation, a rising (or at least not falling) rate environment and an improving global growth picture. This sense of optimism, however, still seems somehow novel, undeserved, and not universally shared. Perhaps we are still wary after having climbed out of the very deep abyss that was the Great Financial Crisis of nearly a decade ago?

The wall of worry which lies just beneath our collective ebullience includes questions around cyber security, wrenching dislocations caused by technology, and the ever-evolving landscape of global financial regulation. Throw in a healthy amount of global political unrest, and there are seemingly plenty of dark shadows which could turn into black swans at any moment.

In this season's Perspectives, we have asked our industry colleagues to explore these trends, their derivations and their impact over the foreseeable future.

- Steve O'Hanlon, President and CEO of Numerix, runs one of the world's largest quantitative modeling firms and will bring his perspective on how real-time technology is driving change at the speed of light in the global financial markets.
- John Stacconi, Global Treasurer of Jefferies, talks about the challenges of managing a US$37Bn full service, global investment banking firm balance sheet without access to funding or deposit guaranties from any central bank.
- Kristen Bay, CEO of CyberadAPT, will unnerve us by bringing her twenty-five years of experience in the risk intelligence field to reveal the increasing threats to all large institutions from the proliferation of mobile devices.
- Adam Lietke, Head of Strategy for Bloomberg, will bring his decades of industry experience to inform us how the little-known world of OTC margin requirement changes will materially increase the costs, structures, and fluidity of global trading platforms.
- Richard Chase, Esq., Managing Director of Oyster Consulting, LLC and former General Counsel & Chief Compliance Officer of RBC Capital Markets, will discuss the possibility that the Volker Rule against proprietary trading in the U.S. will be repealed under a new administration.
- Baker Hostetler, one of the largest litigation firms in the U.S., will bring us their top ten SEC enforcement actions in 2016.
- William Anderson, Esq., Managing Director of GreenPoint Law & Compliance, will review how recent legislation in New York State will increase cyber liability for insurance companies, brokers and agencies even as these threat levels increase.
- Finally, Sanjay Sharma and I will contribute three articles reviewing the political landscape as it pertains to regulation. We have also contributed a piece on a new way of thinking about how banks can optimize their trading desk structure under the forthcoming regulatory framework known as FRTB.

We hope you enjoy this material and appreciate your feedback.

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Summary of Articles

1. Embrace Disruption and Partner with FinTech

Steve O'Hanlon, President & CEO, Numerix

Financial institutions and regulators of those institutions have a love-hate relationship with technology. On the one hand, "FinTech" can transform smaller challenger institutions into disrupting powerhouses and can threaten core business lines of larger players. On the other hand, FinTech can represent huge risk for regulated institutions in which implementation is costly, painful, and full of unexpected surprises. In this article, veteran FinTech CEO Steve O'Hanlon makes the compelling case that financial institutions must embrace financial technology or become swallowed by it. He then lays out a road map for the best ways to embrace this change.

2. Perspectives from a Non-Bank – An Interview with John Stacconi

John Stacconi, Managing Director and Global Treasurer, Jefferies Group LLC

This interview provides insights on capital markets, funding and the evolving regulatory landscape from a seasoned treasurer in the non-bank financial space. John brings seasoned perspectives not only from his current role, but also from his time in senior treasury positions at J.P. Morgan, Nomura and Bear Stearns.

3. The Mobile Device Threat to Bank Networks

Kirsten Bay, CEO, Cyber adAPT

Cyber threats made headlines in 2016, but in the opinion of Kirsten Bay, the threat to banks from mobile is increasing exponentially in 2017 due to hidden back doors brought on by the proliferation of "Bring our Own Device (BYOD)" policies. Increasingly, criminal organizations and even state run enterprises can infiltrate seemingly secure bank platforms using the virtual identities of critical bank employees. Kirsten identifies simple but critical steps every financial institution must take to secure their proprietary client data and their own reputation.

4. How Should Market Participants Think About Implementation and Consequences of the New SIMM Rules

Adam Lietke, Head of Strategy, Bloomberg

New margin requirements are sweeping the OTC world, most recently on March 1st, 2017 in Europe. While the aim of these regulations is well intentioned, implementation across jurisdictions may not be smooth or well-coordinated. The implications for how firms will manage their market, liquidity and technology risks will be profound.

5. Will Volker Survive the Trump Administration?

Richard Chase, Managing Director, Oyster Consulting, LLC

A thorough review of the legal, political and practical drivers behind the potential repeal of this controversial amendment to the Dodd-Frank Amendment with potentially global implications for trading and markets?

6. Top 10 SEC Enforcement Highlights of 2016

BakerHostetler, one of the nation's largest law firms with 940 lawyers across the country, represents clients around the globe through its five core practice groups: Litigation, Business, Employment, Intellectual Property, and Tax.

A quick look back on the top 10 SEC enforcement actions of 2016 from one of the nation's top SEC litigation firms?

7. Navigating New Cybersecurity Rules: Impact on Insurance Companies

William Anderson, Esq., Managing Director, GreenPoint Law & Compliance

The New York Department of Financial Services (DFS) issued new cybersecurity requirements for financial services companies (cyber rules) effective March 1, 2017 which require insurance and insurance-related companies as well as brokers, agents and adjusters licensed in New York to assess their specific cyber risk profiles and design cybersecurity programs that address such risk in a "robust fashion." These cyber rules could prove problematic for licensed brokers, agents and adjusters as well as the insurance and insurance-related companies that employ or utilize them.

8. Basel Under Trump

Jeb Beckwith, Managing Director
Sanjay Sharma, Ph. D., Founder and Chairman
GreenPoint Financial

The world's *de facto* global regulator, the Basel Committee for Banking Supervision or BCBS, is sponsored by the Bank for International Settlements (BIS), a bank owned by central banks around the world which collectively represent 98% of global GDP. Who could have imagined that this infrastructure, based in a quiet Swiss mountain town called Basel, would be so unnerved by an election held half way around the world? In this paper, we analyze what a new U.S. administration can and cannot influence within the BCBS, and the implications for global regulation.

9. Financial Deregulation Under Trump

Sanjay Sharma, Ph. D., Founder and Chairman
Jeb Beckwith, Managing Director
GreenPoint Financial

In February, 2017, President Trump executed an Executive Order and an Executive Memorandum kicking off the new administration's ambitious plans for unwinding much of the financial regulatory burden imposed on the financial community since the financial crises. In this paper, we examine what is likely to be unwound, what is likely to remain, and what remains in play.

10. Basel III to Stay on Course. G20 confirms its Commitment. We are not Surprised.

Sanjay Sharma, Ph. D., Founder and Chairman
Jeb Beckwith, Managing Director
GreenPoint Financial

On March 18th, the G20 released its first official communique ostensibly agreed to by President Trump's new Treasury Secretary. Despite the U.S. election, Brexit, and the rise of nationalistic forces in France and other areas of Europe, the G20 confirmed its commitment to stay the course on the Basel III framework. In this paper, we explore the rationale leading up to this decision as well as implications for the road forward.

11. Trading Desk Optimization Under FRTB

Jeb Beckwith, Managing Director
Sanjay Sharma, Ph. D., Founder and Chairman
GreenPoint Financial

Bank regulation and technology continue to evolve, forcing the need for banks both large and small to rethink how to optimize their desk structure. In addition, the Basel Committee on Bank Supervision (BCBS) has set a timetable for implementing their Fundamental Review of the Trading Book in 2019. With timelines ticking down, we offer a new framework for examining trading book optimization under a new set of technologies and constraints.

12. Author Biographies

Embrace Disruption and Partner with FinTech

Steven O'Hanlon
Chief Executive Officer and President, Numerix

The financial technology (FinTech) phenomenon first started to evolve in the capital markets industry more than 40 years ago, when the Nasdaq Stock Market debuted in 1971 as the world's first electronic stock market, listing more than 2,500 securities.1 Today, the NASDAQ has a greater trading volume than any other U.S. stock exchange, carrying out approximately 1.8 billion trades per day.[2]

Indeed, the FinTech industry has experienced exponential growth through the years, accelerated primarily by the electronification of trading (equities and FX) in the 1990s. FinTech was subsequently thrust into stardom as a result of post financial crisis regulation and the onset of startups that created innovative technology to either compete with or enable financial services institutions.

The scope of FinTech is enormous and touches nearly every aspect of the financial services industry. More than 30 areas are emerging as new norms in financial services as a result of FinTech trends, impacting sectors such as payments, lending, insurance, retail, wealth management and the capital markets.[3]

To be sure, the financial services industry is in a state of flux, and I would argue some of the most significant seismic shifts are being experienced in the capital markets. These are developments that are brewing a perfect storm of conditions that are fundamentally altering the economics and trading operations of investment banks and, to a lesser extent but still at a critical degree, hedge funds.

In my assessment, there are five influencers that are creating a new capital markets reality.

- **Intensifying regulation**

  The industry is riding an immense wave of regulatory reform that is transforming how firms conduct business, from their day-to-day operations to their data management practices to how they build and manage their technology infrastructures to meet the new standards. And that's just the short list of challenges that are faced.

When did it all start? The 2007-2009 financial crisis is, essentially, what led to the new regulatory measures that raised risk management constraints on the industry. These came out in the form of Dodd-Frank, EMIR, EBA, FSB, FATCA, FTT, Basel III, MiFiD, MiFiD II and, coming soon, FRTB. While the scope and geographical relevance of these regulations differ, they all impose very stringent regulatory norms on financial institutions. Many factors that are part of the investment banking business—capital, liquidity, systemic risk, supervision, governance, and trading—are affected by one or more of these regulations.

- **Bank capital and margin requirements**

  The ever-increasing regulations have resulted in extensions and revisions of bank capital and margin requirements, which add to a bank's challenge of achieving its end goal— profitability. This means having innovative solutions in place that can optimize capital and collateral for maximizing profitability, and that can also increase efficiency and lower costs. In 2015, it was observed that 37% of bank executives planned to upgrade their IT infrastructure to cut costs and improve efficiency.[4]

- **Fintech innovation**

  Fintechs have flooded the capital markets scene and have disrupted the financial industry by challenging traditional business models and how profits are made. To stay competitive, banks will have almost no choice but to call on fintech expertise for business process enhancements and for help in improving their go to market strategies and halting declining RoE. It will also mean embracing innovative fintech technology for digital transformation,

In 2015, it was observed that 37% of bank executives planned to upgrade their IT infrastructure to cut costs and improve efficiency.

efficiency, and cost-management needs. For many, it will be worth making the transformational investment.

- **Digitalization process**

Digitalization is forcing firms to undergo the most extensive transformation in their history. They are facing enormous pressures on costs and revenue, and this is requiring a whole new level of efficiency. The digital world can help enable cost management and profitability, yet many firms are still reacting to digitalization with hesitance. Currently, only 39% of the financial services sector is fully digitized.[5] In my view, only by adopting a more digitalized approach will it be possible for the industry to succeed at a higher level.

- **Modernization and simplification of IT and risk oriented technology systems**

In recent years, expenditure on risk technology has experienced double-digit growth of around 10% to 12%, and in 2017 this expenditure is expected to grow by up to 6% as financial institutions continue to progress with their post-regulatory expenditures.[6]

Notably, this spending trend is seeing a shift from internal to external expenditure. Internal expenditure has dropped by 11% overall, while expenditure on external software and services has risen by 13% and 38%, respectively.[8] This is significant: whereas in the past financial institutions built and developed their IT systems in-house, most are now looking to external providers and applications to do the same work.[7]

These developments echo an overall trend for simplification (whether via new technology options, outsourcing, or a mixture of the two), as firms look to reduce their total cost of ownership. This is reflected in the biggest areas of IT spending among Tier 1 banks: risk, governance, integration technology, and data aggregation.

- **Accepting the potential of FinTech**

The financial services landscape has clearly changed. These trends have been forcing institutions to look to the FinTech community to provide innovative solutions that push them to being compliant, competitive, efficient and profitable. Thus, FinTech's partnering with capital markets players is becoming more pervasive and this marriage is driving firms towards rebuilding themselves as digital and automated.

Whereas in the past financial institutions built and developed their IT systems in-house, most are now looking to external providers and applications to do the same work.

Many banks are aware of the benefits of disruptive technology and how it is a gateway to innovation, agility, speed, scalability, and more—they just simply can't duplicate it within their own walls, or don't want to take on the huge expenditure to do it all in-house. The big question that arises, then, is how does an institution identify the right FinTech partner? And what factors should be considered?

- **Five Traits of the Right Fintech Partner**

If I were to advise a CEO or other c-suite leader what to look for when choosing to collaborate with a FinTech company, I would emphatically suggest the following five attributes.

1. **A company that can help you succeed.** The FinTech partner you choose should have an acute understanding of your business (your products, systems, and regulations), a strong empathy for the issues you face, and the ability

to help you achieve your goals faster and more cost effectively. It should also have a market-leading ability to innovate and have the adeptness to help you bring maximum value to your marketplace and improve the experience of your customers.

2. **A company that offers innovative and comprehensive technological capabilities and services.** Critically examine the breadth of coverage and functionality of your candidate. Look for a track record of staying at the cutting edge of technology and having a strong and cohesive product platform and risk management system. It should demonstrate having a powerful architectural vision and the ability to deliver high performance processing. Additionally, a suitable FinTech partner will offer you a solid depth of services, particularly when it comes to implementation and post-deployment support.

3. **It hosts a strong brain trust.** You'll want to look for a partner that has assembled a rock star brain trust. It should have critical mass when it comes to financial engineering, quantitative and software development expertise. The best and brightest deliver the greatest and most targeted solutions.

4. **It has proven success and focus.** Continuity of focus and success are equally vital. Your FinTech partner must demonstrate a proven dedication to innovation and financial technology development. Has it been recognized by the FinTech industry and financial services sector? How often? Does it have a strong client list? Does it have decent market share? Essentially, you want to partner with a firm that can "walk the talk."

5. **It has a global footprint.** A FinTech firm that is global offers the benefit of working across different countries and cultures. A firm that has a global perspective and international experience is more likely to be knowledgeable about and active in the latest and emerging innovation trends in the rapidly evolving FinTech sector. Having a broader view can also help position a FinTech firm as an ideal resource to provide more diverse solutions.

• FinTech steps up in a big way

Fintech is succeeding in helping institutions absorb the disruption presented by regulatory turmoil, digital transformation, and new business challenges. I believe this support, in time, will enable financial companies to emerge stronger and more structurally capable. For me, personally, it's been very exciting to witness the recent traction within the FinTech sector. I see the future holding exciting new opportunities as FinTech expertise and capabilities grow even more to drive effective transformation for financial institutions.

[1] MarketsWiki

[2] advfn.com

[3] Bracing for seven critical changes as fintech matures. McKinsey.com (November 2016)

[4] CMS Top Emerging IT Trends in Banking Sector. Cmsitservices.com (June 2015)

[5] The Case for Digital Reinvention. McKinsey.com (February 2017)

[6] Global Risk IT Expenditure in Financial Services – 2017 Report, Chartis Research

[7] Global Risk IT Expenditure in Financial Services – 2017 Report, Chartis Research

Q&A with John Stacconi

Global Treasurer, Jefferies Group LLC

- You've been a corporate treasury executive at both major banks like J.P. Morgan and non-banks like Nomura and your current employer. What would you say are the major differences in how banks and non-banks approach the markets? How do your top 10 concerns differ in each platform?

The approaches that securities firms take to markets and clients are based on a successful system of regulation and risk that has evolved over an extended history. Jefferies focuses on providing market liquidity to clients across fixed income and equities as well as investment banking services. Securities firms manage risk, while banks seek to avoid and minimize risk. Broker/dealers got into trouble heading into the financial crisis when they moved into traditional banking products such as corporate lending and derivatives. SEC holding company regulations allowed the five large pre-crisis broker/dealers to take on too much risk. Banks can't fail, but broker/dealers fail orderly.

With a focus on market-making for clients and very tight leverage limits, efficient use of balance sheet and return on capital is in sharper focus at Jefferies than at my previous firms. Non-flow assets and aged inventory are tightly controlled so as not to restrict the firm's ability to provide liquidity to clients. Our size gives us the flexibility to measure returns at the trader level and to allocate balance sheet and capital accordingly. Banks have often been willing to accept certain loss leader businesses in support of a broader client relationship. We don't have that luxury at Jefferies given more limited financial resources.

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For Jefferies Treasury, key items of focus are maintaining our liquidity stress models, allocating balance sheet and capital to businesses, managing lending relationships and working to preserve/improve our credit rating. Banks, with the luxury of more diversified funding sources and a central bank back-stop, are not as focused on managing counterparty lending relationships as a broker/dealer. Jefferies has always operated with the knowledge that government support was not an option. That discipline led to the firm's long-standing policy of low leverage and Level 3 assets.

- Do you agree with the recent Federal Reserve study showing that the Volker Rule has led to a significant reduction in secondary market liquidity for fixed income products during periods of stress? If so, how has this change impacted Jefferies' businesses and outlook?

I would tend to agree that, on the margin, the Volcker Rule has reduced liquidity in the secondary market for fixed income products.

With respect to Jefferies, the Volcker Rule has helped Jefferies increase trading volumes at the margin with key clients as banks can no longer lead with balance sheets and now need to compete more on execution and research. But the reduction in market liquidity has also increased the risk of sudden price moves during a stress. This is one of the reasons why we've reduced our balance sheet, inventory and risk profile in fixed income.

- Given that Jefferies is not regulated as a bank, but also does not have access to the Federal Reserve for liquidity, you naturally focus on building a robust liquidity fortress. We note that your level 3 assets represent only 3% of long inventory, that over 75% of repo collateral is eligible for CCP clearing and that 75% of financial assets are readily financeable at haircuts of 10% or less. You also maintain very conservative leverage by bank standards with long term capital maturities capped at no more than 20% per year. Given this background and your experience, how do you think about corporate liquidity differently than a bank would? What impact does this have on the DNA of your firm's daily operations?

Liquidity management at a broker/dealer such as Jefferies is significantly different than a bank. Unlike banks, Jefferies is not in the business of carrying a significant amount of long dated assets. Banks take long dated liquidity risks in their lending and derivative books, both of which are minimal balance sheet users at Jefferies. Most of our balance sheet is used for market making activity in liquid securities (97% Level 1 and 2), reverse repo and stock borrowed. The liquidity risk DNA of the firm mandates that we know the fundability of every asset we own. The stress haircut for inventory and illiquid assets is covered with capital. Harder to fund assets are required to obtain longer dated funding. Though Jefferies isn't subject to Basel LCR and NSFR, we run liquidity and capital stress models that, in many assumptions, are more conservative than the bank models. We clearly understand that our business model is based on access to market-sensitive funding, which is why we focus our balance sheet on liquid products, with conservative term funding and an ample reserve of capital.

- Knowing that the FRTB does not directly apply to Jefferies, but will likely impact global markets, what threats and opportunities does his present for your firm?

We don't anticipate a major change due to the introduction of FRTB. At the margin, it will likely continue the trend towards increasing the cost and reducing the return on regulatory capital for impacted firms, enhancing the potential for Jefferies to continue to increase market share.

- Jefferies reports traditional bank metrics such as VaR even though it is not required to by regulation. Given that Jefferies is able to take a less prescriptive and more practical view of credit, market and liquidity risks than its large bank competitors, what traditional bank tolls do you utilize in daily risk management and why? Specifically, I am thinking of both traditional tools like VaR and cash capital as well as newer tools like Expected Shortfall, Liquidity Horizons, and non-modellable risk factors.

As we outline in our financial disclosure, we apply a comprehensive framework of limits on a variety of key metrics to constrain the risk profile of our business activities. The size of the limit reflects our risk tolerance for a certain activity under normal business conditions. Key metrics included in our framework include inventory position and exposure limits on a gross and net basis, scenario analysis and stress tests, Value-at-Risk, sensitivities (greeks), exposure concentrations, aged inventory, amount of Level 3 assets, counterparty exposure, leverage, cash capital, and performance analysis metrics.

Though Jefferies isn't subject to Basel LCR and NSFR, we run liquidity and capital stress models that, in many assumptions, are more conservative than the bank models.

While VaR measures potential losses due to adverse changes in historical market prices and rates, we use stress testing to analyze the potential impact of specific events or moderate or extreme market moves on our current portfolio, both firm-wide and within business segments. Stress scenarios comprise both historical market price and rate changes and hypothetical market environments. These generally involve simultaneous changes of many risk factors. Indicative market changes in our scenarios include, but are not limited to, a large widening of credit spreads, a substantial decline in equities markets, significant moves in selected emerging markets, large moves in interest rates, changes in the shape of the yield curve and large moves in European markets. In addition, we also perform ad hoc stress tests and add new scenarios as market conditions dictate. Because our stress scenarios are meant to reflect market moves that occur over a period of time, our estimates of potential loss assume some level of position reduction for liquid positions. Unlike our VaR, which measures potential losses within a given confidence interval, stress scenarios do not have an associated implied probability; rather, stress testing is used to estimate the potential loss from market moves that tend to be larger than those embedded in the VaR calculation.

Stress testing is performed and reported regularly as part of the risk management process. Stress testing is used to assess our aggregate risk position as well as for limit setting and risk/reward analysis.

- **How has the transition in many global fixed income markets from market-making to agency models created a level playing field for Jefferies to compete with its bank competitors?**

  On the margin, the reduction in bank balance sheets and the Volcker Rule has tended to help Jefferies level the playing field with larger banks. Banks no longer have the same ability to lead with balance sheet and offer the buy side cheap execution. Their ability to carry bonds for an extended period of time is restricted by Volcker and has become more expensive with new capital rules. Banks now need to compete on execution and research, where we feel our capabilities are on par with the largest banks. This new market dynamic is still playing out, but the early trends are positive for Jefferies.

- **Describe the value brought to Jefferies by your parent Leucadia and how this relationship changes how you think of risk management at Jefferies as compared with your prior non-bank employers.**

  The merger with Leucadia hasn't changed risk management at Jefferies. We continue to operate Jefferies under the same stringent guidelines and limits that were in existence prior to 2013. We have no liquidity or capital line in place between Jefferies and Leucadia and make no assumptions of parental support in our liquidity stress models. Jefferies and Leucadia agreed to balance sheet, liquidity and stress limits with the ratings agencies prior to the merger and both entities have operated well within those thresholds for four years. That said, counterparties and bond investors appear to take comfort in Jefferies being fully owned by Leucadia as opposed to being an independent investment banking firm. Jefferies operates in a volatile industry and having the support of a large, prudently capitalized parent is a net positive.

- **How is Jefferies considering implementation of the new SIMM rules for initial margining? What impact do you foresee to either Jefferies or markets from these new rules?**

  Jefferies' swap RSDs are currently not subject to regulatory initial margin. At this time, SIMM rules will require us to be in compliance by May 2020. We are looking at third party vendors to calculate two-way initial margin under the SIMM model. The liquidity requirements and operational impacts for Jefferies in 2020 are still unknown. We will have to post IM on all swaps, but netting will apply and we can post collateral other than cash (i.e. corporate bonds and equities) which should mitigate a significant portion of the liquidity need.

- **What impact has technology played in the way you manage your business? Specifically, are you moving away from so-called enterprise solutions to more flexible or cloud-based solutions? If the latter, how do you think about maintaining cybersecurity walls? If the former, how do you ensure that your systems are robust and up to date?**

  We are actively moving away from enterprise solutions into more flexible cloud-based architectures. For example, we are:

  a) migrating our exchange on premises to the cloud;
  b) moving from our proprietary system developed CRM to a vendor-based product; and
  c) utilizing features and services of third party clouds to perform complex analytics.

  We see the move to the cloud as an opportunity to review the security posture and requirements of the systems that we are migrating. We believe that with the right design, the cloud migration will in many cases provide us with a superior security architecture compared to the on premise version.

  However, it is important to note that not all cloud providers are created equal. We review every cloud opportunity and only move forward with the ones that meet our security requirements. In most cases, the cloud provider must meet a minimum set of key requirements before we allow our applications to migrate. Some examples of these requirements are:

  a) Independently audited for security and operation by a reputable firm
  b) Ability to encrypt Jefferies data using Jefferies encryption keys (managed and rotated by us)
  c) Ability to monitor the cloud usage using logs
  d) Ability to establish a secure connection between Jefferies network and the cloud provider
  e) Ability to restrict access to the cloud application to certain IP addresses

We are actively moving away from enterprise solutions into more flexible cloud based architectures.

- **Looking out over the next year, what are your top five priorities or concerns within Jefferies Group Treasury?**

  We focus on many things daily, but if I had to pick the top five, they would be:

  1) We need to continue to diversify our counterparty lending group. Some banks, primarily European, are reducing balance sheet and lending in the secured funding market. On the flip side, we're seeing more balance sheet available from Asian and Australian banks.
  2) As markets continue to rally, we need to stay focused on watching for asset bubbles in certain sectors. No immediate concerns, but that can change quickly.
  3) Continue to monitor the allocation of capital and ensure that the Jefferies is generating proper returns.
  4) Impact of Brexit on European business. We may need to move headcount and b/s out of London.
  5) A never-ending focus on increasing our credit ratings.

Prepare for Growing Threats of Mobile Security

Kirsten Bay
President & CEO, Cyber adAPT

Although no one has a crystal ball, it does not necessarily take one to follow trends. To best discuss predictions in the realm of information security for 2017, a review of 2016 events can inform how the landscape has changed.

2016 Year in Review

Ransomware

Ransomware was the single most frustrating and visible of issue throughout 2016. Although not the costliest or the most technically sophisticated, it wreaked havoc on a good deal of small and medium sized businesses and universities.

As PC World put it: "*The number of ransomware attacks targeting companies increased threefold from January to September (2016), affecting one in every five businesses worldwide.*"

Among the most successful ransomware programs in 2016 was *CTB-Locker*, which reportedly accounted for approximately 25% of all affected users, with *Locky* and *TeslaCrypt* following at a distant 7% and 6.5%, respectively.

Ransomware affected a wide range of organizations including hospitals, retail, financial institutions, and many government agencies with varying degrees of severity. Many of these victims actually paid their attackers, which the FBI highly recommends against.

The Tesco Bank Hack was another 'highlight' of 2016. My thoughts on Tesco Bank were recently highlighted by FTSE Global Markets:

> *"The recent Tesco Bank hack has left the retail banking world reeling, searching for answers and more effective ways to secure networks against future attacks. It has revealed weaknesses in how the bank's mobile applications left the door open for cybercriminals to brute force their way in and take more than £2.5m of customers' money. Worse still, the bank had been warned by several security experts of this weakness prior to the attack. Is the Tesco Bank hack the wakeup call needed to make mobile security a priority?"*
>
> **www.ftseglobalmarkets.com/news/lessons-from-the-tesco-bank-hack.html*

Let's be honest – all banks (among other institutions) are under daily attack in one form or another with only a handful of these attacks making the news. The main difference for the Tesco hack, which I would argue is a more pervasive problem within organizations, is that Tesco Bank was **warned** of these issues prior to this event. These warnings were either ignored or were not resolved in time. Sadly, we continue to see this happen on a regular basis, within all sizes and types of organizations.

What about the half billion Yahoo! users who had their personal information stolen? One could argue that Yahoo! is even more culpable than Tesco because Yahoo! failed to disclose this massive attack for two years. The full nature of the compromise was only reported when the attackers struck again late 2016, but not before the SEC had already opened a formal probe into the initial hack.

The list goes on and on – but let's close the discussion of 2016 with how the year ended, the hacking of the DNC. Recently we learned that Russian army malware, dubbed "X-Agent," was reportedly linked to the DNC hack.

> **The number of ransomware attacks targeting companies increased threefold from January to September (2016), affecting one in every five businesses worldwide.[1]**

More malicious than past malware, the one known as "X-Agent" is an implant. It's designed to supplement phishing campaigns, such as the one that ensnared the ranking leadership of the DNC. It's dropped in by infected sites, designed to look legitimate, and, once installed, logs keystrokes, filtrates data, and executes commands remotely. These DNC attacks, and the crafty use of WikiLeaks, were an attempt to influence the US Presidential election. They were well planned, strategic and stealthy. They could compromise a user and had a sophisticated plan for disseminating the information.

We were left with the overarching question of who and what we can trust online or otherwise.

On that bright note . . .

2017 Predictions

After many years of securing data, we've learned that there are no shortcuts. Hard work from both a research and technology perspective are essential, while always keeping a watchful eye on the big picture. Unknowns and volatility make it very hard to mitigate cyber risk.

Cyber Insurance

Although not a new market, 2017 will prove to be either groundbreaking or more challenging than ever, depending on how one can value the cyber insurance market.

> *The current market size is around $3 billion, according to various estimates. According to PwC the global cyber insurance market, dominated by North America, is expected to generate $14 billion in gross premiums by 2022, growing at a compound annual growth rate of nearly 28%.*

Carriers have been valuing policies with a keen eye on the cost of recovery, however a lack of incident data combined with high potential severity lead to the potential for asymmetric payoffs. How does this asymmetry get priced into the insurance equation? The challenge for cyber insurance underwriters is having enough data to calculate risk of loss in an area with several complex variables and potentially large payoffs.

Ransomware

Throughout 2017, you are going to see *target of opportunity vs target of convenience* as an ongoing theme. Understanding this distinction can help not only remediate, but also prevent, many cyber-related attacks.

We saw an a tremendous amount of ransomware activity in 2016 – many felt that 2016 was 'The Year of Ransomware' – but we predict this year will only be worse. We'll see a marked increase in both the sophistication of the encryption used to lock organizations out of their systems as well as a more rapid spread of such attacks across vertical markets, with a targeted *increase* of both state and federal government agencies.

2017 opens as organizations worldwide are rapidly moving IT infrastructures to cloud providers such as Amazon Web Services (AWS), Microsoft Azure, Google, and others. We predict ransomware will quickly escalate along with this transition as we see instances of individual organizations successfully attacked and brought to their knees. This will be similar to last year when fixed network infrastructures were attacked. The difference in the cloud will be that the same attack can be used on many more organizations because the attack profile will be simple to replicate.

The Internet of Things (IoT) will be a new and growing vector for ransomware attacks.

The Internet of Things (IoT) will be a new and growing vector for ransomware attacks. This will increase quickly given how little security exists in IoT products. As reported by Wired Magazine:

> *An Austrian hotel lost control of its door locks, keeping new guests stranded in the lobby. A police department in Cockrell Hill, Texas abandoned years of video evidence and digital documentation. In Washington, DC, the police couldn't access its CCTV footage storage system days before Donald Trump's inauguration. All of this news came out in the last week, stemming from a rapid escalation of how ransomware is deployed. And it's only going to get worse.*

Mobile

As we saw last year with Tesco Bank, mobile devices will only become a more prominent point of entry into organizations' networks. Criminal and state sponsored activists will increasingly harness methods to automate mobile infiltration. Phishing tactics from social engineering, bad apps, and drive-by malware websites will be magnified by the infiltration of hardware, including your new phone, with pre-installed malware compromised due to poor third party supply chain security. We see *these targets of convenience* will continue to grow exponentially.

With a $150 tool and a YouTube video, a hacker can hang out in an airport, hotel, coffee shop, or even your neighborhood, and intercept your mobile communications. While decryption of content may be difficult, stealing your username and password to your banking app, your iCloud account, your company exchange email account, etc. is simple. An attacker can sit in your company parking lot of your local branch to do this – **that** is a target of opportunity.

Scary?

Now turn it into a target of convenience. That same $150 tool can scrape, learn, and store in memory every Wi-Fi access point it touches. Users will connect to what they think is their secured Wi-Fi (Home, Delta Lounge, Company Wi-Fi, etc.) when their traffic is being intercepted and pwned (an industry term for owned or hacked).

Did I mention this tool, called the *Wi-Fi Pineapple Nano*, can fit in your pocket and be powered by one of those little phone charging juice packs?

People are demanding more and more out of mobile. Demands on banks and other businesses for mobile is increasingly "anywhere, anytime and anyhow." With seamless connectivity comes a boundless enterprise, and with a boundless enterprise comes risk. *The more access, the more risk*. Although it is easy to understand why employees want to be able to do everything from mobile devices, it should be even easier to see how of the lack of security on those devices can create the ultimate target of both convenience and opportunity.

Further Predictions and Actions

2017 will be the year that a cyber-related incident based on one or multiple of the characteristics stated above will bring down a financial institution and/or another enterprise in a much-publicized event. This will more than likely be either state sponsored or hacktivist related.

2017 has also already brought much discussion about how the new administration and government aims to improve security to further protect data. For example, private organizations often break their own industry regulations, such as SarBox and HIPAA, simply in the way they provide key data sets to the federal government for compliance. This is because those federal systems do not meet the private sector standards.

This leads me to the role of government protection and some thoughts shared by the majority leader of the US House of Representatives:

"Cybersecurity: Americans are rightfully worried about becoming the victims for the next major data breach and Congress must insist that Americans' personal financial data is protected. Data breaches subject consumers to uncertainty and confusion and increase consumers' vulnerability to identity theft, leading to further inconvenience and possible financial loss. As technology advances and personal data becomes its own currency, consumers face an escalating risk of identity theft and financial fraud from criminals, many of them operating overseas, seeking to access their personally identifying data. The increasing frequency and sophistication of cyberattacks demands heightened vigilance and enhanced efforts by industry participants to safeguard consumers' financial data.

Task Force Solution: House Republicans are developing legislation to ensure stronger protections for consumers against identity theft and fraud as well as legislation to ensure that sensitive information that is submitted to the government is fully protected from cyberattack. H.R. 3738, Rep. Ed Royce's legislation, requires the Office of Financial Research (OFR) to provide a detailed strategic plan regarding its priorities and to develop and implement a cybersecurity plan to protect the data that it collects."[2]

While decryption of content may be difficult, stealing your username and password to your banking app, your iCloud account, your company exchange email account, etc. is simple.

If you believe that, I have a bridge to sell you. Your organization *cannot* rely on the government at the state or federal level to protect your company's data. Instead, it is up to your organization to use technology, in tandem with policy and strong governance, to protect customers, employees, and all other company data. This includes the sharing of that data with government agencies. The legal, regulatory and reputational risks are large.

[1] PC World

[2] From www.abetterway.speaker.gov/_assets/pdf/abetterway-economy-policypaper.pdf

New Margin Requirements Sweep the OTC World

Adam Litke
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On March 1, 2017, the second wave of margin regulation for OTC derivative products swept over the world as the European rules for the mandatory posting of collateral for non-cleared derivatives began to take effect. This delayed implementation followed on the heels of the initial implementations in the US and Asia in September 2016 and ended the first phase of a global roll-out that will last until 2020. While the aim of these regulations was to eliminate the domino effect of a large bankruptcy rolling through the derivatives markets, is a good one, it is going to have a profound impact on the way firms manage risk and on the way they manage their technological infrastructure.

We will start by looking at the most important provisions of the rule.

- Both initial margin and variation margin must be posted.
- Initial margin cannot be taken into account when computing daily variation margin.
- Bilateral margining including the posting of two-way initial margin required to be held in safekeeping by a third party.
- Initial margin must be posted whether a trade is cleared or is purely bilateral.

To some extent this levels the playing field between the OTC and cleared markets, but upon further inspection things are subtler.

- Centrally cleared trades have the advantage of a shorter margin period of risk.
- The central counterparties (CCPs) are also advantaged in the standardized calculation because gross initial margin is included as part of what must be posted.
- Finally, netting is perfect with the clearinghouse, but is far from perfect with OTC counterparties because OTC initial margin cannot be rehypothecated.

This last piece is particularly important because it will inevitably lead to increased concentration amongst an already tiny group of very large counterparties. This is because the best price for a trade will often be with the firm you already traded with for other instruments.

In addition to unintended consequences of the rules, there is also the issue of jurisdictional interpretation. As is usual with the local implementations of standardized rules, the inability of regulators to actually agree on just what those standards are will lead to some interesting market dislocations. Here are some examples.

The strange case of the simplest product: Foreign Exchange

Deliverables

Deliverable foreign exchange trades have been explicitly excluded from margining in the US, but are not completely exempt in Europe. This exemption makes a certain amount of sense in that a huge piece of this market is composed of individuals and firms simply moving assets from one market to another. Whether this is repatriation of profits or to pay bills, margining would act as a huge drag on international trade.

On the other hand, European regulators have, at least partially, taken the attitude that risk is risk and should be mitigated in a consistent way. Many FX forward trades are entered into as hedges and not to explicitly transfer assets, so, in this instance, US regulators have taken the side of the hedgers. Of course, this means there is no level playing field. US institutions have a huge incentive to trade with US banks, which bifurcates the market and hurts liquidity.

Regulatory Conflict

Compounding the jurisdictional difference is the way it interacts with other regulations. In the US, mutual funds are required to use the entire notional of a physically settled trade when computing leverage rather than just the value of the transaction, but this is also what they use when computing leverage for non-deliverable forwards. That means that US mutual funds now have two competing incentives: i) keep

forwards non-deliverable to lower their leverage statistics, or ii) move towards deliverable forwards and avoid margining.

We also have the sticky question of intent. Let us look at the example of a foreign exchange swap. This is economically the same as executing two FX forwards or a spot trade and an FX forward. In fact, when one trades an FX swap it is usually confirmed as two completely separate trades. Here's the rub. Even though the two separate trades are exempt from margining, if the trade was executed as a single trade it would be marginable. In the European regulations, the whole question seems to have been left to intent. That is, if one *intends* to trade an FX swap, then it is an FX swap. If one *intends* to trade the two pieces, then it is not. Of course, it is not at all clear how a booking system can discern intent. In order to manage this distinction in any reasonable way, firms will have to set up a whole system of qualifying and non-qualifying portfolios.

Differences in timing

Jurisdictional differences in the timing of margin enforcement creates global challenges unlike other rule enforcement. It is quite clear at this point that some regulators feel they are ready to implement margin rules while others are worried about operational risk. When the first wave of rules, applicable only to the largest banks, hit in September of 2016, the US and most Asian regulators decided to enforce margining while European regulators decided to allow for a 6-month delay. Now margin rules are not like capital rules. Capital applies to an institution on a standalone basis while margin applies to bilateral transactions. Even if a European bank was exempt from the rules when trading with another European bank, it still needed to have full margining systems in place for trading with banks outside of the EU. The dealing arms of these banks were able to comply without too much trouble, but many of their branch operations and private banks, operating on different systems, got caught out by the rules. These operations had to rush to implement collateral management systems and margining calculations simultaneously.

The March 1 deadline was no different. This time, many more entities are covered by the rules. Across the industry, thousands of CSAs that are not compliant with the new regulations need to be renegotiated. Some firms, which in the past had chosen to operate on an uncollateralized basis, now have to negotiate new CSAs from scratch. This time, the Japanese regulators are moving full steam ahead while the EU regulators have indicated no delay. The US regulators have stated that the rule is in effect, but the CFTC has issued a 6-month enforcement stay, effectively the same as delaying the rule by 6 months. This means that banks supervised by the Federal Reserve are subject to the rules, but non-bank derivatives dealers get to wait. This guidance is continually evolving. On Feb 23, both US and European regulators indicated publically that they would be enforcing the rules selectively under the assumption that banks are making a good faith effort to get new documents in place. The smaller the exposure, the more likely you are do get a reprieve. Once again, who you trade with determines the margin you have to post, at least for the near term.

These regulations... [are] going to have a profound impact on the way firms manage risk and on the way they manage their technological infrastructure.

Legacy trades

Both the US and Europe allow legacy trades that are entered into before the rules take effect to be exempted from margining. Of course, in the interest of complexity, regulators in the two jurisdictions have decided that they will have different rules for novation and amendments. In the US there is simply no exception. That is, once anything about a trade is altered post-implementation, the trade automatically becomes part of the margining set. In the EU, legacy trades stay legacy trades unless they are amended in such a way as

to avoid the rules. Once again, we have the thorny issue of intent here. It is not at all clear if changing the size of a trade triggers margining or not. There will also be trades which are treated as legacy by a counterparty is Europe and marginable by the other counterparty in the US.

Equity Derivative Phase In

In the US, equity derivative trades are covered by the margining rules. There are no exemptions. In the EU they *will* be covered. The key word here is will. Single stock options and options on equity index futures are delayed until 3 years after the implementation of the rest of the rule in the EU. This means that even for firms that must margin everything else, equity derivatives trades will be delayed until 2020.

ISDA SIMM

On top of the fact that the rules and their implementation differ by jurisdiction, there is also the issue of standard vs. internal model approaches used asynchronously between counterparties. Some counterparties will employ the standard rules for margining while others will have been approved for internal model margining. Like its counterparts for market risk capital, internal margining rules will give numbers that are both lower and more realistic than the standard paradigm. If a firm is a prime broker, then it may already have such a model and it has probably imposed this on its customers. Reconciliation between two dealers requires a good deal more transparency. After all, even if both dealers use value at risk models to compute margin, they will not have the same parameters.

The International Swaps and Derivatives Association (ISDA) has tried to step into this breach by developing a standardized model for computing initial margin (SIMM). This model is based on the sensitivities of the position values to standardized inputs, grouped together in a consensus bucketing scheme. For the big banks, this is a godsend. They already have automated systems in place to reconcile trade values with their counterparties which simply need to be extended to the sensitivities. This is far from trivial because two banks may use different models for the same type of trade, but it is at least a well-defined problem and fits into existing system architectures.

What About Everyone Else?

For smaller banks and other market participants, even implementing something as seemingly simple as standardized greeks is a huge undertaking. Let's examine a typical private bank. Historically these banks traded with their own derivatives desks, or with the desks of other firms, and were pure price-takers. They simply stood in between their customers and the other firms and thought of themselves as credit intermediaries. Now, even if their customers are end users and are exempt from margining, the private bank must post and collect margin with dealers. They must move from a role as price-takers—where they receive marks from dealers and check them with an independent third party on a monthly basis—to having daily marks, daily greeks and a complete reconciliation system. This is upgrading to a fully-fledged, mark-to-market and collateral system from what has been, at best, a spreadsheet driven operations function.

For smaller banks and other market participants... [this will mean] upgrading to a fully-fledged, mark-to-market and collateral system from what has been, at best, a spreadsheet driven operations function.

New Documentation

In addition to all of the systems issues, there is one more, not-so-little problem facing the industry. This is the fact that the vast majority of existing credit support agreements (CSAs) must be modified to comply with the new regulations. On top of this, many firms that never had to post margin before are suddenly caught in the net and must sign new agreements and set up collateral posting arrangements at the same time. Some players have already decided that the extra cost of all of these processes is not worth it and they will simply stop hedging.

Conclusion

The new margin regulations represent a valiant attempt to reduce systemic risks, but they fall short in significant ways. The intent was to ensure that in the next financial crisis, there may be a run on the bank, but there won't be a run on the market by simplifying the connections between financial firms, making resolution of failing banks easier, and setting up firewalls between firms.

The continuing implementation of these regulations over the next 3 years is going to be far from consequence free. Many firms will have to create new operational processes and implement their corresponding systems from ground zero. Jurisdictional differences will fragment the trading markets, at least temporarily, and in some cases permanently. In the end, the world will be somewhat safer from financial melt-down, but getting there is going to be a difficult process.

Will the Volcker Rule Survive Under the Trump Administration?

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The "Volcker Rule"[1], a ban on proprietary trading activities by banks included in Dodd-Frank at the last minute, has long been one of the least popular parts of the landmark financial services reform law. Opponents of the Volcker Rule contended that it was a solution in search of a problem: there is scant evidence that proprietary trading played any role in the financial crisis that prompted Dodd-Frank. More importantly, the drafters of this provision soon confronted the reality that it would not be possible to draft a law that simply banned proprietary trading. There were certain trading activities, including treasury management functions, securities underwriting and market-making, that banks were either required to conduct or that lawmakers wanted banks to continue. Opponents of the Volcker Rule argued vociferously that the subsequent efforts to distinguish between prohibited and permitted trading activities made the rule overly complicated and burdensome. On balance, they argued that the harms to the financial markets caused by the Volcker Rule outweighed any supposed benefits in reducing the risks of proprietary trading.

For their part, proponents of the Volcker Rule did not join the debate over the role of bank proprietary trading in the financial crisis. Rather, they contended that the federal banking safety net should not be extended to allow banks to be in the business of engaging in risky trading activities. They noted that the Volcker Rule, and its implementing regulations, carefully separate out this risky trading activity and preserve the ability of banks to engage in trading that promotes risk management and market liquidity. To the extent the rule caused some banks to reduce their permitted trading activities, other non-bank affiliated dealers, hedge funds and others could step in to maintain liquidity.

During the final years of the Obama Administration, backers of Dodd-Frank successfully fended off virtually every effort to peel back even minor provisions of the law, not to mention one of its centerpiece provisions like the Volcker Rule. However, as the implementation of the Volcker Rule has moved forward, opposition has not eased. It has become one of the most frequently mentioned targets for relaxation or outright appeal as the new Trump Administration begins to govern.

In this article, we argue that reform of the Volcker Rule is both appropriate from a policy perspective and likely as a political matter. Further, we believe that, once lawmakers travel down the road of reform, it will be difficult for them to stop short of outright appeal. We also believe that there are other financial controls, particularly capital rules, that can and will be relied on to address the potentially risky behavior the Volcker Rule was intended to address.

Promulgation of the "Volcker Rule"

As adopted, the Volcker Rule provision of Dodd-Frank is far more complicated than a simple bar on proprietary trading. It was recognized from the outset that certain trading activities are integral to the conduct of conventional banking activities, and others, while perhaps not essential, are nevertheless desirable. Hence, the law contains a laundry list of "permitted" trading activities, including trading in government securities, trading "in connection with underwriting and market making-related activities," risk mitigating hedging activities, trading for the general account of an insurance subsidiary or affiliate, and trading that occurs "solely outside of the United States."[2] It also allows the bank regulatory agencies, SEC and CFTC, to permit other activities they determine would promote and protect the safety and soundness of the banking entity and the financial stability of the United States.[3]

The law then imposes limits on the permitted activities, restricting activity that would give rise to conflicts of interest, result in exposure to high-risk assets or high-risk trading strategies, or pose a threat to the safety and soundness of the banks or the financial stability of the United States.[4] For further measure, the law also included a broad "anti-evasion" provision that permits the regulatory agencies either to adopt rules or take action in particular instances where they believe trading that was nominally permitted nevertheless functioned as an evasion or otherwise violated the Volcker Rule trading ban.[5]

In addition to these broad provisions related to trading activity, the promulgators of the Volcker Rule recognized that bank formation of, or investment in, hedge funds or private equity funds could indirectly circumvent the proprietary trading ban. As a result, additional provisions were added that prohibit banks from serving directly or indirectly as managers, advisers or sponsors of hedge funds or private equity funds.[6] Parallel to the proprietary trading ban, the Volcker Rule goes on to include a list of permitted private fund investments[7] and bank activities related to private funds,[8] and in turn imposes certain restrictions related to those permitted fund-related activities.[9]

Challenges and Costs to Volcker Compliance: Two Examples

This entire structure did not take effect upon the enactment of Dodd-Frank. Even though the statute contained detailed definitions of a number of key terms,[10] its drafters recognized that many concepts incorporated into the law required further clarification, and the various prohibitions and permissions required further definition. Drawing the lines between prohibited and permitted proprietary trading—and prohibited and permitted fund formation, sponsorship, investment and management activities—proved challenging.

Distinguishing Market-Making from Proprietary Trading

Even before adoption of the Volcker Rule, the SEC struggled with the distinction between permissible market-making and improper trading activity. Even if performed in a market-making account, trading was not necessarily considered to be *bona fide* market-making.[11] As a consequence , the final implementing rule included a number of restrictions on the market-making activities it would permit. Among other things, it required that the amount, types and risks of the financial instruments in the trading desk's inventories be designed not to exceed the "reasonably expected near term demand" of customers and counterparties, based on the characteristics of the particular securities involved, as well as a "demonstrable analysis" of historical demand and other factors. It also directed banks to establish and implement compliance programs in which their market-making activity would be assessed based on a variety of metrics, to take actions to demonstrably reduce or promptly mitigate risks taken in connection with their market-making, and to establish limits on the risks taken, the instruments used for risk management, and the length of time positions may be held. The adopting release devotes over 200 pages to a discussion of permitted market-making related activities, with 40 pages alone devoted to a detailed discussion of the expected metrics firms are required to adopt in their compliance program.

The steps required by a bank seeking to rely on the exemption for permitted market-making related activity are truly daunting. To prevent a bank's market-making activities from giving rise to excessive risks, the implementing rules require that the bank's trading inventories not exceed the "reasonably expected near-term demand" (nicknamed "RENTD") of customers, clients and counterparties. The determination of what level is appropriate will vary from one class of securities to the next, and indeed among individual securities within the class, and can vary over time and based on market conditions.[12] While the regulatory agencies administering the Volcker Rule have issued FAQs on a number of questions, unfortunately they have not provided guidance on how RENTD should be determined, leaving confusion and disparities in approaches among banks.[13] To assist the regulatory agencies in enforcing compliance with the rule, banking entities and their affiliates are required to maintain metrics related to their market-making activity on a daily basis, and provide submissions regarding those metrics to the appropriate regulator monthly or quarterly. The required metrics include: (i) risk and position limits and usage; (ii) risk factor sensitivities; (iii) value-at-risk and stress VaR; (iv) comprehensive profit and loss attribution; (v) inventory turnover; (vi) inventory aging; and (vii) customer-facing trade ratio.[14] While banks have indicated that they view the more quantitative metrics, such as risk limits and sensitivities, to be relatively straightforward, they have found some of the other metrics, particularly inventory turnover, customer-facing trade ratio and PnL attribution, to be much more challenging, for reasons such as an absence of internal data and established analytical processes.[15]

The steps required by a bank seeking to rely on the exemption for permitted market-making related activity are truly daunting.

Defining Risk Mitigating Hedging

The exception for "risk-mitigating hedging activities," while less lengthy in its exposition, posed perhaps even greater analytical and compliance challenges. The final implementing rules recognize that a hedge need not eliminate all risks related to a position. For example, a hedge may extend only to part of a position (e.g., to bring it below defined risk limits), be for a limited duration (e.g., through use of a swap, future or option), or only address certain risk elements of a market making position (e.g., reduce the currency or interest exposure of a bond, but not the credit risks posed by the particular issuer). The implementing rules permitted an area other than the trading desk that established a risk position to engage in hedging activity (e.g., a risk management group). They also recognized that hedges may not even relate to financial instruments (e.g., a bank might use securities of derivatives to hedge currency, interest rate or credit risks associated with a commercial loan). On the other hand, the implementing rules also recognized that financial instruments used for hedges may give rise to risks of their own (e.g., if they are imperfect hedges, or if they are retained after the underlying market making position is liquidated), giving rise to esoteric questions such as whether to permit hedging of hedge positions.

Other Challenges

Other examples include the challenges in determining when trading activity or private fund activity occurs "solely" outside the United States,[16] delineating the securities/instruments eligible for the U.S., foreign government and municipal

securities eligible for exemption, defining which private funds, hedge funds and similar entities are deemed "covered funds" under the Rule, and discerning permissible activities and time frames associated with "seeding" newly launched public funds and divesting seed positions.

Changing Perspectives on Volker

During the 2016 presidential campaign, Dodd-Frank was a frequent target of criticism by presidential candidate Donald Trump. Almost immediately after his election, Trump's transition team pledged to dismantle Dodd-Frank.[17] Subsequent press reports stated that both Trump and his nominee for Treasury Secretary, Steven Mnuchin, were targeting Dodd-Frank, with Mr. Mnuchin declaring reform of Dodd-Frank to be the Trump Administration's "#1 priority."[18] As to the Volcker Rule, Mnuchin stated: "It's unlikely the Volcker Rule is completely eliminated. But certain provisions may be reversed that give banks more discretion. The number one problem with it is that it's too complicated."[19]

It's unlikely the Volcker Rule is completely eliminated. But certain provisions may be reversed that give banks more discretion. The number one problem with it is that it's too complicated.

These remarks from the incoming Presidential administration coincide with strong opposition among many Republican Congressional leaders. Rep. Jeb Hensarling, Chairman of the House Financial Services Committee, introduced the Financial Choice Act in mid-2016, which would pare back significant parts of Dodd-Frank. Rep. Hensarling would go further than Mnuchin, as the Financial Choice Act calls for complete elimination of the Volcker Rule.[20] The Financial Choice Act passed the House Financial Services Committee, although further action on it stalled before the election. Following Trump's election victory, Rep. Hensarling reiterated his support for radical revamping of financial services regulation and continues to champion the Financial Choice Act and its dismantling of Dodd-Frank.[21]

Significant support for a possible dismantling of the Volcker Rule came from a seemingly unlikely source: the regulator with the primary mandate for enforcing the rule. On December 22, 2016, a paper was released by the Federal Reserve Board staff documenting that market liquidity had suffered as a result of the Volcker Rule.[22] The paper found that illiquidity of stressed bonds had increased after the Volcker Rule. It further found that dealers subject to the Volcker Rule had decreased their market-making activities while non-Volcker-affected (i.e., non-bank) dealers had stepped in to provide some additional liquidity, but not enough to offset the reduction by bank dealers. The Fed researchers were able to isolate this impact of the Volcker Rule from other changes in financial regulation, such as Basel III and new bank capital regulations (CCAR). The authors of the paper asserted that market maker liquidity is most needed in times of market stress. In perhaps its most damning conclusion, the paper stated: "[W]e find

that the relative deterioration in liquidity around these stress events is as high during the post-Volcker period as during the Financial Crisis. Given how badly liquidity deteriorated during the financial crisis, this finding suggests that the Volcker Rule may have serious consequences for corporate bond market functioning in stress times."[23]

Following the release of the paper, the Federal Reserve Governor in charge of regulation, Daniel Tarullo, retired and his responsibilities were assumed by another Federal Reserve Governor, Jerome Powell. Recently, Mr. Powell urged Congress to revisit the Volcker Rule.[24] In a speech before the American Finance Association, Powell stated: "What the current law and rule do is effectively force you to look into the mind and heart of every trader on every trade to see what the intent is. Is it proprietary trading or something else? If that is the test you set yourself, you are going to wind up with tremendous expense and burden. . . . We don't want the largest financial institutions to be seriously engaged in proprietary trading. We do want them to be able to hedge their positions and create markets. . . . I feel the Congress should take another look at it."[25] On the other hand, Fed Chair Janet Yellen, in recent testimony before Rep. Hensarling's House Financial Services Committee, defended the Volcker Rule, stated that the Fed staff paper did not represent the views of the Federal Reserve Board as a whole, and described evidence on its impact as "conflicting."

There is reason to believe that the Volcker Rule, in some form, may well survive. During his Senate confirmation hearings, Mnuchin backtracked somewhat on his earlier remarks, stating that he supported the Volcker Rule, but he felt it would be appropriate to review how it was being enforced by regulators.[26] For their part, many industry leaders, despite strong opposition to the Volcker Rule during its proposal and implementation, have remained guarded in their remarks, despite the opening provided by the Fed paper and comments from the incoming Administration and Congressional leaders. For example, in an article discussing the "cover" provided by the Fed paper for political leaders to change the Volcker Rule, the CEO of JP Morgan's Corporate and Investment Bank, Daniel Pinto, was quoted as saying: "We will not do anything differently if the rule is eliminated." The CFO of Citi, John Gerspach, stated: "We don't want to do proprietary trading, but I also would love to work with regulators to lessen the burden of proving that we are not engaging in proprietary trading."[27] These cautious remarks by the senior management of major banks may merely reflect "smart" politics during an uncertain transition period. But this hesitancy is striking when contrasted, for example, with unabashed calls to unwind the DOL's fiduciary rule.[28]

The future of the Volcker Rule under the Trump Administration

So what does this portend for the Volcker Rule? At the very least, the regulations adopted to implement the Volcker Rule will clearly be up for review, if not the statutory Volcker Rule itself. The initial focus will clearly be on trying to devise ways in which compliance with the Volcker Rule, particularly the exception for market-making related trading, can be made simpler. But I predict that this effort will fairly quickly evolve into a rethinking of the Volcker Rule itself, and a search for alternative approaches to addressing the "evils" of proprietary trading that the Volcker Rule was intended to address.

The regulators clearly did not intentionally create an administrative nightmare that was burdensome to comply with and required them to "look into the mind and heart of every trader on every trade." However, they were faced with a statutory framework that required them to distinguish "risky" proprietary trading from beneficial proprietary trading, when such a dichotomy simply doesn't exist. Virtually all "beneficial" market-making and underwriting requires a trader to assume risk—that's a big part of why it is beneficial.

What is needed is a different approach. There is a ready tool that is already in the regulators' arsenal and renders the Volcker Rule largely superfluous.

But it is naïve to believe that the Volcker Rule will be fixed by re-drawing the lines more simply or to allow more trading. If it were easy to draw lines distinguishing good proprietary trading from the bad, the regulators who labored for three years to craft the implementing rules would have done so. It was undoubtedly an ominous portent of the challenges they faced that, when asked to define the bright line that would identify harmful proprietary trading, Paul Volcker himself, in testimony before Congress, was forced to resort to the quip: "It's like pornography. You know it when you see it."[29] Attempting to undo the illiquidity consequences of the Volcker Rule by drawing the lines so as to allow more trading will simply be substituting a different, and possibly even more difficult, set of metaphysical judgments for the rules' current ones—it's no easier to define "soft" pornography than the "hard" sort.

What is needed is a different approach. There is a ready tool that is already in the regulators' arsenal and renders the Volcker Rule largely superfluous: bank and broker-dealer capital regulation. The Volcker Rule has long been derided by its critics as a blunt instrument.[30] If a market maker puts on a trade, it is either a permitted trade or, if it exceeds RENTD or isn't offset by a risk mitigating transaction quickly enough, it becomes an illegal trade that violates the Volcker Rule. If a hedge is imperfect, or is left on after the underlying position is unwound, it becomes an unlawful proprietary trade. Rather than take such an all-or-none approach, capital regulations impose capital charges on riskier activity. Capital regulations, at both the bank and broker-dealer level, are complex, but they are well-established and well understood. They do involve some judgment calls, but for the most part they are objective and mechanical, and do not rely on discerning a trader's motivation or intent. They also have the advantage

of being very flexible, for traders and regulators alike. If a trader decides to assume, maintain, or fail to hedge or offset a large risk position in a market-making account, he or she can do so, recognizing that increased capital charges will result from those decisions. In managing its overall activities, a bank can rationally determine where it wants to allocate its capital, and is incentivized to carry out its activities in the most capital-efficient (and thereby in the least risky) manner possible. For their part, if the regulators determine that existing capital rules either underweigh or overweigh the risks of certain activities or positions, they can recalibrate their capital treatment accordingly. House Speaker Ryan's legislative blueprint, while not explicitly calling for a repeal of the Volcker Rule, recognizes these key elements in endorsing reliance on capital regulation as the centerpiece of bank financial regulation.[31]

Conclusion

Unfortunately, that brings us full circle. Ultimately the fate of the Volcker Rule will be determined not by economic research studies or rational regulatory calculus, but in the political arena. And there, its fate will be tied to considerations such as the need to obtain 60 votes in an almost evenly divided Senate in order to overturn existing laws or enact new ones. That Donald Trump's nominee for Treasury Secretary has testified that he now supports the Volcker Rule, and senior officials at leading banks say they aren't interested in proprietary trading (even though trading profits are up substantially across Wall Street), suggests that the path to the Rule's repeal will not be an easy one. While repeal makes the most sense, a more likely result, at least in the near term, is that the Volcker Rule remains on the books, while the implementing rules, and enforcement measures associated with them, are relaxed.

[1] https://www.sec.gov/rules/final/2013/bhca-1.pdf
[2] See Section 13(d)(1) of the Bank Holding Company Act.
[3] See Section 13(d)(1)(J) of the Bank Holding Company Act.
[4] See Section 13(d)(2) of the Bank Holding Company Act.
[5] See Section 13(e) of the Bank Holding Company Act.
[6] See Section 13(a)(1)(B) of the Bank Holding Company Act.
[7] See Sections 13(d)(1)(E) and (I), and Section 13(d)(4) of the Bank Holding Company Act.
[8] See Sections 13(d)(1)(G) and 13(f)(3) of the Bank Holding Company Act.
[9] See Sections 13(d)(2) and 13(d)(4)(B) of the Bank Holding Company Act.
[10] See Section 13(h) of the Bank Holding Company Act.
[11] Various SEC rules, such as Regulation SHO governing short sales, provide relief for activities that are deemed to be bona fide market making.
[12] See Section IV.A.3.c.2. of the Preamble to the final implementing rules. 79 FR 5536 (Jan 31, 2014).
[13] See "RMA Survey Reveals Insights into How Banks are Complying with the Rule's Permitted Trading Activity Requirement," The RMA Journal, April 2016.
[14] The market-making metrics and other aspects of a bank's compliance program with respect to the market-making related activity exemption are set out in Appendix A to Volcker implementing rules.
[15] See RMA Survey, supra note 22.
[16] Several law firms have penned lengthy articles and provided detailed guidance on these topics, which have given rise to new acronyms ("TOTUS" for trading outside the U.S. and "SOTUS" for fund investments and activities that are solely outside the U.S.).
[17] Bloomberg News, Nov. 10, 2016.
[18] USA Today, November 30, 2016.
[19] Ibid.
[20] See www.financialservices.house.gov/choice/, and www.financialservices.house.gov/uploadedfiles/financial_choice_act-_executive_summary.pdf.
[21] "This Congressman Could Turn the Dodd-Frank Financial Reforms Upside Down," Fortune, Nov. 15, 2016.
[22] Bao, Jack, Maureen O'Hara, and Alex Zhou (2016), "The Volcker Rule and Market-Making in Times of Stress," Finance and Economics Discussion Series 2016-102. Washington: Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2016.102.
[23] Ibid., at page 3.
[24] "Fed's Powell Urges Congres to Take Another Look at Volcker Rule," by Steve Matthews, Bloomberg News, Jan. 7, 2017.
[25] Ibid.
[26] "Treasury Nominee Pressed on Views," Wall Street Journal, Jan. 20, 2017.
[27] "The Fed Has Given Trump Cover to Unwind Key Wall Street Rule," by Matt Turner, Business Insider, Dec. 27, 2016.
[28] "Labor Proposes Easing Fiduciary Rule on Fees for Some Annuities Sellers," by Lisa Belfuss, Wall Street Journal, Jan. 19. 2017.
[29] "The Volcker Rule is Fatally Flawed," by Peter J. Wallison, Wall Street Journal, Apr. 10, 2012.
[30] Ibid.
[31] http://abetterway.speaker.gov/_assets/pdf/ABetterWay-Economy-PolicyPaper.pdf. See the discussion on page 41 of the paper, under the headings: "Smarter Regulations for Financial Institutions that Choose to Invest in their Safety," and "Task Force Solution: A new regulatory paradigm offers highly-capitalized, well-managed financial institutions an option for relief from excessive regulatory complexity."

Top 10 SEC Enforcement Highlights of 2016

BakerHostetler[1]

One of the largest U.S. business and litigation firms in the U.S.

We have compiled our annual Top Ten list of Enforcement Highlights. This time, it occurs towards the end of the tenure of SEC Chair Mary Jo White. Sullivan & Cromwell corporate securities and capital markets partner, Jay Clayton, is being considered for the next Chairmanship. We like Clayton's nomination. Mr. Clayton fits the traditional role of the SEC Chair with his deep federal securities laws knowledge and experience in capital markets and formation, two of the hallmark missions for the SEC which are impactful upon the U.S. and world economies. Below we recount the actions and focus of the SEC under Chair White.

1. Looking Back on Her Tenure, Outgoing Chair Mary Jo White Touts the SEC's Aggressive and "Unrelenting" Enforcement Program

SEC Chair White plans to leave her position at the end of the Obama administration.[2] In the press release, an accompanying report, and a published speech she delivered on November 18, 2016, Chair White reflected on her time at the SEC, hailing various changes and developments since she became Chair in April 2013, including an aggressive "new model for enforcement."[3] Among the accomplishments cited:

- More than 2,800 enforcement actions, including insider trading charges against more than 250 individuals; a record 868 actions in fiscal year 2016 (ended Sept. 30, 2016) alone; judgments and orders in fiscal 2016 totaling more than $4 billion in disgorgement and penalties; and "first of their kind" enforcement cases in asset management, market structure and public finance.
- Implementation of a new policy requiring admissions of wrongdoing in certain cases.
- A focus on charging individuals as well as companies, particularly in financial reporting cases.
- Dedicated groups and taskforces focused on financial fraud, microcap abuse, pyramid schemes, and other areas.
- Awarding, since 2011, more than $100 million to 34 whistleblowers who provided original information leading to successful enforcement actions.

It will be interesting to see which changes in the Division of Enforcement occur with a new Chair and at least two new Commission members.

2. The Supreme Court's Affirmance of the Insider Trading Conviction in *Salman v. United States*

On December 6, 2016, the U.S. Supreme Court unanimously affirmed the insider trading conviction of Bassam Salman in *Salman v. United States*.[4] In so doing, the Court handed a victory to both criminal prosecutors and the SEC, and appeared to resolve a split in the Circuits in favor of the Ninth Circuit's affirmance in Salman and against the Second Circuit's 2014 reversal of insider trading convictions in *United States v. Newman*.[5] In fact, much of Newman remains intact, and the reach of the Court's decision in Salman remains to be determined.

Both Salman and Newman centered on the Supreme Court's holding in *Dirks v. SEC*[6] that a tippee's liability for trading on inside information hinges on whether the tipper breached a fiduciary duty by disclosing the information to receive a personal benefit. *Dirks* instructed courts to focus on "objective criteria," such as pecuniary gain, in determining whether the insider received a personal benefit, but also held that a jury can infer that the tipper received a personal benefit where the tipper "makes a gift of confidential information to a trading relative or friend."[7]

In *Newman*, the Second Circuit reversed the convictions of two portfolio managers who were "several steps removed from the corporate insiders," where the initial tipper and tippee were merely "casual acquaintances" and friends who were not "close," and where no evidence was introduced at trial to indicate that the defendants knew the source of the inside information or that the insiders received any personal benefit in exchange for the tips.[8] In that context, the Second Circuit held that an inference that the insiders received a personal benefit was impermissible "in the absence of proof of a meaningfully close personal relationship that generates an exchange that is objective, consequential, and represents at least a potential gain of a pecuniary or similarly valuable nature."[9]

Salman had made over $1.5 million in profits trading on tips regarding mergers and acquisitions he had received from his friend Michael Kara, who had received the confidential information from Kara's younger brother Maher Kara, an investment banker at Citigroup who was also Salman's

brother-in-law. In contrast to the facts in *Newman*, the evidence at Salman's trial established that the initial tipper and tippee (the Kara brothers) had a very close relationship, that the tipper (Maher) provided the tippee (Michael) inside information for the purpose of benefiting him, and that the trading defendant (Salman) had been told the source of the inside information. The Supreme Court affirmed the Ninth Circuit's judgment affirming Salman's conviction, finding that Maher's gift of confidential information to his close relative fit squarely within the Court's holding in *Dirks* that a tipper breaches a fiduciary duty by making a gift of confidential information to a "trading relative."[10]

The Court in *Salman* rejected as inconsistent with *Dirks* any application of *Newman* that would require that a tipper receive something of a "pecuniary or similarly valuable nature" in exchange for a gift to family or friends.[11] Notably, however, the Court did not suggest that *Newman* was wrongly decided, and it is likely that the Court would have affirmed the Second Circuit's decision based on the facts in that case. The Court also noted that, while *Dirks'* rule concerning tips to a "trading relative" "easily resolves" the issue in *Salman*, future cases will present courts with more difficult tests in determining the factual question whether an insider personally benefited from a particular disclosure.[12]

3. FCPA Action Against Hedge Fund Manager Och-Ziff Capital Management Group LLC

On September 29, 2016, the SEC announced its first ever enforcement action charging a hedge fund manager with violations of the Foreign Corrupt Practices Act (FCPA).[13] The SEC's settled administrative action included charges against hedge fund manager Och-Ziff Capital Management Group LLC, its affiliated registered investment adviser OZ Management LP, and two senior officers of Och-Ziff. An investigation by the SEC had found that Och-Ziff used intermediaries, agents and business partners to pay bribes to high-level government officials in Africa, so as to induce Libya's sovereign wealth fund to invest in Och-Ziff managed funds and to secure mining rights and influence government officials in five African countries.

In settling the charges, Och-Ziff and OZ agreed to pay one of the largest FCPA fines in history, with disgorgement plus prejudgment interest totaling almost $200 million. Och-Ziff's CEO agreed to pay disgorgement plus interest totaling over $2 million. Och-Ziff further agreed to implement several specified enhanced internal accounting controls and policies, to retain an independent monitor for a period of at least three years, and to follow recommendations regarding improving the effectiveness of the firm's FCPA policies and procedures to be made by the monitor in a series of reports.

4. In SEC v. Graham, Eleventh Circuit Applies Five-Year Statute of Limitations to Declaratory Relief and Disgorgement

On May 26, 2016, the Eleventh Circuit issued its opinion in *SEC v. Graham*, the first ever Circuit Court decision applying the five-year statute of limitations set forth in 28 U.S.C. § 2462 to declaratory relief and disgorgement.[14] Section 2462 governs SEC actions "for the enforcement of any civil fine, penalty, or forfeiture."

The SEC commenced the *Graham* civil enforcement action in federal court in January 2013, alleging that defendants engaged in securities fraud between November 2004 and July 2008. The SEC requested that the District Court: (1) declare that defendants violated federal securities laws; (2) permanently enjoin defendants from future securities law violations; (3) direct defendants to disgorge profits; (4) order defendants to repatriate funds held outside the court's jurisdiction; and (5) require three defendants to pay civil penalties. The District Court dismissed the case, finding that the SEC's claims were time-barred under Section 2462.[15] The District Court relied on the U.S. Supreme Court's 2013 decision in *Gabelli v. SEC*, which involved an SEC claim for a civil penalty. *Gabelli* held that, under Section 2462, there was a five-year statute of limitations for the SEC to bring a civil suit seeking a civil penalty and further, it begins to accrue when the fraud occurs, not when it is discovered.[16]

On appeal, the Eleventh Circuit in *Graham* reversed in part, holding that an injunction is a forward-looking remedy, not a penalty, and therefore not time-barred under Section 2462.[17] But the court affirmed the remainder of the District Court's ruling, holding that Section 2462 applies to declaratory relief and disgorgement, because both are backward-looking and would operate as penalties under Section 2462.[18] Notably, the Eleventh Circuit created an apparent Circuit split in holding that Section 2462 applies to claims for disgorgement, because the D.C. Circuit and Ninth Circuit previously held, pre-*Gabelli*, that disgorgement claims were not subject to the statute of limitations.[19] This new issue on disgorgement now seems ripe for consideration by the Supreme Court.

On September 29, 2016, the SEC announced its first ever enforcement action charging a hedge fund manager with violations of the Foreign Corrupt Practices Act (FCPA).

5. Expansive Interpretation of Advisers Act Rule Targets Fund Administrators as Gatekeepers

Fund administrators have been the target of several recent SEC enforcement actions that seek to hold administrators liable for the misconduct of fund managers and their principals. These aggressive enforcement actions are the first of their kind to argue that administrators serve in a gatekeeper role. The

most recent ones were brought against Apex Fund Services (US), Inc. in June 2016 for allegedly violating Sections 206(2) and 206(4) of the Investment Advisers Act of 1940 (Advisers Act) and Rule 206(4)-8 thereunder in connection with its administrative services for ClearPath Wealth Management, LLC[20] and EquityStar Capital Management, LLC,[21] each of which were subject to separate enforcement actions for fraud.

In both enforcement actions, the SEC alleged that Apex contracted with each of ClearPath and EquityStar to maintain records and prepare financial statements and investor account statements but failed to take reasonable steps in response to red flags indicating each fund manager was misappropriating assets. Those red flags included: (1) undisclosed withdrawals, margin accounts and pledged assets; (2) a warning from a prior fund administrator; and (3) a background check on one of the adviser's principals revealing a previous wire fraud conviction. In each settled order, Apex allegedly continued to prepare inaccurate NAV statements and reports despite being aware of these red flags. Pursuant to the settled orders in which Apex neither admitted nor denied the findings, Apex was required to retain an independent compliance consultant to review and recommend improvements to its policies and procedures and to pay approximately $185,000 in disgorgement, $16,000 in prejudgment interest, and $150,000 in civil penalties.

These enforcement actions, which were not litigated, are significant because they imposed liability on Apex by expansively interpreting existing statutes to regulate its conduct as an administrator where they would not otherwise be subject to the SEC's explicit regulation. In particular, the SEC supported this apparent expansion by citing Section 203(k) of the Advisers Act, which allows the SEC to impose a cease-and-desist order upon, among others, any "person that is, was, or would be a cause of [a violation of the Advisers Act], due to an act or omission the person knew or should have known would contribute to such violation." In this sense, it appears that the SEC viewed Apex as being complicit in the misconduct because they contributed to the environment that supported the underlying fraud. Indeed, Andrew Ceresney, Director of the SEC Division of Enforcement, noted in the press release announcing these settlements that "Apex failed to live up to its gatekeeper responsibility and essentially enabled the schemes to persist at each of these advisory firms until the SEC stepped in."[22]

It will be interesting to see if the SEC attempts to use this untested and expansive interpretation to broaden its regulatory purview in the coming year.

6. New Initiative Encouraged Broker-Dealers to Self-Report Violations

In June 2016, the SEC announced a significant regulatory and enforcement initiative for clearing broker-dealers, the Customer Protection Rule Initiative, which seeks to encourage broker-dealers to self-report to the SEC historical and ongoing violations of Section 15(c)(3) of the Securities Exchange Act of 1934 (Exchange Act) and Rule 15c3-3 thereunder by November 2016.[23] The Customer Protection Rule requires that clearing broker-dealers, among other things, maintain a reserve bank account that is at least equal in value to the net cash owed to customers and retain physical possession or control over their customers' fully paid and excess margin securities.

Fund administrators have been the target of several recent SEC enforcement actions that seek to hold administrators liable for the misconduct of fund managers and their principals.

This initiative is significant because it offered standardized settlement terms for participating broker-dealers, namely a settled order finding violations of Rule 15c3-3 and any applicable books and records and reporting charges where the broker-dealer:

- Neither admits nor denies the findings minimizing deleterious collateral consequences and investor civil litigation;
- Undertakes to enhance their compliance program, cooperate with any subsequent investigation regarding the violation (including against individuals), and retain an independent compliance consultant if necessary; and
- Pays disgorgement and penalties, which may be reduced for cooperation.

For those broker-dealers that did not self-report by the November deadline, the initiative threatens substantial sanctions if they are later found to be not in compliance with the Customer Protection Rule. To emphasize this regulatory risk, the SEC simultaneously announced a settled order with Merrill Lynch and Pierce, Fenner & Smith Incorporated for Customer Protection Rule violations in which Merrill Lynch admitted to the misconduct and paid $415 million in the form of a civil penalty, disgorgement, and prejudgment interest for (i) engaging in complex options trades that did not have any economic basis but reduced the required deposit of customer cash in its reserve account, which allowed Merrill Lynch to use that customer cash to finance its own trading activities and (ii) holding customer securities in accounts that were subject to liens.[24] If Merrill Lynch had not retained an independent consultant prior to the settlement, the order would have also required it to do so as an undertaking.

Since then, there have been no publicized enforcement actions stemming from this initiative or the targeted sweep. It is likely that a few will be announced in 2017 after examination referrals are made to the Division of Enforcement.

7. Private Equity Remained in Enforcement Crosshairs

The SEC continued to scrutinize public equity funds and advisers throughout 2016 by bringing several enforcement

actions relating to conflicts of interest, disclosure lapses and compliance failures. One of the most notable of them occurred in August 2016 involving four private equity fund advisers affiliated with Apollo Global Management, LLC.[25] According to the SEC's settled order, the four Apollo advisers violated Sections Rules 203(e)(6), 206(2), 206(4), and 206(8) of the Advisers Act and 206(4)-7, 206(4)-8, and thereunder in several ways.[26]

First, for nearly four years, the advisers failed to disclose the benefits the funds received from accelerating the payment of future monitoring fees owed by the funds' portfolio companies upon their sale. Because such fees reduced the amount available for distribution to investors, the SEC viewed them as a conflict of interest that required disclosure.

Second, one of the advisers failed to disclose certain information about how loan interest was allocated between the adviser's affiliated general partner, and five of the adviser's funds. Instead of allocating the interest to the funds as disclosed in their financial statements, the interest was allocated solely to the general partner thus making those financial statement disclosures misleading.

Third, the advisers failed reasonably to supervise a senior partner who improperly charged personal items and services to their funds and portfolio companies. After repeated reprimands of and repayments by the partner, the advisers voluntarily reported the expense issues to the SEC and executed a formal separation agreement with the partner.
Without admitting or denying the SEC's findings, the four Apollo advisers agreed to pay approximately $37.5 million in disgorgement, $2.7 million in prejudgment interest, and $12.5 million in civil penalties. It appears that the advisers were able to limit the civil penalty to one-third the possible amount and avoid even stiffer sanctions "based upon their cooperation" that included, among other things, conducting their own reviews of the expense issues, self-reporting those issues to the SEC, and voluntarily and promptly providing documents and information to the staff during the investigation.

Because the SEC has stated that it is deploying more of its staff to focus on examinations of investment advisers in the coming year, it is likely that there will be more enforcement actions in 2017 like the one against the four Apollo advisers.

8. Data Analytics Harnessed to Build Enforcement Actions

Throughout 2016, the SEC increasingly used data analytics to reinforce its enforcement program through the involvement of the Division of Economic and Risk Analysis (DERA). In fact, Chair Mary Jo White emphasized these new capabilities during a November 2016 speech: "There are now huge quantities of data available for nearly all parts of the market, including corporate equity and bond trading, trading in complex financial instruments, municipal bond trading, and other market activity. More than ever, the SEC is developing in-house innovative analytical tools to take advantage of today's data-rich environment. The result is that the number of cases we are able to originate in-house has risen dramatically."[27]

One of this past year's notable analytic enforcement actions was brought against the investment adviser, TPG Advisors, LLC, and its principal, Larry M. Phillips, in December 2016 for systematically and unfairly allocating trades to benefit certain favored clients to the detriment of other clients for over four years.[28] According to the order, the performance of the favored client accounts was a "statistical anomaly" with a less than 1% "likelihood that their profitability originated from random chance."[29] Pursuant to the order, the defendants admitted to wrongdoing in violating Section 10(b) of the Exchange Act and Rule 10b-5 thereunder and Sections 206(1), 206(2), and 207 of the Advisers Act, and agreed to pay approximately

$25,000 in disgorgement, $3,000 in prejudgment interest, and $300,000 in civil penalties. The order also imposed on Phillips a permanent bar. As the SEC continues to develop these in-house capabilities, DERA will continue to play a role in the SEC's enforcement program in 2017.

9. SEC Charges Investment Adviser with Inaccurate Form ADV Disclosures Regarding Wrap Fee Costs

In its fiscal year ended September 30, 2016, the SEC brought its most ever cases involving investment advisers or investment companies (160) and its most ever standalone cases involving investment advisers or investment companies (98).[30] Included in these were several cases against investment advisers alleging misrepresentations or inadequate disclosures concerning fees and expenses, including fees charged in connection with wrap fee programs. In such programs, clients

pay an annual fee intended to cover the cost of services such as custody, trade execution and portfolio management. Transaction charges on trades sent to the broker-dealer designated in the program are typically included in the wrap fee. If, however, the investment adviser "trades away" by sending trades to another broker-dealer for execution, the advisory client typically incurs additional costs.

One example of the SEC's wrap fee cases was the settled administrative action against registered investment adviser RiverFront Investment Group, LLC.[31] On July 14, 2016, the SEC announced settled charges that RiverFront made materially inaccurate disclosures in its Form ADV, stating that it "will generally" execute transactions for wrap fee clients through the wrap program's sponsor. In fact, RiverFront traded away for a majority of the volume for its wrap clients. Notwithstanding RiverFront's position that it did so to seek best execution, the SEC determined that RiverFront's practice made its Form ADV disclosures materially inaccurate, in violation of Section 204(a) of the Advisers Act and Rule 204-1(a) thereunder. RiverFront was ordered to pay a civil penalty of $300,000.

10. Steps Taken to Further Incentivize and Protect Whistleblowers

Over the past year, the SEC continued to develop its Whistleblower Program by issuing millions of dollars of awards, sanctioning companies for violating the Whistleblower Protection Rule through restrictive severance agreements and retaliatory actions,[32] and conducting a sweep examination of registered investment advisers and broker-dealers to assess their compliance with Dodd Frank's whistleblower rules.[33]

The SEC's Office of the Whistleblower further incentivized whistleblowers by handing out over $79 million in awards to 15 whistleblowers in 2016, including, among others:

- $22 million to "a whistleblower whose detailed tip and extensive assistance helped the agency halt a well-hidden fraud at the company where the whistleblower worked."[34]
- $20 million to "a whistleblower who promptly came forward with valuable information that enabled the SEC to move quickly and initiate an enforcement action against wrongdoers before they could squander the money."[35]
- $17 million to "a former executive whose tip substantially advanced the agency's investigation and resulted in a successful enforcement action."[36]
- $900,000 to "a whistleblower whose tip enabled the SEC to bring multiple enforcement actions against wrongdoers."[37] and
- $700,000 to "a company outsider who conducted a detailed analysis that led to a successful SEC enforcement action."[38]

More than ever, the SEC is developing in-house innovative analytical tools to take advantage of today's data-rich environment. The result is that the number of cases we are able to originate in-house has risen dramatically.

The flurry of awards over the past year appears to be the result of the tips working their way through the investigation and enforcement process, suggesting a sign of things to come in 2017. Since the inception of the Whistleblower Program, the SEC has awarded more than $136 million to 37 whistleblowers resulting in more than $504 million being ordered in sanctions, including more than $346 million in disgorgement and interest for harmed investors.[39]

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[2] Press Release, SEC Chair Mary Jo White Announces Departure Plans, Release No. 2016-238 (Nov. 14, 2016), https://www.sec.gov/news/pressrelease/2016-238.html.

[3] Speech, SEC Chair Mary Jo White, A New Model for SEC Enforcement: Producing Bold and Unrelenting Results (Nov. 18, 2016), https://www.sec.gov/news/speech/chair-white-speech-new-york-university-111816.html.

[4] *Salman v. United States*, No. 15-628, slip op. (Dec. 6, 2016).

[5] *United States v. Newman,* 773 F.3d 438 (2d Cir. 2014).

[6] *Dirks v. SEC*, 463 U.S. 646 (1983).

[7] *Id.* at 663-64.

[8] 773 F.3d at 443.

[9] *Id.* at 452.

[10] *Salman*, slip op. at 9.

[11] *Id.* at 10.

[12] *Id.* at 8, 11-12.

[13] In the Matter of *Och-Ziff Capital Management Group LLC*, No. 3-17595 (Sept. 29, 2016),https://www.sec.gov/litigation/admin/2016/34-78989.pdf.

[14] No. 14-13562 (11th Cir. May 26, 2016).

[15] *SEC v. Graham*, 21 F. Supp. 3d 1300 (S.D. Fla. 2014).

[16] 133 S. Ct. 1216 (2013).

[17] No. 14-13562, slip op. at 7-9.

[18] *Id.*, slip op. at 9-14.

[19] See *Riordan v. SEC*, 627 F.3d 1230 (D.C. Cir. 2011); SEC v. Rind, 991 F.2d 1486 (9th Cir. 1993).

[20] In the Matter of *Apex Fund Services (US), Inc.*, No. 3-17299 (June 16, 2016),https://www.sec.gov/litigation/admin/2016/ia-4428.pdf.

[21] In the Matter of *Apex Fund Services (US), Inc.*, No. 3-17300 (June 16, 2016),https://www.sec.gov/litigation/admin/2016/ia-4429.pdf.

[22] Press Release, SEC, Private Fund Administrator Charged With Gatekeeper Failures, Release No. 2016-120 (June 16, 2016), https://www.sec.gov/news/pressrelease/2016-120.html.

[23] Customer Protection Rule Initiative, Division of Trading and Markets and Division of Enforcement (June 23, 2016), https://www.sec.gov/divisions/enforce/customer-protection-rule-initiative.shtml.

[24] In the *Matter of Merrill Lynch, Pierce, Fenner & Smith Incorporated* and *Merrill Lynch Professional Clearing Corp.*, No. 3-17312 (June 23, 2016), https://www.sec.gov/litigation/admin/2016/34-78141.pdf.

[25] Press Release, SEC, Apollo Charged With Disclosure and Supervisory Failures, Release No. 2016-165 (Aug. 23, 2016), https://www.sec.gov/news/pressrelease/2016-165.html.

[26] In the Matter of *Apollo Management V, L.P., Apollo Management VI, L.P., Apollo Management VII, L.P.*, and *Apollo Commodities Management, L.P.*, No. 3-17409 (Aug. 23, 2016),https://www.sec.gov/litigation/admin/2016/ia-4493.pdf.

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[28] Release, SEC, Investment Adviser Agrees to Settle Cherry-Picking Charges, Release No. 3-17217 (Dec. 15, 2016), https://www.sec.gov/litigation/admin/2016/34-79568-s.pdf.

[29] In the Matter of *TPG Advisors LLC d/b/a The Phillips Group Advisors* and *Larry M. Phillips*, No. 3-17217 (Dec. 15, 2016), https://www.sec.gov/litigation/admin/2016/34-79568.pdf.

[30] See Press Release, SEC Announces Enforcement Results for FY 2016, Release No. 2016-212 (Oct. 11, 2016), https://www.sec.gov/news/pressrelease/2016-212.html.

[31] In the Matter of *RiverFront Investment Group, LLC*, No. 3-17343 (July 14, 2016),https://www.sec.gov/litigation/admin/2016/ia-4453.pdf.

[32] Press Release, SEC, Merrill Lynch to Pay $415 Million for Misusing Customer Cash and Putting Customer Securities at Risk, Release No. 2016-128 (June 23, 2016), https://www.sec.gov/news/pressrelease/2016-128.html; Press Release, SEC, Company Punished for Severance Agreements That Removed Financial Incentives for Whistleblowing, Release No. 2016-164 (Aug. 16, 2016),https://www.sec.gov/news/pressrelease/2016-164.html; Press Release, SEC, Company Paying Penalty for Violating Key Whistleblower Protection Rule, Release No. 2016-157 (Aug. 10, 2016),https://www.sec.gov/news/pressrelease/2016-157.html; Press Release, SEC, SEC Charges Anheuser-Busch InBev With Violating FCPA and Whistleblower Protection Laws, Release No. 2016-196 (Sept. 28, 2016),https://www.sec.gov/news/pressrelease/2016-196.html; Press Release, SEC, SEC: Casino Gaming Company Retaliated Against Whistleblower, Release No. 2016-204 (Sept. 29, 2016),https://www.sec.gov/news/pressrelease/2016-204.html.

[33] SEC Risk Alert, Examining Whistleblower Rule Compliance (Oct. 24, 2016),https://www.sec.gov/ocie/announcement/ocie-2016-risk-alert-examining-whistleblower-rule-compliance.pdf.

[34] Press Release, SEC, $22 Million Whistleblower Award for Company Insider Who Helped Uncover Fraud, Release No. 2016-172 (Aug. 30, 2016), https://www.sec.gov/news/pressrelease/2016-172.html.

[35] Press Release, SEC, SEC Issues $20 Million Whistleblower Award, Release No. 2016-237 (Nov. 14, 2016), https://www.sec.gov/news/pressrelease/2016-237.html.

[36] Press Release, SEC, SEC Issues $17 Million Whistleblower Award, Release No. 2016-114 (June 9, 2016),https://www.sec.gov/news/pressrelease/2016-114.html.

[37] Press Release, SEC, SEC Awards Nearly $1 Million to Whistleblower, Release No. 2016-260 (Dec. 9, 2016), https://www.sec.gov/news/pressrelease/2016-260.html.

[38] Press Release, SEC, SEC Awards Whistleblower More Than $700,000 for Detailed Analysis, Release No. 2016-10 (Jan. 15, 2016), https://www.sec.gov/news/pressrelease/2016-10.html.

[39] Press Release, SEC, SEC Whistleblower Program Surpasses $100 Million in Awards, Release No. 2016-173 (Aug. 30, 2016), https://www.sec.gov/news/pressrelease/2016-173.html.

Navigating New Cybersecurity Rules: Impact on Insurance Companies

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The New York Department of Financial Services (DFS) has issued cybersecurity requirements for financial services companies (cyber rules) that recently went into effect March 1, 2017.

The cyber rules, codified at 23 NYCRR §500, require insurance and insurance-related companies as well as brokers, agents and adjusters licensed in New York to assess their specific cyber risk profiles and design cybersecurity programs that address such risk in a "robust fashion."

There is no doubt that cyber risk is real, and the DFS has taken steps to manage it by way of the regulation. Still, the cyber rules could prove to be problematic, particularly for licensed brokers, agents and adjusters. To these individuals – and the insurance and insurance-related companies that employ or utilize them – there are several things to keep in mind.

Entities Affected

The cyber rules apply to any "covered entity," which the regulation defines as "any person operating under or required to operate under a license, registration, charter, certificate, permit, accreditation or similar authorization under the Banking Law, Insurance Law or Financial Services Law."

This means that in addition to insurers, individual brokers, agents and adjusters have a new mandate. What this requires – and pursuant to §500.02(a) of the cyber rules – is that these individuals must "maintain a cybersecurity program designed to protect the confidentiality, integrity and availability of [their] Information Systems." Depending upon a covered entity's size and reach, the following broad requirements (among others) imposed by the cyber rules may be rather burdensome:

- Establishing a cybersecurity program;
- Adopting a cybersecurity policy;
- Designating a Chief Information Security Officer (CISO);
- Implementing privacy policies and procedures for third-party service providers;
- Conducting periodic risk assessments; and
- Notifying the Superintendent within 72 hours of determining the occurrence of a cybersecurity event that has a reasonable likelihood of materially harming any material part of the normal operations of the covered entity, or if notice would need to be provided to another regulatory body.

Achieving Compliance

There are a lot of new requirements for a broker, agent or adjuster to digest. First, a covered entity should appoint a CISO or use a third-party to fill the role. Thereafter, it is required that an initial risk assessment be conducted to identify breaches in security followed by the adoption of corresponding policies and procedures and implementation of necessary security overhauls to bridge any gaps. All of this would be bolstered by appropriate staff education or training. Third-party vendor security also needs to be addressed.

Ultimately, the key to complying with the cyber rules is the implementation of a "living, breathing" cybersecurity program that can adapt to ever-changing security concerns, including new technologies and threats. This program must be one that can be refined when new issues arise and risks are identified.

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What will not withstand governmental audit is a set of written policies that sits on a shelf and gathers dust. Likewise, policies and procedures that merely serve as restatements of the law will be ineffectual. Indeed, the likelihood of an enforcement action decreases proportionally to level of diligence exercised in compliance. Licensed brokers, agents and adjusters must act accordingly.

Who is Exempt?

The cyber rules could create a burden on many individual brokers, agents and adjusters doing business in New York, particularly the "mom and pop shops" that lack the resources of the more substantial and sophisticated industry players. Nevertheless, those licensed by the DFS must comply with the regulation in its entirety unless they are exempt, which could be a possibility depending upon a covered entity's size or annual revenue, among other things. The cyber rules reduce, but do not entirely eliminate, the onus of compliance in certain situations as follows:

- A Covered Entity with (1) fewer than 10 employees (including independent contractors) located in New York; (2) less than $5 million in gross annual revenue stemming from New York in each of the past 3 years; or (3) less than $10 million in year-end total assets, including assets of all affiliates, must still have a cybersecurity program and policy, conduct risk assessments, implement privacy policies and procedures for third-party service providers and notify the Superintendent, but are exempt from most of the other requirements.
- An employee, agent, representative or designee of a covered entity, who is itself a covered entity, does not need to develop its own cybersecurity program to the extent it is covered by the cybersecurity program of the covered entity.

Cyber rules could prove to be problematic, particularly for licensed brokers, agents and adjusters.

This could be a positive sign for some, but there is a catch. Those who qualify for an exemption must file a Notice of Exemption form, as set forth in the cyber rules, within 30 days of determining that an exemption applies. The takeaway: to be relieved of at least some of the requirements of the cyber rules, qualifying brokers, agents and adjusters must submit the requisite paperwork. The failure to do so will subject them to whatever penalties ultimately apply.

It would be good practice for insurance companies and agencies to alert their potentially exempt licensees of the filing requirement.

The Role of Legal Counsel

Qualified legal counsel can be of great help in managing the cyber rules. Not only can it provide the framework for initial and periodic risk assessments mandated by the DFS, but legal counsel can also facilitate continuing compliance and create the attestation trail necessary to demonstrate adherence to the regulation.

Likewise, legal counsel can help to evaluate and fulfill reporting requirements in the event of a cybersecurity breach, and assist in adopting associated reporting protocol. Additionally, an insurance regulatory lawyer can design a cybersecurity curriculum for staff education and training, which can curtail human error, assure proper device management and communicate disciplinary consequences for information or protocol breaches. Finally, legal counsel can advise insurance companies and their licensees on the exemption parameters and procedures built into the cyber rules.

Additional Questions: Stay Tuned ... Stay Vigilant

How will the cyber rules be monitored? What will be the measure of non-compliance? What control protocols other than encryption will authorities accept to withstand enforcement action? What analysis will need to be conducted to determine the actual need for reporting? Is it realistic for smaller entities to comply?

These are all questions that have been raised, and ones without complete answers – yet. Covered entities must nevertheless take prompt action to conduct a risk assessment and establish policies and procedures.

Basel Under Trump

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*"The election of Donald J. Trump as America's 45th President could mean an end to years of cross-border cooperation in banking rules, making life harder for regulators as they try to keep bank excesses in check on both sides of the Atlantic... observers say that spells trouble for global standard setters such as the **Basel Committee on Banking Supervisors [BCBS]** and others." – WSJ 11/14/16*

This headline captures both the hope and fear amongst financial institutions around the world who have been working towards a common regulatory framework for decades, particularly since the 2008 global financial crisis. Not only has Donald Trump been elected on a platform to revise and replace federal regulations, but he has also been swept into office with majorities in both the House and the Senate. This follows the Brexit referendum as well as the rising tone elsewhere to pursue de-globalization policies. Does a Trump victory spell the decline of coordinated, global financial regulation by the BCBS, particularly its most recent rule-making initiatives?

We sense that the U.S.-BCBS relationship could come under scrutiny, but that key initiatives such as the Fundamental Review of the Trading Book (FRTB) will remain on schedule. We arrive at this view through a three step examination of the new landscape.

1. **The What** - We examine the governance framework of BCBS and the U.S.'s role.
2. **The How** - We examine the mechanisms through which the new administration could act promptly and other measures that would take more effort.
3. **The Will** - We provide our assessment about what the new administration is likely to actually do regarding BCBS rule-making and the impact this may have on the global regulatory environment.

What Does U.S. Participation in the BCBS Look Like?

The BCBS is one of six[1] committees established by the Bank for International Settlements (BIS), a Basel, Switzerland based bank owned by its 60 central bank membership that collectively represent approximately 95% of world's GDP.[2] The BIS mandates the BCBS to be the primary global standard setter for the prudential regulation of banks and to provide a forum for cooperation on banking supervision

matters. **The BCBS does not possess any formal supranational authority and, as such, its decisions do not have legal force.** Instead, the BCBS relies on its members to "*implement and apply BCBS standards in their domestic jurisdictions within the pre-defined timeframe established by the [BCBS].*"[3]

Oversight of the BCBS comes from the Group of Governors and Heads of Supervision (GHOS),[4] a 27-member subset of the general membership that approves the BCBS Charter, provides general guidance, and appoints the BCBS Chair from among its members. The U.S. is represented on the GHOS by the heads of four organizations. We refer to these collectively as the U.S. GHOS members (see Table 1).

Table 1

U.S. GHOS Members
1. The Board of Governors of the Federal Reserve System (BGFRS) 2. The Federal Reserve Bank of New York (FRBNY) 3. The Office of the Comptroller of the Currency (OCC) 4. The Federal Deposit Insurance Corporation (FDIC)[5]

The BIS also hosts three independent groups that have their own legal personalities. These influence both the BCBS and, more generally, the Basel Process.[6] These groups are the Financial Stability Board (FSB), the International Association of Deposit Insurers (IADI) and the International Association of Insurance Supervisors (IAIS). Although these are independent organizations, it is important to recognize the formal sponsorship by the BIS and close connection to the BCBS. In particular, the FSB is influential across the Basel Process with significant overlapping membership, including that of BCBS in the FSB. The U.S. is represented at the FSB by the BGFRS, the Securities and Exchange Commission (SEC) and the U.S. Department of the Treasury (UST).[7]

Looking next to the U.S. regulatory framework, we examine how U.S. representative organizations are structured, how their heads are appointed, and how their term expiration schedules are structured. Table 2 provides a summary of key appointments and term expirations. Note that with the exception of the New York Federal Reserve Bank President, all leadership positions are appointed by the U.S. President and confirmed by the Senate.

How Can a New Administration Effect Change?

President Trump assumed to office on January 20th, 2017 with immediate executive authority. These include the power to make appointments and rescind or issue executive orders. After some back and forth, we expect Senate ratification of appointments to move relatively swiftly, not only because

Table 2

Key U.S. Term Expirations				
Organization	**Title**	**Name**	**Expiry**	**Confirmer[8]**
BGFRS	Chair	Janet Yellen	Feb 3, 2018[9]	Senate
	Vice-Chair	Stanley Fischer	Jun 12, 2018[10]	Senate
	Member	Daniel Tarullo	Jan 21, 2022	Senate
	Member	Jerome Powell	Jan 31, 2028	Senate
	Member	Lael Brainard	Jan 31, 2026	Senate
	Member	Treasury Secretary[11]	Jan 20, 2017	Senate
	Member	Comptroller of the Currency[12]		
	Apr 9, 2017	Senate		
FRBNY	President	Bill Dudley	N/A[13]	FRBNY Class B & C Board members[14]
U.S. Treasury	Secretariat Jan 20, 2017	Jacob Lew Senate		
OCC	Comptroller Apr 9, 2017	Tom Curry Senate		
SEC	Chair Commissioner Commissioner Commissioner Commissioner Jun 5, 2021	Mary Jo White Kara Stein Michael Piwowar Vacant Vacant Senate	Jun 5, 2019[15] Jun 5, 2017 Jun 5, 2018 Jun 5, 2020	Senate Senate Senate Senate
FDIC	Chair	Martin Gruenberg	Nov 15, 2017	Senate

of the Republican Senate majority, but also because of the historically close connection between Mr. Trump and Senate Minority Leader Chuck Schumer (D-NY). Of the positions described in Table 2, four appointments can be made immediately following inauguration. These positions are: the Treasury Secretary; the Chair of the SEC;[16] and two vacant Federal Reserve System Board of Governors. Other appointments in 2017 will be: the Chair of the FDIC; the Comptroller of the Currency; and one additional SEC commissioner. Finally, although Janet Yellen's term at the BGFRS does not expire until 2024, her position as Chair expires in January 2018. **With the confirmation of a Republican Senate, President Trump will be able to reconstruct most of the U.S. leadership to the BCBS with his own appointees relatively swiftly.**

Under current U.S. law, Congress vests U.S. GHOS members with the authority to write implementation rules for bank supervision. This includes implementation language for the Fundamental Review of the Trading Book (FRTB), as approved by the BCBS and the GHOS. Although leadership of the U.S. GHOS will undoubtedly change in 2017, **implementing U.S. regulation for the FRTB and related BCBS rules will need to be created prior to January 1st, 2019 unless one of two events occur:**

1) The BCBS revises the formally stated rules it has spent eight years devising; or
2) U.S. GHOS members, directed by new leadership, elect not to implement BCBS rules on a timely basis or as otherwise proscribed in the rules.

Unlike past BCBS initiatives, which did not include specific implementation timelines, the FRTB mandates a specific implementation date: January 1, 2019. As a result, event 2 above would constitute a direct violation by the U.S. of its member responsibilities under the BCBS Charter, Section 5 (e). It is unclear what the consequences of such a violation would be.

Will Major Changes Occur?

First, we should distinguish information about a Trump Administration's posture toward financial regulation into what is known, what is likely, and what is speculation.

We know from President Trump's stated positions that he intends to do the following:

Table 3

President Trump's Stated Positions on Financial Regulation
1. Issue a temporary moratorium on new agency regulations. 2. Require each federal agency to prepare a list of all currently imposed regulations. 3. Rank each regulation from most critical to least critical with a view towards prioritized removals.[17]

As recently as November 11th, Mr. Trump reaffirmed that "financial deregulation" will be a priority in his first few days in office, that the Dodd-Frank Act (DFA) is a "tremendous burden to the banks" and that "we have to get rid of [the DFA] or make it smaller."[18]

There is also reasonable visibility into some key appointees and their positions. House Financial Services Committee Chairman Jeb Hensarling (R., Texas) is widely rumored to be appointed Treasury Secretary. A financial regulatory reform bill he sponsored in September, 2016 largely overlaps with work performed by former SEC commissioner and DFA critic Paul Atkins[19]. Mr. Atkins is widely reported to be spearheading recommendations on financial deregulation policy. The websites of both Mr. Hensarling and Mr. Atkins indicate that they are fiercely opposed to Title II (Orderly Liquidation Authority) of the DFA which provides for FDIC-facilitated receivership of large banks that are in danger of default. Mr. Hensarling is also a fierce critic of the Financial Stability Oversight Council (FSOC)[20] and the Volker Amendment to the DFA. Another potential candidate for Treasury Secretary, Steven Mnuchin, has been less involved in political service and therefore has less of a public track record on regulation. Although he publicly supports less regulation generally, Mr. Mnuchin has been described as an "oasis of blankness"[21] with respect to positions on public policy. Mr. Mnuchin was tapped in April, 2016 to head Donald Trump's fundraising activities. His prior experience came as a partner at Goldman Sachs, as a purchaser of troubled finance companies (e.g. OneWest, formerly IndyMac) and as a movie producer.[22]

House Speaker Paul Ryan also has put forth a detailed list of regulatory reform aspirations, many of which have already been converted into legislation awaiting ratification.

Table 4

Speaker of the House Initiatives on Financial Regulation[23]
1. FSOC: Place restrictions and transparency on FSOC's ability to designate SIFIs including eliminating the $50 Billion test in favor of a multi-factor test[24] 2. Federal Reserve. Preserve the FRS's independence, but increase requirements for reporting, transparency and, most substantially, subject the Fed's prudential regulatory activities to the congressional appropriations process[25] 3. Regulatory Reduction through Benefit-Cost Analysis (BCA). Streamline regulations, eliminate duplicative or conflicting regulation and require regulators to take into account the cumulative weight of regulatory burden[26] 4. Harmonization of OTC Derivative Rules. Build "seamless rules for derivatives market participants" between SEC, CFTC and prudential regulators.

Basel Under Trump: The Global Implications

Where does this leave us?

The still-forming Trump administration, backed by a Republican House and Senate, will undoubtedly push to make dramatic reforms to financial regulation. So far, these reforms seem to be focused on the DFA, Volker Amendment, the CFPB, Title II and other regulations that are perceived to detract from bank lending. Given the size and clout of U.S.

GHOS members, future BCBS rule-making activities are likely to be constrained. Some rules, particularly those impacting smaller financial institutions, may be pared down over time. The big question for the global community is "**What happens if the U.S. does not implement existing BCBS directives on a timely basis, most notably the FRTB which carries a specified implementation date?**"

If the U.S. violates its BCBS member obligations by failing to implement the FRTB as proscribed, then U.S. sponsorship of the BCBS, a by implication of the BIS itself, may come into question. This could lead to an unraveling of the global framework for coordinated bank regulation. For these reasons, we do not believe it is in the interest of a new administration to jeopardize its standing within the BCBS by undercutting rules already promulgated. For these reasons, and given other priorities already described, **we believe that the FRTB is here to stay.**

We will follow the new administration's positions on these matters and provide updates on a regular basis.

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[1] In addition to the BCBS, other BIS committees are the Committee of the Global Financial System, the Committee on Payments and Market Infrastructures, the Markets Committee, the Central Bank Governance Forum, and the Irving Fischer Committee on Central Bank Statistics.

[2] From BIS statistics as of November, 2016. https://www.bis.org/about/index.htm?m=1%7C1

[3] BCBS Charter, Section 5 (e), http://www.bis.org/bcbs/charter.pdf

[4] Currently, the 27 members of BGOS consist of central bank governors and non-central bank heads of supervision from the following countries: Argentina, Australia, Belgium, Brazil, Canada, China, European Union, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

[5] BCBS committee membership on the BCBS, https://www.bis.org/bcbs/membership.htm

[6] For a complete description of the Basel Process, please access this link: https://www.bis.org/about/basel_process.htm

[7] See FSB membership. http://www.fsb.org/about/fsb-members/

[8] Note that, with the exception of the FRBNY, all appointments are made by the President of the United States with confirmation required by the United States Senate

[9] Ms. Yellen's term as a member of the BGFRS expires on January 31, 2024

[10] Mr. Fischer's term as a member of the BGFRS expires on January 31, 2020

[11] Ex-officio member, i.e. membership is vested in the office holder

[12] Ex-officio member, i.e. membership is vested in the office holder

[13] The President of all U.S. Federal Reserve member banks, including the FRBNY, serves at the pleasure of the Class B and Class C board members.

[14] Class B board members (3) are elected by member banks but cannot be employees or directors of any bank. Class C members are appointed by the FRB.

[15] The WSJ reports that Mary Jo White will resign from her post concurrent with the new administration

[16] Provided that Mary Jo White resigns her post in January as reported by the WSJ

[17] Donald J. Trump's stated positions on regulation. https://www.donaldjtrump.com/policies/regulations/

[18] WSJ, November 11th, 2016, http://www.wsj.com/articles/full-repeal-of-dodd-frankisnt-main-focus-of-trump-transition-1478882550?mod=djemFinancialRegulationPro&tpl=fr, *Full Repeal of Dodd-Frank Isn't Main Focus of Trump Transition*

[19] Mr. Atkins criticisms of the DFA are captured in this testimony to Congress from September 11th, 2011. http://financialservices.house.gov/uploadedfiles/091511atkins.pdf His resume can be found at his firm's website here. https://www.patomak.com/paulatkins

[20] FSOC is a creation of the DFA designed to foster cooperation and coordination amongst disparate US financial regulators as well as to implement consolidated rulemaking around G-SIFI's. The FSOC has 10 voting members including three of four US GHOS members. The US Treasury Secretary serves as Chair. More information can be found at https://www.treasury.gov/initiatives/fsoc/rulemaking/Pages/default.aspx

[21] Bloomberg Politics, *Trump's Top Fundraiser Eyes Deal of a Lifetime*, August 31, 2016

[22] Filmography found here: http://www.imdb.com/name/nm6518391/

[23] From www.abetterway.speaker.gov/_assets/pdf/abetterway-economy-policypaper.pdf

[24] See H.R. 1550, 3557, 3857, 3340 and 1309

[25] Much of this comes from the Fed Oversight Reform and Modernization Act (the FORM Act) sponsored by Rep. Bill Huizenga

[26] See H.R. 414, 2354, 2187 and 1675

Financial Deregulation Under Trump

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"We don't want to [reform] in an unregulated way. We want to do it in a smart, regulated way." – Gary Cohn, White House National Economic Council Director & Former President, Goldman Sachs & Co.[1]

Friday's Presidential Executive Order[2] and Memorandum[3] kick off the Trump Administration's ambitious plans for financial deregulation. Notably absent from these documents is any direct mention of the FRTB or other Basel initiatives. **A careful reading of Trump's new Core Principals, in the context of previous publications, leads us to conclude that the FRTB and the Basel Framework will persist for most banks.**

Friday's Presidential Executive Order[4] on financial deregulation aligns with previous statements and documents published by candidate Trump as well as the Republicans in Congress. WSJ's analysis, published only days after the election entitled "*We will Dismantle Dodd-Frank*",[5] laid out a plan for fundamental reform based on detailed position papers from candidate Trump[6] as well as even more detailed draft legislation from the House Financial Services Committee known as the **Financial Choice Act** (FCA).[7] Friday's headlines[8] miss the fact that President Trump's proposed financial reforms, while well-telegraphed, do not directly target rules already promulgated by the Basel Committee on Bank Supervision (BCBS)[9] and agreed to by the Board of Governors of the Federal Reserve system (BGFRS).

In our view, these reforms will be substantial, but will not materially impact BCBS initiatives, including the Fundamental Review of the Trading Book (FRTB). The Trump Administration seeks to attack financial deregulation through three mechanisms: **Executive Orders and Memoranda**, **Legislation** and **Appointments**. These reforms will be significant, but most of these changes are directed at regulation specific to the United States and not part of international frameworks. Table 1 summarize the changes we expect to see.

Table 1

Financial Deregulation: What Stays and What Goes		
Major Overhaul or Repeal	**Tools of Change**	**Limited Change Expected**[10]
Dept. of Labor (**DOL**) rules	Changes via **Executive Order or Memorandum**	NA
Consumer Finance Protection Bureau (**CFPB**)	Changes of Legislation - **Dodd-Frank Amendment** (DFA)	NA
DFA, Title II (including Systemically Important Financial Institutions or **SIFIs**)		
DFA, **FSOC**		
DFA, **CCAR**		
DFA, **Volker Rule**		
Basel "Opt-Out" for Community Banks (10% test)	Changes through combination of **Legislation and Appointments** made over more extended periods of time.	**Basel III, IV** for most banks
Federal Reserve System (FRS), Initiative to bring the Federal Reserve System (FRS) under the Congressional Appropriation Process will be resisted		Fundamental Review of the Trading Book (**FRTB**) for most banks
FRS, various new restrictions through Title VII of FCA[11]		
FRS, various new notice and consultation requirements for new BCBS initiatives not already agreed		

Presidential Executive Order – February 4th, 2017

President Trump outlined six Core Principles for Financial Regulation and directed the Treasury Secretary to consult with all FSOC[12] members and to issue a report within **120 days** describing all laws, treaties, regulations, guidance, reporting, recordkeeping requirements, and other government policies that would inhibit regulation according to the Core Principles.

President Trump's Core Principles for Financial Deregulation	
(a)	Empower Americans to make independent financial decisions and informed choices in the marketplace, save for retirement, and build individual wealth
(b)	Prevent taxpayer-funded bailouts
(c)	Foster economic growth and vibrant financial markets through more rigorous regulatory impact analysis that addresses systemic risk and market failures, such as moral hazard and information asymmetry
(d)	Enable American companies to be competitive with foreign firms in domestic and foreign markets
(e)	Advance American interests in international financial regulatory negotiations and meetings
(f)	Restore public accountability within federal financial regulatory agencies and rationalize the federal financial regulatory framework

Actual changes may take time to implement depending on what this study finds. Trump's Treasury Secretary and most FSOC[13] heads have yet to be confirmed. These confirmations are a prerequisite for orchestrating and executing any rule changes. **Past statements imply that the Trump Administration will use the FCA as a blueprint for implementing financial reform.**

Executive Memorandum – February 4th, 2017

President Trump also issued an Executive Memorandum on February 4th directing the Department of Labor (DOL) to examine their Fiduciary Duty Rule and to repeal it if it is found to reduce investor access or increase investor costs. It should be noted that **this rule change does not require consent beyond the DOL**.

Legislation: Deconstructing the Financial Choice Act (FCA) - HR 5983

FCA is the 513 page blueprint for financial reform. Despite recent headlines, the FCA does not seek to replace the DFA in its entirety. Rather, the Republican Congress seeks to replace certain aspects of DFA and other legislation which it considers to be most limiting to growth or which fosters the potential for taxpayer-funded bailouts of large financial institutions.

Importantly, only the smallest community banks are expected to meet the 10% leverage test required under the FCA to opt-out of Basel capital and liquidity rules.[16]

Here is an outline of how the FCA is constructed.

How the Financial Choice Act Works		
	Description	**Impact**
I	Opt-Out Capital Option	a. Allows banks to apply for Qualifying Banking Organization (QBO) status IF: 1) Total Leverage Ratio[14] > 10% 2) CAMELS[15] of 1 or 2 for all group depositories 3) Election made for all depositories and holding companies within the group simultaneously b. QBO's shall be exempt from: 1) All other capital or liquidity requirements 2) Any Financial Stability or Living Will reporting 3) Limitations of mergers or acquisitions c. Use of RWA is NOT allowed d. Expected to be applicable only for smallest banks[16]
II	Ending "Too Big to Fail"	a. Dramatically eases CCAR tests and exempts QBO's b. Dramatically reduces the powers of FSOC[17] c. Repeals the Fed's Orderly Liquidation Authority (OLA) found in Title II of the DFA d. Replaces the OLA framework with a new Financial Institution Bankruptcy framework e. Eliminates the use of government guarantees (except FDIC deposit guarantees) f. Repeals the use of systemic risk determination, the exchange stabilization fund g. Eliminates the Financial Market Utility designation
III	Replace CFPB	a. Replaces the CFPB with a new Consumer Financial Opportunity Commission (CFOC) b. CFOC governance is a commission structure which congressional budget oversight and Presidential reporting of commissioners
IV	Capital Markets Reforms	a. SEC Reforms b. Repeal of DOL Fiduciary Rules[18] c. Repeal of Risk Retention requirements for commercial mortgages d. Repeal of many Private Equity reporting requirements e. CFTC Reforms, including swap dealer registration rules and harmonization of OTC derivatives rules f. Other reforms including the use of risk based measures for NRSRO's and many section repeals
V	Insurance Regulation	a. Repeals the Federal Insurance Office
VI	Reforms in the Oversight of Regulators Other Than the Fed	a. Require Cost-Benefit Analysis for each proposed regulation b. New requirements for Notices of Proposed and Final Rulemaking including 90-day comment period between each c. Congressional Review procedures established for all rules with Congressional Approval required for Major Rules d. Bringing federal agencies under the annual Congressional appropriations process e. Establishing rules for participation in International regulatory bodies such as the BCBS, the BIS, and IOSCO
VII	Fed Oversight Reforms	a. Bringing the non-monetary wing of the Federal Reserve System under the Congressional appropriations process b. Creating a new Centennial Monetary Commission to reexamine the FRS's "Dual Mandate" and whether changes need to be made c. Strengthens various reporting requirements including compensation disclosures
VIII	Penalty Reforms	a. Increases monetary penalties levied against financial institutions
IX	Repeal of Volcker Rule	a. Repeals Volcker Rule restrictions on proprietary trading and private equity
X - XI	Reforms Aimed at Small Business	a. Various reforms aimed at reducing regulatory burdens for small businesses
Note that **neither the FCA, the Executive Order, nor the Presidential Memorandum on Fiduciary Duty Rule[19] have any direct mention of Basel III, Basel IV or the FRTB other than FCA Title I.** Congress has already granted the BGFRS with broad powers to create implementing legislation for international rules and these powers have not been rescinded within the FCA.		

Executive Branch and the Federal Reserve System Appointments

Financial regulation in the U.S. is governed by a complex network of agencies, bureaus and governmental authorities. Sitting atop it all is the Federal Reserve System (FRS) and governing the FRS is its 7-member board. The BGFRS represents the U.S. at most international bank regulatory organizations including the Bank for International Settlements (BIS), the BCBS, and the Financial Stability Board (FSB).

Unlike cabinet or agency appointments in the Executive Branch, the FRS's governance is independent. **No member of the BGFRS can be removed by Presidential Order alone and no members' term expires prior to February 1st, 2020.**[20] Of the 7-member board, the Trump Administration does have the power to nominate two new individuals to vacant board seats, including the Vice-Chair for Supervision. Trump can also elect to change the Chair (currently held by Janet Yellen) and Vice-Chair (currently held by Stanley Fischer) in 2018, but only from within the existing members of the BGFRS and only with Senate confirmation. While there is speculation that Ms. Yellen, Mr. Fischer and a third governor, Daniel Tarullo, may retire early,[21] there is no legal mandate for them to do so. **We do not expect that the governors who spent years creating the Basel framework will easily now step aside to see it undone.**

Conclusion

Unlike many parts of the DFA, CFPB, Volker and other U.S.-focused reform initiatives, we fully expect that rules promulgated by the BCBS under BGFRS guidance will be implemented on a timely basis for most banks. In particular, this includes the Fundamental Review of the Trading Book (FRTB) which is the first BCBS rule to contain specific dates for local rule making and implementation.

While we do expect an opt-out provision for Basel capital and liquidity standards to prevail in the U.S. and possibly other parts of the world, we believe such a provision will be directed only to the smallest, community banks.

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[1] As quoted in the WSJ, 2/3/17, *Trump Plans to Undo Dodd-Frank, Fiduciary Rule*, by Michael C. Bender and Damian Paletta

[2] Presidential Executive Order on Core Principals for Regulating the United States Financial System https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-executive-order-core-principles-regulating-united-states

[3] Presidential Memorandum on Fiduciary Rule, https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-memorandum-fiduciary-duty-rule;

[4] https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-executive-order-core-principles-regulating-united-states

[5] *Donald Trump's Transition Team: We will 'Dismantle' Dodd-Frank*", by Ryan Tracy, WSJ, 11/10/16

[6] https://www.donaldjtrump.com/policies

[7] A 513-page bill proposed by the House Financial Services Committee in 2016, HR 5983, http://financialservices.house.gov/uploadedfiles/bills-114hr-hr5983-h001036-amdt-001.pdf

[8] Such as "*Trump Begins Assault on Dodd-Frank Financial Regulations*", New York Times, by Ben Protess and Julie Hirshfield Davis, 2/3/17

[9] The Basel Committee for Bank Supervision (BCBS)

[10] The FCA does provide an opt-out provision to these rules under Title I, but only under liited circumstances. Please see FCA, Title 1 discussion below.

[11] http://financialservices.house.gov/uploadedfiles/bills-114hr-hr5983-h001036-amdt-001.pdf

[12] The Financial Stability Oversight Council (FSOC) is a creation of the DFA designed to foster cooperation and coordination amongst disparate US financial regulators, as well as to implement consolidated rulemaking around G-SIFI's. The FSOC voting member agencies are the BGFRS, CFTC, FDIC, FHFA, NCUA, OCC, SEC, Treasury, CFPB. The US Treasury Secretary serves as Chair. More information can be found at https://www.treasury.gov/initiatives/fsoc/rulemaking/Pages/default.aspx. Also, please see our earlier whitepaper entitled *Basel Under Trump*.

[13] See footnote 7

[14] Total Leverage means Tangible Equity/Total Liabilities. The term Total Leverage Exposure is defined under section 3.10(c)(4)(ii), 217.10(c)(4), or 324.10(c)(4) of title 12, Code of Federal Regulations as of 1/1/15.

[15] The key, U.S. regulatory metric of depository solvency measured on a scale of "1" (best) to "5" (worst). CAMEL rating are not publically available but are made known to bank executive managements and boards. CAMELS stands for Capital adequacy, Assets, Management capability, Earnings, Liquidity, and Sensitivity to market risk.

[16] A peer review of 20 regional banks published by Wintrust Financial Corporation finds that the median average Tangible Equity/Total Assets ratio was 8.61% as of 12/31/16, well below the 10% threshold. These 20 banks were: Associated Banc-Corp (ASB), BancorpSouth, Inc. (BXS), Cullen/Frost Bankers, Inc. (CFR), First Citizens BancShares, Inc. (FCNCA), First Horizon National Corporation (FHN), First Midwest Bancorp, Inc. (FMBI), First Niagara Financial Group, Inc. (FNFG), FirstMerit Corporation (FMER), Fulton Financial Corporation (FULT), International Bancshares Corporation (IBOC), MB Financial, Inc. (MBFI), Old National Bancorp (ONB), PrivateBancorp, Inc. (PVTB), Susquehanna Bancshares, Inc. (SUSQ), TCF Financial Corporation (TCB), UMB Financial Corporation (UMBF), Umpqua Holdings Corporation (UMPQ), Valley National Bancorp (VLY), Webster Financial Corporation (WBS), Wintrust Financial Corporation (WTFC). Please see http://www.wintrust.com/investor-relations/peer-analysis

[17] Largely through the elimination of provisions in the Financial Stability Act of 2010

[18] Legislation will not be required to overturn the DOL rules if the DOL, under the Trump Administration, revokes these rules on its own

[19] Dated 2/3/17 directing the Labor Secretary to investigate elimination of this rule, https://www.whitehouse.gov/the-press-office/2017/02/03/presidential-memorandum-fiduciary-duty-rule

[20] https://www.federalreserve.gov/aboutthefed/bios/board/default.htm

[21] http://www.cnbc.com/2016/11/16/obscure-part-of-law-could-let-yellen-fischer-thwart-trump-on-reshaping-the-fed.html

Basel III to Stay on Course

G20 confirms its commitment. We are not surprised.

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"We confirm our support for the Basel Committee on Banking Supervision's (BCBS) work to finalize the Basel III framework without further significantly increasing overall capital requirements across the banking sector, while promoting a level playing field." – G20 Communique, March 18th, 2017.[1]

Nestled within the body of the G-20 communique[2] from Baden-Baden over the weekend was an important statement of support for the Basel III framework. With recent elections in the U.S., Brexit in the U.K., and the rise of nationalistic forces in France, there were growing concerns that the enormous thought and resources expended by the BCBS, global regulators and the banking industry to construct the Basel III framework would be undone.

The G20 statement, ostensibly agreed to by President Trump's Treasury Secretary, Steve Mnuchin, is an indication that the new U.S. administration stands behind the implementation of Basel III, complete with its timelines and new risk management frameworks. The only change between this week's G20 statement and the prior statement issued prior to the U.S. election was the removal of the phrase "we will resist all forms of protectionism." In context, this statement speaks more toward trade than financial regulation. This week's G20 statement lays to rest speculation that the forces driving nationalist movements around the world will somehow creep into global standards for banking regulation. The reaffirmation should jolt into action those banks that may have expected Basel III to be diluted or defrayed.

How does this indication align with talk from the new Trump Administration[3] and the U.S. Congress about reducing financial regulation? On the face of it, we should assume that Basel III is not on the table, and the focus will likely be on domestic U.S. regulations.

As we have written in recent articles,[4] the focus of both Executive and Legislative branches in the U.S. is on enacting deregulation by attacking domestic rules

and legislation. These include reshaping the Dodd-Frank Amendment (DFA), including the Volker Rule, reducing living will and CCAR requirements, revoking the Department of Labor (DOL) rules regarding financial advisory governance and changing the role of the Financial Stability Oversight Council (FSOC). To date, the Trump Administration has not publicly criticized the global regulatory framework promulgated by BCBS and implemented under the supervision of the Federal Reserve Board of Governors. Tables 1 and 2 summarize the distinction between Basel III components and domestic U.S. regulation.

Table 1

Basel III Regulations[5]
• Fundamental Review of the Trading Book (FRTB) • Total Loss Absorbing Capital (TLAC) • Liquidity Coverage Ratio (LCR) • Leverage Ratio • Net Stable Funding Ratio (NSFR) • Interest Rate Risk in the Banking Book (IRRB) • Globally Systemically Important Banks (GSIB) • Credit Valuation Adjustment (CVA) • Pillars 1-3 Capital

Table 2

U.S. Only Regulations[6]
• Dodd-Frank Amendment (DFA) • Volcker Rule • DOL Rule • Sarbanes-Oxley (SOX) • Living Will • CCAR • Systemically Important Financial Institution (SIFI) • Financial Stability Oversight Council (FSOC) • FATCA

The breadth of areas in U.S. domestic regulation reflects the opportunity for the Trump Administration to simplify the regulatory landscape by executive or legislative action. This could be a monumental task, given that most of these regulations and bodies are already in force and functioning. Changing global policies overseen by the Federal Reserve would have been even more challenging.

Away from purely domestic policies, this week's statement from G20 should be viewed as a strong affirmation that Basel III provides the framework for leveling the banking risk field across geographies and regulatory jurisdictions, and thus, protects the global economy from future financial crises led by the banking sector. Steve Mnuchin and Gary Cohn, former President of Goldman Sachs & Co. and now Chair of President Trump's National Economic Council (NEC), are presumably the principal drivers of the Trump Administration's thrust for regulatory reform. Both are Goldman Sachs alums and should be well aware of the need for regulatory controls of the global financial markets. To date, both have expressed support for the Basel III framework so long as those regulations are adhered to globally.

The specific reference in the G20 statement of support for Basle III framework "without further significantly increasing capital requirements" may turn out to be challenging for some of the BCBS initiatives – particularly FRTB. Initial quantitative studies performed by BCBS and others on the industry, as well as our own analysis, suggest that significant capital increases may be required, particularly if the new internal model approach under FRTB becomes over-burdensome or if the capital floor is set at too high a bar. We interpret this statement as an indication that there is movement towards keeping the floor towards a lower bound and thus maintaining the internal model approach to FRTB as a viable option even for smaller banks.

For banks that will face higher capital requirements for market risk under FRTB, the need for optimizing capital usage and deployment will be paramount. These banks will need to mitigate significant declines in ROE. For some, this may even be lower than their cost of capital. Managements should gear up to evaluate risk portfolios, invest in improving risk and capital models. Management should further focus on data quality improvements, optimization of capital deployment and improvements to operational efficiency.

There are significant concerns in the industry regarding global synchronization of the FRTB implementation timeframe. Clearly, banks in regions and countries that adopt and implement FRTB within the BCBS prescribed timeframe will be at a competitive disadvantage compared to those that may delay regulatory rule setting, and follow-up deadlines. This could be mitigated by phase-in periods of FRTB capital requirements, i.e. banks may be required to hold 65% of the total market risk capital charge mandated by "fully loaded" FRTB as proposed in Europe. A phase-in capital requirement could kill two birds with one stone for BCBS: it could muffle the industry protests about onerous capital requirements at a time when global economies are slowly recovering, and it could set the stage for taking a hard line on implementation timelines. This would also open the intriguing possibility that banks in "early-FRTB-adopter" regulatory regimes may actually have lower market risk capital charges during the phase-in period compared to those that are capitalized under Basel II.5

Finally, in response to the questions we have received about the Trump Administration's intention to undo the very idea of financial regulation, we conclude with these cautionary notes from President Trump's Chief Economic Advisor, Gary Cohn:

"We don't want to [reform] in an unregulated way.
We want to do it in a smart, regulated way."[7]

"If you don't invest in risk management, it doesn't matter what business you're in, it's a risky business."[8]

[1] Section 5 of Footnote 2

[2] Relevant text of the communique:

G20 Finance Ministers and Central Bank Governors
March 18, 2017, Baden Baden

1. We recognise the importance and benefits of open capital markets and of improving the system underpinning international capital flows while continuing to enhance the monitoring of capital flows and management of risks stemming from excessive capital flow volatility. To support this goal, we look forward to the IMF's and other IFIs' further work in this area, including on macroprudential policies. A number of non-OECD G20 members have declared their intention to join the OECD Code of Liberalisation of Capital Movements starting already the process of adherence this year. We welcome the current review of the Code, including work on appropriate flexibility, while maintaining the Code's current strength and broad scope. Those G20 countries that have not yet adhered to the Code are encouraged to participate voluntarily in the current review and to consider adhering to the Code, taking into consideration country-specific circumstances.

2. An open and resilient financial system is crucial to supporting sustainable growth and development. To this end, we reiterate our commitment to support the timely, full and consistent implementation and finalisation of the agreed G20 financial sector reform agenda. We endorse the Financial Stability Board (FSB) policy recommendations to address structural vulnerabilities from asset management activities, ask the International Organization of Securities Commissions (IOSCO) to develop concrete measures for their timely operationalisation and ask the FSB to report on the progress of this work by the Leaders Summit in July 2017. We will continue to closely monitor, and if necessary, address emerging risks, in particular those that are systemic, and vulnerabilities in the financial system, including those associated with shadow banking or other market-based finance activities. We ask the FSB to present by the Leaders Summit in July 2017 its assessment of the adequacy of the monitoring and policy tools available to address such risks from shadow banking and whether there is need for any further policy attention. We also look forward to the FSB's comprehensive review of the implementation and effects of the reforms to over-the- counter (OTC) derivatives markets and call on G20 members to complete the full, timely and consistent implementation of the OTC derivatives reforms where they have not already done so. We welcome the progress by the Committee on Payments and Market Infrastructures (CPMI), IOSCO and FSB towards developing guidance to enhance the resilience, recovery and resolvability of Central Counterparties (CCPs) and look forward to their publication by the time of the Leaders Summit in July 2017 as well as plans for any follow-on work as needed. We confirm our support for the Basel Committee on Banking Supervision's (BCBS) work to finalise the Basel III framework without further significantly increasing overall capital requirements across the banking sector, while promoting a level playing field. We reiterate the importance of progress under the work plan to address misconduct risks in the financial sector and look forward to the report from the FSB by the time of the Leaders Summit in July 2017. We will continue to enhance our monitoring of implementation and effects of reforms to ensure their consistency with our overall objectives, including by addressing any material unintended consequences. We look forward to the FSB's third annual report. We also welcome the FSB work to develop a structured framework for the post-implementation evaluation of the effects of the G20 financial regulatory reforms and we look forward to the framework, after an early public consultation of its main elements, being presented by the time of the Leaders Summit in July 2017 and published. We welcome the OECD Methodology for Assessing the Implementation of the G20/OECD Principles of Corporate Governance.

Source: Germany's Federal Ministry of Finance

[3] *Gary Cohn's Vision for a Regulatory Rethink, WSJ,* February 3, 2017; *U.S. to World: Banking Deregulation Back On*, WSJ, February 3, 2017

[4] See *Basel Under Trump* and *Regulation Under Trump* – GreenPoint Perspectives.

[5] Not intended to be all-inclusive

[6] Not intended to be all-inclusive

[7] WSJ, February 3rd, 2017, *Trump Plans to Undo Dodd-Frank, Fiduciary Rule*

[8] http://www.azquotes.com/author/42565-Gary_Cohn

To FRTB and Beyond

Sanjay Sharma, Ph. D.
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In January 2016, BCBS released revised minimum capital requirements for market risk following their eight-year long Fundamental Review of the Trading Book (FRTB). This framework represents an overarching view of how risks from banks' trading activities and portfolios should be assessed and quantified through a credible and intuitive relationship with capital requirements. Principal components of the new guidelines include: a clear and impermeable boundary between banking and trading books; replacement of VaR by expected shortfall as a risk measure; revised sensitivity-based standardized approach; and revised expected shortfall-based internal model approach with differentiated liquidity horizons. The principal objectives of BCBS for FRTB are: 1) to achieve consistency across jurisdictions, 2) for its standardized approach to serve as a credible fallback and a floor to the internal model approach, and 3) to address existing weaknesses in the current internal model approach, with the overarching motivation to not significantly increase bank capital requirements.

Adoption of FRTB standards will require substantial overhaul of banks' risk analytics frameworks and processes including model selection, validation, and computation of parameters. FRTB will also have far ranging implications on how trading books will be organized, capitalized, managed, and regulated. FRTB is required to be implemented by year-end 2018.

The FRTB framework replaces Basel II.5,[1] which was viewed from the outset as a stop-gap, post-crises measure. FRTB draws heavily on lessons learned from unobserved risk build-up leading up to the 2008 financial crisis and addresses the following inadequacies and inconsistencies of Basel II.5 and other related standards. BCBS states that "[s]ignificant weakness in the Basel capital framework for trading activities resulted in materially undercapitalized trading book exposures prior to the 2007-08 period of financial crises."
Initial estimates suggest that the increase in capital charge for banks' trading books from FRTB adoption will be in the range of 40%[2] higher than current Basel II.5 capital requirements for trading desks/banks. Further, banks adopting the standardized approach are expected to experience capital charges 40% higher than for desks/banks adopting IMA.[3] The sheer increase in capital charge has attracted the attention of bank senior managements. Further, the wide gap between the standardized and internal model approaches will set the stage for competitive rebalancing across the industry.

FRTB rules and guidelines allow for banks to use the internal model approach at a desk level (as opposed to at a business or institution level in existing rules). This flexibility in selecting between the two approaches allows managements to be selective in investing in risk and analytics frameworks and allocating capital. Furthermore, this selectivity will allow capital markets managements to have flexibility in organizing trading desk structures towards optimizing capital deployment.

FRTB will reward availability and consistency of market data as well as integrated and robust analytics frameworks. A case in point is that regulatory approval for adoption of the internal model approach will require banks to demonstrate operational capability to be able to run the analytic frameworks on a regular basis.

FRTB will reward availability and consistency of market data as well as integrated and robust analytics frameworks.

Beyond the impact on capital changes, FRTB regulations appear to be prodding senior and functional managements to review their existing data, risk analytics and technology frameworks and to assess their capabilities for supporting manifold increases in the need for computational capacities across front office, risk, finance and operations.

In initial quantitative impact studies, banks have reported wide variations in the impact of FRTB on their capital charges. Two inferences can be drawn from the stunning diversity of reported impact. First is that the banks' trading portfolios are so diverse in their underlying risk profiles that the impact of FRTB rules on capital charges are substantially diverse. This should alarm regulators. The alternative inference, on the other hand, should be equally alarming in that banks have not understood the FRTB methodologies correctly or have used error-prone data or analytics. This should be alarming for both regulators and senior managements.

Regulators should be concerned about under-computation of capital charge, and vice versa for traders, desk and

business heads, and senior bank managements. Regulators may well question overcapitalization of trading desks, but anecdotal evidence of regulatory scrutiny of overcapitalized desks or banks is rare unless these desks or banks have demonstrated excessive risk-taking. A logical response to this phenomenon is for both regulators and managements to ask for benchmarking of models and computation methodologies and "challenger" environments.

For the blessedly FRTB-uninitiated we provide a brief overview of FRTB and then move on to tackle the challenges and opportunities.

What are the key elements of FRTB ?

1. Revised, stricter boundary between the trading book and banking book.

This creates a less permeable and more objective definition that is aligned with banks' risk management practices, and reduces the incentives for regulatory arbitrage. FRTB provides explicit definitions of trading instruments and Regulatory Trading Desks (RTD) and prescribes an extensive list of instruments presumed to be in the trading book with requirements for explicit approval from its supervisor for any deviation from this list.

2. Restriction on movement between books

FRTB sets strict limits on the movement of instruments between banking book and trading book. In the rare instance that a transfer is allowed, disclosed Pillar 1 capital charges will be recorded.

3. Enhanced supervisory powers and reporting requirements

Supervisors will now have discretion to initiate a switch in instruments between books if deemed improperly designated. Banks will also be required to provide enhanced reporting, evaluation and monitoring of boundary determination and compliance including inventory ageing, daily limits, intraday limits and assessments of market liquidity.

4. Standardization of risk transfer treatment across the boundary

Limits and regulatory capital protocols are introduced on the internal risk transfer of equity and interest rate risk from banking books to trading books. This aligns with protocols already in existence for the transference of credit risk across the boundary.

5. Choice between standardized and internal model approach at the trading desk level

FRTB provides more flexibility for the banks to choose between Standardized Approach (SA) and Internal Model Approach (IMA) for capital charge computation at the RTD level. This is a very significant shift from prior environments where this choice was generally made at the bank level.

6. Change in principal risk parameter from VaR to expected shortfall

FRTB framework shifts the basic risk parameter from VaR to expected shortfall (ES) to better capture tail risk, and calibrated over a period of financial stress.

7. Differentiated treatment of liquidity factors

FRTB Incorporates the risk of market illiquidity by introducing "liquidity horizons" in the market risk metric, and an additional charge for trading desks with exposure to illiquid, complex products.

8. Revised standardized approach

FRTB standardized approach framework is sufficiently risk-sensitive to act as a credible fallback to internal models, and is still appropriate for banks that do not require sophisticated measurement of market risk.

9. Revised internal model approach

FRTB's internal model framework includes a more rigorous model approval process and more consistent identification and capitalization of material risk factors. This is designed to capture tail and liquidity risks and to improve model granularity by driving approval of internal models down to the trading desk levels. Hedging and diversification benefits will be recognized only when there is empirical evidence that they are effective during periods of stress.

10. Closer alignment between the trading book and the banking book

FRTB's treatment of credit risk involves a differential approach to securitization and non-securitization exposures.

What is the relative attractiveness of SA vs. IMA?

SA methodology under Basel II was considered to be coarse and conservative. It applied a significant capital charge premium for the uncertainty of partial risk capture. This premium should be lower for FRTB SA because it is sensitivity based.

SA is a reasonable sensitivity-based methodology. It provides a robust view of aggregate risks across all asset classes. The sensitivity-based approach also removes the perception that the computation framework is not sophisticated enough. This is a change from the SA methodology under Basel II and its iterations, which was viewed as rudimentary and coarse.

The incremental cost of adopting and implementing IMA should be justified through the reduction in capital charge and effective risk and capital management. Costs should also include the uncertainty of failing the P&L attribution test for IMA and falling into SA, with a consequent cliff of higher capital charge.

The incremental cost of adopting and implementing IMA should be justified through the reduction in capital charge and effective risk and capital management.

For banks that adopt the IMA, the differences in capital charges will likely attract higher funding costs if market participants form a skeptical view of the veracity of a bank's IMA framework. Banks that already have IMA will find the choice of adapting SA challenging because of higher capital charges and lower returns.

Banks that are currently under SA will find the choice of adapting to IMA on a desk level to be a potentially viable enhancement towards their competitive position. The possibility of individual desk level approval under FRTB creates the potential for banks that currently have SA to level the playing field from a capital charge perspective. If they are able to obtain IMA approval and a lower capital charge, these formerly SA-only banks could focus additional client relationships which had been previously attainable. This is particularly true in "flow" desks in which robust market data is available.

As of this writing the floor level for SA has not been determined by BCBS. Because the SA approach under FRTB is significantly more risk-sensitive compared to previous BCBS methodologies, it should be expected that the capital charge difference between the IMA and SA should be lower than before, implying a lower cliff. Higher differences will be logical for instruments/securities for which the underlying risks are demonstrably not captured or only coarsely overestimated under SA.

What are the dynamics of VaR vs. expected shortfall?

VAR is now considered as a straightforward and useful metric for practitioners for day-to-day risk management. P&L can be mapped to or associated with a specific day's market movements and realized P&L.

Estimating the likelihood and impact of a specific tail event is difficult and subject to computational uncertainty. This is further exacerbated by the calibration horizon of one year. The uncertainty of tail events, and the corresponding error bands, will impact capital charge at the desk level, making return estimates and capital management challenging.

The computation of ES will present challenges for current Monte Carlo or historical VAR computation frameworks. This will be even more so for banks with legacy based feeder framework, where the P&L vectors are generally generated at the business/desk level and aggregated at the enterprise level, resulting in computation and reporting latency that can be as long as one business day.

This will cause distinct challenges in the creation of a common data and computation framework across risk, finance and front office. It will also challenge the new tail-focused risk parameter, as opposed to current VAR frameworks where the size and dispersion of tail events are excluded from consideration.

From a computational perspective, VAR-based risk parameters only had to be back-tested and tractable up to the selected confidence level. In contrast, ES measures represent the expected value of the loss distribution in the tail beyond the specified quantile. The practical implication is that computation models have to capture and quantify the extremely low-probability events beyond the VAR thresholds.

In FRTB this represents two challenges: first is the calibration of IMA models with sparse data; the second is defining the methodology used to back-test and validate data on a limited set of historical tail events which, by their very nature, are rare.

This situation extends to back-testing the ES parameter as well. BCBS approach is to validate the ES parameter with two VAR measures at different levels:, however, this approach does not fully capture the extreme tail of the loss distribution.

From a theoretical perspective the transformation from VAR to ES is more robust as it is focused on tail risk modeling. However, its applicability, usability and acceptance as a risk management tool has yet to be borne out. It is possible that if the measure is unstable and not tractable, its practical application as a risk management tool may be limited.

There has been a long period of familiarity in working with VAR in recent years with stress tests. Within banks and across other stakeholders there will be a period of time before ES is understood and accepted as a risk metric for risk management and capital charge computations.

Why is there so much talk around model validation and P&L attribution?

P&L attribution tests determine whether banks can use the internal model approach to estimate market risk and compute capital requirements. If banks expect to not pass this test by significant margins, they will likely elect the SA approach, thus sacrificing capital efficiency.

Predictably passing the current prescribed approach for P&L attribution test will be challenging for several banks and trading portfolios. This is because of anomalies in the prescribed approach. The most noteworthy one is that a well-hedged portfolio will be more likely to fail the test compared to one that has directionality or market delta.

For IMA, monthly P&L attribution tests require that the risk theoretical P&L (daily P&L predicted by the risk management model based on the approach prescribed by FRTB) matches the hypothetical P&L (based on mark-to-market models at trading desk levels which are calculated by revaluing positions held at the end of previous day using market process at the end of current day.

What are non-modellabe risk factors and why should a banks be concerned?

Non-modellable risk factors (NMRFs) come into play when there is lack of security-specific trade and market data availability and quality. Minimization of NMRFs will require availability and sound management of data. Position level market data feeds into computation algorithms have to be robust and optimized for SA, and if required for IMA, at a granular level for stress testing.

Minimization of NMRFs will also require that desk and risk models be in close alignment. The most optimal or necessary way to achieve this will be to use a common framework or system for risk and mark-to-market computations/valuations.

Non-modellable risk factors in the internal model approach that cannot be systematically or predictably quantified due to lack of data. The fundamental question being posed by industry participants is that if the risks are non-modellable, then what is the underlying logical framework for their quantification?

What will be FRTB's Impact on trading desks and business units?

Through its capital charge construct for individual trading desks, FRTB will have significant impact on the structure, scope and scale of trading activities. Banks will need to optimize their regulatory trading desk structures given the limited scope for diversification benefits. Some trading desks that deal in instruments that have low trading volumes will likely have high capital charge under FRTB even if the bank and other market participants feel that there is reasonably good liquidity. Non-linear and structured securities will also be assessed with higher capital charge, particularly for security structures with high convexity/curvature.

A second risk to desks will come for IMA desks that may fail P&L attribution test because their input parameters are not frequently traded or there is noise around model generated sensitivities. These will impact pricing of new transactions/trades, particularly those with long maturities or holding periods. At the same time, return expectations from existing positions with longer holding periods may have to be adjusted if a trading book moves from IMA to SA, and vice versa.
Hardest hit trading activities will be for securities with conservative liquidity horizons, residual risk add-on and NMRFs. Some trading activities, such as foreign exchange options trading, could mitigate the high SA charge by opting for IMA with the expectation of small NMRFs and residual risks. However, banks will be well-advised to conduct bottom-up impact analysis at security and desk level to assess the options for strategic and tactical organizational and desk scaling decisions.

This also implies that trading volumes for instruments and sectors that are currently illiquid may fall into a vicious cycle if

banks exit because of higher capital charges under FRTB, thus further pressuring trading volumes and liquidity. This may include off-the-run sovereign bonds and highly-rated corporates that may not have high trading volume within some regulatory jurisdictions. This could also exacerbate systemic risk with concentration among large banks if smaller banks cease trading in these securities.

Hardest hit trading activities will be for securities with conservative liquidity horizons, residual risk add-on and NMRFs.

Is FRTB a sound framework for risk management and capital charge measurement?

As will be expected, FRTB can be viewed as onerous, misplaced or inconsistent — and several industry stakeholders have expressed this sentiment. In defense of the FRTB regulation, one can state that, by design, universal regulations cannot fit all constituents, and it is a balancing act to capture current and foreseeable risks. Prescriptive factors and methodologies are designed to encourage and promote standardization and prevent banks from using their own methodologies that, by default, make comparisons in risk profiles challenging for regulators. For counterparty risk management and for assessment of systemic risk, standardization is desirable. This holds even if the one size fits all approach can distort reported risk measures to a limited extent. The lesser of two evils is thus standardization where banks and local regulators can agree on interpretations, application and implementation.

The risk is that if large and medium-sized banks adopt the Standardized Approach for most of their trading books and activities, there will be a strong possibility for unmodelled, and therefore latent, systemic risks. In the evolution of the search for a universal risk parameter, there have been several contenders including VaR and stress testing frameworks. In addition to the individual inadequacies and pitfalls of universal parameters, the threat from standardization is that gaps are magnified from a systemic risk perspective with widespread adoption. The hard choice for regulatory standard setters is to balance between consistency and standardization of risk quantification frameworks. The tradeoff becomes comparability of risk parameters across institutions vs. allowing for flexibility and differentiation, which prevents magnification of systemic risk.

The appraisal of FRTB as a regulatory framework and standard for trading books should span three questions: (1) are the capital requirements optimal and consistent across the underlying risks; (2) are the required processes and computations feasible and desirable from a technology and personnel resources; (3) and finally, will this framework lead to better and suitable risk measures and transparency to thwart institution-specific or systemic stress and crises? Our view is that FRTB is a good foundation but will need selective changes and refinements to address risk transparency and management, and then as a framework for quantifying capital charges.

How important is market data in the FRTB framework?

The critical importance of the availability and access to a "committed quote" and market process – by default to market data vendors. A prospective question here is the consequent individual responsibilities of vendors and banks if there are unexpected gaps in the collection, availability or distribution of market prices. This may be costly from a capital perspective if a desk fails the P&L attribution test and falls to SA with consequent cliff effect. Avoidance of these situations will require reliable data integrity and availability, and possibly regulatory approval or oversight of data vendors. Large banks using IMA may not elect to share or pool market risk data if they believe this data represents a competitive advantage. Mechanisms to address the competitive dynamics of banks as well as regulatory factors will be advisable.

How will capital be allocated to trading desks under FRTB?

Under FRTB banks will be well-advised to follow a three-step process. First, identify a regulatory trading desk (RTD) structure that is conducive for management and segregation of trading desks. The second is to assess the feasibility of computing SA and IMA capital for each desk. The third is to modify the RTDs to optimize capital charge. Once this structure has been decided upon, top of the house/enterprise level capital should be assessed. FRTB stipulates that there will be a top of the house floor to IMA capital based on a percentage of the SA capital from those RTDs. FRTB does not prescribe what that floor will be and, as of this writing, the floor percentage remains unresolved.

Calibration of the floor will be critical to defining how the IMA, and more broadly how the FRTB, will be deployed. As calibration approaches 100%, there will be increasingly little cause for banks to implement the IMA and capital costs will rise many fold. This will be particularly true for banks which currently operate under the Basel II or II.5 Advanced Approach. As calibration falls below a certain inflection point, at which IMA capital meets or exceeds floor capital, then floor cost will increasingly not constrain IMA usage except in cases of extreme or unintended model events.

What are the prospects of postponement of FRTB Finalization and Implementation Timelines?

The sheer scope and breadth of changes in regulatory frameworks over the last five years has stretched supervisory resources globally, particularly those who are responsible for interpreting and implementing the new regulations and associated supervision. In the US, the CCAR process has sapped regulatory and institutional resources because of its complexity and implementation challenges. Similar regulatory initiatives in Europe including SA-CCR have kept regulators and supervisors very busy as well.

FRTB stipulates that national regulatory bodies are required to finalize technical guidance in the form of country-specific regulations and associated laws by January 2019, followed by live implementation by banks by the end of that year. Historically, country-specific technical guidance has been provided by jurisdictional regulatory bodies within a year of BCBS releases. However, at the time of this writing, not all major jurisdictions have taken the preliminary steps to communicate their agreement with FRTB timelines.

Given the complexity and scope of FRTB, jurisdiction-specific technical guidance and implementation guidelines will be governed by the heterogeneity and state of preparedness of respective banking systems and regulatory resources. Another factor will be the number and proportion of banks that elect IMA for individual desks. Regulators will also want to stipulate the extent of their acceptance of bootstrap approaches for banks with legacy data and computation frameworks as opposed to nudging or requiring them to undertake transformational approach. Given the wide-ranging and long-term impact of FRTB on capital and risk management, it will be optimal if national interpretations and technical standards are tailored to conform to respective banking, market, supervisory and macroeconomic environments.

A rush to establish local standards may result in coarse technical interpretations and lack of collaboration between regulatory bodies, banks and other stakeholders. A collaborative, stepwise and consensus approach towards setting local technical requirements is advisable to ensure stability and resilience of banking systems while preserving individual banks' respective competitive positions both nationally and globally. Early definition and adoption of national FRTB standards will enable supervisors to participate in bank-level and system-wide impact studies as observers and remediate anomalies and unexpected outcomes. This is particularly important for FRTB as several of its elements are new and untested, e.g. P&L attribution tests, capital charge algorithms and the SA floor.

There is ample precedent for local regulators to extend implementation deadlines for major BCBS guidelines and rule changes. The postponement of the SA-CCR implementation in Europe is a case in point and this may well turn out to be the case for FRTB as well. We would like to state here that such postponements do not only impact the credibility of the standard setting regulators, but also of implementation managers and other stakeholders who diligently apply for budgets and push hard to have their banks become compliant, only to watch as the timing is determined by the preparedness of laggard banks and regulatory jurisdictions.

A rush to establish local standards may result in coarse technical interpretations and lack of collaboration between regulatory bodies, banks and other stakeholders.

Despite the underlying challenges, it will be advisable for local regulatory and supervisory bodies to issue technical guidance well in advance of the January 2019 deadline. This will provide banks more time for implementation – which, as described above, will include impact analyses, organizational adjustments, system tests, and phasing out of existing frameworks and methodologies as applicable. On their part, banks should ideally aim to conduct concurrent runs with FRTB methodologies and frameworks for 2018 year-end close to minimize surprises and adjustments.

How should a bank approach FRTB's adoption and implementation?

FRTB is designed to make regulators more aligned and aware in the approval of regulatory trading desk structures, the use of IMA at the desk level and model validation while maintaining jurisdictional consistency. Banks will naturally

move towards optimizing around the least stringent and restrictive regulatory interpretation of methodologies and model inputs and seek the necessary regulatory approvals.

Unlike other marginal or evolutionary changes in regulations, FRTB will require a significant transformation in the way banks organize and run their trading businesses and compute their market risk capital. The same can be said for SA-CCR for credit risk capital requirements. Moreover, FRTB and SA-CCR are just two elements in a much larger package of new BCBS requirements for capital adequacy.

Risk, finance, technology and operations will be impacted by the transformation. Banks should be prepared for transformation that will initially appear to be intrusive. Bank managements will be well advised to reflect on and plan for technology, computational, and governance frameworks that must be prepared beyond 2019.

The adoption and compliance with FRTB framework will entail multi-year efforts and significant budgetary outlays. In addition, the new Basel capital requirements will be phased in across the next five years. To manage the deadlines, banks will have to prioritize efforts and projects against competing priorities.

Bank managements should elect to launch and undertake this transformation with adequate time frames to avoid rushing to meet deadlines without a sustainable and cost effective design and implementation. Timely organization of FRTB project teams with specific responsibilities and deliverables will have ample opportunity for optimally aligning their trading books and business structures with FRTB capital allocations.

Taking into consideration the lengthy supervisory approval process and the extraordinary extent of changes made to the market risk capital framework, banks need to move to implementation mode rather earlier than later. There will very likely be a crunch for regulatory resources around mid-2018 as individual bank RTD and approvals get piled up.

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Institutions who believe that FRTB will be watered down or delayed in any significant way may have to play catch-up with very difficult challenges, slipping timelines and unexpectedly high budgetary outlays. A prudent strategy will be to tackle FRTB head-on for what it is and begin to adjust businesses accordingly.

What are bank/enterprise level Implications of FRTB?

Once capital requirements of banks' existing and potential trading portfolios is estimated under the new guidelines, senior bank managements will have to determine the return and feasibility of continuing certain trading activities and businesses. Trading books with inadequate return on capital may have to be evaluated for sunset or exit. For activities that are retained, the requirement will be to implement new processes and risk management practices. Implementation of the new internal model standards will be challenging, requiring banks to make extensive changes to their existing architectures.

There will be continual modifications and fine-tuning of FRTB standards, but it is clear to us that banks that implement FRTB requirements effectively and efficiently will strengthen their competitive positions, and not be pushed into expending resources to create avenues for regulatory arbitrage and take undue risks that may be latent from their own view.

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Historically this has been a general response to more rigorous regulation to maintain return on capital. FRTB is designed to prevent this. For banks and institutions with legacy frameworks, budget constrained resources and a kick-the-can culture, the requirement to adopt FRTB also represents a significant opportunity for risk management, and technology functions to seek required budget outlays to undertake this transformation. There is certainly the possibility that the prevailing political and legislative winds may do away with FRTB and some aspects of the Basel framework altogether. This appears to be beyond the realm of possibilities as the G20 leaders and representatives explicitly affirmed their support for Basel (dear editor, please footnote for our G20 piece)

[1] BCBS, Revisions to the Basel II market risk framework (updated as of 31 December 2010), February 2011, www.bis.org/publ/bcbs193.pdf

[2] Based on 4 BCBS QIS studies found in the Impact analysis (section 4) of the FRTB explanatory notes found here http://www.bis.org/bcbs/publ/d352_note.pdf According to the QIS studies, revised capital requirements are likely to be 40% higher on a weighted average basis, including all exposures.

[3] Section 4.1, Table 2 of the BCBS explanatory notes to the FRTB found here http://www.bis.org/bcbs/publ/d352_note.pdf

Regulatory Trading Desk (RTD) Optimization Under FRTB

Sanjay Sharma, Ph. D.
Founder and Chairman
GreenPoint Financial

Jeb Beckwith
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In January 2016, the Basel Committee for Banking Supervision (BCBS) released revised minimum capital requirements for market risk following their eight-year long Fundamental Review of the Trading Book (FRTB). This framework represents an overarching view of how risks from banks' trading activities and portfolios should be assessed and quantified through a credible and intuitive relationship with capital requirements. Principal components of the new guidelines include: a clear and impermeable boundary between banking and trading books; replacement of VaR by expected shortfall as a risk measure; revised sensitivity-based standardized approach; and revised expected shortfall-based internal model approach with differentiated liquidity horizons.

These requirements—which are set to be implemented within every major jurisdiction around the world—will profoundly impact how trading desk structures will be organized, managed and monitored. Capital frameworks will now be implemented and regulated at the desk level rather the enterprise level. Risk factors within trading instruments will be disaggregated with a multitude of sensitivities. Each sensitivity will need to be separately modeled. Risk factors for which historic market data cannot be obtained over a ten-year stress horizon will be deemed to be non-modellable and subject to punitive capital treatment.

As a consequence of the coming regulatory reforms, existing desk structures, now called Regulatory Trading Desks or RTDs under FRTB, will need to be completely reorganized. Less liquid instruments may need to be separated from "flow" instruments. Netting, which will be more constrained, will have to be remodeled, as will default risk, credit spread risk and the trading book-banking book boundary. New required tests, like P&L attribution and revised backtesting, will also need to be considered. Operating costs as well as capital costs may increase incrementally for each new trading desk. All of this will create the need for banks to fundamentally change their RTD framework to ensure costs, capital and risk management are properly aligned and ideally optimized.

As a consequence of the coming regulatory reforms, existing desk structures will need to be completely reorganized.

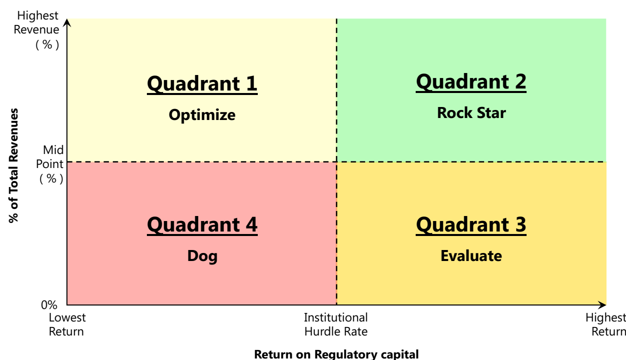
In this paper, we provide a glimpse on a new methodology for quantifying the value of each RTD to a bank including methodologies for dealing with some of the less-tangible drivers. By consolidating complex metrics into a simple red-yellow-green depiction of each RTD, we create building blocks for more the more complex construction of global business platforms while still considering all the real-world drivers. Our methodology envisions that robust construction of RTD structures, supported by quantitative impact studies, can take place in a modular way such that supporting groups such as risk, reporting, treasury, and vendor management will have a clear model for adding, removing and modifying RTDs as changes are inevitably made over time.

Trading desks exist, thrive and liquidate for reasons beyond simple returns, but, on the whole, trading must generate meaningful revenues and returns to a firm or risk becoming displaced. This is even more true under the FRTB which requires banks to undergo a granular rethink of how their trading desks are assembled, capitalized and governed. Our experience as practitioners informs us that at least 80% of the cost for any bank system change resides in implementation rather than actual vendor cost. For banks dealing with increasingly dynamic regulatory environments, markets and technology, low-cost flexibility in RTD construction, deconstruction and reconstruction will be ever more critical.

Valuing the RTD

Figure 1 below illustrates how we first consider the valuation of a RTD by quantifying importance (size) against return on regulatory capital (RORC). Size is determined by the relative revenues of the RTD as a percentage of all trading revenue. The scale can be adjusted based on a bank's size and number of trading desks. RORC is determined by dividing the fully costed Net Income After Tax (NIAT) against the expected regulatory capital using either the standardized or internal model approach. This approach enables us to bucket each RTD into one of four quadrants for further examination. We label these quadrants "Rock Star," "Dog," "Optimize" and "Evaluate" as shown below.

Figure 1: RTD Value Matrix[i]



After segmenting each RTD by quadrant, we then tag each desk with "High, Medium, or Low" marks from the modifier box in Table 1 below.

Table 1 **–** RTD Valuation Modifiers

- Strategic Importance
- IMA Cliff Potential
- Growth Potential
- Return on Economic Capital
- Core/Non-Core
- Consolidation of Risk Classes, Assets and Factors

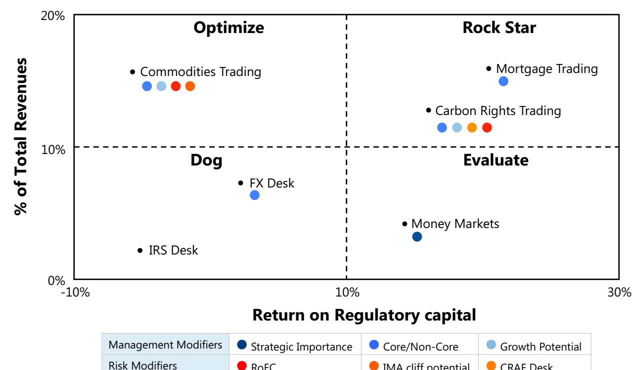
Under our schema, modifiers act as a separate test to easily ask specific additional questions about the entire portfolio of RTDs. For example, to assess "What is my overall IMA cliff potential?", simply take the total RTDs labeled as "high IMA cliff risk" and add the difference between the SA and IMA capital (both calculated daily). To assess "Where are my laggards in growth?", list all the RTDs in tagged "low growth." We tag each of these modifiers dynamically using objective metrics monthly for subsequent reporting and evaluation.

To see how this works in practice, let's examine a use case.

Case Study: HomeBase

HomeBase is a regional Texas-based bank focusing on retail deposits, mortgage lending and small commercial lending. It also has a niche specialty business serving the energy and utilities sectors using proprietary models for trading commodities and carbon rights developed using proprietary trading data developed over many years. Outside of these specialty trading platforms, HomeBase maintains very modest trading desks in FX and rates, but volumes in these desks are very low and spreads are compressed. Corporate Treasury also maintains a small money markets desk which it uses to supplement daily liquidity needs and maintain its name in the market. HomeBase has a targeted 10% return on regulatory capital. Figure 2 illustrates the HomeBase picture prior to optimization.

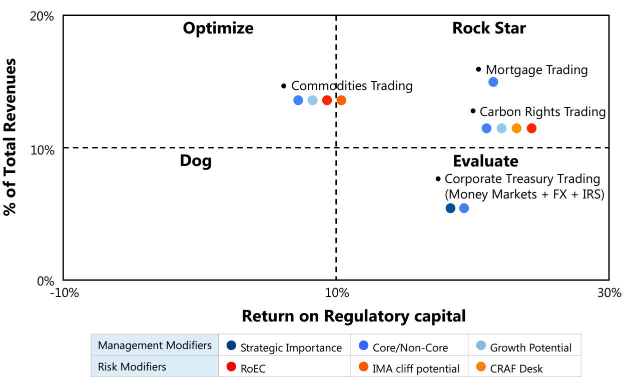
Figure 2: Case Study – HomeBase (Regional Bank)
Before FRTB Optimization



Under FRTB, HomeBase faces several capital challenges which it will need to address. First, its market leading commodities business delivers suboptimal returns under the IMA and this business has a high likelihood of failing its IMA tests over time, yet this is a large business for HomeBase and many of its clients are also core to its M&A and carbon trading businesses. Second, the carbon trading business, though profitable, cannot obtain IMA approval because of a lack of pricing history for a small segment of its market. Thus, the carbon trading business operates under the higher SA framework. Its other trading desks are small, but at least two, FX and money markets, must be maintained for client and strategic reasons, respectively.

After using our methodology, HomeBase makes significant improvement on returns without sacrificing either client service or meaningful revenues. In the commodities and carbon trading businesses, HomeBase elects to exit the very thinly traded portions of those businesses for which it does not have robust, proprietary data. The impact on revenues is modest but the impact to returns is significant. Second, HomeBase consolidates its Money Markets, FX and IRS desks into a single desk operated by corporate treasury. This consolidation not only creates operational efficiencies with reporting, oversight and name in the market, but also reduces required regulatory capital by accessing modest netting across the books. After examination, HomeBase determines that its mortgage trading desk is doing well as is and elects to increase its investment here coordinated with a parallel retail lending push. The results of HomeBase's optimization program are illustrated in figure 3.

Figure 3: Case Study – HomeBase (Regional Bank)
After FRTB Optimization



Putting it All Together

In general, we can paint a complete, one-page picture for the value of each RTD to the entire organization or to whatever subset of the organization needs to be examined (see figure 4). The quadrant/modifier framework can be used for ring-fenced entities, for example an Intermediate Holding Company (IHC) in the U.S., or can be used to compare RTD's across jurisdictions with similar asset classes or supporting similar businesses.

A simplified version of the quadrant analysis can also be performed across single modifiers to, for example, consider where to invest amongst all the high growth opportunities in a region or, conversely, which desks align ROEC with RORC. The quadrant analysis can also be used within a single product or business line to better assess which core businesses to invest in and which to pare back. Best of all, this model is run off of quantitative data in the first instance, giving greater transparency to what can be challenging conversations across business lines competing for the same capital dollars.

At GreenPoint Financial, we are also deploying machine learning technology to enhance transparency and effectiveness of this decision-making process. We expect RTD Optimization will be a major competitive driver for depository trading platforms over coming years.

[1] Note that returns are assumed to be based on a fully costed (NIAT) basis using IMA or SA as appropriate. Hard dollar subsidies may be allowed.

Author Biographies

William H. Anderson, Esq.

William Anderson is Managing Director and Head of Law & Compliance. He leads GreenPoint practice in providing regulatory, legal and technology counsel and solutions to law firms, legal publishers, financial institutions and in-house law departments around the world, overseeing our team of experienced US attorneys and data and technology experts.

Will has over 25 years' experience working with corporations to improve the management of their legal and corporate compliance functions. Will began his legal career as a litigator with Drinker, Biddle LLP. He then served as in-house counsel to Andersen Consulting LLP, managing risk and working with outside counsel on active litigation involving the firm.

Will has leveraged his legal experience interpreting regulations and appearing before federal (DOJ, SEC, FTC) and state agencies (NYAG) to oversee research and other compliance matters at Bear Stearns around the period of 2008 financial crisis. In this capacity, he counseled analysts on regulatory risk and evolving compliance requirements. Will also consulted on the development of a proprietary tool to ensure effective documentation of compliance clearance of research reports.

Will went on to work in product development and content creation for a global online compliance development firm pioneering the dynamic updating of regulated firms' policies and procedures from online updates and resources.

Will holds a Juris Doctorate with high honors from the Washington University School of Law in Saint Louis and is admitted to state and federal bars. He lives in Pawling, NY with his wife and daughter.

Kirsten Bay

Kirsten Bay is redefining what it means to be a fearless leader in the technology industry. She is an accomplished, bilingual executive transforming the cybersecurity space. As President and CEO of Cyber adAPT, she leverages more than 25 years of experience, leading her team with risk intelligence, information management, and policy expertise across a variety of sectors.

Throughout her career, Kirsten has been appointed to a congressional committee developing cyber policies, initiatives and recommendations for the intelligence community. She worked in partnership with the Center for North American Studies (CNAS) and Center for Strategic and International Studies (CSIS) to develop energy policy recommendations for the White House, and energy policy, and collaborated on information studies for MIT-Harvard and several federal agencies. She has gone before a parliamentary subcommittee on recreating trust in the global economy, presented national security and critical infrastructure concepts at conferences such as Black Hat, Secured Americas, Enterprise Architecture Institute, SC World Congress, and the Eurim Information Management Committee. She has also spoken on applied economics and its relationship to both cyber and national security around the world.

Kirsten is a self-proclaimed 'serial student.' Her current membership of the Alliance of Chief Executives feeds her perpetual drive to learn and share insight with peers, an inspirational trait she models for her Cyber adAPT team.

In previous executive roles for ISC8, Attensity Group, and iSIGHT Partners, she has led companies through corporate restructuring, risk and corporate intelligence product launches, and company turnarounds, respectively.

With a BA in English and German from the University of Oregon, let's just say she will correct your grammar in multiple languages.

John E. ("Jeb") Beckwith

John "Jeb" Beckwith is a Managing Director and leads GreenPoint's financial services division. His mission is to create effective and efficient solutions to complex regulatory, legal, cost and technology issues facing financial institutions around the world. In the banking sector, Jeb's initiatives include driving solutions for the forthcoming implementation challenges facing banks under the new Fundamental Review of the Trading Book regulation. In the insurance claims industry, Jeb is leveraging GreenPoint's litigation, technology and analytics expertise to help clients improve outcomes and variability in their most complex, highest-value motion practice cases.

Jeb brings over 30 years of industry experience to his current positon in the management of risk, capital markets, lending and transaction banking practices. Prior to joining GreenPoint, he was Managing Director at RBC Capital Markets for 10+ years where led several businesses as Head of Americas - Global Financial Institutions and as Founder/Chair of the committee adjudicating all global bank and sovereign credit and market risk limits. Jeb was charged with managing the credit and cross-sell for financial intuitions around the globe through a team of bankers and regulatory experts. Earlier in his career, Jeb held various management and corporate banking positions with increasing levels of responsibility at MUFG, Bank of America and BNY-Mellon.

Jeb has written several papers on banking regulation and is a co-author of forthcoming "The Fundamental Review of Trading Book (FRTB) – Impact and Implementation" to be published by RiskBooks in Summer of 2017. He holds a BA from Hamilton College and lives in Riverside, CT with his wife and son.

Richard Chase

Richard Chase is a Managing Director at Oyster Consulting, LLC, a regulatory and compliance consulting firm. Prior to joining Oyster in 2015, Richard was General Counsel and Chief Compliance Officer at RBC Capital Markets. He has also previously served as General Counsel of two other brokerage firms, U.S. Bancorp Piper Jaffray and Wessels Arnold & Henderson, and was previously Deputy General Counsel of Dain Rauscher and Senior Counsel at Lehman Brothers. He has served as Executive Vice President and head of regulation at two securities exchanges, the American and Philadelphia Stock Exchanges. He began his career at the SEC, where he served as Associate Director in the Division of Market Regulation. Mr. Chase has been active in a variety of industry organizations, serving on the Board of Directors of the National Society of Compliance Professionals (NSCP) for nine years (including two terms as Chairman), and has served on various committees of the Securities Industry Financial Marketing Association (SIFMA), including its General Counsels and Bank Regulatory Committees (which he also chaired), as well as its Federal Regulation, Capital Markets, and Securities Technology Committees.

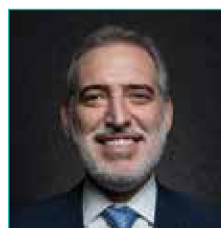
BakerHostetler

BakerHostetler, one of the nation's largest law firms, represents clients around the globe. With offices coast to coast, BakerHostetler's more than 940 lawyers litigate cases and resolve disputes that potentially threaten clients' competitiveness, navigate the laws and regulations that shape the global economy, and help clients develop and close deals that fuel their strategic growth.

BakerHostetler has five core practice groups: Litigation, Business, Employment, Intellectual Property, and Tax. Within these groups are several large specialty practices, including antitrust, bankruptcy, healthcare, energy, middle market mergers and acquisitions, complex commercial litigation, data privacy and security, patent prosecution and international tax. Their attorneys have broad knowledge and experience in many industries, including energy, media, manufacturing, healthcare, financial services and insurance, consumer products, and hospitality.

BakerHostetler distinguishes itself through its commitment to the highest standard of client care. By emphasizing an approach to service delivery as exacting as its legal work, they are determined to surpass their clients' expectations.

BakerHostetler was founded on three core principles: to develop and sustain mutually beneficial, long-term relationships with each of its clients; to provide timely, responsive, and high quality legal services; and to be generous with both time and money to the communities where they work. BakerHostetler has consistently nurtured a collegial approach among their lawyers, assuring effective teamwork in handling client work, while maintaining a culture of providing exceptional legal counsel with a clear focus on value. BakerHostetler is committed to the continuous development of its people and of the resources essential to delivering effective and distinctive legal services worldwide.



Adam Lietke

Adam Litke is the Head of Enterprise Risk Services for Bloomberg. He is responsible for developing Bloomberg's strategy around risk models and software. Prior to this Adam was the head of Market Risk for the Securities and Investment Group of Wells Fargo and head of Market Risk for Wachovia where he managed market risk activities including quantitative risk management, counterparty risk modeling and direct management of market risk. Before that Adam worked for Barclays Bank, PLC as the head of Market Risk in the Americas and head of Market Risk for Global Financing. Adam also served as the Global Head of Market Risk for Swiss Re Financial Products, and spent several years in various management roles with BNP Paribas.

Adam is a trustee of the Georgia State University Risk Management Foundation and is a former advisory board member for the GSU masters program in mathematical risk management. He is also a past chairman of the Market Risk Program Committee for the New York Chapter of PRMIA.

Steve O'Hanlon

Steven O'Hanlon is a dedicated visionary who inspires bold change and flawless execution. Since first joining the company in 2002, and under his leadership as President & COO starting in 2004, Mr. O'Hanlon has driven the transformation of Numerix from a broadly-focused company with many disparate products and five locations, to a global analytics software company operating from a single platform with a presence in 26 countries.

In his early years with the company Mr. O'Hanlon aggressively pursued the derivatives pricing business and by 2008 established Numerix as a global leader of financial analytics software. Witnessing firsthand the impact of the financial crisis, under Mr. O'Hanlon's leadership, Numerix made a key decision to re-evaluate its core analytics solution and creatively determine how it could be maximized to pivot the organization into the rapidly changing market of derivatives risk management. Through his ability to focus, adapt and execute, Mr. O'Hanlon was named CEO of Numerix in January 2013.

Through Numerix's continued investment in innovative technologies, unrivaled analytic capabilities, and a customer-centric solution selling approach, the company has been firmly planted as the most prolific and dominant leader in both risk and pricing. To date, the company has been recognized with over 100 international awards including being named one of the fastest growing companies in North America by Inc. Magazine's 500|5000 and Deloitte's Technology Fast 500™. Mr. O'Hanlon's personal achievements include being named one of New York SmartCEO's Future 50 rising stars, as well as being ranked annually on Institutional Investor's "Tech 50" and "Trading Technology 40" Lists.
Prior to joining Numerix, Mr. O'Hanlon actively negotiated the sale of several companies for nearly $500M. A seasoned veteran, he has more than 25 years of experience building emerging market start–up software companies and has contributed to three successful IPOs. Mr. O'Hanlon participated in the Network Express IPO road show in which $30M was raised. It was his product and distribution strategy that led to the sale of this company to Cabletron for $110M. Prior to Network Express, Mr. O'Hanlon was a member of Banyan Systems Inc. executive team, which drove eight years of unparalleled growth from $3M to $150M, culminating in a successful IPO. Before that time, Mr. O'Hanlon also held sales executive positions at Avant–Garde Computing and Nixdorf Computers.

Sanjay Sharma, Ph.D.

Sanjay is the Founder and Chairman of GreenPoint Global.

During 2007-16 Sanjay was the Chief Risk Officer of Discretionary Capital Group and Managing Director in Fixed Income and Currencies Risk Management at RBC Capital Markets in New York. His career in the financial services industry spans over 25 years during which he has held investment banking, risk management and technology transformation positions at Goldman Sachs, Merrill Lynch, Citibank, Moody's and Natixis.

Sanjay is the author of "Risk Transparency" (Risk Books, 2013) which provides a framework for enhancing risk transparency through quantitative parameters, subjective analyses and contextual commentary. He has also published several papers and is a co-author of forthcoming "The Fundamental Review of Trading Book (or FRTB) – Impact and Implementation" to be published by RiskBooks in Summer of 2017.

Sanjay is the Director of the RBC/Hass Fellowship Program at the University of California at Berkeley and is an Adjunct Professor at EDHEC, Nice in France. Sanjay has served as an advisor and a member of the Board of Directors of UPS Capital (a Division of UPS) and is a frequent speaker at industry conferences and at universities. He serves on the Global Board of Directors for Professional Risk International Association (PRMIA).

He holds a Ph.D. in Finance and International Business from New York University and an MBA from the Wharton School of Business, and has undergraduate degrees in Physics and Marine Engineering. Sanjay acquired his appreciation for risk first hand as a merchant marine officer at sea where he served for seven years and received the Chief Engineer's certificate of competency for ocean-going merchant ships. Sanjay lives in Rye, NY with his wife and two teenage sons.

John Stacconi

John has been the Global Treasurer of Jefferies Group LLC since 2012. Prior to Jefferies, he was International Treasurer at Nomura International responsible for all Treasury functions, ex-Japan. Before Nomura, John was at Bear Stearns as a Senior Managing Director and Treasurer of Bear Stearns Securities Corp.

John graduated from Hofstra University with a BBA in Finance and a minor in Economics.

About GreenPoint Financial

- GreenPoint Financial's approach is to develop C-level partnerships and offer subject matter expertise, data management platform, and implementation services at fixed cost for complex projects. Our current focus is on Fundamental Review of the Trading Book (FRTB) and its impact on the industry.
- GreenPoint Financial is a subsidiary of GreenPoint Global – a risk advisory, technology, education, legal and compliance services firm headquartered in New York.
- Founded in 2006, GreenPoint has grown to over 380 employees and over 40 consultants. We have a global footprint and production and management teams located here in the U.S, India and Israel. GreenPoint is owned by its founders and principals and is debt free.
- GreenPoint's stable client base ranges from SMEs to Fortune 1000 companies worldwide served by a deep resource pool of subject matter experts across legal, financial, publishing and education sectors.
- GreenPoint has leading edge software development capabilities with over 50 professionals on staff who work on internal and client projects and specialize in .net, Java, Python and Azure platforms.
- As an ISO certified company (by TÜV Rheinland, Germany), GreenPoint rigorously complies with ISO 9001:2008 and ISO 27001:2013 standards.
- GreenPoint is certified as a Minority and Woman Owned Business and complies with all federal and state contracting requirements.

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