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INTRODUCTION

digital transformation demands a new perspective

We no longer live in a world where we can easily compartmentalize identity. In fact, the individual characteristics of companies, industries and even people are becoming more and more diluted with each passing day. Yet, while this poses a risk for many, it offers great opportunity for those firms that use this blurring of the lines as a chance to shine rather than fade into the background.

In the capital and commodity markets alike, our clients are dealing with unprecedented levels of disruption from multiple angles. These include but are not limited to: rising global competition, increasing regulatory reform, the proliferation of data, and innovations in industrial, financial and consumer technology. The potential to be swallowed up by these changes is real and this fear is causing many firms to look long and hard at their business models to ensure they can stay competitive.

The question at the forefront for leaders dealing with this disruption is: How can I drive transformation to make my business relevant for tomorrow? The smartest companies are realizing the role the digital revolution has played in bringing on this present state and recognizing that many of their business problems are in fact digital problems. Solving these issues requires understanding that consumers are changed forever—they not only expect but require immediate access to information at any time from any place.

To emerge as a star in this age of digital transformation, organizations must focus on driving increased and enduring agility so they can better respond to the demands of the new consumer. This will require making strategic investments in areas of differentiation while looking for creative ways to handle non-proprietary processes. By doing so, firms can focus resources where they matter most and position themselves to quickly infuse innovation into the business when needed.

In this issue of CROSSINGS, we explore the roles that industry wide utilities and outsourcing will play as firms chart their course forward in light of digital transformation. For Rashed Haq, this “information industrialization” deserves critical attention by energy companies: “In an era of unprecedented change, the time is right for firms to work together to develop and capitalize on the benefits of business utilities, which will help improve their own returns and make them more agile.” Likewise, Sean O’Donnell reviews the drivers of change for financial institutions and how the expanded use of outsourcing models will help “change the bank” by improving revenue and creating new business opportunities.
We consistently underestimate the pace of innovation and disruption while it continues to increase geometrically. The difference between leaders and “also rans” in business typically has been the ability to respond to change in smart and effective ways. Those that are quick thinking and agile not only ensure their relevance, but also set themselves apart from the pack.

Best Regards,

Chip Register
CEO, Sapient Consulting
THE NEXT PHASE OF OUTSOURCING:
“change the bank” with digital transformation

Financial services firms have always faced market volatility, but new challenges are forcing most to rethink their traditional operating models in favor of outsourcing. In this article, Sean O’Donnell reviews the drivers of change for financial institutions and how the expanded use of outsourcing models will help improve revenue and create new business opportunities.

Over the past five years, global capital markets have experienced unprecedented change. Today, increased regulations, more reliance on technology, reduction in revenue and a greater need to aggressively target new business while still reducing costs have forced all participants to reassess their strategies, operating models and risk frameworks. These challenges are further complicated by fundamental changes among society as a whole.

Today’s connected consumers have embraced technology to such an extent that it has become an extension of them. Influence of mobile technology, social media, rising customer experience and service expectations and lower switching costs for customers to take their business elsewhere have dramatically changed the competitive landscape for banks.

Both sets of challenges are proving to be Herculean endeavors for banks, and many have realized they cannot do it alone. For years banks have outsourced various business functions to cut costs, but as outsourcing models have evolved, banks have begun to see the value in partnering with outside experts to help them bring more than just cost savings to their businesses.

OUTSOURCING: THE COST-SAVING MODEL

Since the 1970s, banks and other businesses around the world have used outsourcing for functions unrelated to their core business, including clerical, record storage, accounting, data processing, security and plant maintenance. Outsourcers could often do the work at a fraction of the cost of what companies spent to maintain themselves, helping fuel the growth of the outsourcing industry.

In 1989, Eastman Kodak’s decision to outsource its IT systems was considered revolutionary. Driven by a realization that it was in the photography business, not the IT business, Kodak was quickly followed by dozens of major corporations similarly realizing that owning technology was not a necessity to their businesses. One such company is British Petroleum [BP]. The company began outsourcing selected IT services in 1989, slowly consolidating systems and data centers and decreasing its staff. In 1993, the company outsourced its complete IT operations for its BP Exploration division and has since moved IT functions from other areas of the business. Realizing the cost savings and opportunity to gain more flexibility and higher-quality resources, BP moved to completely outsource its global finance and accounting functions in 2012—an industry first.
With demand growing, the outsourcing marketplace has evolved, offering more services and greater expertise.

› **Technology Outsourcing** has grown beyond server and data center hosting to include private and public cloud computing, application development and management, software maintenance and enhancement, network management, user support and outsourced database and system administrators.

› **Labor Arbitrage** has fueled new outsourcing models for both operational and technology needs, including off-shoring, near-shoring and right-shoring. While the outsourcing of customer service functions to outside countries may be shifting, use of engineers and programmers in India, Russia, Brazil and China for testing new products, IT services and complex data analysis continues to grow.

› **Business Process Outsourcing (BPO)**, the outsourcing of back-office functions, has quickly caught on within the financial services industry. Today, top retail banks outsource their mortgage application process to service partners who can process them at a lower cost, using industry-standard process flows and technology. Leading insurance providers have their claims quickly and expertly managed, processed and settled by third-parties. Human resources, procurement, facilities management and payment processing are additional areas organizations have turned over to outsourcing partners.

**BANKS TURN TO OUTSOURCING TO “RUN THE BANK”**

Bank CFOs and CIOs, focused on reducing costs, have begun using managed services for “run the bank” processes, but most still remain married to their outdated, complex and costly systems. Recent challenges and evolving technology are causing the banking industry to rethink the decision to hold onto such legacy systems, processes and business models.

Similar to the automobile industry in the 1950s, banks are being forced to embrace change and enable transformation if they want to compete and thrive in today’s marketplace.

Four key factors are driving the change:

› **Increased regulatory oversight**—An increasingly complex regulatory environment has forced many banks to revamp their technology and processes—but with looming deadlines, many have opted for faster Band-Aid fixes. Impact on revenues and further compliance requirements, as well as the need for real-time insights from data will drive further change.

› **Technological advancements**—The crossover of consumer technologies into the enterprise, multi-customer channel growth and the commoditization of infrastructure have greatly challenged traditional operating models. Organizations struggle with a desire to keep everything in-house and the high cost to do so.

› **Higher consumer expectations**—With ready access to information, influence of online retail experiences and adoption of new technologies, customer expectations are rapidly changing. This is driving a shift in the market and forcing organizations to develop new interaction models that deliver deeper personalized service and improved customer care.

› **Lower appetites for risk**—Recent market volatility and tighter operating margins have caused most C-suite executives to demand cost savings and efficiency gains from every area of the business. Organizations are also realizing their legacy systems and manual processes are bringing unnecessary risk to the business.
OUTSOURCING FUELS MUCH NEEDED CHANGE

The next step for banks is to embrace outsourcing as a strategic extension of the business for managing core processes and “change the bank” projects. By selecting high-end managed service partners over low-cost options, banks can quickly add deep expertise, best practices, scale and flexibility, best-in-class service levels and technology capabilities to their businesses.

The shift is already happening. In fact, according to a 2013 survey by HfS Research, business growth and regulatory compliance are the two most critical business drivers behind financial services firms’ decision to outsource.

Managed services have grown to encompass a number of back-office functions, including HR-activities, marketing, risk management, trade reporting, compliance and IT operations. For example, some of the world’s largest financial firms, including Morgan Stanley, First Tennessee Bank and UBS, utilize PHH, the biggest US outsourcer of home loans, to process and originate mortgages on their behalf. Focused solely on mortgages, PHH has the benefit of scale and expertise and can invest in compliance at a level many banks can’t afford.

Another example is HSBC. Already using Equifax for risk management services, HSBC turned to Equifax’s proprietary matching tools to comply with Financial Services Compensation Scheme rules. Using Equifax’s SCV system, HSBC can identify and verify individuals more accurately. While driven by a regulatory mandate, tapping into a partner’s sophisticated technology also helped the bank meet strategic goals to improve customer relationships and enhance the customer experience.

In an effort to cut their compliance costs, Bank of America Merrill Lynch, Citi, Commerzbank, JPMorgan, Société Générale and Standard Chartered joined forces last year with Swift to develop and use a centralized due-diligence system. This is just one example where banks are letting go of core business processes in favor of third-party managed services.

THE NEXT EVOLUTION OF “CHANGE THE BANK:” UTILIZING DIGITAL TRANSFORMATION TECHNIQUES

This change among C-suite executives from viewing outsourcing as strictly a cost-cutting measure to being an integral function of their operation is fundamental.

Today’s competitive corporation must optimize every process to achieve the best possible business performance. Since all functions, both core and non-core, contribute to overall performance, banks must take a critical eye to all aspects of their business and determine if what they do and how they do it gives them a true strategic advantage.

Such decisions are not easy ones to make. But, as technology advances faster and faster, the banking business and customers demand more—exceptional service, faster access to information, personalized products, quicker response rates and transaction speeds, enhanced analytics and real-time decision support systems—and are not willing to wait. Meeting these demands with “five year” implementation plans is no longer feasible.

Now more than ever, banks need to be agile. They also need to be more attuned to their customers’ needs—determine how they can better engage with their clients, know the products they want and predict what’s needed rather than wait and react. This means embracing social media, giving customers more ways to interact with the business, rethinking traditional marketing tactics and mastering analytics.
Adoption of outsourcing models by the banking industry has been slow—particularly as banks moved from traditional outsourcing to either “run the bank” or “change the bank” initiatives. Firms have an easier time outsourcing initiatives when they fall on either extreme of the spectrum—having a high degree of current investment or having high strategic importance. In the past, it has been challenging knowing when and what to outsource for initiatives where the strategic relevance and investment are somewhere in the middle. Looking ahead, however, few firms have the Digital Transformation acumen in-house, yet it is a strategic priority, making the decision to outsource a logical one.
To get there, “Change the Bank” initiatives have started to merge with a broader, multi-industry initiative around Digital Transformation. This new focus has been fueled by disruptive technologies such as Google, iPhone, smartphone apps, and “always on” cloud services, which have transformed customer behaviors and created entirely new products, services and business models. Multi-billion dollar companies like Uber and Airbnb have revolutionized their industries by thinking outside the incumbent analog business model with a new digitally driven one.

In this age of digital transformation, agile organizations that can quickly integrate and drive innovation into the business will succeed—those that don’t are destined to the fate of Polaroid, watching profits plummet as digital photography blossomed. For banks, business success will demand enhanced customer experiences, faster delivery of services/products, enhanced process transparency and better analytics.

Organizations ready to embrace digital transformation are scrambling with how to move forward, fueling the next wave of outsourcing services. Possessing both the skill and experience, consulting partners are stepping forward to help organizations innovate and improve processes and push transformational change by:

- Fundamentally understanding the customer through business intelligence and analytics techniques and tooling to create better customer segmentation models, develop new products and channels and drive more impactful marketing campaigns
- Utilizing organizations that can help with creative/UX and the digital and social environment—a critical element in today’s business environment
- Engaging with organizations that can help determine a bank’s true value chain with regards to its customers—and use the latest technologies to enhance it
- Digitizing business processes to enable plug-and-play services
- Designing seamless business models intended for mobile and cloud business environments
- Rapidly creating new products and services based on hard data
- Evaluating and recommending new technologies that are used successfully in other industries
- Engraining their brand through each client interaction, and enhancing value through new digital touch points, such as social media

Essentially, these consultants act as new digital change agents and can bring a deep understanding of consumer drivers, new technologies and markets, along with insight into what’s going to happen next. They work with their clients to see what’s coming and help them evolve to meet it.

CONCLUSION
What began as a way to cut IT costs, outsourcing has become an industry standard for many “run the bank” initiatives. Today, faced with an unprecedented number of challenges and changing customer and client expectations due to technology, banks are quickly realizing their “change the bank” initiatives are no longer enough to succeed. Digital transformation is the new key to success. To achieve it requires agility, creativity and full digital adoption. Few banks readily have this unique skill-set in-house, leading many to turn to consulting partners who have the experience, skills and creative DNA to enable success in the new digital world.
Resources


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**The Rising Cost of Trade Reporting: can firms afford to stay compliant?**

Now that most G20 member states have mandated trade reporting of derivatives, market participants have an opportunity to evaluate the agility and sustainability of their current approach. In this article, Randall Orbon, Arun Karur and Cian Ó Braonáin discuss the state of trade reporting and show how growing costs, complexity and regulatory scrutiny are fueling a compelling business case for third-party managed solutions.

To address the trade reporting requirements outlined in Dodd-Frank and EMIR, many organizations made significant investments in internal systems. Now additional regulations and further enhancements—including MiFID II/MiFIR and requirements in other regions—are poised to effect more change. In addition, it is likely that regulators will begin to scrutinize data and organizations will need ways to create assurance and paths to remediation for trades that are self-reported or reported on their behalf. With many of the systems currently implemented there is no clear path to efficient tracking, reconciliation and remediation of trade data. The time is right for firms to reevaluate the ongoing business-as-usual outlay for trade reporting and determine whether or not the cost for compliance will be sustainable into the future. More specifically, firms may benefit from exploring how to:

- cost-effectively maintain their reporting system(s)
- improve their ability to remain 100% compliant
- ensure their current system(s) are enhancing overall reporting capabilities
- afford the expansion or adaptation of their system(s) to meet emerging requirements
- track what has been reported and provide assurance and remediation capabilities

**TODAY’S TRADE REPORTING SYSTEMS: HOW COMPLEX AND COSTLY?**

Driven by requirements, existing systems and available budgets, market participants have tackled regulatory compliance in a variety of ways.

**Investment Banks**

With an average spend of almost $25 million to achieve compliance for both Dodd-Frank and EMIR, many banks have implemented basic compliance, often with more than one reporting system servicing different silos of the bank. Most firms quickly discovered it was too difficult and time consuming to build a single, enterprise-wide solution to comply with regulations.

Despite sizable investments, many banks are still grappling with data management challenges and inefficient trade reporting processes and governance. Tight timelines have resulted in many shortcuts and reduced features, particularly related to data mapping, data ingestion and operational management information reports. In addressing these challenges, banks face tight budgets and a persistent belief that once compliance dates are achieved, additional funds will be unnecessary.
In reality, many banks will spend almost as much to meet forthcoming regulations as they did to get to where they are now. In all likelihood, they will realize little to no savings due to the lack of extensibility and flexibility in their current reporting solutions.

For most banks, the bigger concern is that delegated reporting is becoming a risky proposition, with hard-won clients facing difficult questions from regulators. Initially rolled out as a free service to clients to retain business, trade reporting is quickly becoming a high-risk offering; reporting confidently for clients will require a sizable investment.

**Buy-Side Firms**

Until EMIR took effect in August 2014, buy-side firms felt confident that their executing broker or clearing member was fulfilling their basic transparency requirements. Unlike Dodd-Frank’s single-sided reporting obligation, which placed responsibility for reporting to a trade repository on the executing broker or clearing member, EMIR requires that both the buy-side firm and the sell-side broker or clearing member report their transactions. Although firms have the option of continuing to delegate their reporting obligation, they cannot delegate liability for the collateral and valuation information provided to the broker.

Thus, even with a third party handling reporting, buy-side firms must be able to demonstrate to regulators that they are validating the delegated reporting against their own records. Further, they must provide assurance to regulators and their own management teams that reporting data is accurate, timely and complete. Doing so can be challenging for buy-side firms if they lack a detailed understanding of regulations.

**Third-Party Service Providers**

Many buy-side firms have turned to service providers for solutions to reporting commitments. While service providers are frequently the only data source for reporting buy-side trading activity, many have been reluctant to assume the added responsibility of ensuring regulatory compliance for their customers. Reconciliation and control challenges, as well as the risk of duplication and fragmentation, are among the potential downsides to providers. Reporting flow is further complicated by the buy side’s use of delegated reporting by their banking counterparties—who select data repository locations convenient to them, not to buy-side firms. This fragmented approach complicates reconciliation and puts pressure on service providers to maintain connectivity to all relevant trade repositories.

Given firms’ small appetite to pay for reporting services, third-party service providers are realizing that the risks may outweigh the profit potential.

In reality, many banks will spend almost as much to meet forthcoming regulations as they did to get to where they are now. In all likelihood, they will realize little to no savings due to the lack of extensibility and flexibility in their current reporting solutions.

**Evaluating Current Systems: Is the Status Quo Sustainable?**

Now that several major deadlines have passed, market participants can expect active regulatory scrutiny. What regulators find will likely be fraught with issues, and the cost of non-compliance can be steep. Deutsche Bank recently was fined £4.7 million for failing to properly report transactions.1 Previously, Barclays was fined £2.45 million for failing to provide accurate transaction reports under MiFID 1 to the Financial Conduct Authority and for serious weaknesses in its transaction reporting systems and controls.2

Regulatory audits aside, organizations face other potential threats—including confidential data breaches, technology failures or client transaction errors. Such threats have significant reputational, regulatory or legal ramifications, and very likely expose the organization to financial loss.
A number of triggers may prompt market participants to reevaluate their current trade reporting infrastructure. Among them:

1. **Achieving compliance across jurisdictions proves challenging.**
   Depending on entity classification, reporting requirements for the same trade can differ across jurisdictions. Institutions delegating their trade reporting or offering reporting services need to be ready for potential conflicts if they are operating within the EU or within countries where local law differs from ESMA or Dodd-Frank. To ensure full compliance, institutions need sophisticated rules engines, systems and data management—features which most current in-house systems lack.

2. **Poor data quality inhibits the ability to meet requirements.**
   Siloed infrastructures persist throughout the financial services industry, presenting tremendous challenges for cross-border trade reporting. Trades with counterparties in different jurisdictions often involve two or more incompatible data stores and trade processing systems. Such structural issues create poor data quality and significantly hinder a reporting party’s ability to achieve 100 percent match rates. Compounding the data quality issues is the introduction of several new fields that trade capture systems need to accommodate—including LEI (Legal Entity Identifier), Product Taxonomy (UPI) and UTI / USI (Universal Trade / Swap Identifier).

3. **Managing governance with siloed systems proves risky and costly.**
   Many organizations are managing their governance, risk and compliance initiatives with dozens of disparate, often disjointed systems. The approach fuels duplicative and contradictory processes and documentation. With such complexity, it becomes easy for suppression logic to become stale. That, in turns, results in over- or under-reporting, which puts organizations at risk of censure and fines. Add the expense of maintaining multiple point software solutions, and the cost of compliance can quickly spiral out of control.

4. **Using multiple, inter-trade repositories results in poor pairing and matching rates.**
   Inconsistent interpretation of reporting requirements has led to varied reporting formats and standards within the industry. With multiple inter-trade repositories accepting these different standards and formats, the result has been poor trade pairing and low matching rates.$^3$

With so many challenges, participants face a fundamental question: Can they afford to continue with their current solutions? Those that have invested in internal solutions need to determine whether or not they can scale to accommodate change as the regulatory environment continues to evolve. What will happen when leadership with accountability for regulatory reporting starts asking for real management information reporting? How long will it take until the business initiates or accelerates strategies to unwind trading because business-as-usual costs for regulatory reporting make trading unprofitable?

Some banks and large buy-side firms that have already spent millions developing an internal reporting infrastructure may opt to continue with what they have built. However, with CIOs focused on improving efficiency and reducing costs, a growing number of organizations are weighing the options—and concluding that it no longer makes sense to maintain expensive, proprietary systems or to support third-party solutions in house.

*Those that have invested in internal solutions need to determine whether or not they can scale to accommodate change as the regulatory environment continues to evolve.*
LOOKING “OUTSIDE THE BOX” FOR A TRADE REPORTING SOLUTION

Why are so many companies reexamining their original decision to build in-house solutions? Based on conversations with our clients, it comes down to the following reasons:

1. First, companies underestimate the total cost of ownership. Companies often estimate only the cost of an initial build or implementation and don’t typically account for the following:
   - Cost of understanding regulatory requirements and creating traceability to the reporting functionality upfront but also on an ongoing basis as regulations change or new ones are rolled out.
   - The likelihood that technology builds and implementations do not go as planned creating either additional technology costs or compromised solutions that often create additional operational overhead on an ongoing basis.
   - The ongoing cost of supporting and adapting the technology platform as regulations change.
   - Infrastructure and connectivity cost to support their platforms and negotiate the onboarding and ongoing relationship management with trade repositories like DTCC, CME, ICE, REGIS or UnaVista.
   - The emerging cost of reconciliation and assurance as firms will need to have teams and technology that can work across trade repositories to reconcile what has been submitted, remediate errors and provide assurance to key stakeholders or clients. Many firms only account for the cost of submitting trades.

2. Second, building in-house systems was the accepted practice, especially for large banks and custodians. This is no longer true. Banks are now looking for alternatives to building their own systems for all of their needs, not just trade reporting.

3. Finally, there were few alternatives when companies were initially trying to understand how to respond.

THE BENEFITS OF MANAGED SERVICES

Today’s growing availability of managed services and cloud computing has driven many industries to shift away from developing software and maintaining hardware—functions deemed too expensive and complex to keep in house. For example, long ago most major airlines have done away with their proprietary ticketing systems in favor of outsourcing through systems such as Sabre or Amadeus.

When financial regulations were coming into effect in 2012, there were no managed solutions available to help market participants handle trade reporting. Today, robust, third-party managed services are available, offering organizations a number of benefits:

1. Lower Total Cost of Ownership (TCO): A managed solution helps organizations minimize capital outlay and staffing requirements. With operating costs syndicated across multiple subscribers, ongoing cost of ownership is also significantly reduced.

2. Improved Reconciliation: Trade reporting service providers maintain a reconciliation engine that takes reports from trade repositories, TriOptima and other sources, and then reconciles them to a client’s internal database. This approach addresses regulatory rules for portfolio reconciliation, discrepancy identification and dispute resolution, as well as reporting.

3. Reduced Compliance Risk: In addition to offering out-of-the-box support for reporting to all global trade repositories for all asset classes and message types, best-in-class trade reporting solutions include regular, timely updates reflecting reporting rule changes. Additionally, such providers maintain close relationships with regulators to stay informed about new requirements.

4. Improved Data Usability: Access to a comprehensive solution that aggregates data from multiple sources creates an opportunity to expand data analytics and utilize the trade reporting solution as a decision support system.
5. **Rapid Deployment**: With pre-configured reporting rules and message types, trade reporting service providers seamlessly integrate with any source system. Designed to work in conjunction with other reconciliation applications, they also enable easy integration with all trade repositories, counterparties and vendors.

6. **Better Reliability and Security**: Despite continued concerns about the reliability and security of managed solutions, remotely hosted services can offer a higher and more reliable standard for data protection than onsite software.

**WEIGHING THE OPTIONS: IN-HOUSE VS. OUTSOURCE**

As with any business decision, a financial analysis is a critical input to deciding whether to upgrade/build a trade reporting solution or outsource to a third-party provider. In building or upgrading a solution, firms typically incur the following major costs:

- ✔ Cost of interpreting regulations and defining business requirements
- ✔ Cost of design/engineering and project implementation
- ✔ Cost of physical infrastructures
- ✔ Cost of ongoing operations and support staff
- ✔ Trade repository fees

Finally, opportunity costs—the consumption of resources that could support other business initiatives—should be factored into the total cost of ownership.

What follows are two scenarios that demonstrate the total cost of ownership of building an in-house reporting system versus using a managed solution. Costs and calculations reflect Sapient’s firsthand experience working with banks and buy-side firms worldwide.

**Scenario 1: Managed Trade Reporting Solution for Tier 2 Bank**

Large banks with 500,000 trades per month can expect to spend close to $30 million to build an initial reporting approach plus another $18 million per year to maintain it (including operations, testing, technical, remediation and business analysis resource costs).* Additional system build-out costs for Tier 2 banks to address EMIR and other G20 rules are estimated at $45 million.

In comparison, a fully managed solution—in which infrastructure, software and operational processes are managed by a third party—removes the costly upfront build and many of the ongoing internal resource expenses. With an estimated yearly managed services fee of $3.5 million, a Tier 2 bank’s total business-as-usual expenses are reduced from $18 million to $8 million per year—a savings of $70 million over seven years.

**Scenario 2: Managed Trade Reporting Solution for Buy-Side Firm**

Buy-side firms are likely only partially down the path of implementing robust trading capabilities. For Dodd-Frank, they relied on their counterparties to report. For EMIR they are still figuring whether to delegate or self-report. Most have not yet begun to consider what capability they will need in order to assure management and investors that they are compliant.

Depending on volumes, a fully managed solution, which removes costly upfront build and many ongoing internal resource expenses, would cost in the range of $50,000-$2,000,000 per year. Variability of cost to volumes is a significant benefit of managed services as opposed to the fixed one-time and ongoing costs of an owned solution.

* Source: Sapient Global Markets (modeling scenarios used $150,000 avg. annual resource salary and 3 reporting systems)
CONCLUSION
After making considerable investments, firms now face another wave of trade reporting regulations. As a result, market participants are re-examining their current strategies and, in many cases, are questioning whether or not it makes financial sense to continue to adjust internal infrastructures—particularly with the availability of new alternatives, such as outsourced trade reporting services.

For some firms, cost savings will be a key driver. Others will be seeking ways to mitigate risk as regulatory scrutiny intensifies. Either way, outsourcing offers what in-house systems cannot: a more adaptable, cost-effective approach to meeting today’s trade reporting requirements—and those that are bound to emerge in the future.

Resources


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Following the 2007/2008 economic crisis, there was an increased need to improve transparency and restore investor confidence in the European securitization market. In 2009, the structured finance industry, spearheaded by the European Central Bank (ECB), came together to address the problem. Their efforts resulted in a vision to create a European central data repository that would offer visibility and timely access to standardized loan-level data provided by originators to all market participants. In 2010, the ECB took the next step by announcing its intention to establish loan-level data requirements in order to pledge ABS as collateral in the Eurosystem. Today that vision is a reality with the European DataWarehouse—one of the very few industry-owned pieces of infrastructure in Europe and a model for enabling market transparency. In this article, CROSSINGS talks to Markus Schaber, CEO of the European DataWarehouse, to discuss the challenges, successes and future vision for the European DataWarehouse.

Markus Schaber
joined European DataWarehouse GmbH (ED) in January 2013 as Chief Executive. Following the 'loan-level initiative' of the ECB, ED was created in 2012 as a market initiative and utility aimed to increase transparency in the ABS market. ED is owned by a broad range of market participants. Prior to ED, Markus worked in various roles in the European securitization markets since 1995, inter alia as Head of Securitization at the European Investment Fund, Managing Director at Deutsche Bank London with responsibility for Northern and Central European securitization markets and as Director at Fitch Ratings with responsibility for CLO ratings and structured finance ratings in Germany.
**CROSSINGS:** The European DataWarehouse is an example of a successful utility. Why do you think it continues to be so successful?

**Markus Schaber:** The success of the European DataWarehouse (ED) can be attributed to three key principles. The first is centralization. It is the only centralized utility for the asset-backed securities market. When there are competing utilities within a single market, the effectiveness of having all market data in one place is diluted. The second key principle is standardization. With a centralized repository, it’s easier to enforce standardization, which leads to a much higher level of comparability. We provide clear definitions in terms of how the data must be delivered, so everyone is contributing in the same format. This gives us a wealth of information—one massive database that allows us to compare and contrast transactions. The third key principle or success factor is the transparency ED provides, which helps create a level playing field. Without a single standardized repository, some market participants would have better information than others. With ED, everyone has the same access to the same information. I think these three factors—centralization, standardization and transparency—make ED successful today and position us for success in the future as well.

**CROSSINGS:** What has been the response from the European ABS community to ED?

**Markus Schaber:** The research we conducted prior to the creation of ED absolutely validated the need for a central repository, so we knew moving forward was the right direction. But there were differing views in the market. However, since the ECB made the use of ED a requirement and it’s become a market best practice, market participants are recognizing that the type of transparency ED affords is not only beneficial—but also necessary.

**CROSSINGS:** How has governance played a role?

**Markus Schaber:** With a utility, governance is absolutely key. Market participants need to have the comfort that we’re truly working for the markets. At the same time, we have to be commercial. We have a cost plus approach, where our prices are based on our cost, not on certain profit targets. We have an independent pricing committee which reviews our pricing structure and a diversified set of shareholders with no larger shareholder. Our governance model includes the ECB, and is focused on ensuring the overall market participants’ interests are top of mind.

**CROSSINGS:** How is ED relevant globally, particularly in light of Regulation AB II being published in the United States?

**Markus Schaber:** Our mandate is to bring transparency to the highly fragmented European market. So it’s unlikely that we as a company would look to expand into other countries, such as the United States. In our discussions with US institutions, however, it’s clear that having something more centralized makes sense. In fact, the United States already has access to loan-level data in various segments. And while what we did with ED may not be 100 percent transferrable, it could serve as a template or example that other countries can follow.

**CROSSINGS:** How has the adoption process been with ED? Have there been any surprises?

**Markus Schaber:** No surprises—but a few challenges. I think that one of the key challenges is that when you start something like ED, you must first onboard everyone, and that, obviously, involves both administrative and legal aspects. Making sure people had access and registered was relatively straightforward. But, it was slightly more challenging on the legal side. This is due to the fact that there are 28 different jurisdictions in the EU and approximately 200 participating banks, yet we needed to have one contract in order to maintain consistency. But we were able to work through those issues.
Garnering market participation can also be a challenge. That’s why some form of public sector intervention is so crucial—not just monitoring and moderating the process, but also advocating for it. Because of the public sector push that ED received, we now have a very high percentage of market coverage.

**CROSSINGS:** What are the challenges of running a utility and how have you addressed these challenges?

**Markus Schaber:** An ongoing challenge for any utility or market initiative is that with so many different stakeholders—with sometimes conflicting needs and requirements—it’s important to balance the interests of all market participants. I also think one of the bigger challenges for a utility is to make sure that things are moving at a reasonably fast pace. But at the same time, it’s important to make sure that the market understands why you are doing certain things. So communicating changes regularly is necessary.

**CROSSINGS:** How does ED communicate to its participants?

**Markus Schaber:** Outreach is very important to the European DataWarehouse. We focus quite a bit on communication and use multiple channels to reach our constituents, such as face-to-face meetings at industry conferences and through electronic channels such as workshops and webinars. For example, every month, we host a webinar where we explain what we are doing, where we are and where we stand. We also go to the key financial centers in Europe, meet with banks to explain our next steps, how our IT development is currently working and how we are developing new tools. Plus, our data users routinely give us feedback on what they would like to see. It’s especially important given the fact that we are a utility and for most of our users, ultimately a cost center. So, we need to make sure that we are continuously providing a service environment that’s relevant to our users and meets their changing needs.

**CROSSINGS:** What are some of the challenges you’ve faced in managing the data and how have you addressed them?

**Markus Schaber:** Undoubtedly, the biggest challenge is data quality. With so much data coming from so many bank IT systems, we’ve seen both data quality and data completeness issues. Much of the data is pulled from original systems designed for servicing, accounting or other functions. Often there is missing data due to old loans and old files—as well as potential inconsistencies. The transformation of this data into a standard template is an ongoing challenge and obviously, where we spend a lot of time and effort.

In general, the focus on ensuring data quality is increasing in Europe, but it’s not at the level it needs to be. Banks are beginning to realize that their internal data really does matter in more ways than they previously thought. It matters from a regulatory perspective because asset quality review exercises will become more important and more frequent. It matters in the reporting of capital market transactions. And it matters for internal controlling purposes as well.

We address the data quality issue in a number of ways. We filter out the more obvious mistakes using an automated approach. We’ve developed data quality rules that we run in the system, but there is still a lot of manual work involved. We communicate on a day-to-day basis with the banks to make sure they understand what they need to deliver and that we understand what data they can deliver if it doesn’t exactly conform to the standard. A lot of drill down is necessary, and obviously the deeper you dig, the more issues you find. So I think this will keep us busy for quite some time.
**CROSSINGS:** How is technology evolving in the utility space?

**Markus Schaber:** Data users and people in general are starting to have fairly high expectations in terms of data accessibility and usability. As a utility, our basic mandate is that we provide data in order to enable transparency. But the market needs have shifted and participants now expect a certain level of data aggregation, data visualization and the ability to compare the data in a very easy and straightforward way.

A new trend is that people really want to have access to data directly online with browser-based systems. Downloading data is something many actually try to avoid. And people also want to avoid installing software, which requires getting their IT departments involved. Instead, they want easier and much faster access to data in a much more digestible way. Not only do people expect you to deliver the data, but they expect you to do so in various channels. They expect that the data is more or less readily usable and that they can slice and dice it to suit their needs.

Since we are a utility, in principle we could make the argument that it’s not our job to provide such extensive functionality. But since we believe that it is important to provide transparency to the market, we are adopting more technologies to enable us to deliver the data in the way that the users want to see it.

**CROSSINGS:** Do you feel that the ED model could be replicated in other areas of the capital and commodity markets? If so, which ones?

**Markus Schaber:** Undoubtedly there are a number of areas in the financial markets, such as covered bonds or money markets, where a utility model can make sense. Whenever there is a need for more transparency in a particular market segment—and if the market participants believe there is added value in having such utility—then ED can serve as an example and be replicated.

**CROSSINGS:** What is the Capital Markets Union and what is ED’s role?

**Markus Schaber:** The Capital Markets Union is a new political initiative spearheaded by the European Commission with the aim to create a much more Pan-European capital market. As a result of the financial crises, many segments of the European capital markets retracted to national boundaries causing a high degree of fragmentation. At the same time, there is still a high reliance on bank lending to the real economy. So, for companies, access to capital markets products is still fairly difficult. The Capital Markets Union aims to lower the reliance on bank funding and enable a more integrated capital market. In order to achieve that, we need to overcome the fragmentation hurdles. However, actually putting something in practice will not be so straightforward. There are many considerations, including the different data protection laws in the various countries. And I think that’s where we are undoubtedly most relevant, as an example on how to succeed both from a governance perspective as well as from a technical perspective.

**CROSSINGS:** What does the future hold for ED?

**Markus Schaber:** I think the future will be determined by whether the market buys into this strategy of having a Pan-European standardized data repository. So far, we’ve made good progress—and people are open to the idea. We’re also being asked to look at other projects, which is good but also a challenge, because we’re still a relatively small company. I think we will undoubtedly expand horizontally—providing our utility model and governance to others who have similar issues.
As over-the-counter (OTC) trade reporting is being implemented around the globe, concerns about the accuracy of the data being reported are growing among market participants and regulators alike. In fact, both the US Commodity Futures Trading Commission (CFTC) and European Securities and Markets Authority (ESMA) stipulated that institutions must establish processes to identify and monitor disputes for bilateral trades, creating an urgent need for firms to be able to identify and resolve any data discrepancies. In addition, trade repositories (TRs) are expected to perform inter-TR and intra-TR reconciliation and potentially extend this service to participants. In this article, Dheeraj Joshi and Ravi Jain address the need for reconciliation as an industry utility and the advantages for trade repositories and financial institutions.

Portfolio reconciliation is a post-trade process used to ensure that OTC derivative portfolios are synchronized between counterparties. The process is comprised of two steps: matching and reconciliation. For reconciliation to occur, both parties must submit the trade data to a reconciliation platform. The platform will first match the trades, which is a process of finding the same trades from both sides. Once a match is found, the system reconciles the trade by comparing relevant trade terms.

The goals of portfolio reconciliation are to:

- Provide early identification of any discrepancy in both the material and valuation terms of the OTC derivative contract
- Ensure alignment of trade terms and valuation between the counterparties throughout the trade lifecycle by continually performing the reconciliation process
- Facilitate identification and resolution of discrepancies between counterparties with regard to the valuation of collateral held as margin

Industry participants in the global OTC market need to build or utilize existing portfolio reconciliation solutions to meet regulatory requirements, while ensuring that OTC derivative portfolios are, and remain, synchronized between counterparties to help minimize settlement disputes.
RECONCILIATION PROCESS CHALLENGES

Industry participants execute reconciliation processes on their end to verify whether the trades booked by both entities have similar terms. To achieve this, the party to the trade must have access to data from different entities like counterparties, brokers and trade repositories. This not only makes the process inefficient, but creates a number of other challenges as well. These include:

› **Redundancy:** Each party involved in the trade must perform the reconciliation on their end, thus duplicating the effort. Even if one of the parties reconciles, regulators require that both parties be responsible for any break identification and therefore need to validate the results of the reconciliation process.

› **Cost:** Individual parties must develop and maintain an infrastructure and processes for reconciliation. Regulatory updates or other changes will need to be incorporated, possibly requiring changes to the system already in place. Manual matching and reconciliation is an alternative approach, particularly for many small and Tier 2 entities; however, it does not reduce costs and has a high margin of error.

› **Turnaround time:** The process involves manual sourcing of the data. Since the systems from both sides are not seamlessly integrated, it takes longer to get the reconciliation reports, which may impact the firm’s ability to meet regulatory timelines. A subsequent lag in identifying disputes may adversely impact regulatory reviews. In addition, stale results created by a delay in the reconciliation process reduces their usefulness for any party, rendering the exercise futile.

› **Lack of standardization:** Both parties are able to book a trade in their own formats, which are likely to be different from one another. Each entity could use an entirely different date format from another entity, and seemingly distinct trade field names can have a similar meaning. For example, the maturity date in some asset classes may be denoted as an expiry date or exercise date. Deploying measures to streamline data across multiple counterparties (thousands, in the case of Tier 1 banks) requires considerable initial set-up as well as continuous update efforts.

RECONCILIATION AS A REGULATORY REQUIREMENT

Firms need an accurate and dynamic understanding of their portfolio exposures, without which they cannot efficiently monitor risk or manage collateral. Portfolio reconciliation is the process that helps firms identify differences in pricing methodologies and data standards—and, ultimately, to align exposures. It also helps firms verify transaction trade details before there are payment or calculation methodology disagreements, which helps to eliminate time-consuming and costly dispute resolution later on. Disputes impact not only profitability, but also the reputation and business of the firms involved.

CFTC and ESMA have specified requirements for portfolio reconciliation as outlined in Figures 1 and 2. Other regulators across jurisdictions are expected to follow suit.
CFTC requirements
The CFTC rules require swap dealers (SD), major swap participants (MSP) and other entities to engage in portfolio reconciliation with respect to swap transactions, other than those that are cleared by a Derivatives Clearing Organization (DCO). The counterparties are required to agree, in writing, to the terms of the reconciliation. The final rules do not prescribe any specific procedures that must be followed to resolve a discrepancy in valuation. Figure 1 provides a snapshot of the portfolio reconciliation rules.

ESMA requirements
EMIR specifies that all European entities, classified as a Financial Counterparty (FC) or Non-Financial Counterparty (NFC), must participate in portfolio reconciliation. The frequency of portfolio reconciliation depends on the status of the counterparty (FC, NFC+ or NFC-) and on the number of outstanding contracts the counterparties have with each other. The trades that are covered in the rules are all collateralized or uncollateralized swaps which are not cleared by a third party.

<table>
<thead>
<tr>
<th>Reconciliation Frequency</th>
<th>Resolution of Material Terms Discrepancies</th>
<th>Resolution of Valuation Dispute</th>
<th>Reporting of Valuation Dispute to CFTC</th>
<th>Record Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SDs and MSPs</strong></td>
<td>Daily for ≥ 500 trades, weekly 51-499 trades, quarterly 1-50 trades</td>
<td>Immediately</td>
<td>Resolved no later than 5 business days</td>
<td>Lasting more than 3 business days, or greater than USD 20M</td>
</tr>
<tr>
<td><strong>Other swap entities</strong></td>
<td>Quarterly for ≥ 101 trades, annually for 1-100 trades</td>
<td>Promptly</td>
<td>Promptly</td>
<td>Lasting more than 5 business days, or greater than USD 20M</td>
</tr>
</tbody>
</table>

*Figure 1. CFTC Portfolio Reconciliation Rules*

<table>
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<th>Reconciliation Frequency</th>
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<th>Record Retention</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FCs and NFC+s</strong></td>
<td>Daily for ≥ 500 trades, weekly 51-499 trades, quarterly 1-50 trades</td>
<td>Immediately</td>
<td>Resolved no later than 5 business days</td>
<td>Lasting more than 15 business days, or greater than 15M Euros</td>
</tr>
<tr>
<td><strong>Other swap entities</strong></td>
<td>Quarterly for ≥ 101 trades, annually for 1-100 trades</td>
<td>Promptly</td>
<td>Promptly</td>
<td>Lasting more than 15 business days, or greater than 15M Euros</td>
</tr>
</tbody>
</table>

*Figure 2. EMIR Portfolio Reconciliation Rules*
IS A MARKET UTILITY THE ANSWER?

With new regulatory requirements in Europe and the United States making portfolio reconciliation mandatory, more entities are looking for cost-efficient and effective ways to comply with the new rules. They must also agree upon portfolio reconciliation processes and dispute resolution procedures with their counterparties for any portfolio of uncleared swaps. While this can be negotiated, agreed upon and implemented bilaterally, a market utility may provide a simple yet effective solution for firms to reconcile their outstanding positions.

For reconciliation to happen, trade data will be required from both parties of the trade. A market utility will be helpful in terms of data management for everyone involved—including the actual parties to the trade, the brokers facilitating the trades and the trade repositories. A market utility would allow different entities to use a common platform to share the trade extracts, thus reducing the turnaround time for the reconciliation.

This can be further illustrated with an example in which all parties are sending their trades to the utility (limited fields are shown in Table 1). The utility will try to match the trades based on the unique identifier (if present) or a set of other fields (selected by the users) if the unique identifier is missing. The matched trades are highlighted in the same color. The trades for which no match is found are marked as orphans.
HOW WOULD A PORTFOLIO RECONCILIATION UTILITY WORK?
This utility can be seen as a hub wherein participants can connect and send their trade data. As shown in Figure 4, there are three key elements of the process: matching, reconciliation and break report generation.

Matching
Once parties submit trades to the utility, it checks the trade details and finds a match from the submissions made by other parties. This matching process can be done in two ways:

› **Unique identifier:** An exact match can be found if there is an identifier in a trade which is unique. The system would try to match both sides of the trade on the basis of this identifier, which could either be a unique swap identifier (USI) or a unique trade identifier (UTI).

› **Matching key:** If one or both sides are missing the unique identifier, the system would be provided with a set of fields allowing it to uniquely identify a trade. The utility would allow trade matching based on user-configurable parameters.

Reconciliation
Once the utility finds the matching trades, it compares all trade fields from both sides. Fields from one side of the trade would be matched with the appropriate field from the other side of the trade.

Break report generation
After the trades are reconciled, the utility generates the break report. This report would be available only to the parties involved in the trade and would highlight any differences between the trades, allowing users to take necessary actions to correct them and thus reach a common understanding regarding the trade economics with the counterparty.

**Figure 4. Trade Reconciliation Utility Workflow**

BENEFITS OF A PORTFOLIO RECONCILIATION UTILITY
A portfolio reconciliation utility meets a growing need in today’s OTC market. In addition to helping participants achieve compliance with CFTC and ESMA mandates, it creates efficiencies by enabling firms to leverage an already established infrastructure and reporting mechanism rather than creating and managing their own, thus reducing costs and redundancy.

A utility would also enable reconciliation for multiple products and counterparties, offering automated dispute management workflow. This would help to speed the identification and remediation of issues, thus drastically reducing turnaround time.
Just as important, a utility could manage one of the most tedious aspects of portfolio reconciliation: UTI/USI matching, or confirming that the same trades are being reported with the same identifier, so that the position is not duplicated. This would also help the entities map the UTI/USI of the trades which their counterparty reported.

With an industry utility, data set-up for on-boarded market participants would need to be done only once, eliminating the need to address the data standardization issue for reconciliation against a counterparty.

A utility would also be routinely enhanced to align with new or revised regulatory guidelines. This gives firms an advantage with almost “automatic” adherence to future regulations, without having to spend money and effort to adjust their internal process and infrastructure. The firm would continue to send its data to the utility, which would decide what fields need to be reconciled for which regulation and where the reports should go.

The utility will also be capable of generating break reports, and providing regulators with a consolidated report for all market participants. The regulators would then be able to analyze the break trends for a particular entity and take preventive actions to prevent any potential risks.

CONCLUSION

Not only is portfolio reconciliation a requirement by the CFTC and ESMA; it could become a mandate by other regulatory bodies in the future. Until the time when OTC derivatives are being traded and reported, reconciliation will always play an important role for all trade parties, trade repositories, brokers and regulators. In today’s competitive environment where operational efficiencies are critical for overall business performance, a utility model could offer much-needed speed, flexibility, accuracy and cost management—not to mention compliance assurance.
As the CCP market continues to expand, with clearing houses offering an increasing number of clearable securities and netting efficiencies, there is an increased focus on the fate of over-the-counter (OTC) derivatives that are as yet unclearable. These bilateral trades will be subject to the BCBS-IOSCO Initial Margin (IM) requirements, scheduled to phase-in from September 2016. This will result in higher IM costs, primarily as a result of the increased Margin Period of Risk (MPOR). The baseline MPOR for a netting set (i.e., a portfolio with a counterparty under a legal netting agreement) is 10 days, but under certain conditions the MPOR can be doubled, or even quadrupled. However, it appears that a number of circumstances that can bring about MPOR increases are self-fulfilled by the BCBS-IOSCO and the regional regulators themselves, particularly with respect to collateral disputes and illiquid trades. In this article, Ben Larah discusses BCBS-IOSCO, the impact of the rules concerning MPOR and the strategies that banks can take to address it.

INTRODUCTION

Prior to 2008/2009, a relatively minimal margin had to be set aside for bilateral OTC derivatives portfolios. Although the transfer of Variation Margin (VM) from the counterparty to the dealer was commonplace, IM (also known as independent amount) was typically set as a small percentage of the absolute portfolio notional, with the percentage amount varying according to counterparty credit quality. Therefore, the independent amount was usually low.

As a result of the 2008 financial crisis, the situation has changed. In an effort to reduce systemic risk, regulators are incentivizing the central clearing of derivatives. Two methods by which they are doing this have attracted significant attention. Firstly, regulators have mandated the central clearing of vanilla swaps in some jurisdictions, most notably the United States. Secondly, BCBS-IOSCO has introduced stricter IM requirements, set to phase-in commencing September 2016 (moved back from December 2015), on bilateral derivatives portfolios. According to the BCBS-IOSCO guidelines, the IM for bilateral derivatives portfolios will be calculated using a Value at Risk (VaR) method with 99% confidence, using 5 years’ worth of historical scenarios (including a period of “financial stress”), with a minimum 10-day MPOR. The 10-day MPOR serves as a baseline (or “supervisory floor”) for small, liquid portfolios where counterparties do not frequently dispute collateral (or resolve disputes in a timely manner). However, there are several conditions under which the 10-day supervisory floor can be raised.
RAISING OF THE MPOR

According to a 2010 BCBS consultative paper, which was followed up with an FAQ paper in 2012, the three conditions under which the 10-day supervisory floor MPOR for uncleared derivatives can be raised are as follows:

1. If the netting sets contain “illiquid” collateral, or OTC derivatives “that cannot be easily replaced.” In such cases, the MPOR is increased to 20 days for the netting set.

2. If the netting set exceeds 5,000 individual trade positions during a quarter. In such cases, the MPOR floor for the following quarter will be increased to 20 days.

3. If a bank has experienced two or more collateral disputes on a netting set over the past quarter. If such disputes have gone unresolved for a number of days longer than the MPOR currently in place, then the MPOR supervisory floor is doubled from its current value over the next six months.

Note that the third condition could mean a doubling-of-a-doubling. For example, if the netting set contains illiquid OTC positions, and two collateral disputes exceeding 20 days occur over three months, then the MPOR will be doubled again to 40 days for the next six months, as long as the netting set still contains the illiquid positions. [See Figure 1] As the MPOR is supposed to reflect the time it takes to close out a portfolio of trades, many market participants feel that a 40-day MPOR is rather excessive, given the close out periods that have been observed in the market thus far.

The additional IM that results from the increased MPORs depends on both the composition of the bilateral portfolio and the details of the IM calculation method applied. However, as an approximation, the IM calculated under a 20-day MPOR is roughly 1.4 times higher than the IM calculated under a 10-day MPOR, and the IM calculated under a 40-day MPOR is around twice the amount calculated under a 10-day MPOR.

While the rationale for the regulators taking such a conservative approach should be appreciated, conditions one and three may have the potential to be exacerbated by the regulatory framework created by BCBS-IOSCO and regional regulators, unless additional steps are taken to standardize market practices.

Figure 1. MPOR Increase Conditions
COLLATERAL DISPUTES

The concern over collateral disputes (condition 3) lies in the BCBS-IOSCO guidelines for the calculation of IM. Although the BCBS-IOSCO 2013 consultative paper provides details on some aspects of the 2016 IM, it leaves several key details open to interpretation. VaR is a complex method of calculating risk that exhibits many degrees of freedom. There are many VaR parameters for which the BCBS-IOSCO paper provides little guidance. Such parameters include (and are not limited to):

- The calculation method for the VaR scenarios
- The historical data-sets to use, and the determination of, the “financial stress” period
- The risk factors to be stressed

If there is no universal agreement on such parameters, then banks may develop non-uniform VaR calculation engines whose outputs disagree when run on the same trade positions. This has the potential to result in significant collateral disputes, which will raise the MPOR supervisory floor for uncleared derivatives.

The BCBS-IOSCO paper itself acknowledges this dispute possibility over IM calculations. Paragraph 3.12 of the September 2013 paper states:

“The specific method and parameters that will be used by each party to calculate initial margin should be agreed and recorded at the onset of the transaction to reduce potential disputes. Moreover, parties may agree to use a single model for the purposes of such margin model calculations subject to bilateral agreement and appropriate regulatory approval. In the event that a margin dispute arises, both parties should make all necessary and appropriate efforts, including timely initiation of dispute resolution protocols, to resolve the dispute and exchange the required amount of initial margin in a timely fashion.”

Though this paragraph mandates transparency of the IM model and inputs between two counterparties, it stops short of mandating a common IM model across the industry. The prevalence of regulator-approved internal IM models that lack commonality may have the unintended effect of intensifying collateral disputes between counterparties. For example, if Bank A and Bank B have each developed a regulator-approved, internal IM calculation model, any resulting difference in the calculated IM will be strongly disputed—given that neither Bank A nor Bank B have issues with their models from a regulatory standpoint.

In addition, a “single model” approach (suggested by BCBS-IOSCO) between two counterparties, in the absence of a common industry standard, may result in an increased burden on operations, technology and model governance unless the single model is shared by all market participants. For example; if Bank A and Bank B have a single IM model between them, and Bank B and Bank C have a different single IM model between them, then Bank B will have to document, maintain and govern two separate sets of bilateral IM calculation models.

These issues could be mitigated by an initiative to homogenize the IM calculation models according to a universally agreed standard. ISDA proposed such an initiative—called the Standard Initial Margin Model (SIMM)—in December 2013.³ Highlights of the ISDA SIMM paper are as follows:

- It recommends that regulators within a jurisdiction agree upon a common set of historical scenarios that include a period of “financial stress”

To avoid procyclicality, the paper recommends that the set of historical scenarios used within an IM calculation should not change from one day to the next. Local regulators should perform an annual review of the scenarios to decide whether changes are necessary.
The paper recommends that regulators agree on the set of risk factors that should be stressed within the IM model.

The paper recommends that a common “portfolio Greeks” implementation method should be used to calculate IM, rather than a “full revaluation” method, with the risk-point deltas calculated by the model made transparent to allow any potential dispute resolutions to be minimized as much as possible.

If the proposals of the ISDA SIMM are backed and enforced by the industry, then the likelihood of the MPOR being doubled due to collateral disputes will be decreased significantly.

**ILLIQUID DERIVATIVES**

The concern over the provision for OTC derivatives that are “not easily replaced” (condition 1) is that this may eventually cover most OTC derivatives that remain bilateral, given the momentum of clearing mandates going into effect.

At the time the BCBS-IOSCO paper was published, the size of the bilateral vanilla IR swaps market was trillions of dollars of outstanding notional, and the CFTC had not yet announced its plans to mandate the central clearing of vanilla swaps. As clearing mandates are extended to include additional OTC derivatives, the most eligible targets for the mandates will be those products that are liquid enough to be cleared. If this trend continues, then the OTC derivatives that will remain uncleared will be those that are inherently difficult to clear, primarily due to a lack of standardization (which regulators often associate with a lack of liquidity). Therefore non-standard derivatives, which previously accounted for a minority of the bilateral portfolios, will eventually account for a majority of bilateral portfolios.

It is therefore likely that, in the longer term, any newly-traded derivatives in a bilateral portfolio will inherently be subjected to a 20-day MPOR. As a result of these increased costs, market participants are likely to switch their investment and hedging strategies away from these products, which will further reduce liquidity and reinforce the higher MPOR.

To mitigate the illiquid trade-related MPOR doubling, banks can transfer the offending trade positions into separate netting set, so long as they are able to identify what these trades are, and as long as local regulations permit them to do so. This is advantageous because the BCBS-IOSCO guidelines state that if a single position within a netting set is illiquid, then all trades within that netting set, regardless of liquidity, are subject to a 20-day MPOR. Therefore by separating out the illiquid trades, banks are able to reduce their IM overheads.

**CHOICES FOR MARKET PARTICIPANTS**

Faced with the likelihood of increased MPORs for bilateral derivatives portfolios, banks have several additional strategies at their disposal, in addition to those mentioned previously.

To mitigate the collateral dispute-related MPOR doubling, banks may simply choose not to dispute collateral calls. If a bank is capable of modeling the projected IM costs for their portfolio over the next six months with a doubled MPOR (with appropriate assumptions the future composition of their portfolio), then they can compare the amount of collateral under dispute with the projected increase in IM demands due to the doubled MPOR, and use this information to determine whether or not to engage in a collateral dispute.

Banks can also look to reduce their total number of outstanding trade positions in order to avoid the MPOR increase triggered by having more than 5,000 outstanding positions within a netting set. Banks can engage in portfolio compression by using vendor services, such as TriOptima, to tear up derivatives positions that offset one another.
CONCLUSION
The main complaint that market participants have with the doubling (and potential quadrupling) of the 10-day MPOR is that it results in an onerous increase in margin, which may introduce collateral scarcity and threaten the liquidity of unclearable derivatives. However, market participants face additional challenges with the implementation of the MPOR-increase rules, such as ensuring that their systems are capable of applying the rules in an automated manner. Some rules should be relatively simple to implement (e.g., the 5,000-plus-position rule), but others will be more challenging (e.g., identifying illiquid collateral and hard-to-replace derivatives).

Another significant concern is the potential for changes in market infrastructure to have an economic impact on the MPOR. In October-November 2014, 18 Global Systemically Important Banks (G-SIBs) voluntarily agreed to waive their rights to close out swaps positions with counterparties that run into financial difficulty. This measure, known as a “stay on early termination rights,” came into effect in January 2015. It is intended to give regulators time to step in and transfer the positions to non-distressed financial counterparties. The G-SIBs must wait for up to 48 hours before they can terminate their positions with insolvent counterparties. In theory, the limitations on early termination rights should result in an MPOR increase, as dealers must wait an extra two days before they can close out their positions with distressed counterparties. However, the proposed rules do not account for this set of circumstances.

As the final versions of the bilateral IM rules in regional jurisdictions have not yet been published, there is a chance that some of the aforementioned concerns regarding MPOR rules will be addressed before they are finalized. BCBS-IOSCO has already shown its willingness to respond to the concerns of market participants by pushing back the phase-in of the IM requirements from December 2015 to September 2016, and they may be similarly flexible in addressing issues concerning MPOR.

Figure 2. MPOR Amounts for IM Calculations. The Red-Line Shows Approximately how the Calculated IM for a Given Portfolio Changes as the MPOR Changes, Assuming a Base-case IM of $10m under a 1-Day MPOR.
Resources
3. ISDA, Standard Initial Margin Model for Non-Cleared Derivatives, December 2013
5. Approximations are as follows: (1) Portfolio contains instrument(s) whose payoffs are linear with respect to the risk factors that are shifted within the VaR model (2) Risk factors within the VaR scenarios are distributed lognormally (3) VaR varies parametrically with the square root of time

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Digital has transformed how prospective investors discover and evaluate products and services. A well-designed website that articulates the brand and makes it easy to find product information is at the core—and it is no longer simply “a nice to have.” In the article below, Mash Patel and Jeff Hendren from Kurtosys, a Sapient Global Markets strategic partner, outline five key considerations for investment manager web sites.

In January 2013, Cerulli looked at marketing and branding in fund management. Their research cited strong client service, a recognizable brand and an effectual website as the three most important factors potential investors use when choosing an asset manager. More than two years later, expectations are still rising.

Today, more investors demand transparency in their dealings with companies and want access to information 24/7. PricewaterhouseCoopers believes that by 2020, technology will become critical to “drive customer engagement, data mining for information on clients and potential clients, operational efficiency and regulatory and tax reporting.” Websites must perform a number of functions: sharing information, building trust and engaging with potential investors. However, building a website that fulfills the different criteria and the priorities of marketers, designers, investment teams and users can be difficult. Forrester conducted research to assess what customers do when they can’t complete a goal online, which highlights the importance of the user experience (UX). The results of the study showed that most people will go from a website to another information channel, usually the telephone; a large proportion of people leave the site and go to a competitor’s website; while many give up on the online goal altogether.

THE CHALLENGE
The challenge then, is to build a website that combines advanced data functionality with an optimal UX — a design that makes complex content easy to navigate. It must also be secure, scalable and easy to manage. This list of requirements demands a versatile platform and a team that understands finance.

Few fund websites actually succeed in being truly useful to their target users: investors and intermediaries. Making complex fund data both attractive and user-friendly can create big challenges. Developers may be skilled at coding and understanding the underlying fund data, but may miss the finer points of UX design. And traditional design agencies may not have the experience or requisite skills to understand the intricacies of data-driven content.

The first step in this journey is understanding the five key qualities of modern fund websites.
THE FIVE ESSENTIAL COMPONENTS OF AN ASSET MANAGEMENT WEBSITE

1. Beautiful Data
In serving asset management clients, Kurtosys has found that 70% of web traffic on financial sites goes to fund pricing, performance and charting tools, so presenting the right data in the right way must be a priority. Investors want to see accurate data in real-time so that they can make decisions based on actualities.

Presenting data in a way that is automatically updated, visually attractive and easy for potential investors to analyze requires a flexible platform with a straightforward content management system (CMS). Firms must understand if their CMS is suited for all the data and documents they need to share with their audience, and if their data can be periodically refreshed via automated processes.

Automatic updates
Giving advisors and investors 24/7 access to fund data isn’t easy. To display fund ratings, performance charting or fund comparison tools, the data needs to be up-to-date, accurate and automatically refreshed. Perhaps more importantly, the user interface has to be fast, flexible and super easy to use.

Compliance
Furthermore, pairing content management with a unified data model allows firms to tag and organize all content and data feeds (including industry benchmarks) using custom or standard categories such as investor type, language and country of registration. For example, certain documents or funds may only be relevant to particular organizations (advisors or wholesalers rather than end investors). To comply with financial regulations, some areas of a firm’s website may only host specific types of documents. An organized set of meta data helps it manage and streamline all of this content and ensure that it’s visible to the right users.

Figure 1. Key Qualities of a Modern Fund Website

A Modern Fund Website Should Be:

1. Dynamic & data rich
2. Secure
3. Easy to manage & optimized for search
4. Scalable & integrated
5. Quick to set up
Data Design
Every communication a client receives from a fund manager is designed to convey complex information in the best possible way. Visuals—graphs, graphics and infographics—can be used to tell stories and make detailed information far easier to process than just words. The Web Marketing Group found that 40% of people respond better to visual information than text alone and also report that 90% of the information our brains take in every second is visual. Therefore, data visualization makes data more accessible and websites more engaging. A few data visualization tips include:

› Present data as simply and as beautifully as possible—design is key

› Graphs and other web graphics should be high resolution, but fast loading. A vector graphics API can help render quality SVG charts on screen or when printed

› Custom web fonts can be used by inserting a short piece of CSS in the stylesheet—designers no longer have to use only “web safe” fonts

Responsive
Internet usage on mobile devices started to exceed that on PCs in the beginning of 2014 and is expected to continue growing. Therefore, it is essential that firms’ websites display correctly on all mobile devices and tablets to increase traffic, lower bounce rates and satisfy users—including potential investors. Web pages should be based on a responsive-first design strategy for all devices and screen sizes.

2. Security
The second key requirement for asset management firms to consider is security. As a financial institution, online security is key but if it acts only as a secure portal for wealth management, a website won’t build relationships and convert site visitors into clients. Because every site needs a variety of visible pages that aren’t guarded by a login wall, the site’s overall security has to work in concert with engaging data-rich content.

Figure 2. Sites Should have Multi-Point Security
A 2013 study showed that more than half of the biggest banks in the world have been hacked and a quick search on Google shows how often banks and other financial organizations are targeted. For example, in October 2013, Chase Bank was hacked and information from 83 million accounts was stolen.

As hackers devise ever more sophisticated ways of attacking websites and are determined to cause massive disruption to businesses and reputations, security measures have to mitigate the threat of hacking without knowing exactly what the next threat will be.

Design partners or vendors must be able to demonstrate their commitment to security too by providing:

- **Backup & DR:** Advanced backup and disaster recovery, which is essential with cloud-based hosting technology
- **Certification:** A documented information security management system and ISO 27001 certification
- **Protection:** Ability to minimize threats from hackers, viruses and internal mishaps through a systematic, managed framework

It’s also important that all plugins are certified and their security is verified otherwise they can compromise a firm’s site’s security, change its appearance or bring the whole site down.

### 3. Ease of Use

Without a doubt, a website’s user experience is the top priority but content must be easy for admins to upload and manage as well. Even a small firm will have multiple team members managing web content, so a multi-author workflow should be possible, along with approval controls, and an eye toward compliance-required footnotes or disclaimers. CMS solutions provide a straightforward system for uploading and editing content, as well as more sophisticated features.

Keep in mind that fund managers and marketers are not all HTML wizards, so in-page editing needs to be simple for regularly updating text, adding pages, uploading images and documents (such as fund fact sheets), and inserting charts, tables and graphs. Admins also need to be able to tag and surface all the documents for different regions and investor types.

### An effective website is a conversion machine

Marketers need to be able to measure goals and returns on their investment. Tracking packages, such as Google Analytics or Omniture, make it easy to understand the user journey on a site. Using calls to action (CTA) strategically on each page can lead people around the site and encourage them to take specific actions towards converting them.

Basic reporting on conversion goals will show what site visitors are doing. A fund manager will want to easily aggregate and contextualize visitor data by product or investment vehicle, domicile, benchmark or any other relevant factor. This kind of data can drive better decisions on where to point the user next, showing visitors the information they need most.

### Make the site discoverable

Optimizing the site’s titles and descriptions for Google is a must in order to be found by prospective investors and advisors. Doing so allows admins to analyze content and bring in more targeted prospects through organic search.

### Differentiate between fund types

Understanding and differentiating between hedge funds, private equity, venture capital, exchange-traded funds (ETFs) and mutual fund providers online is important for investment teams. For a site to be fully scalable, each fund type should be treated differently, with sector-specific terms and tagged information in the page templates. Understanding and allowing for these differences can save countless hours of work.

Increasingly, asset management firms (and many other sectors outside the financial services arena) are moving to open source CMSs because they are so versatile and customizable. Proprietary software is losing traction but it’s important to mitigate all of the cons of open source software.
4. Integration and Scalability
Websites are no longer stand-alone tools. To be effective, they must be integrated with a range of external software, which can drive more traffic to a site, convert visitors and link it to other marketing platforms. Sites also need to be scalable and responsive to changes within the firm, the funds under management and within the wider context of the financial sector.

PwC predicts that global investable assets will increase from around $64 trillion to $102 trillion by 2020—that’s a compound annual growth rate of 6%9.

Three key factors have been identified as drivers of this increase:

1. The government-incentivized shift to individual retirement plans
2. The increase of high-net-worth-individuals (HNWIs) from emerging populations
3. The growth of sovereign wealth funds (SWFs)

Even if funds simply retain their market share over time, investment managers need to think about future-proofing their sites, considering how (and whether) their sites can be extended and the lifespan of their sites.

In the same report, PwC expects assets under management in the South America, Asia, Africa and the Middle East (SAAAME) economies to grow faster than those in the developed world, which brings with it the need to consider a broader visitor base. Sites increasingly require in-built, multi-lingual pages with auto-locale detection.

Integration
Asset management websites cannot exist alone. They need to be integrated with external software, such as:

› **Cloud services**: Cloud-based content distribution networks (CDN), such as Akamai, provide fast performance and a flexible cache

› **Customer relationship management (CRM) systems**: Managing the firm’s interactions with current and future customers requires an interoperable CRM system, such as Salesforce, that preferably uses a single sign-on

› **Marketing automation platforms**: For capturing leads, then nurturing and scoring them, firms should align their site with marketing automation software, such as Eloqua, HubSpot, Marketo or Pardot

› **Social media**: Help site visitors easily share website content via social media platforms through plugins and widgets

› **Site analytics**: Firms can measure success by adding Google Analytics or Omniture to monitor and analyze web traffic

› **Microsites**: Firms can run separate marketing campaigns by building and linking microsites through the main company site

5. Speed of Delivery
The final key ingredient to building a website that meets asset management firms’ requirements is the speed of delivery. The average website (20 to 30 pages) takes between two and three months to build—from kick-off to sign off. Complex sites can take much longer than that (some as much as 14 months), which can not only mean a huge time investment from everyone involved with the project, but also create delays in digital marketing campaigns and overall strategy.
CONCLUSION
When it comes to fund management, the need for an effective website has never been greater. But “effective” doesn’t just mean a nice design. Firms that want to drive real results with their websites—and improve the way they service clients—need to create a site with the five key aspects of modern fund websites in mind.

Resources
5. Known as the ‘@font-face’ rule, it is recognized on IE, Safari, Chrome, Opera and Firefox browsers
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Large-scale uncertainty, regulation and shifts in the competitive landscape are placing enormous pressure on energy firms’ existing operating models. In this article, Rashed Haq discusses an approach for “information industrialization” to help energy companies more effectively compete and thrive: harnessing modern information technology and adopting lean operating principles to create integrated, inter-company workflows across the energy value chain.

The energy markets have experienced large-scale uncertainty over the last five years, driven by the dichotomy of a dramatic increase in supply from shale and renewables, and declining demand. Unprecedented midstream investments have created infrastructure changes, and the competitive landscape is shifting for traditional and non-traditional players caused by supply changes, regulation and new opportunities. The arrival of nimble competitors is eroding the revenues of established players, while stronger marketing and trading arms from midstream or downstream players are also altering the competitive backdrop.

Technological advancements, such as the adoption of consumer technologies in the corporate world, are driving the commoditization of big data, analytics and infrastructures in the cloud. At the same time, mobile apps are creating higher user expectations for enterprise applications to be more accessible, intuitive and responsive.

With an existing model that no longer operates efficiently, energy companies must transform the way they operate their businesses to deal with these unprecedented changes. A key problem is the high cost and inefficiencies each company must endure when building its own platform of processes and systems for functions that do not create a competitive advantage. Similar to the banking industry, energy companies need to undergo a transformation of their own by leveraging shared platforms, or business utilities, across companies that improves both inter-company communications and efficiency in order to thrive over the long term.

This transformation, referred to as “information industrialization,” is the use of technology innovation to fundamentally improve efficiencies across an entire industry. It replaces manual processes and paper trails with the sharing of information and resources in a digital environment to drive efficient division of labor and growth for all participating organizations. This is not unlike the automobile industry’s transformation in the 1950s when parts manufacturers were organized as separate companies to serve multiple carmakers.
HARNESSING TECHNOLOGY FOR BUSINESS FLOW INTEGRATION

Business utilities are at the core of the information industrialization movement in numerous industries. These utilities are designed to carry out business functions for multiple companies, because there is no strategic advantage for each company to do these business functions themselves.

One example is payroll in the United States: a significant percentage of payroll is processed through a few providers, such as ADP, because their services are much more cost effective than if each company were to set up its own payroll processing function in-house. What’s more, the quality of the service and the additional features that ADP offers are more advanced and extensive than companies would be able to justify developing internally. This is largely due to the fact that ADP can leverage economies of scale by serving multiple companies.

For energy companies, business utilities can provide operational and transaction management services in which certain functions and associated infrastructure are moved outside of the company and into the utility to handle. The simplest case for leveraging business utilities is one in which communication between two companies is required. The different types of communication are:

› Vertical communication: between customers and suppliers, e.g., nominations sent from shippers to pipeline operators

› Horizontal communication: between peers, e.g., netted trade confirmations

› Star-like communication: with pooled interdependency rather than linear dependency, e.g., Brent, Forties, Oseberg and Ekofisk (BFOE) trading window in the North Sea

Many companies are already using outsourcing and software-as-a-service (SaaS) models. Outsourcing is an allocation of specific business processes of a company to a specialist external service provider, eliminating the need for companies to allocate staff to perform some or all aspects of the function internally. SaaS is a software distribution model in which applications are hosted by a vendor or service provider and made available to a company’s employees over a network, typically the web.

But business utilities go well beyond outsourcing and SaaS models by providing a resource-sharing information system and all associated processes. They link multiple firms that may be peers, or customers and suppliers, to carry out a common function by facilitating the efficient exchange of information. Participating organizations share the cost of expensive assets such as IT systems and leverage the economies of scale by consolidating the process execution. Business utilities perform transaction processing and reporting, for example, by providing only the necessary data from companies’ internal systems through automation—particularly information that needs to be exchanged, such as nominations, confirmations or invoices.

BUSINESS UTILITIES FOR THE ENERGY INDUSTRY

Business utilities for the energy industry can connect information among producers, traders and asset operators. The business utility platform depicted in Figure 1 connects shippers and operators to exchange data across the energy logistics value chain. In this example, a trading organization connects to the business utility to send trade confirmations (to be sent to counterparties), and once scheduling is done, it forwards all nominations for all modes of transport. These will be sent to the respective operators, such as pipeline, terminal and rail companies or marine vessel companies. Their confirmations come back through the utility.

Similarly, any associated inspection or agent nominations are sent to and received via the utility. Finally, invoices from each service provider are passed through the business utility back to the trading organization. This connects multiple companies across the value chain through a single network to efficiently exchange the information necessary to perform multiple business functions. In essence, the utility operates as a data exchange that receives information and disperses it to where it is needed, when it is needed.
Some of the advantages of leveraging business utilities, as described above, are enhanced operational processes and increased user efficiency, and hence, more timely availability of information. Because the utility is a shared resource, there is higher overall efficiency due to economies of scale and elimination of duplicate systems. This also gives each business the potential flexibility to increase or decrease costs based on business volume (rather than headcount, IT system investments, etc.). Over time, improved efficiency and access to timely information can lead to further benefits, such as improved supply chain with reduced holding inventory.

At the same time, business utilities can present a number of challenges. Primary among these is the complexity of change management, which requires an understanding of inter-company processes and technologies as well as the ability and willingness to make necessary changes in the B2B workflow. This happens when there is more than one autonomous decision-maker and any change decision requires collaboration between the business utility and its customers.

**TAKING THE NEXT STEP**

The energy industry is primed for business utilities. Industry-wide utilities are already emerging and will accelerate over the next decade to provide specialized services to help energy firms make the transformation. Business relationships across producers, traders, consumers and asset operators already exist, but with much of the information exchange happening point-to-point and often manually.
Similarly, the necessary technologies such as reliable bandwidth, cloud-based infrastructures and data security already exist. The next step is the transition of traditional relationships into digital interactions, without requiring every company to build its own infrastructure and processes—particularly when it doesn’t offer a competitive differentiator.

The information industrialization of energy firms is a multi-dimensional effort that must start at the executive level and flow throughout the firm, encompassing relevant departments and functions. Each company needs to validate that the benefits of business utilities outweigh the costs. Open discussion of the perceived versus actual benefits and costs is needed to address misconceptions about the strategic value of the business utility. Additionally, successful implementation of a business utility will require agreement by all companies on standards, business practices and processes around what information needs to be shared, and the invested equipment and human resources.

At the organizational level, support from senior management is essential for cross-organizational readiness, since adoption will require a fundamental cultural shift. Energy companies embracing information industrialization may need to establish a key role within the company to help drive and maintain transformation: a senior executive whose main focus is to implement the vision of an industrialized organization. This Chief Industrialization Officer (CnO) would have C-suite sponsorship, strong operational experience and the business acumen to effectively work across the lines of business, operations and technology functions while breaking through organizational silos with ease.

Leveraging modern technologies to digitize business relationships through information industrialization makes sense for energy companies because the benefits outweigh the costs. In an era of unprecedented change, the time is right for firms to work together to develop and capitalize on the benefits of business utilities, which will help improve their own returns and make them more agile.

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The traditional method of transporting crude is via pipe, but crude by rail has boomed over the past several years and more firms continue to join the crude by rail shippers list. In this article, Carolyn Barless and Karen Lukacs discuss the impacts of increased production, crude by rail volumes, and upcoming tank car safety regulations on traditional fleet management. All are leading to increased costs, tank car supply shortages, and more complex utilization decisions. As energy firms face tighter profitability, they will need to take a deeper look at more in-depth analysis and reporting tools for the management and growth of their business.

In 2014, oil production across North America hit all-time highs. The United States became the number one producer of oil in the world and within the first week of 2015, the United States reported production of 9.19 million barrels (bbl) per day. Canada currently produces slightly less than 4 million bbl per day with an expected increase of 3.5% for 2015.1

With limited pipeline capacity, additional production from the oil sands and the Bakken Shale, and the delays of new and expanding pipeline projects, companies were forced to look for alternative ways to move their product to market.

Shipping crude by rail became a viable option and necessity for many companies. Capital investments were made into loading and unloading facilities, which allow crude oil producers to utilize the existing rail network to reach desired markets.

During the latter half of 2014, energy prices fell across the board with crude as the worst performer. Today, the outlook of the energy market is a hot topic within the rail industry. Many are concerned about the volatility of energy prices and its effect on the crude by rail volumes. If prices drop below the all-in cost of production, and are expected to remain there, the planned exploration and capital investment projects would be placed on hold. However, energy prices would have to drop below the short-run marginal costs before existing production is halted. Some industry experts are bullish about crude prices for 2015 while others forecast a slightly gloomier outlook. Either way, the crude by rail increase we have seen in the industry over the past few years will continue through the early part of 2015, albeit at a slower pace. Contractual volume commitments, existing infrastructure investments and current drilling programs will sustain growth for the near term. Longer-term outlooks will depend on the levels of crude prices throughout 2015 as additional exploration and investments will be dependent upon oil prices.
SAFETY AND REGULATIONS – HOW WILL IT CHANGE?

Since 2011, the rapid growth in crude by rail traffic and the number of high-profile rail incidents has increased public scrutiny and concern over the crude by rail boom.

Safety has always been a primary concern, but it has become paramount following the tragic rail accident in Lac Mégantic, Quebec, Canada in July 2013. This incident sparked a complete investigation and review in both Canada and the United States on the safety of tank cars that are shipping crude oil. The Department of Transportation’s (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) has proposed rules for the safe transportation of crude by rail. The proposal would require that all tank cars manufactured after October 1, 2015, conform to new required specifications of the DOT-117. Expected retrofits to the existing fleet, as forecasted by PHMSA, range from $27,000 to $65,000 per car depending on the final regulations. If amortized over a 10-year retrofitted tank life, the cost per barrel would equal $0.23 to $0.66.3
The DOT has announced that it is expecting the new tank car standards to be published on May 12, 2015, which would give car owners up to five years to adhere to the new requirements. The Canadian Transport Ministry, however, has taken a tougher stance stating that Canada wants the older DOT-111 tank cars removed from all fuel deliveries by May 2017.

**THE SLOWING FLEET**

The management of railcar fleets and the optimal utilization of rail assets are paramount to successful rail logistics. A significant difference can be achieved by a single percentage point gain in asset utilization. If a shipper managing a railcar fleet of 5,000 tank cars can increase asset utilization by 1.2%, this would equate to having an additional 60 tank cars in the fleet. Financially, this represents an annual savings of approximately $1 million in railcar lease costs.

Efficient utilization of railcar fleets is achieved through in-depth data analysis of cycles to determine transit time performance for all origin-destination pairs. Fleet sizing decisions will be based upon the variability of the cycle time and also will be used in determining risk between over and under capacity costs associated with the railcar fleet. To maximize the efficiency of a rail fleet, the supply chain as a whole needs to be examined. The review of origin loading and destination unloading capacities and capabilities requires consideration when working to increase fleet utilization on an ongoing basis.

Optimal shipping requires continuity throughout the entire movement of the railcar. For instance, if a destination location is experiencing a delay, a push for railways to move idle-flagged railcars can have an adverse effect if the cars will just be stalled at the endpoint of their route. This is analogous to merging into traffic. When vehicles in the merging lane and incoming lane allow for space on a shared road, merging is smooth and does not halt traffic. However, when vehicles from either lane do not allow for space, it ultimately results in a slower flow and creates a backup. This queue will take longer to move vehicles through than if cars were continually moving. When a backlog of railcars occurs at a destination, the same concept applies—it will take longer for them to get through the queue.

Included in the PHMSA proposal for the transportation of crude by rail are speed restrictions and route revisions. If speed reductions are regulated for crude oil traffic, the impacted rail capacity would decrease overall by 10-11% for the rail transportation of all commodities. Additionally, if route revisions are required for crude cars and delays are incurred through lost time while cars are retrofitted, the overall utilization of the fleet would decrease with the increase in cycle times. The reduced rail velocity across the entire network would also increase locomotive and railcar asset requirements for the railroads. If the same shipper lost a one day average in cycle times on his 5,000 tank cars, the reduction of shipped product in a one year period would be 1.4 million barrels of crude oil.

![Figure 4. Relative Asset Utilization and Annual Savings in Tank Car Lease Costs](image-url)
OCCUPORTUNITY OF SHARED DATA
As efficient fleet management becomes increasingly imperative to the bottom line, additional data analysis can help fleet managers make faster, more accurate decisions. Railroads currently provide all raw data on car movement via Car Location Messages (CLMs) to an industry-shared service which provides that data, at a cost, to the shippers, car owners, system providers and other railroads. The data allows users to monitor the status and movement of their particular rail traffic on all 530 railroads.

The benefits of expanding this shared industry service could provide information via the CLMs to be analyzed and summarized, after the removal of competitor data, into reporting tools for shippers. As a result, a fleet owner/lessee could gain more transparency throughout the entire rail network, and in turn, make organizations’ fleet management more efficient. They could have visibility, via a variety of reports, into the performance of rail operations, schedules including current delays or backlogs, percentage commodity breakdowns, traffic moving on lanes, and railroad capacities. These reports would provide shippers and consignees more timely and accurate information to determine best shipping routes, railway shipping patterns, best day of the week shipping and switch and interline performance. This information could also be utilized by railways to determine interline carrier performance, potential route changes, schedule revisions and performance measurements, as well as new business opportunities.

CONCLUSION
Because rail is an important, strategic asset for many companies, successful asset management is critical to achieve business development and sustainable growth. This includes compliance with new regulations for tank cars transporting crude, ongoing operation management of the rail assets, optimization of assets and creating a competitive advantage around extending the supply chain. With the volatility of energy prices and changing regulations, fleet management will become even more critical. Fleet utilization is not just about keeping the cars moving, but ensuring synergy across the entire supply chain. Fleet managers need to complete in-depth analysis of available data with the right tools in order to produce the most accurate results and make decisions quickly and efficiently. This includes data on the fleet, the railroads, interchanges, cycles and routes. For firms to maximize their trade deals, transportation and fleet, costs should be scrutinized in preparation for the changes coming to the crude by rail business.

With a high-level view of the overall supply chain, available data and the right technology firms can take advantage of changing environments and capitalize on market opportunities. Each company that utilizes rail to transport product should be asking themselves if they have the efficient tools required to manage their business, and the available data to determine how well they are managing their overall railcar operations.
CONTROL – Activities tied to the control aspect for the base drivers of the business
• Focus: Regulatory standards and compliance
• Goal: All the processes necessary to operate the business assets are in place and are valid to report against

OPERATE – Activities related to the physical operation of assets under management
• Focus: Ongoing asset operations
• Goal: Business assets are operated safely, prudently and efficiently

OPTIMIZE – Assets are optimized to realize the highest returns
• Focus: Assets and capacity management
• Goal: Achieve the highest returns possible at the commensurate level of risk

EXTEND – Leveraging strategies and positions to grow business results into new areas
• Focus: Business and operating asset acquisition, supply chain extension
• Goal: Achieve business development and growth goals to achieve a competitive advantage

Figure 5. Core Functional Activities Focus Attention on Key Logistics Business Elements
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WIND DERIVATIVES: has their time come?

The Internal Energy Agency (IEA) estimates that wind will generate 18% of the world’s power by 2050—equating to approximately 2800 gigawatts (GW) as compared to current generation of about 300 GW. This growth in wind power will have a significant impact on the grid infrastructure, power systems, policies and electricity markets. Kevin Casey, Shailesh Joshi and Shahid Intekhab discuss the need for wind-related products/derivatives to manage risk across all aspects of the wind economy, including generation, trading, distribution and project financing.

HOW RENEWABLE POWER IS CHANGING ELECTRICITY MARKETS

On Sunday, October 4, 2009, at approximately 3:00 AM, the German Power Exchange (EEX) registered a day-ahead market clearing price of -500.02 € per megawatts per hour (MWh). To some, it may have seemed like a technical glitch or an anomaly. But in reality, this was the 71st time that the price of electricity dropped below 0 € per MWh since the EEX removed the price floor in September 2008.

Since that day, high-variability renewable power (excluding hydro and bio-fuels) has increased from about 400 terawatts per hour (TWh) to 1000 TWh and is projected to grow to 2000 TWh by 2020. When that happens, renewable power will be approximately 10% of total electricity production (see Figure 1).

Figure 1. Global Renewable Electricity Production, Historical and Projected
THE CHANGING LANDSCAPE
In 2008, governments began offering tax breaks and incentives to firms building renewable energy projects. By having a top priority in distribution coupled with the added incentives, renewable energy has become the power of choice for small players, such as financial investors. Today, however, the situation is slowly changing. With reduced incentives, increased regulations and an evolving grid infrastructure, renewable generators will have to evolve from asset developers and investment managers into power market players. To make this shift and to drive profitability, generators will need to invest in production forecast, portfolio optimization, risk management and scheduling.

This shift will likely change industry strategy by creating opportunities whereby energy utility functions will be offered as services to smaller generators. The big incumbents potentially will become the new traders and the traditional utilities may change their business strategy. For example, on November 30, 2014, E.ON announced its strategy to focus on renewables, distribution and retail solutions and its intent to exit conventional generation.

INFRASTRUCTURE
An integrated grid infrastructure and market coupling, such as integrating electricity markets, are the keys to handling generation variability. Over the last few years, Europe added multiple interconnector capacities and a few remain in the pipeline to build connectivity across the continent. Companies like the European Market Coupling Company (EMCC) are using day-ahead auctions to manage congestion.

In the United States, the proposed Tres Amigas Superstation that will enable the connection of America’s three primary interconnections—WECC, Eastern and ERCOT—will serve as a renewable energy market hub. Transmission companies and electric utilities will be able to connect to the Superstation and purchase power from, and sell power to, each of the three US power grids.

ROLE OF WIND—CHALLENGES AND OPPORTUNITIES
Wind plays a major role in renewable power. In 2013, more than 35,000 megawatts (MW) of new wind power capacity was brought online. In terms of overall investments, the global wind sector saw a small decline to USD 80.3 billion in 2013 from USD 80.9 billion [EUR 59.2 billion] in 2012.5

Asia was the flag bearer of new wind capacity installations in 2013 and is likely to overtake Europe as the region with the most deployed wind capacity by the end of 2015. China was the primary engine of growth, taking the top spot with 16,088 MW of new capacity. India, the new player, added 1,729 MW.6

The world is expected to continue pushing for green technologies while the investment trend in wind (and other renewable sources of energy) will continue over the next several years.

Variability
The variability in supply from wind leads to uncertainty in the short-term intraday markets for both renewable generators that are unable to accurately forecast the generation, and the conventional generators that are unable to optimize their dispatch. This has led to an increase in short-term trading activities and balancing services. As a result, trading volumes have steadily increased over the past few years.

Low Marginal Cost
Wind power has a low marginal cost (zero fuel costs) and therefore enters near the bottom of the supply curve (see Figure 2). Graphically, this shifts the supply curve to the right, resulting in a lower power price depending on the price elasticity of the power demand. In Figure 2, the price is reduced from Price A to Price B when wind power decreases during peak demand. In general, the price of power is expected to be lower during periods with high wind than in periods with low wind. This is called the “merit order effect.”
In May 2011, Galileo Weather Risk (acquired by Endurance Re), a provider of weather risk protection products, announced WindLock, which it described as “the first financial products designed to assist the wind power industry in hedging the financial risk of wind variability.” The contracts, transacted either as derivatives or (re)insurance, were based on an index of modeled output from a wind farm, driven by average or hourly wind speed.

In 2007, the US Futures Exchange announced that it would offer wind futures. Seven contracts from wind farm regions in Texas and New York were to be traded with monthly expiries.

THE DIMENSIONS OF WIND DERIVATIVES
The increased contribution of wind generated power, availability of data, models and an increased need to manage the volume risk indicate that it is the perfect time to start thinking about wind derivatives.

At a fundamental level, wind derivatives can be structured using two dimensions: wind speed and wind power.

Wind Speed
Wind speed products will be defined based on the daily average wind speed as measured by a predefined meteorological station over a specified period. The inherent problem with such products is the basis risk which can now be minimized by data provided by companies like 3TIER, who provide very comprehensive data at the installed wind capacity location. The product can be similarly structured to temperature products with average speed and high wind and low wind steps. These products will be of particular interest to producers as they can hedge the expected dispatch.

Wind Power
Wind power products will be defined based on power generated by the installed wind capacity in a particular region over a specified period. The European Energy Exchange (EEX) is planning to launch a product based on Deutsche Börse’s Wind Power Indicator, which
provides the daily expected wind power generation normalized to available capacity [MWh per available MW] for Germany, Austria, the UK and Denmark. Conventional power generators will find this product key to hedge the price risk because the product is based on the market area and pricing region.

LOOKING AHEAD
Both wind speed and wind power can be structured as standardized products to create a wind derivatives market. It’s a market that will provide the right hedging tool to generators and other participants in the value chain, and will eventually replace the current “kitchen sink” approach to hedge variability due to wind generators.

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Since 2005, Sapient Global Markets and Markit have worked together to provide the G15 banks with global derivative transaction metrics for the over-the-counter (OTC) Derivatives Regulators’ Forum chaired by the Federal Reserve Bank of New York. The dealer group community utilizes this data to increase operational efficiency, along with verifying the ranking within the group and evaluating trading activity. The key metrics encompass OTC derivatives transaction volume and electronic processing of trade confirmations and measures the time delay in issuing trade confirmations. In this article, Aaron Gill and Vassil Kirtchev provide the Q4 2014 metrics and associated highlights.

The industry’s desire for self-regulation stated by the introduction of commitments to the OTC Derivatives Regulators Forum (ODRF) was a unique approach to a completely new industry challenge. The electronic processing of OTC transactions still remains stimulating across asset classes due to a range of dependencies, such as the availability of products on electronic trading platforms or client onboarding on electronic trade confirmation matching engines. Through the evolution of post-financial crisis market reforms, in particular the Dodd-Frank Act and the European Market Infrastructure Regulation, the need for self-regulation was superseded; however, it remains a voluntary commitment that the industry is dedicated to deliver.

METRICS TRANSFORMING CAPITAL MARKETS
The metrics are based on targets for voluntary industry commitments, with the purpose of improving transparency, standardization and risk management across the OTC derivatives industry.

The Federal Reserve Bank requires all industry players to report cross product, commodity and clearing metrics, supplying electronic processing deal volumes, from which industry players were ranked. These statistics are crucial to gauge the varying operational efficiency of contributors and their level of automation. The facilitation of industry-wide working groups, on a monthly basis, aims to improve the consistency and standardization of reporting criteria across all dealers, to reflect regulatory demands.

The continued focus on metrics and analytics is becoming increasingly important in the financial markets’ current data-driven environment. Financial institutions going forward will look to seek much more sophisticated data and benchmarking to become more competitive.
Credit Derivatives

› During Q4, average deal volumes for credit derivatives were considerably volatile, averaging at 29160 per month for the quarter. The median deal volumes showed similar fluctuations.

› Credit derivatives are the most automated product type where, by the end of the quarter, 98% of the traded volume was electronically confirmed. The electronically eligible volume as a percent of total volume remained fairly steady over the quarter.

› In terms of confirmations, electronically confirmed credit derivatives as a percent of electronically eligible saw an upward trend and reached almost 100%. Outstanding confirmations fell to an average of 262 by the end of Q4.

› Business days outstanding saw an upward trend and finished the year at 0.06 for outstanding confirmations aged over 30 days.

› Both average and median pre-netted and post-netted settlements were fairly converged over Q4.

The contributors to the data are Bank of America-Merrill Lynch, Barclays Capital, BNP Paribas, Citi Group, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JPMorgan Chase, Morgan Stanley, Nomura, Royal Bank of Scotland, Société Générale, UBS and Wells Fargo.

The quarterly Markit Metrics Trend Report is published by Sapient Global Markets and can be found on the Markit website (www.markit.com).
Equity Derivatives

For equity derivatives, the average and median deal volumes are the most diverged out of all product types. Deal volumes saw a surge and increased to an average of 9335 in December 2014.

The data shows that the gap between average not electronically and electronically confirmed volumes has converged. The electronically confirmed volume as a percent of total volume of OTC equity derivatives transactions had an upward trend and finished the year at an average of 51%. The electronically eligible volume as a percent of total volume showed similar trends.

The electronically confirmed as a percent of electronically eligible trades finished the quarter at a 93% average. The average total outstanding confirmations increased by 270 in December 2014 compared to the same time the year before.

The average business days’ worth of outstanding confirmations aged over 30 days went up by 0.1 by the end of Q4 in comparison to how Q3 ended.
Interest Rate Derivatives

The average and median trade volumes for interest rate derivatives remain fairly converged, with a median value of 41879 and an average value of 43041 for December 2014.

The electronic volume as a percent of total volume ranged between 90-93%, and the electronically traded volumes for December were at 40064, whereas for December 2013 they were at 25726. The electronically eligible volume as a percent of total volume remained steady at 96-97% throughout the quarter.

The electronically confirmed as a percent of electronically eligible saw a positive trend over the quarter, finishing the year at a 96% average. The average total outstanding confirmations declined by 236 since the end of Q3 2014.

The average business days’ worth of outstanding confirmations aged over 30 days has been on an overall decline since June 2011, going from 0.08 to 0.04 in December 2014.
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