

**Frontiers in Finance**  
For decision-makers  
in financial services  
*Winter 2014*

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Virtual currencies get real  
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# Frontiers

in Finance

## Driving claims transformation:

Reclaiming the  
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cutting through complexity



# Foreword

The environment facing financial services firms remains challenging. In most cases, the threat of actual disaster has been averted. But what remains is a sense of chronic malaise. Most developed economies remain fragile, supported by artificially low interest rates and unconventional monetary policies. As a result, growth is feeble and returns are low. At the same time, political and regulatory retribution for past failings has still to run its course. Trust in financial services has yet to recover fully.

All this comes on top of the conventional challenges facing banks, insurers or investment managers: how to remain competitive, sustain a franchise, earn a fair return for shareholders. Chief executives, chief finance officers and their teams face the need to develop strategy and plans on a number of fronts at once. It is not *simply* a matter of how to respond to the next regulatory imposition, or how to upgrade legacy IT systems, or how to reconfigure the business model, or how to take advantage of new data technology or digital opportunities. It is about dealing with all of these challenges – and more – simultaneously.

This means a holistic approach is essential. Initiatives launched independently, usually in isolated silos, can not only fail to generate their intended return: they are likely to conflict, and obscure their true costs and impacts. It is only by understanding the *range* of issues and their *interactions* that effective strategy can be formulated. We would call this transformation.

This issue of Frontiers addresses part of this complex landscape, some of the principal issues which senior executives are struggling with today where transformation is required within their business. The G20 meeting in Brisbane in mid-November set the broad context for economic reform and further financial services regulation. We look at some of the key items on their agenda, review the results of the ECB's stress tests of Europe's biggest banks, and explore the implications of IFRS9, the new standard for accounting for financial instruments.

The data issue is increasingly significant; many would argue that managing data in all its ramifications, and extracting the most valuable and useful information from it, represents the biggest single challenge – and opportunity – facing the industry today. We explore two contrasting facets. Closely connected are the systems underpinning both data management and transaction processing. How can legacy systems best be updated or replaced? What lessons can we learn from past failures? How do automation and risk interact? We believe these are both complex and critical subjects.

In the insurance sector, advanced data analytics tools and data management systems are transforming claims technology. However, increasing reliance on information technology carries its own dangers; awareness of the risks of data breaches, identity theft and cyber extortion is growing rapidly, opening new opportunities for insurers themselves. In investment management, the search for returns is driving fund managers into complex and opaque assets, which carry demanding new governance and due diligence requirements. The constant pressure to improve cost-effectiveness and deliver greater business value is stimulating welcome improvements in approaches to shared service centres, in investment banks as elsewhere in the industry.

At KPMG, we are convinced that sustaining the ability to address the breadth and complexity of these issues – and to cut through them to determine the critical implications and responses – requires a comparable range of deep expertise and experience. We work hard to maintain this. Across the broad financial services industry as a whole, the evidence suggests that our firms' clients derive significant, concrete benefits from insights and advice which similarly underpin our articles in Frontiers.

Jeremy Anderson's introductory article to this issue suggests that the industry may be at a turning point, that it can move now from protecting its current franchise to laying the foundations for growth and adding value in a rapidly changing environment. This is more than a glimmer of hope: it is an exciting prospect. At the close of the Brisbane meeting, G20 leaders affirmed that strengthening the resilience of the global economy and the stability of the financial system are crucial to sustaining growth and development. We hope the articles in this issue illuminate some of the key issues financial institutions need to address to capitalize on the opportunity now on offer.



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# A turning point in sight?

**Jeremy Anderson**, Chairman, Global Financial Services  
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Genuine and substantial progress has been made in stabilizing the financial sector since the crisis 6 years ago. A great deal remains to be done: the Brisbane G20 meeting endorsed further regulatory imperatives which will need to be translated into effective legislation. But there is a sense that a turning point has been reached. This should allow the finance industry to turn to focus again on supporting jobs and growth, and consider how to react to the profound changes being wrought by the continuing digital revolution.

**A**s we finalize this edition of *Frontiers in Finance* in the last quarter of 2014, there is a sense that the financial services industry, especially those multinational banks based in countries most affected by the global financial crisis, may be approaching an inflection point. The global economy remains very fragile, as market volatility in recent weeks has reminded us. But it does seem that the debate over issues such as capital requirements for global banks, balance sheet restructuring and future business models may be coming to at least an interim conclusion. Greater

certainty should be welcome to all in the finance industry, and in the wider economies that depend on its effective operation. A turning point may be in sight.

As this edition appears, the G20 have recently concluded their ninth summit meeting since the crisis, in Brisbane. They have agreed in principle on new global standards for loss absorbency capability in strategically important failing institutions; proposals to establish cross-border resolution mechanisms; and measures to deal with some of the deficiencies of the shadow banking sector and derivatives markets. Taken together, these decisions

may prove painful to implement; but they should provide greater certainty against which banks can plan their future global structures and the optimum balance between global and regional governance.

This will also give regulators a firm base on which to work together and build mutual trust in how to tackle recovery and resolution issues in major global institutions. If this can be achieved, it will be a real landmark for the industry.

## **Greater clarity and stability**

Earlier this year, we saw the results of the latest round of stress tests on the 30 largest







bank holding companies in the United States. The European Central Bank (ECB) published the results of its own stress tests on more than 120 banks at the end of October. And the Bank of England announced that the results of the UK's exercise will be published on 16 December, alongside its half-yearly financial stability report. While there is, understandably, some discomfort at the margins at the outcome of these processes fast approaches, there is no doubt that stress tests will be a part of life going forward and, together with leverage ratios and a more standardized approach to risk weights, will be a key tool for regulatory oversight.

There is still much to do to translate agreed regulatory imperatives into legislation and detailed implementation. But the environment is more stable and clear: Bank boards should get greater certainty over the future than they have had for some time. It does feel as if substantial progress has been made towards ensuring the financial stability of major institutions and of the global financial system. It has been interesting to note that during the meetings of the world's financial and economic institutions this past autumn that the discussion turned much more to how the financial sector can now promote jobs and growth in order to sustain and nurture economic recovery, increase consumer demand and prevent further damage to social cohesion.

Nevertheless, a significant contrast persists between those financial institutions and economies – chiefly in Western Europe and North America – which were most severely affected by the crisis and the remainder of the developed world. Clients and policy makers in the former regions remain acutely conscious of the overhang of impending regulatory tightening. The specter of further litigation related to alleged conduct failures also looms large. By contrast, we find that clients in the Asia-Pacific region and other parts of the world are focusing firmly on growth and on the rapid adoption of digital technologies in production and distribution channels. These promise to be profoundly disruptive of existing business models.

## Disruption and transformation

Excited and colourful sketches of the products of radical technological change

belong more to futurology and science fiction than to sober strategy and planning. The impacts of technology are more subtle and indirect than is often claimed. But what is clear is that information technology and the digital revolution are increasingly changing the way in which people behave and the ways they prefer to interact with each other and with suppliers of all kinds, including those of financial services. So the real challenge for banks, insurers and others is to harness new technology in both production and distribution and to align these choices with the more enduring concern of satisfying the needs of coming generations of customers.

**Digital technologies are evolving quickly and innovation is already transforming parts of the financial sector and their interactions with clients.**

Digital technologies are evolving quickly, and innovation is already transforming parts of the financial sector and their interactions with clients. The rapid growth of Alibaba, the Chinese e-commerce group, and of peer-to-peer lending in the United States are recent cases in point.

The pace of change driven by digital technology innovation can only increase over the next few years. Those organizations that rise to the challenge will be those which thrive and continue to defend their business models against new entrants. This will require developing the agility to absorb successful innovations into the core business, and promoting the management capability to look forward at the opportunities of the future rather than back to the legacy of the past. A key challenge for senior executives in financial services companies, especially those most heavily burdened by dealing with legacy overhang, is to create sufficient management capacity to deal with both perspectives simultaneously, while competitors are nibbling at their heels.

The sooner that financial institutions begin operating in a much more customer-centric way, and genuinely seek to deliver customer benefits through the medium of innovation and technology, the sooner they can begin rebuilding the trust damaged by the crisis and by the continual subsequent revelations of misconduct and failures of compliance. The restoration of stable and sustainable financial institutions and systems is a precondition for delivering the finance, credit and risk management services needed by entrepreneurs and small businesses, and which in turn will underpin the economic growth necessary for recovery.

## New customers, new attitudes, new challenges

In previous editions of *Frontiers*, we have talked extensively about the implications of the digital agenda, and how financial services companies need to transform operational processes and exploit new data capabilities to generate value or meet regulatory requirements. But looking ahead over the next 5 years, one of the fundamental changes will be the rise of a new generation with profoundly different attitudes to data, information and modes of social interaction. It is time to explore systematically and strategically what these changes mean for security, privacy and data management in financial services; and how these can be used to create services of real benefit to consumers rather than simply to underpin more efficient transaction processing. For instance, customers still trust banks to look after their information much more securely than non-financial institutions. In a world where client identification tools are of increasing importance, is this an opportunity for banks to provide a new set of services that will then genuinely make life easier for their customers?

There will no doubt be a few more years of hard work before the new stability is entrenched. But it is imperative for financial services companies to carve out senior management time to consider how they can move from protecting their current franchise to laying the foundations for growth and adding value in a rapidly changing environment. ■

# The G20 summit:

## Time for reflection on the agenda for financial services

**Giles Williams**, KPMG in the UK

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The Brisbane G20 summit marked a shift of attention from regulatory reform designed to address the financial crisis to the promotion of jobs and growth. This provides an opportune moment for policy-makers to reflect upon two key questions: how can we better maximize the contribution of the financial sector to jobs and growth, and, given the number of financial reform measures currently underway, should we consider a pause to better digest the many changes already underway before undertaking additional major reform initiatives? The world economy may have stabilized, but a number of areas remain quite weak and, it will be important to ensure that resiliency measures are balanced with growth objectives.

### Financial services, jobs and growth

The G20 stated that its primary focus is now moving to jobs and growth. There is however a trade-off between financial stability and overall economic growth. Indeed, most agree that strengthened financial stability measures lessen the financial services sector's ability to contribute to the creation of jobs and economic growth, and many have suggested that the G20 should adjust the direction and details of stability reforms so that financial services can make a more positive contribution to jobs and growth. In particular:

- long-term financing by insurers and asset managers and other channels of intermediation needs to be facilitated and encouraged
- more robust capital markets need to be

developed, particularly outside the US

- regulatory constraints and disincentives to banks fulfilling their role as providers of loans, trade finance and risk management services need to be reduced
- financial institutions, their customers and investors need to see more consistency and certainty in financial regulation.

Financial stability is imperative. However a balance must be struck between a very stable, though less robust market, and a market that creates the right conditions to sustain economic growth and job creation. Excessive regulation always risks stifling responsible and sustainable growth, however, many remain more worried about the risks of returning to pre-crisis, light touch regulation. Banks also need to restore trust and confidence,

through decisive improvements in their culture and behavior. It may, therefore, be time to add a second dimension, in which the financial sector is viewed as a facilitator of jobs and growth. This requires a change in regulatory focus and the pursuit of a revised agenda which will likely:

- encourage bank lending to SMEs, infrastructure and trade finance
- encourage insurers and other long term investors to provide more funding for infrastructure, SME and other long-term investments
- encourage asset managers to invest more in infrastructure
- develop capital markets.

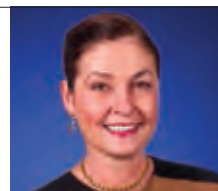
In a recently-published report, KPMG sets out in detail what this agenda might imply.<sup>1</sup>

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<sup>1</sup> Brisbane G20 summit: a new agenda for financial services, KPMG, October 2014

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## The FSB agenda for Brisbane

Since the financial crisis, the Financial Stability Board (FSB) and the three main international regulatory standard-setters in banking (Basel Committee on Banking Supervision), insurance (International Association of Insurance Supervisors) and securities (International Organisation of Securities Commissions) have been focusing on four core issues:

- building resilient financial institutions through higher levels and quality of capital and liquidity, limitations on leverage, and improved risk governance
- ending 'too-big-to-fail' through both resilience and recovery and resolution – allowing large financial institutions to be resolved in an orderly manner and without taxpayer bail-outs
- addressing shadow banking risks, by understanding these risks, regulating non-bank credit intermediation, and limiting the interconnectedness between banks and the shadow banking sector
- making derivatives markets safer, through the central clearing of derivatives.

The FSB brought a set of proposals in these four core areas to the Brisbane summit for endorsement and the details can now be

finalized over the next few years, without the need for further G20 level input and guidance. The key measures aim at:

- **Ending 'too-big-to-fail':** The FSB presented proposals on loss absorbency capability (LAC) in strategically important failing institutions: the level and types of liability which could be included, and where in the corporate structure it should be held – at parent company level or in each operating company. However, even though the high level principles can be agreed in Brisbane, some difficult issues remain to be resolved in all these areas.
- **Cross-border resolution:** The FSB tabled proposals for the bail-in of debt issued under foreign law, so that LAC can be bailed-in across a group as and when required; and for measures to facilitate temporary stays on close-out and cross-default rights in financial contracts when an institution enters resolution. However, these proposals will not be sufficient in themselves to deliver effective cross-border resolution. This may require either a fuller set of formal powers and binding commitments that apply cross-border or a much stronger and wider-ranging set of international agreements that could be relied upon in the event of the need to resolve an international financial institution.

- **Shadow banking:** The FSB updated the Brisbane summit on information sharing, securities financing transactions and banks' exposures to the shadow banking sector. However, it is important that the post-crisis approach to 'shadow banking' should focus primarily on risks to financial stability, not – as in the EU – on imposing bank-like regulation on anything that looks vaguely bank-like, in the name of addressing 'regulatory arbitrage'. It is important to recognize the value of some alternative channels of finance, both for consumers and for facilitating economic growth, particularly in emerging markets.
- **Making derivatives markets safer:** Considerable unevenness remains across jurisdictions. The Over-the-Counter (OTC) Derivatives Regulators Group recently reported on how the identified outstanding issues have been or will be resolved. This is a key area where international consistency is required, not least to reduce the costs to both financial institutions and their customers that will arise from fragmentation and having to meet multiple inconsistent national or regional requirements.



The FSB also brought to the Brisbane summit a report on identifying systemically important financial entities other than banks, insurers and financial market infrastructure. As yet, the basis for identifying systemically important asset managers, finance companies and other such financial institutions remains vague. Considerably more thought needs to be given to the regulatory measures that would follow from the designation of any such institutions as being of systemic importance: the FSB will need to focus more on the potential causes of the next crisis, be this from different threats to banks such as fraud, systems failures and cyber security, or from non-bank activities within the financial sector.

As these comments suggest, many difficult issues remain unresolved. The financial sector continues to suffer from uncertainty about the regulatory reform agenda. Higher capital and liquidity requirements are known and accepted, but many other issues remain open and unresolved. The G20 and the FSB must now aim to provide a more certain environment in which financial institutions – and their customers – can operate, by pressing harder for greater global consistency to avoid the complexity, cost and distortions of inconsistent regulations globally and across sectors; and by more ruthless prioritization of regulatory reforms. We have argued elsewhere, particularly in Europe, regulation that may have moved beyond the ‘tipping point’ at which the costs of additional regulation exceed the benefits: the net impact of further regulation on economic growth may already now be negative.<sup>2</sup>

### Conclusion

The G20 has placed an understandable emphasis on increasing the safety, soundness and resilience of the financial system. But there comes a point where the costs of moving ever further in this direction – the potential for higher costs and reduced availability of financial products and services, in addition to the localization and fragmentation that arise from the inconsistent implementation of regulatory reforms across jurisdictions, and the continuing uncertainty over the end point – may outweigh the benefits of reducing the probability of another financial crisis.

We believe that now is the time for regulators to regroup and be bold in:

- focusing on the cumulative impact of regulation on the financial sector and on the wider jobs and growth agenda
- re-evaluating the cost benefit analysis of some regulatory reforms
- prioritizing the remaining initiatives, and providing greater certainty on the substance and timing of these remaining initiatives
- reducing inconsistencies in the implementation of international regulatory standards.

Meanwhile banks, in particular, need to intensify their efforts to introduce cultural and behavioral change, to restore public confidence in the sector. It is time for the industry to rise to this challenge. But it is also important for the regulatory authorities to take a moment and assess the cumulative impact of the financial stability measures undertaken to date. ■

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<sup>2</sup> Moving on: The scope for better regulation, KPMG International, May 2013; and Evolving Banking Regulation, KPMG International, February 2014.



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# Driving claims transformation:

## Reclaiming the insurance customer experience with digital tools

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**F**aced with increasing pressures, from rising customer expectations and operating costs, to mounting insurance fraud and catastrophe losses, insurers realize that emerging claims technology could revolutionize the traditional claims process. With impressive possibilities, insurers are now working to surmount organizational challenges to achieve meaningful claims transformation.

Although the ability to practically incorporate innovation varies greatly by product class, complexity, client appetite and regulatory regime, here is a small sample of claims-handling innovations that could revitalize the insurance customer experience, contain losses, improve efficiency and enhance catastrophe response.

### Elevate insurance customer experience

Insurers recognize how claims transformation, by introducing the right combination of technologies along the claims process, from first notice of loss (FNOL) to settlement, can enhance the customer experience.

The claims process includes well-understood moments of truth in the

customer journey that can build customer loyalty, drive renewals and earn word-of-mouth recommendations, or have the opposite effect. In particular, technology could better engage the customer during claims reporting. For example, some insurers are now striving to reduce customer stress by empowering individuals to make their FNOL by their preferred channel, such as telephone, web, text or smart phone.

A number of insurers are focusing their attention on rolling out seamless, integrated, multi-channel options for claims reporting, mirroring their efforts to integrate other points along the customer sales and service chain. Unfortunately, some experts estimate that it could take years for insurers to access and adopt systems that could fully capture, store and analyze the vast free-format data that will arrive from these channels.

There might be more immediate promise in accelerating the speed of claims handling, information gathering, investigation and payment for a number of product classes. For example, the introduction of mandatory telematics emergency notification systems in German automobiles in 2015 could mean that accident claims could be received and

assigned faster. Meanwhile, in the UK, select insurers are piloting programs by which clients e-mail claim photos or videos and receive a rapid mobile payment, rather than a traditional check or fund transfer.

Beyond shortening cycle time, insurers in some markets are experimenting with sentiment analysis tools to improve overall service quality offered by call center staff. Through automated analysis of voice recordings of customer conversations against key words, phrases and business rules, they can monitor handlers and compare claims data, to determine whether positive or negative sentiment scripts impact settlement costs. They can then fine-tune protocols and training, while also accumulating invaluable compliance records.

### Reducing fraud losses

In light of rising levels of false or inflated claims, insurers are taking note of technological innovations that can help prevent, detect or recover insurance fraud losses. Among the main avenues to improve fraud detection: data analytics of structured data to improve fraud scoring, text and voice analytics of unstructured data from client interviews, and external source and social media analytics.

Aggregated global data could help insurers spot patterns and build more accurate predictive modeling of potential fraud. Then, better fraud detection rules and workflows can be developed, so that claim data can be mined for high-risk flags. Again, voice recording analysis could identify relationships between customer language and typical fraud indicators to alert claims representatives, accurately route files to investigators and swiftly block payments.

With the immense potential uses of these technologies, particularly fast-evolving artificial intelligence applications, insurers are beginning to envision or even build the capability to automatically read and interpret huge quantities of existing or incoming unstructured claims data.

Harnessing this data will most certainly pay-off in both underwriting terms and claims management, in both cases providing additional benefit to carriers and ensuring a consistent and predictable customer experience, benefiting both carriers and customers.

Enhancing catastrophe response

A raft of technologies, many of which are emerging from the ‘Internet of Things,’ can be applied to boost both operational efficiency and help insurers respond better to catastrophes, including more frequent weather and natural disaster-related losses.

These emerging technologies could improve insurers’ capabilities prior to, during and post-catastrophe. Pre-disaster, better event forecasting systems and prediction models can help insurers analyze probable policy holder impact and prepare strategies for loss minimization. They could also help an insurer review overall operational and financial preparedness and set appropriate reserves.

These tools could enable insurers to issue early warnings to customers and save lives, making the insurer an invaluable, trusted partner to disaster preparation authorities. Such tools could also help insurers rapidly mobilize adjusters and other resources for post-event claims handling and customer support.

Although there is already rich partner data for forecasting, insurers’ deployment of many of the above technologies is hindered by recurring internal data quality issues, or systems that do not have the performance capacity for larger data volumes. Despite the challenges, insurers are acknowledging the importance of testing and applying available data in order to improve and evolve their capabilities.

There is also rising availability of off-the-shelf tools that could transform the

process, one chain link at a time. For example, with Google Glass eye ware, adjusters could capture image, video and voice recording on location, collaborate in real-time with specialists for quick decision-making and instantly submit forms via mobile apps.

Similarly, commercial drones could help adjusters access hard-to-reach catastrophe locations, and transmit data instantly to the claims center. These products are often available at affordable price points, with hardware and software that can feed into existing company systems.

When implemented in combination, such digital tools could revamp what is often viewed as the slowest part of the claims process, the investigation and evaluation stage. It could also eliminate the

A day in the life...

Conventional claims adjuster versus digital claims adjuster

Process...	
Today	Tomorrow
1. Check email – plan trip to claim site.	1. Transfer daily route to navigation system.
2. Print out route information.	2. Drive to claim location.
3. Print out relevant claims files and checklists and copy files.	3. Use google glass and connect to voice and collaborative claims system.
4. Drive to claim location.	4. Collect evidence.
5. Fill in worksheets and forms – connect with client again to complete forms.	5. Pre-authorize payments or services to claimants on the spot using digital connect with office.
6. Use cameras and voice recorders to collect and store evidence.	6. Run data analytics routines overnight based on collected claims evidence and update underwriting database and rating engines.
7. Drive back to the office.	
8. Scan paper-based documents and transfer them to the claims system.	



## Consider the following

- Pilot radical initiatives in a controlled environment across a sample number of claims in order to test, learn and refine how to embed the innovation and, more importantly, have a clear vision of what needs to be put in place to execute before making significant investments.
- Introduce fresh thinking from outside the insurance sector; look to industries such as fast-moving consumer goods, gaming, and telecommunications, which are adopting innovation as matter of course.
- Equally, do not become a slow follower. History has shown that technology disrupts incumbents who believe they are too big to fail.

still-widespread use of paper checklists, manual forms and worksheets by adjusters.

We cannot be naïve to assume there won't be initial costs. However, the payback over the long-term will justify the investment made; just think investment in fraud technology or tools to support personal injury assessments. Both have required insurer spending, but have supported quantum and loss assessment. Based on KPMG's recent research, we anticipate a cost of approximately 3-7 percent of the claims payments.

### First step: Open minds, but focus on basics

While the list of ready-to-go or soon available tools is intriguing, the essential first step for an insurance firm to realize the dream is to embrace culture change and open minds to the possibilities. Insurers' historic propensity for risk avoidance means that many firms have yet to embrace experimentation, constant learning or the 'fail fast and move on' attitude that is a hallmark of top technology firms.

With the right mindset, an insurer might first examine whether they are capturing the fundamental, basic information needed to understand and optimize their claims process. Identify the basic business problems that must be remedied and begin working towards the solutions, seeing technology as the capability. Potentially, concentrate your efforts on two to three well-defined problems and explore technology solutions through co-creation or small-scale, low-risk pilots that can be expanded or abandoned, depending on results.

While there are many routes to achieve practical, executable claims transformation, there is one widely-agreed end point: Those firms that explore the technologies that are now within reach will be tomorrow's leaders in making the claims experience more friendly, transparent, convenient and cost effective, enabling them to reclaim their place in the customer-centered digital revolution. ■

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# Cutting through concepts: Virtual currencies get real

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Virtual currencies present both a threat and an opportunity to financial institutions. Regardless of your position on this new market development, you would be well advised to watch this space closely.

Bitcoin is forecast to have eight million users by the end of 2014.

## Bitcoin:

An online payment system where users purchase currency that can be used to buy goods and services from other members or merchants.

## Ripple:

An online trading forum for exchanging virtually any commodity, from gold to air miles.

## Fiat money:

Money that is typically issued by a state as legal tender, whose value is not linked to any commodity.

The announcement of the closure of Bitcoin exchange Mt. Gox in early 2014 sent shivers across the virtual payments sector. Eight hundred and fifty thousand Bitcoins worth over US\$470 million were declared lost or stolen by hackers, with Bitcoin's price duly plummeting, calling into question the viability of this and other virtual currencies.

Bitcoin weathered the storm and, along with the likes of Ripple, continues to grow at a rapid rate, with over eight million accounts anticipated by the end of 2014, up from just 750,000 in mid-2013. Although the daily transactions figure of around US\$85 million<sup>1</sup> is a mere drop in the vast global retail ocean, it is enough to make banks sit up and take notice and further consider their roles in the new digital currency marketplace.

A virtual currency is essentially a medium of exchange not attached to a fiat currency such as the dollar, yen, euro or sterling. Such currencies are also unregulated by authorities or governments, although this may be about to change. The state of New York has proposed regulations for Bitcoin operators, including many of the same requirements that apply to banks

and money transfer providers, such as anti-money laundering (AML), cyber security, privacy and information security, as well as capital levels. Governments are also getting in on the act, with the US and China both considering how to tax Bitcoin revenue.

Transactions are peer-to-peer and fast, bypassing traditional payment systems. Bitcoins are initially created through a process known as 'mining,' where information technology (IT) specialists are awarded a Bitcoin each time they confirm a hash through the blockchain process. Other users can then purchase units of currency through a bank transfer at the current market rate, which can then be exchanged for goods or services, either direct from other 'members' or from a growing number of online or physical retailers.

Bitcoins are stored in a wallet with a unique ID number, and companies like Coinbase and Blockchain can hold the currency for the user. When buying from a merchant's website, customers simply click the Bitcoin option in the same way as they would select credit card or PayPal and type their wallet ID.

<sup>1</sup> Analysis – Bitcoin shows staying power as online merchants chase digital sparkle, Reuters, 28 August 2014.





Seventy or so exchange forums have evolved to allow the transfer of fiat currencies into virtual money or vice versa, with Coinbase, Bitpay and Kraken among the better known. Despite this abundance of exchanges, price differentials have created significant arbitrage opportunities for traders, with some individuals and organizations adopting a hedging strategy, holding units in hope of a rise in value.

With multiple currencies and exchanges and a lack of an overview across exchanges, supply and demand can differ, leading to differences in price. Hedge funds and other capital markets players are looking closely into the risks and benefits of holding such currencies and are likely to favor exchanges with the highest volume, on the basis that these are likely to be more stable and predictable. Compared to more conventional investments such as stocks or bonds, the market for Bitcoins is still in its infancy and remains highly volatile.

**Anonymity has brought perhaps the biggest challenge in the form of money laundering and exchange of illegal goods.**

In response to demand for an efficient means of hedging, in September 2014, TeraExchange announced the launch of the first regulated Bitcoin swap trading exchange and price index. This forum is based around Bitcoin derivatives, with traders buying and selling long and short against anticipated Bitcoin future prices. Some form of insurance product is likely to follow to protect against prices falling. The facility is registered with the US Commodity Futures Trading

Commission and will be regulated under the commission's rules.

**In September 2014, TeraExchange announced the launch of the first regulated Bitcoin swap trading exchange and price index.**

Ripple differs slightly from Bitcoin; while it has its own currency, XRP, it is primarily an exchange medium or protocol using a set of rules for transaction-clearing and settlement based on a consensus model for real-time settlement. Most widely known for its 'virtual trading floor' used for swapping any commodity for another, most notably gold, as well as reward program points such as frequent flyer miles.

Investment banks that trade in commodities may consider using this facility, with the added advantage of zero storage fees, but also the potential for greater risk. Ripple's technology can enable banks to optimize internal payments operations (for example, back-office) and provide new and enhanced external payments services to customers (for example, retail, commercial and institutional clients).

Then there is blockchain technology – the technology behind Bitcoin that allows computers to store and exchange value across a distributed network. This technology has the potential to disrupt the current payments system. It can be adapted to verify and record a wide range of real-world financial transactions, such as transmitting international payments and other assets or clearing securities, all using a database that is distributed across the internet yet still held secure.

### **Mavericks and masterminds**

Virtual currency users are by no means a homogenous group, although an element of unfettered capitalism pervades the community, given the lack of regulation and the fact that transactions do not require the approval of big banks or government. Many are attracted by the immediacy of the transactions and the low costs, notably for cash, enabling customers to convert money into Bitcoins and other currencies and transfer this to third parties, who can either hold it or convert back to a fiat currency.

The anonymity of the medium has brought perhaps its biggest challenge, in the form of money laundering and exchange of illegal goods by organized gangs, as well as terrorist financing. The now-defunct Liberty Reserve Bank of Costa Rica allegedly allowed criminals to conduct illegal transactions through a digital currency called 'LR', before its operations were shut down. In another example, the Silk Road black market purported to offer many illicit goods and services paid for primarily in Bitcoins.

Nation-state espionage is a further hazard, with countries forming virtual currencies with the express intention of being acquired by a larger corporation abroad, offering an entrée into the parent organization in order to gather intelligence. Other currencies have been found to have been created purely for the purpose of organized crime.

**With the advent of Apple Pay, mobile payments have moved closer to the dream of a 'one click' transaction.**

Virtual currency infrastructures such as Ripple could potentially decentralize clearing and settlements between investment banks, speeding up transactions and reducing costs.

The demise of Mt. Gox has reinforced the need for sound due diligence to be carried out on exchange entities. Whether acting for their clients or themselves, the financial and brokerage community has to carefully scrutinize these outfits for security, reliability and the ability to identify and authenticate customers, in order to satisfy wider financial services regulatory requirements for anti-money laundering (AML), know your customer (KYC) and data privacy. A review should also cover:

- any subsidiaries
- sources of funding
- the integrity and competence of management
- encryption quality
- access protocol
- cloud providers.

Virtual exchanges find it difficult to demonstrate the resident country of users, who may be exchanging virtual money into currencies outlawed by many economies. For this reason, several eastern countries have placed outright bans on virtual currencies. Regulators are still trying to establish a clear position on these currencies, and investment banks will want to keep abreast of developments.

### Beat them or join them?

Estimates suggest that by the end of 2014, 100,000 merchants globally will accept Bitcoin,<sup>2</sup> attracted by the rising demand, lower transaction fees and faster settlements. Although same-day payments have been established in markets such as the UK and Singapore, others – most notably the US – are still some way off, increasing the attraction of alternatives such as blockchain or consensus technology. By

developing its own network, an investment bank can bypass traditional trading channels and cut costs.

Virtual currencies are the latest in a long line of new payment systems including PayPal, Dwolla and Google, all of which are threatening to exclude banks from a territory they once owned. This could have a dramatic impact on the fees banks earn from processing transactions. The October 2014 launch of Apple Pay may, however, provide a lifeline. The new service, linked to a credit or debit card, is a step up from existing mobile payments, offering security and convenience, with nothing more than a tap of the iPhone required to make a purchase. With Visa, MasterCard and master acquirers signed up, banks are prepared to sacrifice a proportion of their usual margins to Apple in return for maintaining a stake in the payment network. Apple Pay's success will ultimately depend on stimulating higher volumes of transactions.

This development notwithstanding, retail and investment banks are still considering whether to integrate with the likes of Bitcoin or Ripple, or even to start virtual currencies of their own. Banks could use their ATM and branch networks to let customers buy and sell virtual money and make transfers through their online or mobile banking platforms. Virtual currency e-commerce and point-of-sale transactions could be extended to an expanding range of retailers while banks may consider tying existing card services and debit cards to a digital wallet (although the launch of Apple Pay may make this latter move unnecessary).

<sup>2</sup> Analysis – Bitcoin shows staying power as online merchants chase digital sparkle, Reuters, 28 August 2014



Mobile payments have been touted as the next big thing yet are still relatively cumbersome as consumers have to enter card or bank account information for both payer and payee, which is some way short of the dream of a 'one click' transaction. A digital currency, on the other hand, has the potential for an instant, end-to-end payment, with far less information to enter and no requirement for clearing.

The millennial generation has not grown up with banks, has little brand loyalty and already leans towards Google or PayPal and now Apple apps for its mobile wallets. Although a number of banks have embraced Apple Pay, they should also consider how use of digital currencies could return them to the forefront of the payments game.

Banks cannot afford to ignore this intriguing and fast-moving marketplace, nor can they leap in unprepared, given the potential volatility and lack of regulatory protection. Some form of bank-owned virtual currencies can be expected in

the near future, utilizing open-source technology to create fast, peer-to-peer payment systems that give consumers a quick and secure way to pay with just a single click. The Trans-European Automated Real-time Gross settlement Express Transfer System (TARGET2) in Europe has set the pace for standardized payments between investment banks. By leveraging virtual currency infrastructures such as Ripple, clearing and settlements could be decentralized, moving directly from one institution to another, speeding up transactions and reducing costs.

If they take off in a big way, Apple Pay or blockchain could be the next big thing. Alternatively, they might simply be a temporary lull in the virtual payment revolution. Either way, banks would be advised to keep in close touch with virtual currency developments. Victory in the battle for the digital wallet may not necessarily go the swiftest, but an over-cautious approach could leave banks trailing in the dust of early adopters. ■

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David Montes has 17 years of experience providing strategic insight and implementation support to large financial services companies, including initiatives focused on business, operations, and technology transformation.

## Pros and cons of virtual currencies for investment banks

### Pros:

- fast transaction speed
- low cost
- open source network enables new apps
- potential lower fraud risk due to personal details not being exchanged.

### Cons:

- anonymity leads to illicit use
- vulnerable to cyber attack
- volatile value due to lack of government or central bank backing
- lack of regulatory scrutiny could reduce acceptance in certain countries.



# Rethinking the finance offshoring model:

## Investment banks cast a critical eye on finance shared service centers to boost value and meet regulator demands

**Aris Kossoras**, KPMG in the UK  
**Andrew Tinney**, KPMG in Singapore

It has been more than a decade since the world's investment banks began experimenting with finance offshoring and outsourcing models to shave costs from their finance functions. These banks are now rethinking their finance shared service approaches, fueled by a desire to deliver greater business value and readiness for intensified regulator scrutiny.

Since the banks first began applying a range of finance shared service (FSS) models, opinions vary among finance executives as to whether FSS centers have produced the anticipated quality of outcomes. While some are bullish on the value these centers bring to finance and the wider organization, others

are resigned to the fact that FSSs are here to stay, but they must evolve the shared service structure as the banks bow to efficiency, standardization and compliance pressures.

We personally believe in a hybrid model to help banks maximize value and efficiency. The hybrid model involves process-aligned structures with regionally-dedicated teams within them, where ultimate accountability and ownership of output and quality stays onshore.

### Cost savings drove shared service expansion

Industry leaders agree that FSSs have been an effective strategy to reduce the overall

cost of finance. With estimates that costs to maintain typical global bank finance functions can exceed US\$1.3 billion per year with thousands of highly-paid staff domiciled in the world's financial capitals, it made sense to shift labor out of costly head office locations or consolidate duplicative functions in centralized facilities.

With the promise of average annual cost savings per full-time equivalent (FTE) ranging from US\$80,000-US\$196,000, en masse, the investment banks pursued the FSS model. Many established 'captive' FSS centers (maintaining in-house ownership of end-to-end processes). Others chose outsourced centers operated by third parties. Preferred locations ranged from



home country or regional hubs to popular, far-off FSS jurisdictions such as India, the Philippines, Singapore, Eastern Europe and Central America.

Witnessing the impressive cost reductions, ranging from 20-40 percent of their annual finance budgets, banks continued to push the model up the value chain, shifting focus from 'transactional' roles, like accounts payable, payroll and product accounting, to more 'core' duties, including financial and internal/management reporting.

A number of investment banks have now sourced (offshored/near-shored/outsourced) more than half of their finance functions, and some are targeting 70 percent within a few years. The enthusiasm for FSS has even driven some banks to consider offshoring complex or higher judgment finance responsibilities, such as budgeting, regulatory returns and capital management and reporting.

### Moving shared services up the value chain

In addition to pure salary arbitrage savings, the FSSs can help banks further lower operational costs. For example, by employing truly empowered global process ownership (GPO) organization and governance with end-to-end visibility, ownership of budgets, teams and infrastructure, they can perform comprehensive re-engineering programs to eliminate steps and integrate and automate processes to increase savings. This can potentially offset the risk of future offshore wage inflation.

And the argument for FSS goes beyond costs, since the banks are drawn to the ideal of optimizing business value from their finance units. By shifting non-core tasks offshore, they free up onshore capacity to deliver higher value analysis and advice for business line partners. They also recognize the potential scalability of a shared service model, enabling the bank to acquire new divisions and subsidiaries without a corresponding increase in finance costs.

### Results vary by shared service structure

The ability to harvest potential cost and value-related benefits often hinges on the

organizational FSS structure adopted and whether it is aligned by function, geography, or a combination of both.

On one extreme, some banks created a regionally-aligned structure, supported by pure team extension governance. They are structured along geographic regions or business units and day-to-day management is controlled by an onshore chief financial officer (CFO), center head or regional counterparts. This offers a high level of control and regional customization, but achieves fewer synergies or process efficiencies.

Although global process ownership can virtually operate with such structures, its effect is diminished since the power and control of the GPO over the end-to-end process across multiple locations is reduced. Such structures are often the preferred model for highly federated institutions where the regional CFO wants to unilaterally influence the operating model for the processes that serve their region.

At the other end of the spectrum, some banks opted for a process-aligned structure, organized by the processes delivered (such as accounting, reporting, etc.) and controlled FSS itself. The resources are easily substituted, but the regions have little

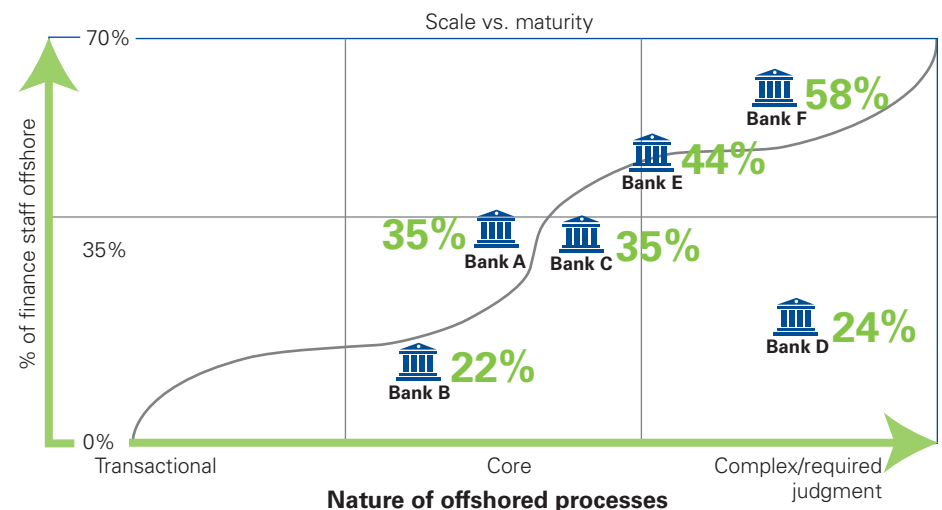
**A number of investment banks have now sourced (offshored/near-shored/outsourced) more than half of their finance functions, and some are targeting 70 percent within a few years.**

visibility as to who performs the work for them and issues of transparency persist.

Although this structure is prevalent in large captive FSSs, it is also suited to an outsource solution and a managed service governance. This set up works smoothly for non-core, highly transactional processes such as accounts payable and data processing prior to report production and analysis.

Between these two extremes, most banks are evolving to a hybrid structure. Here, shared services are often structured by process, with process owners, consistent standards and efficiencies, but with dedicated regional teams within those

**A 2014 benchmarking study by KPMG in the UK of six investment banks shows that they have transitioned a broader range of finance processes, from transactional to complex, to FSS centers.\***



\* Does not include accounts payable processes.

Source: KPMG benchmarking analysis 2014



functional/process groups to create an extended team feel and a one-team culture.

It is not unusual today for an investment bank to operate four or more center, but with different models at each center, co-existing across the bank's FSS center network. This

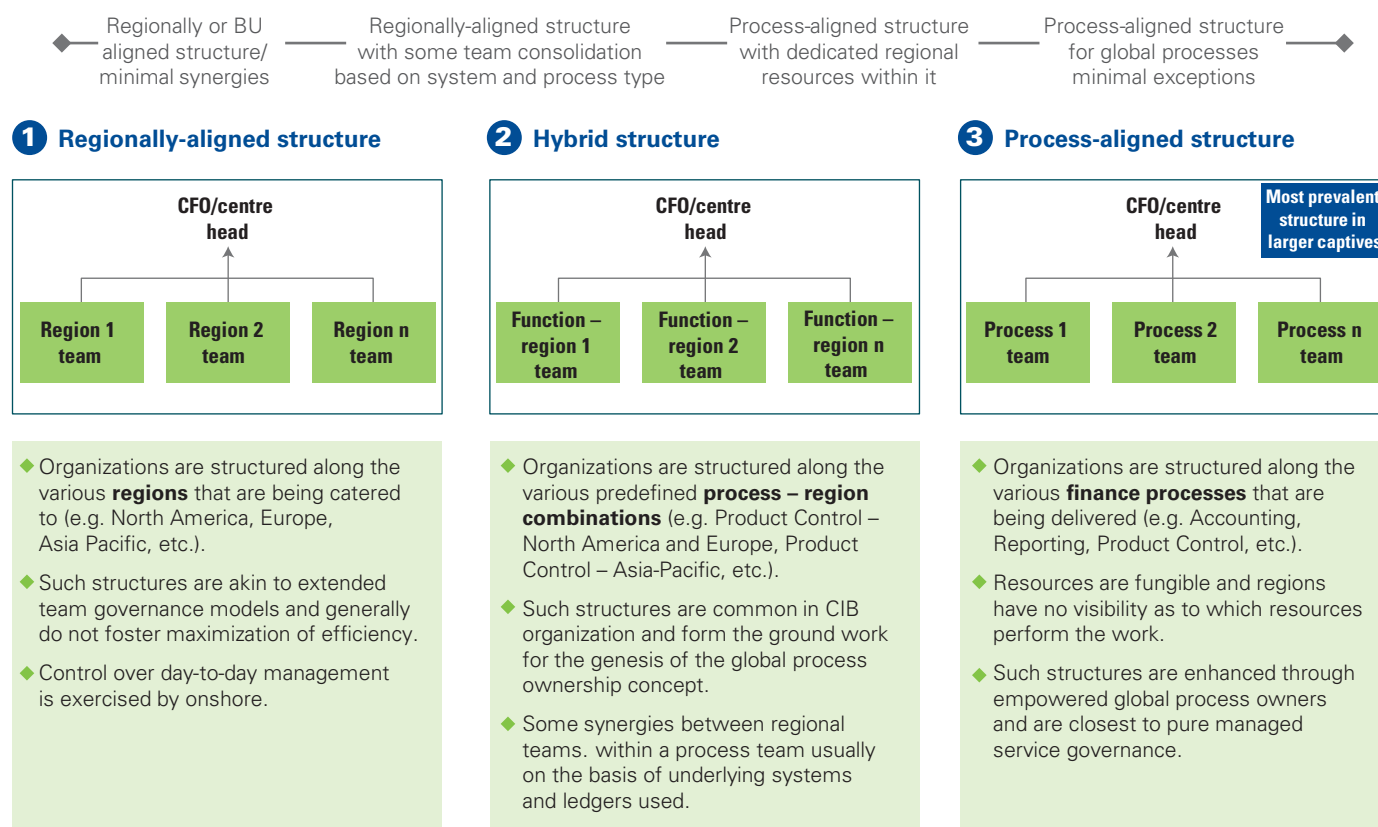
is seen as a major limitation and even an impediment to taking FSS to the next level.

Most banks are currently looking at ways to optimize their FSS network to operate as a single unit under central leadership. Global process owners are pivotal in making this

happen and they form one senior group with the heads of the different FSS hubs in the network. This new type of governance, with a senior head coordinating location strategy, seems to be the way forward in the new era of FSS global optimization.

**Between the regionally-aligned and process-aligned FSS structures, the hybrid FSS structure can provide advantages.**

### The spectrum of shared service models – organizational structure



### Beating challenges with hybrid shared service models

The hybrid organizational structure can help overcome recurring FSS challenges, particularly the banks' inability to maximize value and efficiency. Unfortunately, some FSS arrangements have bred a 'them versus us' perception that still separates onshore and offshore groups, hindering 'one finance team' cultures needed for true collaboration, transparency and performance optimization.

Breaking these barriers, and changing deeply embedded cultures and beliefs, is not easy. In addition, FSS deployment may harm a bank's ability to retain top

talent within its onshore finance function since employees may feel that there is no onshore career path for them.

The hybrid structure may enable a more united finance team culture, with more integrated workflows, improved communication and cooperation between teams, as well as improved morale and lower attrition among both onshore and offshore staff.

### Overcoming offshore regulator issues

The hybrid model may also help banks overcome today's stricter regulatory

regimes, which were not a dominant concern a decade ago.

Today, regulators in the UK, Europe and the US are concerned about the banks' oversight and transparency of their global enterprise, including adequate risk frameworks for third-party relationships. Supervisors expect that: banks maintain onshore accountability for offshore activities; bank management fully understands third-party risk; business continuity plans are in place for critical services and sourcing strategies deliver the best outcomes to local customers.

As a result, some banks have curtailed their plans to move higher-risk finance functions offshore and regulators are ready to pounce on compliance missteps by banks with significant offshore groups. Banks now face the challenge of demonstrating compliance without incurring new costs and organizational change that would dilute the benefits of FSS. The hybrid model may offer the necessary central control, aligned processes, governance and quality assurance, and those banks that show their commitment to adopting this model may appease anxious regulators.

In summary, investment banks' foray into finance shared services has reduced costs but not always reaped desired productivity gains due to uncoordinated growth, under-investment in people, culture and technology, and limited strategic planning and governance. By tinkering with current models – and giving careful consideration to a hybrid model – the banks can optimize their FSS networks and respond to emerging business and regulator demands. ■

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Aris Kossoras has more than 10 years of consulting experience in the financial services industry within finance. Aris has developed international exposure through a series of projects in the UK, Europe, Asia and North America. He has successfully designed and delivered major re-organization (integration/separation), right-shoring and process optimization solutions for finance. He is currently driving KPMG's global initiative for finance benchmarking in banking and leads efficient finance operations and GBS capabilities for financial services in the UK.

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Andrew Tinney has almost thirty years of experience in banking and capital markets and drove the finance transformation strategy for Deutsche Bank from 2004-09. This included building scale finance shared service centers in the Philippines and India and redesigning the onshore finance function for 57 countries. He focuses on delivering transformational change for financial institutions.

## Leading practices in shared service management

A study of the wide cross-section of investment bank finance shared services reveals several leading practices:

### 1. Build a clear operating model with a holistic view

Success depends on clarity of the operating model and building a cohesive location strategy to define capabilities that should be onshore, offshore or outsourced and the scope. Think holistically of current and future business strategy, skills availability, present and emerging risk and regulatory issues, etc. Do not add new FSS centers without first putting in place a single location strategy and target operating model across your FSS network.

### 2. Embed empowered global process ownership

To achieve maximum benefits and alignment, establish global process owners with the right powers. They require control of end-to-end processes, infrastructure teams and budgets at deployed and retained locations with clear reporting, performance agreements and relationships with both onshore regional/business unit (BU) finance leadership and FSS heads.

### 3. Develop a solid offshore risk management framework

In light of regulatory concerns, and recent high profile offshore business disruptions from natural disasters and political instability, a comprehensive risk framework is essential. It should encompass clear executive accountability for the location

strategy, a senior cross-functional governance body, and business continuity plans to ensure that mission-critical processes and functions can be assumed by onshore and offshore teams.

### 4. Invest in a 'one team' culture

Although cost reduction may be your focus, commit to significant, ongoing investment in building your people capability and enterprise-wide finance team culture. Provide training and re-training for onshore and offshore staff, integrated communications, leadership travel and senior offshore/onshore secondments. Do not use term 'customer' or 'customer relationship managers' in reference to internal stakeholders since it conflicts with the 'one team' aspiration.

### 5. Pursue process definition, refinement and automation

To achieve continuous improvement in a mature center or to move your FSSC network up the maturity curve, add process automation and technology. Focus on process definition of formal and informal finance activities to better systemize the collective knowledge of finance staff. Apply workflow tools and technologies to support process improvement, productivity and collaboration as well as enhanced transparency to satisfy regulators.



# Data:

## An integral driver in transforming the operating model

**Jim Suglia**, KPMG in the US

**Kalpana Ramakrishnan**, KPMG in the US

With the investment management industry at a critical stage, radical new operating models can give companies the agility to grow margins and manage costs, while keeping regulators happy.

Investment management profit margins are under attack from the combined forces of rising regulatory demands, increased competition, and fee pressure from lower-cost, passively managed funds. The emergence of a new breed of nimble, technology-savvy competitors is threatening the traditional hegemony of large firms, with a 2013 poll suggesting that 20-30 percent of today's asset management industry will disappear in the next decade.<sup>1</sup>

As the sector considers its response, big question marks linger over the main players' abilities to expand market share and improve operational efficiency. Most current operating models are outdated, unwieldy and fail to offer the agility to deliver innovation. Disparate information technology (IT) systems are a further cause for concern, being ill-equipped to support business decision-making, satisfy regulatory reporting, or integrate with joint venture partners or acquired organizations.

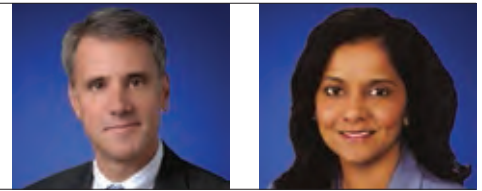
The gravity of the challenge is such that mere incremental change will not be enough, and this article outlines a number of steps that must be taken to achieve an efficient, cost-effective transformation that is built to scale.

### **Build a streamlined operating model aligned with business strategy**

A standardized, automated operating model increases efficiency, reduces risk, and provides a foundation for scaling up

<sup>1</sup> *Industry Insights: A snapshot of the key trends, issues and challenges facing the investment management industry*, KPMG, March 2013.





## Build a target operating model that aligns to the business strategy

1

Operations and technology should be highly automated, cost-effective, robust, and scalable.

2

Operations and technology should be extendable to other parts of the business.

3

Operating models should separate generic products from high-margin products.

4

Operating models should combine functions across products/services to eliminate silos.

5

Operating models should allow for potential joint ventures or consortia structures that combine in-house capabilities, processes, and functions.

internally and integrating with potential joint ventures or consortia. By separating generic products from high-margin products, account and customer service teams can focus on priority offerings. There are two broad routes to transformation: a product-centric model that speeds up the introduction of new products to market, or a process-centric approach that enhances processing.

**The data architecture strategy should be flexible enough to cope with new types of demands from management and regulators.**

## Manage the data supply chain and architecture

Despite having more data than ever from a growing range of internal and external sources, many asset management firms are unable to fully harness this information to benefit their businesses. The right insights can help to uncover new market opportunities, identify gaps in the portfolio or determine when to exit underperforming investment products. Accurate, comprehensive and timely access to data will enhance management decision-making, help satisfy regulatory requirements and flag risks for necessary remedial action.

Analytic tools are powerful aids, but can only succeed if the raw data is filtered, organized and stored efficiently, and

is easily accessible. Multiple systems are a big obstacle, with client details frequently held in different formats, making it hard to build up a complete view of a customer and compare products like-for-like. Something as apparently innocuous as the use of different names to describe customers, products or transactions can hinder the ability to conduct meaningful analysis. One solution is to appoint a data 'csar' to work across business units and liaise with the IT function and data vendors, to re-architect data using common definitions, and, crucially, provide information in real-time.

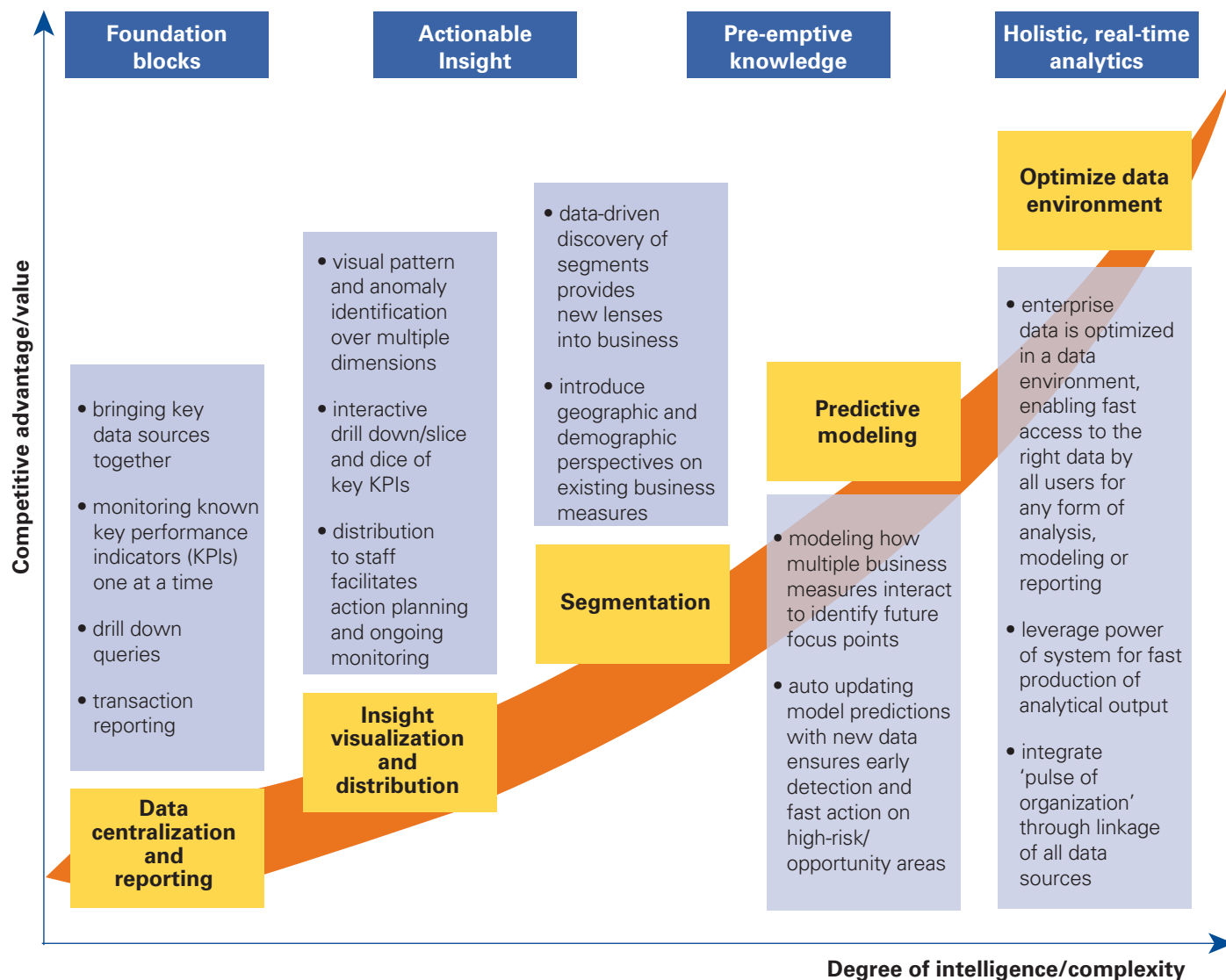
A comprehensive management information framework should cater to a variety of different needs. Simple, self-service tools allow quick and easy insights, while data analysts can also send out regular reports on topical business matters, as well as handling specific requests for more sophisticated analysis. At the technical end of the scale, a small group of specialists can carry out more speculative, investigative research into megatrends to unearth new ideas for products and prepare for future risks.

The longer-term data architecture strategy should cater for these different uses and be flexible enough to cope with new types of demands from management and regulators.

## Move up the analytic maturity curve

Although not a linear process, the path to analytic maturity tends to begin with centralized, standardized data storage and reporting, to process and harmonize internal data with that of third parties. Investment management companies then have a foundation for advanced analysis to compare different products, people and customers.

## The data analytics maturity curve



Moving up the curve, predictive modeling involves scenarios such as new competitors, economic volatility, talent scarcity, falling prices and regulatory change to assess the impact on the business.

Segmentation, whether geographic, demographic or financial, gives new perspectives and helps sales and marketing teams tailor products and services towards defined groups. Moving up the curve, predictive modeling involves scenarios such as new competitors, economic volatility, talent scarcity, falling prices, and regulatory change, to assess the impact on the business. At the highest level of maturity, companies reach an optimized state where users are able to access data

in real-time in the format they desire, to spot new opportunities and protect against adverse events.

In one recent case, an investment management firm experienced a rapid fall in redemptions, and wanted to know whether this trend was likely to continue and how it would affect the bottom line. Its analysts processed multiple data sources to produce a single view of customers, and built a predictive model

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## Four questions about your operating model

1. Where does your organization sit on the analytic maturity curve?
2. Can you easily scale up your operating model?
3. Is all data in a common format?
4. How automated are your internal processes?

that forecast which members were most likely to exit. Armed with this knowledge, the marketing team was able to devise appropriate, targeted retention strategies. Other companies have used similar models to address various challenges.

### Embrace the power of visualization

Senior managers often despair of being handed huge spreadsheets with thousands of pieces of data, when what they really want is a simple story that explains why profits have fallen or risen, trends in customer purchasing behavior, or performance comparisons with competitors. Incorporating compelling visualization into presentations can make a huge difference to an audience's understanding, cutting through complexity to alert readers to salient points.

### Becoming masters of change – not victims

A host of growth opportunities beckon in the form of alternative investments, retirement plans and wealth management, as well as developing markets in Asia and Latin America. Asset management firms must develop the agility to seize these openings, while coping with new regulations and increased investor demands for due diligence and reporting.

As the business model changes, so the operating model should evolve concurrently, to help firms adapt more swiftly to a changing environment. Data plays a central role in this evolution, making the unpredictable more predictable, providing a base from which to diversify, grow margins and expand geographically. ■

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# Cyber insurance: A market matures

**Stephen Bonner**, KPMG in the UK

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## What is cyber insurance?

Cyber insurance refers to a broad range of insurance products designed to cover operational risks affecting confidentiality, availability or integrity of information and technology assets. Cyber insurance products can include coverage for various risks including data breach, cyber extortion, identity theft, disclosure of sensitive information, business interruption, network security, and breach notification and remediation.

**T**he cyber insurance market is booming. Many suggest that it will be the biggest growth market for insurers over the coming years. But insurance organizations will need to become much more sophisticated in their approach to assessing and managing cyber risk if they hope to turn the opportunity into a strong and sustainable line of business.

## A growth market emerges

Cyber insurance is clearly on the verge of becoming a very big market for insurers. The *New York Times* calls cyber insurance “the fastest-growing niche in the industry today<sup>1</sup>.” According to one recent report,<sup>2</sup> demand for cyber products increased by 21 percent in 2013, led predominantly by financial institutions seeking to better transfer their cyber risk.

Most pundits predict these growth trends will continue for the medium-term. In part, demand is being driven by regulatory pressures in the US where many states are

Demand  
for cyber  
products  
increased by

**21%** in 2013<sup>2</sup>

now starting to adopt fairly rigorous breach notification laws. This, in turn, has catalyzed European regulators into promulgating their own notification legislation that will require all firms to notify individuals if their personal data is breached.

With regulation driving increased transparency into the frequency and scope of data breaches and

<sup>1</sup> *Cyberattack Insurance a Challenge for Business*, New York Times, June 8, 2014

<sup>2</sup> *Benchmarking Trends: Interest in Cyber Insurance Continues to Climb*, Marsh Risk Management Research, 2014

**Contacts (from left)**

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## Seizing the competitive advantage

If the cyber insurance market is to properly mature and effectively transfer risk, insurers (and any eventual re-insurers) will need to become much more sophisticated in their approach to assessing and managing cyber risk. Those that hope to achieve first-mover advantage will want to focus on three, somewhat interrelated, areas:

### 1. Security assessment and monitoring

In order to properly quantify the risks they are underwriting, insurers will need to improve their ability to conduct appropriate security assessments on their customers in a way that helps them better understand the protections in place and, therefore, the likelihood of having to pay out a claim.

The challenge, however, will be in balancing the rigor of the assessment against the capabilities (or resources) of the customer. Set the bar too high and potential customers will look for other ways of transferring or mitigating cyber risk. Set the bar too low and insurers will be left taking on unquantified risks. Overly intrusive or complex assessments are also likely to discourage potential new customers.

Insurers will want to move quickly to create a stronger capability for conducting security assessments and monitoring. The reality is that the more assessments insurers conduct, the better their insight will be into what 'good' cyber security looks like for certain segments and industry verticals. Those able to start collecting and using this data early will almost certainly achieve a significant first-mover advantage.

### 2. Data management and analytics

Given the speed at which the threats – and therefore the levels of protection – change within the cyber arena, insurers will need to become much better and much faster at managing and analyzing their data in order to better inform their pricing and risk models.

Armed with detailed information taken from their security assessments, insurers could, for example, start to overlay claims information to more precisely quantify how much protection each security method or tool provides. This would, in turn, stimulate a better understanding of cyber risk and create new approaches for quantifying the value of security. Were insurers to add real-time data on specific threats that may be circulating, they could also become more proactive at managing their risks and reducing the potential for 'systemic' attacks that could result in masses of multiple claims being submitted simultaneously.

Indeed, we believe that, in the not-too-distant future, insurers may well become hubs of security intelligence, leveraging their data and analytics capabilities to provide early-warning information and tracking to not only their customers, but also to third parties involved in cyber security management. Whether there is a business model that would allow this data to be monetized by insurers without regulatory challenge remains to be seen.

### 3. Product development and innovation

What is clear about the future cyber insurance market is that product innovation will be key. Already, some of the industry leaders are creating and adopting new approaches to ultimately deliver better value to customers and simultaneously reduce risk.

Chubb, for example, offers some customers a form of no-loss deductible on some cyber policies where, if no claims are made in a given year, part of the deductible is returned to the customer in order to be used on enhancing their level of security.

Looking ahead, insurers are likely to start offering a much broader scope of services to support their cyber insurance customers. It would not be that difficult, for instance, for insurers to leverage their new-found and sharply-honed cyber capabilities to provide risk assessment, forensic investigation and breach investigation services to their customers. Teaming up with intelligence organizations to proactively disrupt hacking syndicates could also deliver value-added benefits to customers.

The bottom line is that insurers will need to start thinking more broadly about how they develop and structure their products if they want to succeed in the evolving cyber insurance market. Not only to stay ahead of the competition, but also ahead of the threat.

cyber-attacks, at the same time, consumer expectations for notification have also risen and are adding new pressures onto organizations faced with managing a breach. Not surprisingly, demand for products that (among other things) cover the management and costs of notification processes is on the rise.

The cyber insurance market also seems ripe for continued organic growth. Indeed, as organizations become increasingly reliant on data and more and more of their business is conducted over digital channels, it is reasonable to assume that they will start to place increasing value on protecting that data and those channels. This, in turn, will catalyze organizations to seek ever-higher levels of coverage from their insurers to cover greater risks.

Increase  
in premiums  
paid for cyber  
insurance  
**50%** in 2013



Given that few insurers today are willing to underwrite more than US\$100 million in cyber policies for any one organization, this should result in increased business across the board.

Demand is also being driven by a number of very high-profile and costly breaches over the past few years. Sony reportedly spent hundreds of millions of dollars to clean up after its breach in 2011. Target's 2013 data breach was still adding costs months after the incident occurred (US\$148 million in the second quarter of 2014 alone<sup>3</sup>). Both organizations continue to face consumer litigation related to the breaches. As with any business risk, insurance plays a key role in managing some of these costs and impacts.

## Growing pains

While the cyber insurance market may only now be taking off, many insurance organizations have, in fact, been writing cyber policies for more than a decade. Big name players such as AIG, Chubb and Allianz are already very active in the market, as are smaller regional and national insurance players.

Uptake of new cyber products is also on the rise. According to one market survey, the total premiums paid for cyber insurance in the US market alone was close to US\$2 billion, a jump of more than 50 percent over 2013.<sup>4</sup> And while the market outside of the US has been much slower to develop (research by Marsh suggests that a quarter

of European corporations do not even know that cyber insurance exists<sup>5</sup>), there is evidence that growth will pick up speed as the risks increase and regulatory penalties start being meted out.

The challenge for any fast-growing and emerging market segments, however, is that it often takes insurers some time to fully understand the unique risks and challenges that they are taking on. And nowhere is this more the case than in cyber insurance.

In part, this is because the threat risk is continuously changing. As noted in an April article in *Frontiers in Finance*, the cast of ne'er-do-wells seeking to wreck cyber havoc (particularly on financial institutions and insurers) is long and varied and their tool-kit is vast and rapidly-evolving. When compared to the rather defined and well-understood risks involved in underwriting an auto policy, for example, the complexity of cyber insurance is mind-blowing.

How, for instance, will reputational and brand damage due to data breaches be valued and compensated? According to the *New York Times* article, Target's profit fell 46 percent in the period following their data breach. As the publication points out, "the loss to the brand is essentially unmeasurable." Once you overlay understandable concerns around the moral hazard associated with information asymmetry, the task of calculating exactly

<sup>3</sup> Target Q2 2014 Press Release ([http://investors.target.com/phoenix.zhtml?c=65828&p=irol-newsArticle\\_Print&ID=1955266&highlight](http://investors.target.com/phoenix.zhtml?c=65828&p=irol-newsArticle_Print&ID=1955266&highlight))

<sup>4</sup> The Betterley Report, Cyber/Privacy Insurance Market Survey 2014, June 2014

<sup>5</sup> Cyber Risk Survey 2013, Marsh (2013)



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what proportion of that loss was due to the data breach would bring nothing but headaches for actuaries.

The underlying problem is that few insurance organizations have a clear understanding of what 'good' cyber security looks like for their customers and are therefore unable to assess whether their customers are taking the right precautions to properly manage their risks. Some cyber insurance products can be purchased today without the need for even a high-level risk assessment. Clearly, the insurance industry will need to drive towards

standards if they hope to remove the moral hazard concerns inherent in this market.

While insurers may still be struggling to understand the market, evidence suggests that the purchasers of cyber policies are no better informed. Generally speaking, few organizations truly understand what their cyber policies cover and in what circumstances. Many organizations still (wrongly) believe that their general property and liability policies will provide them with protection from cyber risk damages. ■

### Heavy lifting ahead

KPMG firms are strong advocates of the cyber insurance market and firmly believe that insurers will play a key role in helping companies and individuals secure their most valuable data and information. But we also firmly believe that the sector will need to work hard to achieve the level of sophistication that the market now demands.

Those that are able to get ahead of the competition by creating compelling product offerings that properly manage risk will ultimately ride the wave of this rapidly-maturing market. Those that cannot may face a rather rocky and painful road ahead.

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# Who is in control: You or your data?

**Prabhakar Jayade**, KPMG in the US  
**Bill Cline**, KPMG in the US

It should come as no surprise that data is now considered the number 1 asset at financial services organizations. Yet most organizations continue to be slaves to their data – pouring vast amounts of resources and labor into structuring and managing an ever-growing volume of information and systems.

A small few, however, have started to rise above the complexity to become true masters of their data and, in doing so, have created a significant competitive advantage in their markets.

Increase in  
data year-  
over-year  
**40%** (projected  
year-over-year increase  
in the quantity of data  
available to businesses)

## The data deluge

Let's face it: data underpins virtually every aspect of the financial services sector. Whether it is regulatory reporting, client onboarding, risk management or profit and loss forecasting, all enterprise processes and activities are reliant on data. No wonder, then, that financial services executives have become increasingly focused on their data management and infrastructure.

Unfortunately, many are fighting an uphill battle. According to most estimates, the quantity of data available to businesses is on track to increase by around 40 percent every year for the foreseeable future. In financial services, a large percentage of this increase has been driven by increased regulatory requirements. At the same time, the growing complexity of financial services organizations combined with the increasing regulatory reporting burden



in most jurisdictions, has only ratcheted up the pressure for organizations to gain greater control and visibility into their data.

### Spending lots but getting nowhere

Our experience suggests that few financial services organizations today – large or small – are getting even a fraction of the potential value they could be from their data. Quite the opposite, in fact; many executives that we talk to suggest they are pouring exponentially more resources into data-related activities than ever before, but getting only meager returns for their investment.

In large part, this is because most financial services organizations are still too overly-reliant on manual processes and interventions when it comes to collecting, processing and analyzing data. This is especially true in the area of compliance, where actionable data tends to sit in unstructured form and across a myriad of data sources and systems not sufficiently integrated. And, as a result, many are finding that the increased demand for data skills and services is driving a correlated increase in costs and headcount. They are also finding that throwing more bodies at the problem does nothing to reduce error rates or improve data quality.

### Letting value slip away

The cost impact of increased manual activities has, not surprisingly, led most financial services organizations to focus their resources only on the data that offers immediate value. In doing so, they are leaving masses of potentially useful data behind.

Consider this: while a typical International Swaps and Derivatives Association (ISDA) Master Agreement for trade activity tends to contain between 500 and 700 possible data reference elements, most investment banks only capture between 100 and 200 data points. What

this means is that every time there is an adverse event in the market (say a debt downgrade or change in capital ratios, many of these organizations will need to go back to the source contract to identify and then manually pull the data they need to reassess their exposure, an expensive and time-consuming proposition, indeed.

**The cost impact of increased manual activities has, not surprisingly, led most financial services organizations to focus their resources only on the data that offers immediate value. In doing so, they are leaving masses of potentially useful data behind.**

### Data, data everywhere...

Another reason financial services institutions are fighting an uphill battle is that few – if any – are able to achieve a ‘single view’ of their data across their organization. In part, this is due to decades of consolidation, mergers and regulatory-driven separations which have left most financial services organizations with a mess of internal systems and data management processes. And, as a result, most financial services organizations are now finding that their data is fractured and stuck in silos, inaccessible to the rest of the organization.

Data governance, therefore, is also a massive obstacle, particularly within larger, more complex organizations. Thankfully, the past decade has seen this issue rise up the boardroom agenda

to the point where we are seeing the emergence of a new corporate role – the chief data officer (CDO) – typically charged with creating an enterprise-wide data strategy, standards and policies. The CDO is expected to be the data champion to align and operationalize this strategy across the organization, taking into account country-specific business and regulatory requirements for those that are operating in more than one jurisdiction. Yet much more must be done. Few CDOs have the necessary power to force lines of business into sharing their data and, as a result, data continues to be highly fragmented and difficult to access and work with.

Across the sector, the response to this challenge has been to centralize more and more data into (often outsourced) data warehouses. While the centralization of data is certainly key to improving access and data flexibility, the reality is that this is a massive and continuous undertaking that requires organizations to know exactly how they expect to use their data 5 to 10 years in the future. Given the pace of regulatory change and the new innovations only now emerging from new analytics approaches, it would be near impossible for organizations to know what they will need from their data in the future.

**Yet much more must be done. Few CDOs have the necessary power to force lines of business into sharing their data and, as a result, data continues to be highly fragmented and difficult to access and work with.**



Ultimately, this should allow organizations to leverage all of their data, no matter where in the organization (or outside of it) the data resides or originated.

### **The pressure mounts**

Everybody knows that the status quo must change. The simple truth is that regulators and watchdogs are starting to demand better and higher quality reporting from financial institutions, often within much tighter timelines. Some regulators have gone beyond simply reviewing the quality of data in submitted reports and are now starting to circulate rules for how data should be handled with the organization. Those able to get ahead of the regulator's scrutiny by creating and implementing a transparent and effective approach to data management will surely be better placed to meet shifting regulatory requirements in the future.

Most financial institutions also recognize that they can no longer continue to throw money and resources into fighting a losing battle. So while there is broad recognition that the rigors of requirements such as know your customer (KYC), anti-money laundering (AML) and Foreign Account Tax Compliance Act (FATCA) are only going to increase with time, most also recognize that

the root problem can never be solved just by adding more people or outsourcing more work. Something must change.

### **A new approach emerges**

We believe that the opportunity is already here. Over the past year or so, a new approach to data management and control has emerged that allows organizations to truly become masters of their data.

The idea is actually quite simple: rather than tagging and locking away mountains of data into different systems, organizations are instead starting to use big data technology that can 'crawl' through masses of both structured and unstructured data (such as written contracts, media reports, transactions or market data) right across the organization to process and pull only the information required – regardless of the format.

Ultimately, this should allow organizations to leverage all of their data, no matter where in the organization (or outside of it) the data resides or originated. Moreover, it also allows real-time access, meaning that organizations always have the most recent data available.

The benefits should be clear. Risk and finance would not disagree on financial results (as both would now be pulling from the same root data sets at the same time). A financial services organization would not struggle to quantify its exposure to certain risks. And operations would not need to

expand headcount or increase spending to respond to regulatory reporting requirements.

Though the current regulatory agenda is pre-occupying an outsized portion of financial institutions focus and resources, in due time this will be backward-looking. Those with a more innovative and competitive view will also recognize the massive upside available to those that are able to master their data in this way. Already, some are starting to use predictive analytics in their operations to reduce trading risk and improve customer interactions. Others are quickly identifying and measuring key lead indicators, uncovering new opportunities to grow their business and portfolios. And many are using this approach to cut across various regulatory reporting requirements by leveraging common data and policies.

### **Improving results and reducing costs**

KPMG's proprietary data solution, for example, leverages big data approaches and KPMG's unique insight and business acumen to offer companies a clear roadmap to lowering costs while realizing improvements that meet regulatory and compliance challenges, and support operational efficiencies.

This new solution platform is unlike other regulatory tools because it operates across multiple regulations,

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meaning that common data and pre-defined regulatory policies, developed in collaboration with KPMG's functional and regulatory subject matter experts, can be leveraged across client data to unleash the inherent cross-regulatory and cross-industry economies of scale in a way disassociated tools and workflow alone cannot. Today's technology allows organizations to combine data aggregation and search, intelligent data extraction, policy automation and efficient workflow processes with a speed, accuracy, completeness and unit price that would not have been possible just a few years ago.

When applied to areas such as client onboarding (a process that costs most tier 1 banks between US\$50 million and US\$70 million per year), we can help organizations deliver a more complete,

**Most importantly, financial services organizations need to recognize that the environment has changed and that doing more of 'the same' will be unsustainable over the long term.**

accurate and cost-effective review process, improve the quality of their data and reporting, and reduce the costs of ongoing operations, maintenance and infrastructure.

### **Time for change**

However, we also recognize that no business challenge can be solved by technology alone. Indeed, for financial services organizations to become true masters of their data, they will also need to put significant focus on changing the organizational culture, governance, processes and structure in a way that encourages data-driven decision-making and the sharing of data, not just for satisfying today's regulatory demands, but to position the organization for the future.

Most importantly, financial services organizations need to recognize that the environment has changed and that doing more of the same will be unsustainable over the long term. Those that are willing and able to take a new approach will rise above the fray to become true data masters. Those that cannot will ultimately find their costs – and complexity – choking their growth.

Clearly, it is time for a new approach. ■

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# Stress testing and the asset quality review:

## An opportunity to underpin longer-term profitability

**Stephen Smith**, KPMG in the UK

**Daniel A. Quinten**, KPMG in Germany

**Francisco Fernandez**, KPMG in Spain

**T**he European Central Bank recently finalized the results of its year-long scrutiny of Europe's banks, before taking over responsibility for their supervision in November 2014. For a number of reasons, the immediate impacts for most of the banks concerned are unlikely to be particularly traumatic; 25 of the 130 largest banks were found to need additional capital, but half of these have already taken the necessary steps to strengthen their balance sheets. However, these stress tests are now part of a continuing process of oversight, not only in the Eurozone but in the UK, USA and elsewhere. Banks are now beginning to ponder the longer-term implications.

### The challenge of European banking supervision

The financial crisis dramatically emphasized the need for stronger regulation of the financial sector, and in particular for better supervision and oversight of the largest banks; the last five years have seen continual regulatory initiatives to this end. In Europe, the challenge has been magnified by continuing sovereign debt crises, reflecting

deep structural inconsistencies between Eurozone economies and emphasizing the potentially vicious circle between sovereign states and their banks within a single currency union. To address the supervisory deficit, and restore confidence and stability, the European Council determined in 2012 to move to a full banking union within the Eurozone.<sup>1</sup>

A key component of the banking union is the creation of a single supervisory mechanism, in which the European Central Bank (ECB) will assume responsibility for all banks in the Eurozone (approximately 6,000). Although national competent authorities (NCAs) will continue to carry out day-to-day supervision of medium-sized and smaller banks, the ECB will directly supervise all banks with assets of more than €30 billion or which are otherwise seen as systemically important – around 130 institutions, constituting about 85 percent of Eurozone banking assets. Before taking over these responsibilities in November 2014, the ECB was required to undertake a Comprehensive Assessment, including a balance-sheet asset quality review (AQR) as at 31 December 2013, of the resilience and stability of the relevant institutions.<sup>2</sup>

Ultra-low interest rates and comparative stability have allowed collateral values to improve and enabled some rebuilding of banks' defenses against impairment.

Market conditions have become more favorable in the last year or two. Ultra-low interest rates and comparative stability have allowed collateral values to improve and enabled some rebuilding of banks' defenses against impairment. Most banks had already raised additional capital in anticipation of the AQR results (although mutual companies remain more exposed). Thanks to careful management of expectations and prudent anticipatory measures, therefore, the direct impact of the Comprehensive Assessment is limited to a relatively small number of banks. Nevertheless, it is likely to have wider and more long-lasting consequences. And it also offers banks some significant opportunities.

<sup>1</sup> EUCO 76/12, European Council Conclusions, and Euro Area Summit Statement, Brussels, 29 June 2012

<sup>2</sup> Council regulation 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions



#### Contacts (from left)

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## Rebuilding confidence

The objectives of the comprehensive assessment were three-fold:

- *transparency* – to enhance the quality of information available on the condition of banks
- *repair* – to identify and implement necessary corrective actions, if and where needed
- *confidence-building* – to assure all stakeholders that banks are fundamentally sound and trustworthy.

There were three components:

- supervisory risk assessment, to review key risks, including liquidity, leverage and funding

- AQR, to enhance the transparency of bank exposures by reviewing the quality of banks' assets, including data quality, asset valuations, classification of non-performing exposures, collateral valuation and provisions
- stress testing to examine the resilience of banks' balance sheets.

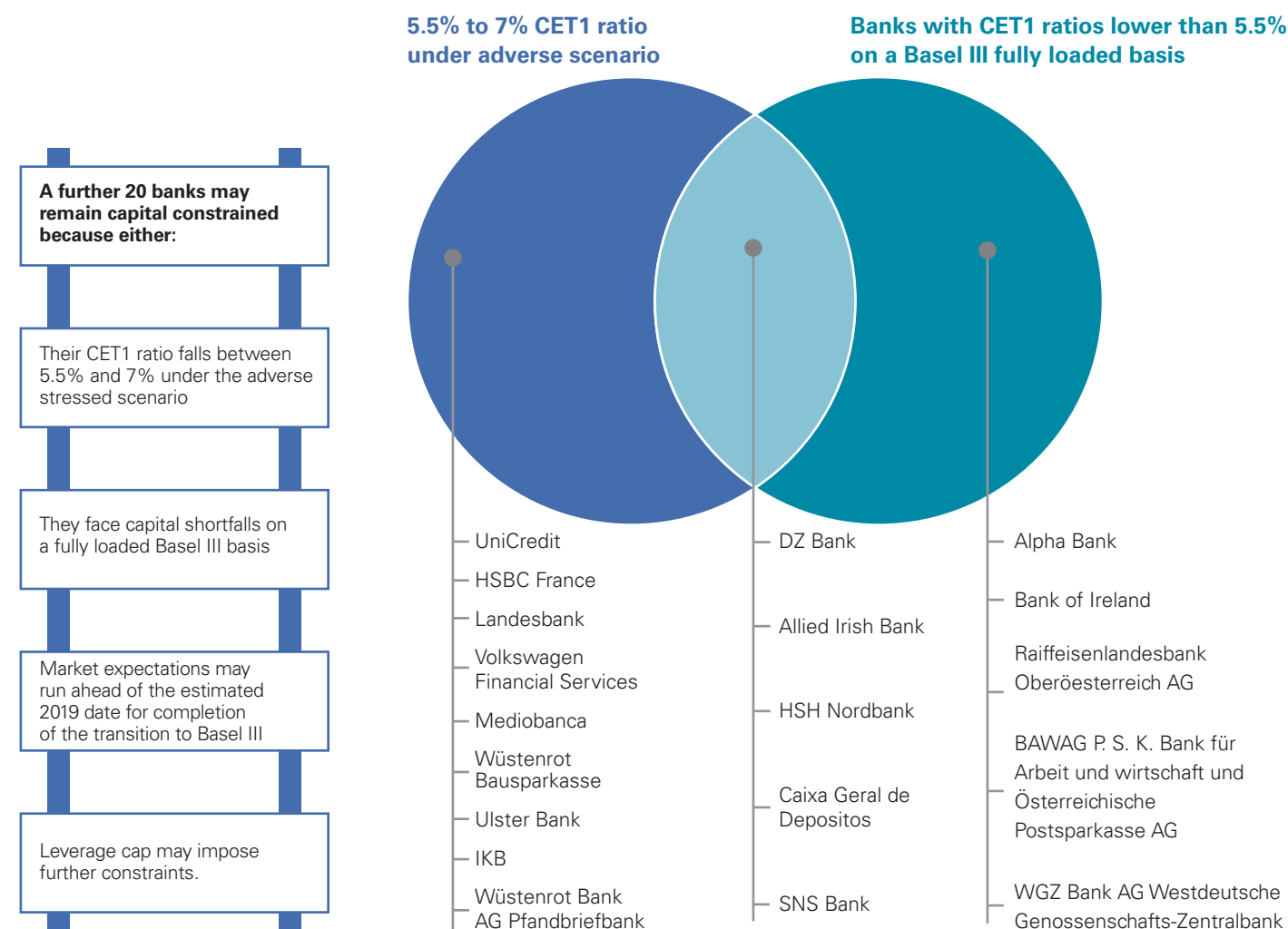
The formal results concluded that:

- there was a capital shortfall of €25 billion at 25 participant banks
- banks' asset values needed to be adjusted by €48 billion
- an additional €136 billion was found in non-performing exposures

- the adverse stress scenario would deplete banks' capital by €263 billion, reducing median common equity tier 1 (CET1) ratio by 4 percentage points from 12.4 percent to 8.3 percent.<sup>3</sup>

However, as the Daily Telegraph in London commented: "the number of banks was far fewer and the amount needed to be raised far less once capital measures in 2014 were taken into account."<sup>4</sup>

Those banks needing to take further action will have to submit plans to cover the shortfalls within a six-nine month time period.



Source: KPMG analysis 2014

<sup>3</sup> ECB Press Release, ECB's in-depth review shows banks need to take further action, 26 October 2014

<sup>4</sup> Passing ECB stress tests is just the beginning for Europe's lenders, Daily Telegraph, London, 26 October 2014

## Avoiding destabilization

From their interactions with the ECB and NCAs during the process, the great majority of banks had a good idea of the likely outcome, and were already taking the necessary steps to respond. Indeed, stimulating early remedial action and avoiding major destabilization was certainly one of the ECB's priorities from the beginning.

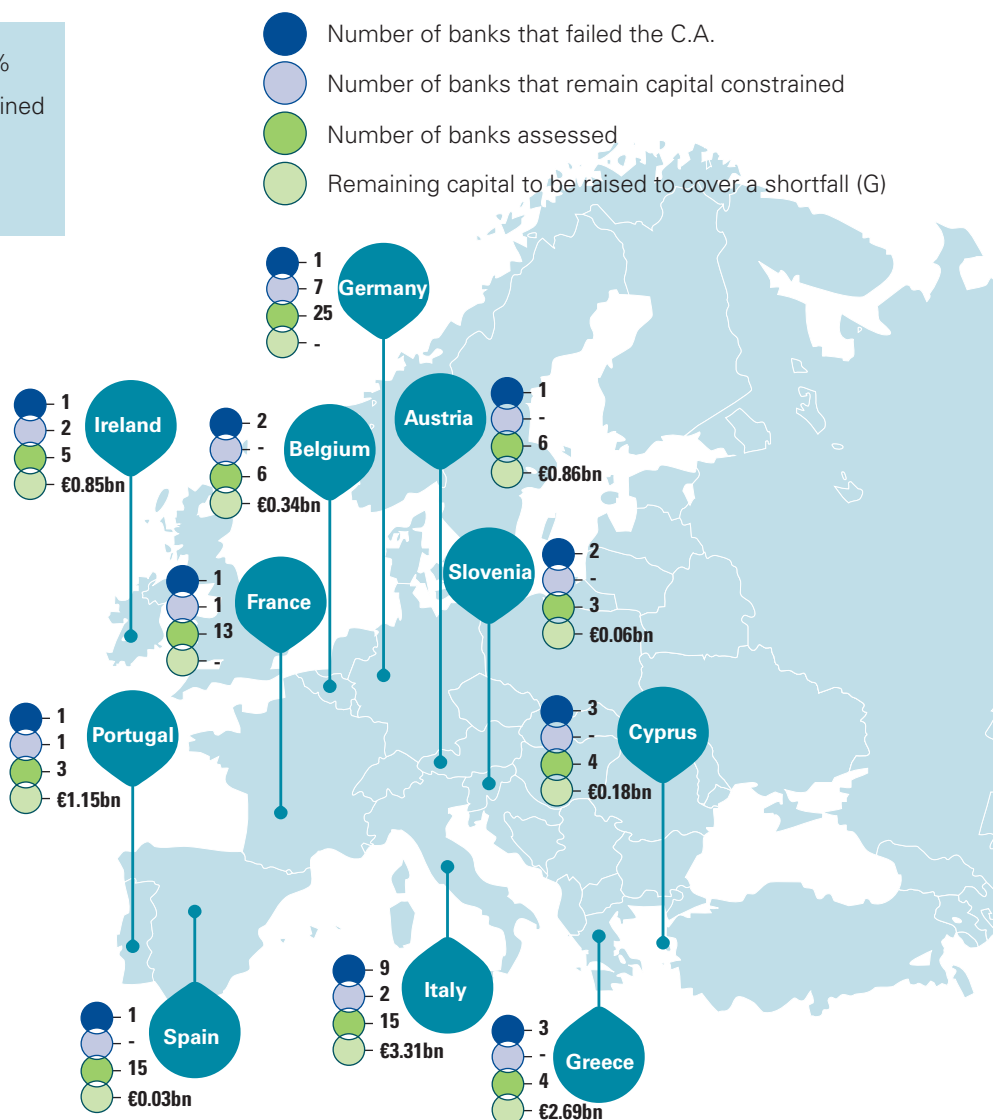
Even before the assessment began, the ECB noted that, since the onset of the financial crisis, Eurozone banks had raised

around €225 billion of additional capital, with a further €275 billion having been injected by governments, and both further capital raising and balance sheet restructuring continued throughout the process. As we have seen, market conditions have been relatively benign: according to Reuters, the ECB has said that Eurozone banks have increased their capital by a further €198 billion euros since July 2013.<sup>5</sup>

Goldman Sachs estimates that European banks have raised almost €47 billion of alternative tier one capital since last

October. More recent examples include the €2.25 billion rights issue launched by Millennium BCP, Portugal's second-largest lender, and the €5 billion rights issue completed by Monte dei Paschi di Siena, Italy's third-largest bank. On the other side of the balance sheet, according to the European Banking Authority, banks are expected to sell a record €80 billion of non-core loans in 2014, up from €64 billion last year.<sup>6</sup> Lenders are also selling subsidiaries, such as UniCredit's flotation of Fineco, Italy's leading online bank, with a valuation of €2.2 billion.

## AQR outcomes



Source: KPMG analysis 2014

Note: not all countries are shown on this map.

<sup>5</sup> Reuters, Analysis – Will Europe's banking 'big bang' loosen lending?, 4 August 2014

<sup>6</sup> Risk Assessment of the European Banking System, EBA, Luxembourg, June 2014

Overall, these measures should ensure that the Eurozone will avoid any sudden adverse impacts on credit or liquidity as a direct result of the Comprehensive Assessment process.

The package of measures announced by the ECB in June to improve the flow of credit and to support lending to the 'real economy', in particular in Southern Europe, came into effect this past autumn. The ECB's July quarterly lending survey reported that credit standards on loans to enterprises were eased in net terms in the three months to June, for the first time since mid-2007.<sup>7</sup> The ECB also remains on guard to offset any downturn in market sentiment. Overall, these measures should ensure that the Eurozone will avoid any sudden adverse impacts on credit or liquidity as a direct result of the Comprehensive Assessment process. Indeed, market reaction in the weeks immediately following the publication of the ECB results was muted.

### Longer term: a model for continuing scrutiny

Stress testing in the European banking context is not new. The Committee of European Banking Supervisors (whose responsibilities passed to the European Banking Authority on 1 January 2011) carried out stress testing exercises in 2009, 2010 and 2011. But while these were progressively more detailed and broader in scope, they differed from the recent exercise in a number of ways. The results were published only in aggregate form; responsibility for follow-up action rested with NCAs; and most significantly, the stress tests were not underpinned by the detailed analysis of balance sheet quality which underpinned the latest AQR.

It is likely, then, that building on the experience of the current assessment, stress testing combined with an AQR process will form a continuing element in the supervisory framework indefinitely. We can envisage it being employed on a regular basis perhaps every two years. The current exercise will form a core model for future exercises. In addition, the process and outcomes are likely to be studied by other banking supervisors – within Europe but outside the Eurozone, and in other jurisdictions – to learn lessons and to inform other, similar, developments.

### Addressing long-term profitability

The Comprehensive Assessment should improve market confidence in the stability of sound, well-capitalized banks by providing an implicit seal of approval from the ECB, laying to rest for the time being lingering concerns. According to Reuters, three quarters of investors surveyed early in September said they expected the exercise to be positive for bank valuations, with banks set to "outperform" the broader equities market once the results are announced.<sup>8</sup>

This is important, because it will give banks a chance to turn their attention to the more intractable issue of long-term profitability. Structural returns in the industry remain low, a situation exacerbated by low interest rates, elevated costs and insufficient capital allocation pooling performing assets, all compounded by additional capital requirements. Assuming relatively stable conditions continue, European banks should have a window of opportunity, underpinned by improved investor sentiment, to develop long-term strategies for restructuring, cost reduction, improved capital allocation and balance sheet optimization. These challenges are fundamentally more pressing. Now that the AQR is out of the way, banks should be able to address them with renewed vigor. ■

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Daniel Quinten advises banks in all kinds of supervisory law questions, including Pillar 1 and Pillar 2 requirements and regulations aiming at structural changes such as Recovery and Resolution or Liikanen Style requirements. He was supervisor responsible for negotiating the post crisis regulation on an international and European level as well as transposing such rules into national laws.

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<sup>7</sup> Reuters, ECB bank review will need large capital demand to be credible – survey, 3 September 2014

<sup>8</sup> Reuters, ECB bank review will need large capital demand to be credible – survey, 3 September 2014





# Taking the legacy system leap:

## Why legacy system projects often fail to deliver

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It is a perplexing question: Banks and insurers appreciate the critical role of technology in their future success – and they have considerable internal and external resources at their disposal – but why do many legacy system renewal projects achieve mixed results or fail to get off the ground?

Although there is no single answer, clues may be found in the two solitudes that endure between business and information technology (IT) functions focus. At the

same time, Leadership's struggle to place priority focus on the long-term benefits of technology transformation, and simultaneously balance the contradictory combination of risk-averse corporate cultures and enthusiasm for large-scale/high risk initiatives.

### Mixed results to a long-standing challenge

It's no mystery how the financial sector accumulated a massive inventory of business-critical legacy systems.

As early adopters of computer and data processing systems, banks and insurers embedded many 'leading edge' technologies into their core business functions over the past 50 years.

They continued to tack-on newer, inter-dependent systems as they grew, merged or expanded into other businesses and channels, as well as, ongoing addition of complex business rules. Even wholesale banks without retail bank mainframe

**Contacts (from left)**

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dependencies have amassed decades-old capital markets systems that will soon demand attention.

There are countless case studies of financial institutions that have embarked on IT transformation projects, opting to 'rip and replace' old systems with complex ground-up new systems, either with the help of a blue-chip vendor or through a homegrown solution. Many of these projects, unfortunately, have produced lackluster results or failed outright.

There also remain a large number of financial institutions that have yet to decide how to confront their legacy system vulnerabilities, even though they have studied the issue since the year 2000. Typically these institutions have engineered around the edges of their legacy platforms, to provide customer-facing capabilities while retaining their core legacy systems using complex interfaces to keep the systems in sync. The result is a system that works but may ultimately be un-sustainable and does not easily embrace change and innovation.

### Why the apparent failure to act?

Why have many highly-successful, respected institutions still not taken action? They may spin their wheels at the thought of making multi-year, multi-million dollar infrastructure investments

Similarly, technologists may not have clearly communicated the gravity of the legacy challenge, nor articulated the alternatives or the benefits from a business versus technology viewpoint.

that are unproven, will provide no obvious, near-term ROI, or are overshadowed by higher-priority business imperatives or demands on capital.

Decision-making deadlock can also come from the wide array of choice in legacy system solutions, often advocated enthusiastically by technology firms who compete for senior leaders' attention. With complex choices, from costly core banking platform replacement and customized turn-key solutions, to smaller-scale application rationalization and portfolio optimization projects, it is understandable that senior management can be overwhelmed by the options presented. In many cases, interim, less-costly solutions to patch the problem or outsource legacy system maintenance have been the preferred route chosen.

It must be acknowledged that many financial institutions have in fact performed thoughtful, comprehensive analysis of the available options and determined that in the near to medium term, and in light of their risk appetite, deferring legacy system renewal is the best decision for their organization.

### Portray the business benefits

The problem, in part, may relate to the age-old divide between business and IT groups, and technology leaders' often limited access to the leadership table. Similarly, technologists may not have clearly communicated the gravity of the legacy challenge, nor articulated alternatives or benefits from a business versus technology viewpoint.

For example, chief information officers (CIOs) may need to better present the business and customer capabilities that legacy system renewal will enable, rather than detailing the dry technical capabilities. With even the most conservative corporate boards and leadership teams now taking note of the impact of digital disruption and social, mobile, analytics and cloud (SMAC)

issues – and the looming impact on their institution's growth – this may be prime time to connect the dots between these much-discussed digital concepts and how legacy system renewal is an essential enabler to such plans.

Boards may warm-up to capital requests to create 'systems of engagement,' which can help them better understand and engage their customers, rather than proposals that emphasize essential but mundane 'systems of record.'

By making the relevant, accurate links between legacy systems and an organization's strategy to be more customer-centric, agile and flexible, CIOs may find greater appetite among boards and chief executive officers (CEOs) to invest their time and corporate resources. Boards may warm-up to capital requests to create systems of engagement, which can help them better understand and engage their customers, rather than proposals that emphasize essential but mundane systems of record.

### Clearly express the risks of inaction

The perceived risks of legacy system replacement are frequently the prime culprit that stall or kill potential transformation projects. There are certainly considerable risks, particularly regarding migration of customer data or processes for banks or insurers, many of whom realize that they lack the skills, documentation or business rules knowledge to proceed with confidence.

However, management must recognize – and technologists must communicate precisely – the potentially greater risk of inaction. These risks center on both business and technology considerations:

**Business:** There is a growing and constantly changing customer and business expectation for new and innovative products, services and information that must be offered faster and securely across more delivery channels than ever before. The need for agility and speed to market in this and the regulatory space, has never been more acute in the face of legacy applications which are difficult to maintain and slow and expensive to upgrade.

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**Technology:** Legacy systems are generally old and often use underlying technology that is facing industry obsolescence. This, combined with an aging workforce capable of supporting these technologies, and a scarcity of skills is driving up the risks and costs of maintenance and enhancement. Now, the software engineering at the 'legacy edges' used to trying to keep up with the capabilities of more modern systems acts like a dragging anchor when trying to innovate. This contrasts with the

## Developing a sound strategy

While selling an IT transformation project definitely requires the technology community to better sell 'the sizzle on the steak,' it is also critical that the strategy delivers substance and garners senior support. Best practice strategies should incorporate the following considerations:

- **Build a richer business case:** First and foremost, build a better, fact-based business case. Not only must it be compelling, but it must be well-grounded in complete, deep analysis, both to provide leaders with confidence and to help set achievable targets and expectations. Strategists need to move beyond high-level analysis and source more reliable, in-depth data that confronts the unknowns head-on. This may require creativity, and drawing upon existing available internal data and intelligence, if research resources are scarce.
- **Big picture plan, but with manageable complexity:** While organizations are well-known for

crafting 'too big to fail' transformation projects, the surer path may be to build a broad umbrella plan that sets a clear vision, but with manageable components. This may include an overarching enterprise-wide technology strategy that lays out the broad business and technology capabilities. Then, the program is broken down into well-aligned but separate projects to address individual requirements. Ensuring manageable complexity will enable the execution of smaller, phased projects that can be better planned, budgeted and monitored, yet with the flexibility to adapt to shifting priorities or emerging needs.

- **Board-driven for continuity:** In light of typical turnover in c-suite roles, a multi-year legacy system renewal project requires longer term continuity, support and oversight, ideally engrained at the board level. An engaged board, with a designated member or committee focused on achieving the IT vision, has a stronger chance of shepherding major technology projects to completion, and the ability to defend or balance

emergence of ostensibly fit-for-purpose industry software solutions supported by large-scale service providers which offer not only core system replacement and functional agility, but also the opportunity to more readily outsource maintenance and development of these commoditized systems.

In fact, financial institutions, from retail and corporate banks to property and

casualty and life insurers, are now witnessing the considerable exposure, legal, regulatory and reputational risks that can arise from outdated legacy platforms. Evidence of this can be drawn from daily headlines that recount client lawsuits against broker/dealers for trading errors, massive fines imposed on global banks for regulatory missteps, and losses incurred by insurers for miscalculating policy exposure.

the program against quarterly deliverables and competing enterprise priorities.

- **Appoint a guru:** In support of a board-mandated program, there can be great value in appointing a senior leader able to bridge the business and technology spheres to drive the strategy forward. While many companies have created Chief Strategy Officer or Chief Innovation Officer posts, these positions often lack reporting clarity, are not designed to be advisers to the board, or operate without the mandate to champion the long-term technology vision. This individual must be an ambassador for the vision and the resulting capabilities, be ready to mediate competing business and technology perspectives, and provide necessary oversight and scrutiny to keep transformation programs on track.
- **Ensure adequate resourcing:** Major technology programs often

fail due to poorly estimated or overly conservative resourcing plans. In turn, inadequate investment is made in formative program stages, including vital change management components to achieve top-down and bottom-up commitment, resolve stakeholder discomfort and manage the impacts. They often lack sufficient funds to build highly skilled, appropriately-staffed planning and execution teams.

- **Instill disciplined program governance:** Transformation programs require comprehensive governance models and structures to ensure clear ownership, oversight, adherence to program vision and targets, and risk mitigation. While organizations may lean on external partners and vendors to execute the program or specific projects, thorough executive governance and internal oversight are essential at each stage of the journey.

Ultimately, these recommendations require deep, meaningful organizational culture change. Success will depend on an organization's ability to adopt fresh approaches, embrace experimentation with a gestation period well beyond the next fiscal quarter, but carefully counterbalanced with their traditional strengths as disciplined risk managers, meticulous process owners and sound, principled fiduciaries.

Those organizations that face their legacy challenges in this spirit can reclaim control of the technology labyrinth and be well positioned for any threat or opportunity on the horizon. ■

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# IFRS 9:

## Making the transition – challenges and opportunities

**Danny Clark**, KPMG in the UK

**Steven Hall**, KPMG in the UK

**Maresh Narayanasami**, KPMG in the US

A new standard governing accounting for financial instruments has been completed with the publication of the final version of the *International Financial Reporting Standard 9* (IFRS 9). Implementation planning now needs to begin in earnest. However, this will be a major challenge. The systems consequences are significant; and the implications go far beyond technical accounting changes.

The long process of introducing a new accounting standard for financial instruments reached a major milestone in July 2014, when the International Accounting Standards Board (IASB) finalized *IFRS 9*. This will replace *International Accounting Standard 39 Financial Instruments Recognition and Measurement* (IAS 39), which has been criticized by many for its complexity and a lack of congruence with how companies

actually manage financial instruments, from straightforward loans to complex derivatives.

The financial crisis added greater urgency to projects which had been under way for some time at both the IASB and the US Financial Accounting Standards Board (FASB). Inadequate understanding and management of credit risk were seen as major factors in precipitating and then



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# 1

## 12-month expected credit losses

Impairment based on losses expected as a result of default events that are possible within 12 months after the end of the reporting period

### Transfer

if the credit risk has increased significantly since initial recognition

### Move back

if the transfer condition above is no longer met

# 2

## Lifetime expected credit losses

Impairment based on losses expected as a result of default events over the life of the financial asset

broadening the crisis. New regulations – Basel III, Capital Requirements Directive IV (CRD) and in the US the Dodd-Frank Act – have aimed to improve the robustness of the global financial system by, *inter alia*, increasing capital requirements against potential credit loss. Accounting standard-setters have strived to ensure that financial statements provide users with greater transparency on credit risk and a more forward-looking perspective on asset impairment that will be more responsive to changes in the credit cycle.

While the project to revise accounting for financial instruments started as a joint project between the IASB and FASB, the FASB has gone in a different direction from the IASB. Consequently, companies applying both US GAAP and IFRS will be implementing different guidance – increasing the costs of implementation and lacking comparability.

Compliance with IFRS 9 will be mandatory as of 1 January 2018. While early adoption is permitted, many banks and insurers are expected to make use of the full implementation period to make the system and model changes necessary to put the new 'expected credit loss' model for impairment into action and to parallel run new systems. However, this is not just a technical accounting change. Entities will want sufficient time to consider carefully the impacts on regulatory capital requirements, key performance indicators and communicate their planned response to stakeholders.

## IFRS 9: Phases and stages

- The new standard includes revised guidance on classification and measurement of financial assets, including a new expected credit loss model for calculating impairment, and supplements the new general hedge accounting requirements published in 2013. Although the permissible measurement bases for financial assets are similar to IAS 39, the criteria for classification into the appropriate measurement category are significantly different. The new standard also replaces IAS 39's 'incurred loss' model for impairment with an 'expected loss' model.

For banks, in particular, it is the new requirements around impairment which will have the most profound impact. IAS 39, in effect, prevented recognition of credit losses until an objective trigger event, such as a default, occurred. The underlying philosophy was well-intended. It was designed to prevent the use of advance provisioning to create 'hidden' reserves which could be applied to smooth earnings and flatter performance in a downturn. However, the crisis led to growing concerns that in many cases provisions were too little, too late, as losses turned out to be greater than financial statements had recognized or implied.

The 'expected credit loss' model in IFRS 9 means entities will have to recognize some amount of expected credit losses immediately, and revise the total level of expected losses each period to reflect changes in the credit risk of financial

instruments held and expectations of future credit losses on those assets. Initial application of the new model may result in a large negative impact on equity for banks, and potentially insurers, as equity will reflect not only incurred credit losses but also expected credit losses. The impact will be substantially influenced by the size and nature of its financial instrument holdings, their classifications, and the judgments made in applying IAS 39 requirements.

The 'expected credit loss' model recognizes two categories or stages of impairment, depending on changes in credit quality and assets generally can move into and out of the two buckets as illustrated above.

Accounting standard setters have strived to ensure that financial statements provide users with greater transparency on credit risk and a more forward-looking perspective on asset impairment that will be more responsive to changes in the credit cycle.

### Not so simple

There are a number of challenges and uncertainties inherent in implementing the new standard. Among the key ones are:

- the need to develop more forward-looking estimates of future credit losses
- the transfer of assets between impairment categories is likely to be highly dependent on judgment and internal management processes
- interpretation of the terms 'significant increase' in credit risk and of 'default' will also require judgment
- ensuring comparability of approaches, and hence of reported performance, within and between banks will be challenging.

A further complication is that the IASB and FASB have been unable to agree on a common standard. The FASB issued an exposure draft of a proposed current expected credit loss (CECL) impairment model in December 2012 that was different from the model in IFRS 9. Although the FASB's proposed model was also an expected loss model, it included a single measurement approach based on lifetime expected credit losses. The FASB is still considering its proposals and its final impairment model is expected to be issued in the first half of 2015.

Hans Hoogervorst, chairman of the IASB, has said the two boards would meet to review the situation later this year. He held out the possibility that regulators might impose additional disclosure requirements to bridge the gap, although that would impose additional costs on preparers.<sup>1</sup>

### Insurance: Particular challenges

Although the main concern during the crisis focused on potential asset impairment in the banks, the impact of IFRS 9 may be felt, perhaps paradoxically, more heavily by insurers. Banks have already had to respond to massive new regulatory requirements, but insurers are now facing probably the biggest change to their financial statements they have ever seen.

Insurers are facing major new regulatory changes of their own in the form of Solvency II, which comes into force

on 1 January 2016, and a planned new insurance contracts accounting standard scheduled to be finalized in 2015 with a three-year implementation period (i.e. a likely mandatory effective date of 1 January 2019). Planning for the new requirements needs to be integrated to ensure consistency, compatibility and the avoidance of unintended consequences.

### Planning for the new requirements needs to be integrated to ensure consistency, compatibility and the avoidance of unintended consequences.

As with banks, the impact of moving to the expected loss model may be significant for some insurers. However, the classification and measurement element of IFRS 9 is likely to be more significant in the insurance context, since it goes to the heart of the insurance business model of matching asset and liability cash flows. For insurers, ensuring that financial assets are classified appropriately will require, in particular:

- determination of the objective of the business model in which the assets are managed
- analysis of their contractual cash flow characteristics (that is, whether they give rise to cash flows that are solely payments of principal and interest)
- comparison of the treatment of gains and losses on insurance contracts with the treatment of gains and losses on matching assets – in order to identify any accounting mismatches.

Timescales are short. There is pressure in a number of jurisdictions to move to earlier adoption of IFRS 9. If so, there is very little time to wait. However, insurers and banks in the European Union will not be able to apply IFRS 9 until it has been endorsed into EU law.

### Far-reaching implications

While IFRS 9 and the FASB's proposed CECL model are nominally accounting changes, the actual impact on financial institutions is far more extensive.

These new standards require extensive cooperation between credit risk management and accounting functions. Accounting will now involve the determination of expected credit losses, including forgone interest, principal loss and the timing of expected cash collections based on available portfolio information and possibly complex cash flow and loss algorithms. The new accounting model requires tracking of exposures across time and extensive new disclosure requirements.

These challenges will require significant changes to existing risk and finance infrastructure including organizational structures, policies and procedures, established credit loss methodologies, data management, technology architecture and frameworks, governance models and internal controls. These will be particularly cumbersome for small and medium-sized financial institutions with legacy accounting systems, as these systems typically do not contain modules which can model and calculate expected losses. For many larger institutions, the need to comply with both IFRS 9 and US CECL standards magnifies the challenge.

Determining a budget for a change program can be challenging and financial institutions will need to take into consideration that new processes and controls will be required in areas such as credit-risk modeling. Planned IFRS 9 program budgets will depend on resourcing and timelines. Implementation costs for some banks are expected to cost upwards of £30 million.

New models and software tools should aim at a minimum, to:

- calculate expected losses based on cash flow forecasts and available risk data, with delinquency status as a minimum parameter
- assign financial instruments to impairment stages using an algorithm and/or manual

<sup>1</sup> IFRS 9 leaves IASB with impaired convergence, Accountancy Age, 5 March 2014

- input and ensure that stage transfers trigger changes in the expected loss calculation as well as journal postings.
- Structure reporting around the disclosure requirements so that individual reports can be fed into the year-end processes as building blocks for the notes.
  - Allow parameters for stage allocation and calculating expected losses to be entered flexibly at portfolio level to enable differentiation across segments.<sup>2</sup>

The impact on capital planning and business models may be more profound. As discussed previously, the new 'expected credit loss' model may have a large negative impact on capital and net income, but it is also likely to result in higher and more volatile reserve levels that will lead to more rapid recognition of losses if economic conditions deteriorate. Banks that grow their loan books will see a new business strain on earnings. These impacts may lead some institutions to rethink their business models and current portfolios. They may serve as further stimulus to restructuring and divestments, or repositioning in different market segments. Companies should assess the impact and develop a plan to mitigate any negative consequences. In addition to communicating these impacts to key stakeholders, banks should factor the new requirements into their stress testing to ensure potential impacts under adverse scenarios are properly understood and can be responded to.

## Companies should assess the impact and develop a plan to mitigate any negative consequences.

Compliance may raise the cost of capital and lower the reported return on assets. It will be critical for banks and insurers to find ways to increase both efficiency and revenue. For banks, this may also lead to further tightening of credit availability.

All of these consequences will have potentially negative impacts on the perception of

financial institutions and their reported results. It will be important for them to communicate the significance of the new regime to markets, shareholders and other stakeholders. Some of these changes are indeed 'just' accounting changes; others will be driven by the impact on the underlying business. Companies will need to explain the difference.

### How to respond

Planning for new systems, processes and modelling tools will be critical in preparing for the organizational, methodological, procedural and governance changes necessary for compliance. So will organizational and cultural evolution to ensure that impact of IFRS 9 on corporate strategy right across the business is well understood. Detailed analysis of potential impacts will need to focus particularly on:

- undertaking a comprehensive review of all financial assets to ensure they are appropriately classified and measured; for insurers, this would mean coordinating their efforts with the implementation of the insurance contracts standard
- developing models to apply the expected loss methodology to different asset classes
- developing impairment methodologies and controls to underpin consistent and effective judgments
- evaluating the potential consequences for regulatory capital requirements, profit and loss and balance sheet impacts
- developing communication plans for all key stakeholder groups.

However, financial institutions cannot afford to be distracted by the tactical challenges of compliance if they are to succeed. As the new standards take effect, there will be winners and losers. The winners will be those that can get out ahead of the organizational, procedural, technological and governance changes to focus on the strategic challenges. Those that can see beyond compliance should be poised to enjoy the competitive advantages of a smoother, lower cost program of change as well as improved communication with stakeholders through more transparent financial reporting. ■

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<sup>2</sup> KPMG's proprietary gCLAS (Global Credit Loss Accounting Solution) tool is designed to meet all these requirements, cutting through the complexity of IFRS 9 and CECL compliance.





# Automation and risk:

## Understanding and managing complex interactions

**Stefano Hartl**, KPMG in Germany  
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Automation of processes and systems is a long-standing feature of financial services operations. Many factors have contributed: the drive for cost reductions and efficiencies; technological progress; and the benefits of automation for predictable control of market and credit risk. Automation often reduces the operational risk that is inherent in manual processes and controls. However, while it typically reduces operational risk in total, technology can introduce unintended – and potentially severe – operational risks that need to be systematically managed and controlled. Piecemeal patches may only add to the danger. Meeting the challenge requires a consistent, coherent and above all sustained long-term strategy.



**F**or many years, automation has been a primary underlying theme of change and development in financial services companies. In capital markets firms, a number of drivers have contributed. In the front office context, the challenge of sustaining margins in an increasingly difficult environment has placed greater emphasis on faster and more efficient execution, on more sophisticated and detailed risk management and on increased automation as a foundation for optimizing operational strategy and improving time-to-market.

Since the financial crisis, regulatory developments have added further impetus. Regulators are systematically seeking to dampen speculation and dangerous risk-taking. A key objective is to drive all transactions onto open and regulated markets, creating a more stable, transparent, commoditized financial system. These pressures also argue for a more automated, predictable front office environment.

In the back office, the primary objectives are efficiency and cost reduction. For many years, where they have retained operations in-house, companies have focused on streamlining structures and operations and eliminating unnecessary costs and personnel by automating processes as far as possible. Where operations have been outsourced, either to specialist providers or to shared service centers in low-cost locations, automation and standardization have been fundamental drivers of improved performance and, in many cases, have been prerequisites for outsourcing initially.

Here again, regulatory imperatives have reinforced the trend. Regulators have called for increasingly robust control systems to eliminate unnecessary risk. Comprehensive, systematic and auditable, automation and automated controls have taken over much of the routine tasks previously undertaken by (human) risk management specialists. This has had the collateral benefit of freeing up risk managers' time so that they can concentrate on analyzing management information rather than simply producing it.

**In the back office, increased automation can eliminate the scope for error, speed up processes to reduce delay and vulnerability to damaging market impacts and impose greater discipline on the risk control environment.**

### **Automation and risk**

While important aspects of risk management have been subsumed into or reinforced by automated processes, the interaction of automation and risk more generally is complex. In some respects, front office automation can actually increase risk. Heightened operational risk may now be added to the traditional areas of credit risk and market risk. Automation renders trading operations faster and more opaque – in many cases massively so – to the point where for example in equity trading technical and operational risk now dwarfs other sources of risk. A series of notorious failures has starkly highlighted the dramatic financial consequences which can follow unmanaged technology risk.

In the back office, increased automation can eliminate the scope for error, speed up processes to reduce delay and vulnerability to damaging market impacts and impose greater discipline on the risk control environment. However, these benefits are not easily secured. Typically, operations and processes are automated piecemeal, with new systems being grafted onto earlier ones, leaving gaps and inconsistencies and instilling a false sense of security over the total impact on overall risk. Where back office automation is implemented ineffectively in this manner – which is all too common – new and unappreciated risks flow from the introduction of new technology.

It is commonplace that major IT projects designed to automate back-office functions are too often late, overly pricey

and inadequate to the task. Too often they fail to deliver all the cost reductions and improvements in efficiency which are their purpose. However, despite the shortcomings of final implementation, it is frequently the case that the original forecasts of consequent staff reductions and budget cuts are followed through anyway. The result? Greater risk.

### **Mitigating risk**

Most of these risks can be mitigated if automation is pursued correctly. However, it is not a simple task. In the case of credit and market risk, there are external benchmarks and historical data which can be used to quantify, or at least estimate, risk. But when it comes to operational and technology risk, this is much more difficult. Historical data is often simply not available. And when it is, analysis and quantification of potential impacts are almost always highly subjective.

Banks have invested a great deal of time and money on systems to improve front office execution, using algorithmic processes to reduce latency rates and speed up trading. But in the rush to profit, they have neglected to match these advances with parallel investments in risk and control systems. As a result, we now see an increasing focus on streamlining front office infrastructure and improving its alignment with mid-office and back office platforms. However, this makes the IT delivery that much more complex to manage, because the challenge is that much greater.

Lack of reliable quantification of risk is not only damaging in itself, it also makes judgments over the costs and benefits of mitigation, and the business case for investment, effectively impossible. So there is an increasing focus now on retrospective work designed to understand and measure the risks which have been created alongside algorithmic trading and super-fast execution.

However, in many cases, once again, the dangers associated with piecemeal and patchwork retro-fitting arise. Although the dangers are now more widely appreciated, decisions are still too often being made within a short time horizon, and without full analysis of the ramifications across the organization. As we have seen, the introduction of

disjointed parallel systems can create a more fragile environment and introduce greater – and unidentified – risk.

At the same time, the penalties for failure are increasing dramatically as regulators seek to stamp out trader misconduct. Transgressions which only a few years ago may have drawn only a mild sanction are now being met with fines of hundreds of millions of dollars, on top of billion-dollar losses – enough to cause a major detriment to a company's performance, and even threaten its viability.

The extent of this change is still not fully appreciated. Chief Risk Officers have typically had a background in credit or market risk, and tend to discount technology and operational risk as an administrative issue, not worth investing heavily in. There are also heavy pressures to minimize costs while ensuring regulatory compliance.

### Getting out in front

The scale of the challenge can seem daunting, especially in an environment of low margins and acute pressure on costs. As we have seen, piecemeal approaches are not enough, and may even make the situation worse. At the same time, it is difficult to make a sound business case for major investment in systems to improve operational risk management. A strategy of targeting minimal regulatory compliance is understandable. But the risks and penalties mean that this will be an increasingly unsustainable position.

**Chief Risk Officers have typically had a background in credit or market risk and tend to discount technology and operational risk as an administrative issue, not worth investing heavily in.**

The leading financial institutions appreciate that following the herd, doing the minimum

necessary and remaining in the middle of the pack, are unsustainable in the longer term because they carry unquantifiable but rapidly increasing risks. They understand that getting out in front, following a path of differentiation and tackling the issue of operational and technology risk effectively can bring powerful competitive advantage, as well as help build a more robust and responsive business. But it is expensive. It takes a five-ten year strategy and clear identification of specific priorities.

In many cases, these will vary from institution to institution, depending on the specific history of past investments and an analysis of current risks and failings. However, a number of general themes seem to recur. The first is that the key current priority is likely to be front office trading risk. This reflects a combination of the factors we discussed above: chiefly the potentially disastrous impact of failure and the acute regulatory focus on overseeing this area and punishing deficiencies.

The second is that greater visibility of operational and technology risk is needed, across the business. The position has improved in recent years. But there is still a way to go. Relevant analytical tools and data are lacking. Operational risk remains difficult to quantify. Systematic comparison and contextualization remain very challenging.

Following from this, the third theme is that without adequate data, targeting and prioritizing remedial investment, even within a long-term strategy, is impossible. The irony is that a company determined to tackle the issue may still end up with disconnected and risky systems. If experience teaches anything in this field, it is that piecemeal approaches are inadequate. An institution which holds fast to that knowledge and creates a strategic vision to deal with the failings of the past will have a golden opportunity to get out ahead of the pack, to build a more robust business, to minimize technology and operational risk and the potential associated costs. These are objectives which are not only worthwhile, they may save the business. ■

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# Complex investments demand a different approach to governance and oversight

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## More and more essential, an effective operational due diligence program will:

- assess conflicts of interest within the fund manager as well as how their processes avoid/mitigate and continuously monitor existing and emerging conflicts of interests
- gauge the firm's 'tone at the top' and 'culture of compliance'
- understand the firm's approach to risk management
- challenge the manager to put the investor's interest first.

Institutional investors are increasingly investing with fund managers who specialize in alternative investments. Investments in infrastructure real estate, private equity and hedge funds can enhance returns and diversify risks, but the price trade-off is often greater complexity and opacity, challenging the asset owner, whether it's an institutional investor, pension fund trustee or fund of fund manager.

So, for example, why are pension trustees investing in these more opaque arrangements? The traditional defined benefit investment approach sought out-performance across the whole portfolio with a heavy weighting to equities. However, increased life expectancy, falling birth rates and low interest rates on traditional investments such as government bonds has made it increasingly difficult to maintain an appropriate balance between revenues, growth and commitments.

The new approach is to twin track by seeking to match promises to members with liability driven investments combined with seeking out-performance through investing in alternatives. This means a growing dependence on alternative investments which promise superior returns while offering reduced investment risk through diversification.

There is also a growing trend towards fiduciary investment management, where trustees delegate selection and monitoring of fund managers to a fiduciary investment manager which creates further complexity by introducing an additional layer of potential opacity. Many defined contribution funds use 'white label' investments which, in turn, invest in a range of underlying investments funds. These themselves may be fund of funds or, in the case of insured unit linked funds, are reinsurance arrangements which also increase complexity.



For all of these reasons, governance and due diligence responsibilities are becoming much more demanding, particularly in the light of scandals such as the collapse of Madoff Investment Securities and the Weavering Capital hedge fund, which focused acute investor concern on the effective oversight of collective investments.

## Can you outsource?

Some of the larger institutional investors appreciate, and have responded to, the challenge by adopting a more thorough and professional approach themselves; and by incorporating investment experts into their governance structures. On the other hand, pension fund administration and support structures are typically small and supporting the necessary range of expertise in-house is often impractical. Many smaller funds are, therefore, relying on external investment experts, consultancies and other advisory bodies. A number of larger firms in this field have evolved integrated administration offerings, providing complete outsourced solutions.

These have the potential benefit of being able to draw on greater market knowledge

and operational professionalism. Nevertheless, it is clear – and regulators have emphasized – that reliance on third-party administrators does not absolve trustees from ultimate legal responsibility. There is increasing pressure to demonstrate that the approach to operational due diligence is sufficiently robust to manage the increased risks.

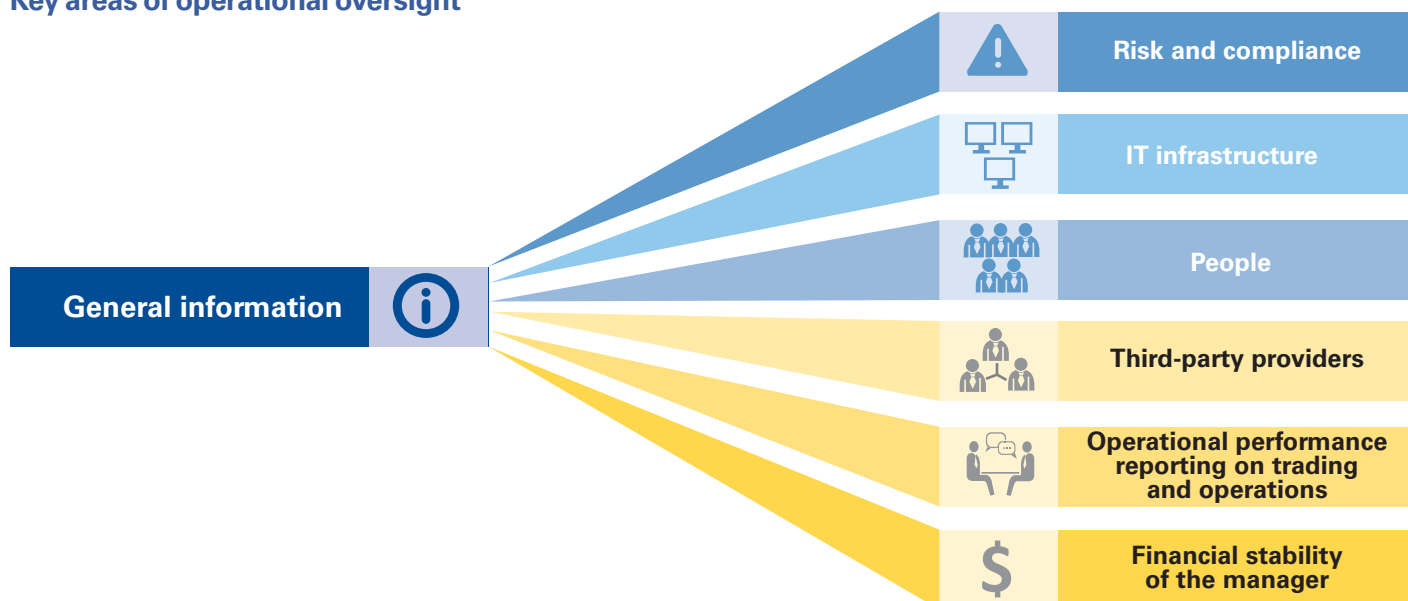
## Key priorities

The primary due diligence challenge for trustees is to ensure that they understand the assets in which their funds are invested and the risks attached to them. Operational due diligence needs to be placed at the heart of strategy implementation from the beginning. Whereas previously the appointment of third party managers depended on an assessment of their market knowledge, investment capability and track record, due diligence now needs to extend to cover a wide range of operational and management considerations: How is the fund set up? Where are their investments? Who is the custodian? Who are the administrators and auditors? What are the fees and charges? How comprehensive are the reports?

## Due diligence requires:

- strengthening of in-house professionalism and expertise; and where third party administrators are involved, an insistence on timely, comprehensive and transparent reports
- understanding what safeguards are built into internal and external management structures, and how effective is any operational due diligence being carried out on their behalf:
  - What are the critical systems and process components? How robust are they? And, since complex fee structures are much more common in unconventional asset investments, how cost effective and transparent are management processes?

## Key areas of operational oversight



While operational due diligence now needs to be a key part of the selection process, this is only a beginning. Continual performance monitoring and review is critical to ensuring that risks are managed and that the trustees' fiduciary responsibilities are discharged effectively. Traditionally, once a manager was appointed, regular reports all focused on investment performance, asset allocation and market conditions. But it is now essential that the focus on operational performance and risk continues. Formal operational due diligence reviews need to be undertaken regularly, not only on the appointment of new managers, but on any major change in investment strategy and periodically to ensure continued compliance.

### Operational due diligence review: key issues

A primary objective is to assess and understand conflicts of interest within the manager as well how effectively their own processes monitor and avoid existing and emerging conflicts of interest. Ultimately, the manager has to be challenged to demonstrate effectively that clients' and investors' interests come first.

The manager's oversight and monitoring of key service providers – administrators, custodians, prime brokers, auditors and other service providers – is crucial, as is its financial stability, as evidenced by an analysis of audited financial statements, cash flow information and key financial ratios. Assessment of personnel capability requires evaluation of directors and key employees, including background checks and reviews of remuneration conditions.

The risk and compliance assessment involves a review of trading and operational processes and procedures, including:

- risk management framework
- compliance arrangements
- internal controls over key operational processes
- personal trading and insider dealing policies and procedures
- valuation policy and responsibility
- policies and procedures over:
  - complaints management
  - conflict of interest
  - insider dealing
  - internal fraud
  - trading errors.

Ensuring that the trustees have access to the necessary expertise to undertake and evaluate such reviews is an equally challenging task.

### Conclusion

Since the financial crisis, pension investors have increasingly come to recognize the need for effective operational due diligence processes alongside the evaluation of investment performance by managers. Meeting the challenges involved requires access to different sets of expertise from those traditionally shared by pension trustees: not only experience in the investment market, but also critical evaluation of management systems, processes and compliance.

Effective operational management can create value as readily as inadequate processes can destroy it and leave firms open to the risk of underperformance as well as regulatory sanction. These are issues which trustees can no longer ignore. ■

### MORE INFORMATION

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In the UK, Troy Mortimer leads the Governance and Controls team and the Operational Due Diligence service offering for the Investment Management practice. He has project managed and participated in a wide variety of regulatory and risk projects across the Americas and Europe during his 13 years with KPMG. His experience includes conducting operational due diligence and investment operations reviews for a fund distribution platform of a global investment bank, UK based fund of fund manager and a European family office. Troy has advised on the implement operational risk and control frameworks for a variety of investment management firms, including a start-up fiduciary management firm.

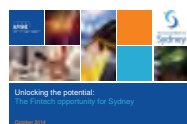
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