

Mapping the Treasury Business

Trends. Challenges. Strategies.



Cover Story Mapping the treasury business

Feature Impact of global regulatory change

Big Bet SMAC, a treasure trove for the treasury?

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Treading the treasury space



While the space has always been a challenging one, the financial crisis only made it more so. What are the latest regulations banks and financial institutions must watch for? And what must they do to not simply deal with these changes, but make the most of them? In this edition of FinacleConnect we have put together articles that answer these questions and also discuss some important aspects in the treasury space.

To start, our cover story does a roundup of the current trends, challenges and strategies in treasury and maps the business as it stands today as well as its way forward. To add, our feature looks at the regulations that have been introduced post the financial crisis and their impact on bank trading and operations.

On a similar vein, we have three interviews that present different perspectives around regulations. In this edition we have, Manfred Wiebogen, Director International Markets for Volksbank AG Vienna and Hon President of ACI talking about regulations and their aftermath, Harry Newman, Head of

Market Initiatives EMEA for SWIFT discussing the implications of these regulations, and finally Justin Chapman, Senior Vice President and Global Head of Industry Management for Operations and Technology at Northern Trust talking about regulatory trends and their impact on technology.

The big bet article this time introduces the SMAC (Social, Mobility, Analytics, and Cloud) concept and analyzes its effect on treasury. Meanwhile, the Kaleidoscope section covers a country that is home to some of Europe's largest banks – Spain.

There's all that and more in this edition of FinacleConnect. I hope you enjoy our Treasury focus and find it both useful and interesting!

Haragopal M Global Head – Finacle, Infosys

The impact of global regulatory

change on bank trading and operations



Since the financial crisis hit, there has been a slew of regulatory responses. The challenge to keep up is immense and some aspects of change are so unclear that implementing the required regulatory moves could potentially cause increased risks for the banks themselves. How is this impacting treasury operations and what are the issues banks face? Chris Skinner takes a look.

Understandably, everyone was shocked by the scale and impact of the financial crisis of 2008. Billions of pounds were lost by investors and shareholders in what should have been the most stable sector of all: finance. Banks that should never fail, failed and countries that were prosperous, were ruined. Unsurprisingly, the financial markets has been left alone: governance, remuneration, accounting, taxation, market structure, company structures, capital and more has been scrutinised, analysed and regulated.

All of this has taken place over the past five years and has been brought to a head by three major pieces of regulatory change that will impact the post-trade space the most: Basel III, Dodd-Frank, and the European Market Infrastructure Regulation (EMIR).

Of course, there are other pieces of change that will impact the markets: the UK Bank Reform Act and the European Banking Union, the Financial Transaction Tax,

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political response and backlash has been swift, angry and deep, creating a tsunami of regulatory change to an industry that has been regulated stringently for decades. Are these further changes justified and appropriate? You can decide, but there are some critical challenges all companies will face due to the increased requirements for capital across the markets of the world. These changes will impact every bank, treasury, counterparty and corporation, and is something that could jeopardise future economic prosperity if we get it wrong.

The political drive behind such change is the area that is particularly notable. Governments and their political leadership are at the helm of this change, and they want to prove that they are doing the right thing by society and the media. This means that no area of Solvency II and MiFID II, but these three are the ones that are top of mind for most dealing and trading in global markets.

What do these three acts mean for dealing and treasury operations?

Let's take a look.

When the 2008 crisis hit, there were two obvious issues that governments and regulators observed: banks were under-capitalised and Over-the-Counter (OTC) derivatives were out of control.

The response has been to increase bank capital requirements by revising the core bank regulation, the BIS agreement Basel III, and to force OTC derivatives to

be traceable by forcing central clearing into the market through Dodd-Frank and EMIR.

But, through this process, the markets are claiming that these changes will dry up liquidity and markets might become destabilised, weakened or even closed.

The views on both sides of the table are extreme, and we need to tackle each issue separately: the capital

Basel III has raised the minimum capital requirements for common equity capital from 2% to 4.5% of riskweighted assets and the Tier 1 ratio from 4% to 6% effective as of 2015.

requirements on the one hand, and the liquidity and leverage of markets on the other.

The problem with bank capital

Across the world, banks are being asked to reserve more money. It is quite confusing as to what they are actually being asked to reserve however.

The core of the challenge is to work out the percentage of capital a bank needs to keep in reserve to be robust.

Under the original Basel Accord of 1988, the view was that the total capital to be held in reserve should be equivalent to eight percent of the banks' risk-weighted assets. This capital is then split into Tier 1, Tier 2 and common equity capital.

That is confusing in itself, as banks make money by leveraging their capital. This is why banks typically want to hold the minimal amount in reserve as the more that is lent, invested or leveraged, the more profitable the bank.

This is the core reason why the Basel Accord was created – to ensure that banks did not over-leverage and potentially bankrupt themselves. However, we already have one challenge when accounting for capital as it comprises so many types of capital, not just Tier 1, Tier 2 and common equity, but even the type of Tier 1 and Tier 2 capital is open to question.

For example, Tier 1 capital is the core capital of the bank. It represents shareholders' equity, retained earnings and assets of the bank after liabilities are paid. However, this is split into core Tier 1 capital and Tier 1. The difference is that the core Tier 1 is best of the best capital, the pure liquid funds of the bank that can be used in an emergency. Other Tier 1 may include other investments and equity holdings that are less liquid but still defined as high value capital.

In other words, there are four types of capital: Core Tier 1, Tier 1, Tier 2 and Common Equity under the Basel Accord and these can also be valued differently

This is well illustrated by the issues of 2008, that were fuelled by factors related to how you account for risk-weighted assets on the balance sheet of the bank. The USA and rest of the world were using different accounting standards. The USA use the Generally Accepted Accounting Principles (GAAP) accounting standards whilst the rest of the world use the International Financial Reporting Standards (IFRS). This meant that a bank was better or poorer capitalised, based upon how it valued derivatives and other structured products on its balance sheets.

How do you value a derivative that is related to future returns? Banks have generally accepted the rule of mark-to-market – the market value of those investments at the time of reporting – but, under GAAP and IFRS, the reporting of the value of these derivatives' assets is different.





Hence under Basel rules, where you have to provide a fair value of risk-weighted assets to calculate your capital reserves requirements, banks can create different leverage dependent upon whether they are valuing these assets using GAAP or IFRS.

This has led to a major debate about capital requirements, accounting standards and bank reporting, with the view that the eight percent to risk-weighted assets Basel ratio has obviously failed. Hence, Basel III has raised the minimum capital requirements for common equity capital from 2% to 4.5% of risk-weighted assets and the Tier 1 ratio from 4% to 6% effective as of 2015. Subsequently, fully effective as of 2019, banks will be required to add a conservation buffer of 2.5 percentage points on the top of common equity and Tier 1 capital ratios or, in general parlance, banks will now need to have 10.5 percent of capital in reserve against risk-weighted assets, up from 8 percent under Basel II.

As you can see, the valuation and structure of bank capital is complex and, rather than getting bogged down in the detail here, the aim is to ensure that when markets face a significant financial shock, banks will be resilient to this shock. This is because they can immediately access liquid funds – their capital buffers – to resist the impact of the shock.

The fact that Lehman Brothers, Bear Stearns, Wachovia and so many other banks were undercapitalised when the crisis hit, demonstrated that this was not working. Hence, Basel III has raised capital requirements.

But are they too high?

Some would say yes, some would say no. The reason for this is that a bank's capital ratio is fairly meaningless in a crisis moment, as it is the banks' ability to manage risk rather than reserve capital that determines its resiliency. If you have a bank that truly understands market, credit, operational and liquidity risk, then it can operate with minimal capital; if you have a bank that has no ability to manage market, credit, operational and liquidity risk, then it does not matter how much capital is in reserve, it will still fail.

And there's the real issue: no-one knows how to value capital effectively, how to report capital structures

appropriately and how to manage capital to support economic growth rather than shrinkage. After all, the more capital banks hold in reserves, the less they lend to businesses, governments and individuals for trade finance, economic investment and mortgages. In other words, the more banks reserve, the less the world grows.

For example, a recent OECD study estimates that the medium-term impact of the Basel III implementation on GDP growth would be in the range of -0.05% to -0.15%

There were around \$700 trillion worth of OTC derivatives being traded when Lehmans imploded, more than ten times the amount that the people on Planet Earth produced each year or ten times GDP if you prefer.

per year. That may not sound significant, but it means that the world shrinks by around \$40 to \$120 billion a year (the world's total GDP in 2012 was \$83.2 trillion).

Some fear it is worse. For example, the headline at the SWIFT tradeshow SIBOS in 2010 read:

"If the regulations are implemented as they are currently written, we could be seeing a 2% fall in global trade and a 0.5% fall in global GDP." Karen Fawcett, senior managing director and group head of transaction banking, Standard Chartered Bank.

Regardless, and as outlined, the capital changes required for banks to be robust are extremely

challenging and costly, in terms of how you value and account such capital, and the impact bank capital buffers creates in sustaining economic growth and viability in the markets.

This then leads us to our second major area of impact on treasury operations: OTC derivatives transparency.

Making OTC derivatives transparent

For a significant time, the powers that be in the Federal Reserve and European Commission have been working with the G20 to try to implement new regulations that will ensure that the trading of overthe-counter derivatives is no longer off the network, but is transparent and traceable on the network. This is in response to the staggering figure that appeared at the time the crisis hit that there were around \$700 trillion worth of OTC derivatives being traded when Lehmans imploded, more than ten times the amount that the people on Planet Earth produced each year or ten times GDP if you prefer.

The regulators and politicians initially worked to limit or even shut down such trading, but gradually realised that much of this trading is to offset risk for corporations around the world. After all, if you are an American firm selling goods in China, you want to hedge the risk of Renminbi changes in the future, and a large volume of these derivatives contracts achieve exactly that.

However, other contracts are more speculative, allowing spread betting and arbitrage on currencies, commodities and services. It is the latter that the authorities felt needed to be monitored, as speculative trading could push the world's economies over the brink.

Now this is also not the case. Every OTC derivative contract has a buyer and a seller, and every hedge is offset by a counterparty therefore. This means that the notional value of all OTC derivatives may have been estimated to be several hundreds of trillions of dollars but the actual risk of those contracts would be far less, billions rather than trillions. Nevertheless, this still left a gap. For example, when Lehmans collapsed, Barclays Capital estimated that every \$20 of OTC derivatives was backed by a dollar of Lehman's balance sheet. With around \$400 billion of potential bad debt on their books, Lehmans-backed securities therefore multiplied to a potential \$8 trillion of contracts gone bad.

Again, this was harum-scarum stuff at the time, but it made the politicians and regulators wake up and determined to shake up the OTC Derivatives marketplace.

This they achieved at the September 2009 G20 meeting in Pittsburgh, where the world's finance ministers agreed that:

All standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements. We ask the FSB and its relevant members to assess implementation regularly and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse.

In June 2010, G-20 Leaders reaffirmed their commitment to achieve these goals and, in its October 2010 report on Implementing OTC Derivatives Market Reforms, the Financial Stability Board – a group of central bank, government and regulatory policy heads from the world's largest banking nations (the G20 plus Hong Kong, the Netherlands, Singapore, Spain and Switzerland) – made 21 recommendations addressing practical issues that authorities may encounter in implementing these commitments.

As a result of these initiatives, US and European authorities stepped on the accelerator and implemented highly aggressive timeframes for change through two major regulatory pushes: the Commodity Futures Trading Commission (CFTC) developed the Dodd-Frank Act regulation under which Swap Data Repositories are regulated for the US markets and came into full force in April 2013; whilst the European Securities and Markets Authority (ESMA) developed the European Markets Infrastructure Regulation (EMIR) regulation, which became effective from August 2012.

The core essence of this regulatory change has been to create a central repository for reporting, tracking and tracing derivatives. In other words, as with equities, commodities and other instruments, derivatives markets have moved and are being moved by regulatory mandate, towards central clearing and settlement through Central Counterparties (CCPs). This is why there is not a single repository, although the USA's Depository Trust and Clearing Company (the DTCC) has positioned itself strongly to be one, but a group of firms operating to offer trade reporting of derivatives and monitor the risks involved. For example, in Europe we have four: the DTCC, the London Stock Exchange, the Intercontinental Exchange (ICE), Clearstream with Iberclear, and the US-based CME Group.

The challenge with these regulations however, is that not only have they been created rapidly with very aggressive deadlines, but they have some schizophrenia.

For example, their definitions are different with Dodd-Frank talking about Swaps Dealers and Major Swaps Dealers, whilst EMIR talks about Financial Counterparties and Non-Financial Counterparties. EMIR demands that counterparties centrally clear OTC contracts, and sets certain thresholds for Non-Financial Counterparties as to which apply, whilst Dodd-Frank leaves the determination of which contracts have to be cleared with the CFTC and SEC with no thresholds involved.

All of this may be very much in the melting pot as to what the reaction in the markets will be, but it does leave all of those involved wondering where certainty will lie, how liquidity will be impacted and how the long-term results of these unbalanced regulatory drives will play out for the long-term.

Short-term change with long-term repercussions

In conclusion, it is obvious that the lawmakers, policymakers and regulators are not trying to cause an implosion of the world's banking system through the rules being drawn up to avoid just that. However, it is also clear that the world's lawmakers, policymakers and regulators are acting with great speed to enforce great change that leaves no-one the wiser for the long-term effects.

For example, we have discussed Basel III and OTC Derivatives regulations in depth here, but have not even touched on the much vaunted Financial Transaction Tax (FTT) being introduced into the European markets for which no-one believes it will have any positive benefits, only negative ones. Overall, the net effect of all of these regulatory changes in the short-term will be that liquidity in global investment markets will weaken, and trading will move to centres and cities where arbitrage and investment returns are the greatest. This will mean that there will be a rebalancing of financial trade, with potentially serious consequences on those markets that squeeze liquidity the hardest. Those markets appear to be in Europe, and it creates an insecure future for the Eurozone when the Eurozone has already taken a severe knock through austerity measures and sovereign debt.

It remains to be seen what impact these changes will have on the rest of the world.

About Chris Skinner

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Mapping the Treasury Business

Trends. Challenges. Strategies.



reasury and trading capital markets businesses have gone through turbulent times in recent years. The world has changed permanently after Lehman and the past five years have seen imposition of regulation on an unprecedented scale. As we look forward to the future, how should banks around the

Treasury and trading capital markets businesses have gone through turbulent times in recent years. The world has changed permanently after Lehman and the past five years have seen imposition of regulation on an unprecedented scale.

world approach their treasury and trading capital markets businesses? What should be their priorities and how should they implement the required changes?

Let us begin by understanding what brought us here in the first place. The boom years of 2003-08 were marked by flourishing capital markets activity around the globe, riding on easy liquidity and the benign attitude of regulators who were unwilling to "rock the boat". Financial innovation was the "mantra" and "exotic" its hallmark. It was another matter that such financial innovation was neither in the best interests of clients nor of markets in general. A number of market participants added products they neither understood nor required. Many costly "change the bank" projects were launched in this period in the hope that they would generate substantial revenues for banks' treasury and capital markets business, going forward. Risk management was neglected to a certain extent as markets continued to move northwards. All this changed after the Lehman bust.

Specifically, the change has occurred along four key dimensions or trends. This article explores these trends

- Trend 1 Regulation
- Trend 2 Risk management
- Trend 3 Cost control
- Trend 4 Client centricity

Year	Planned regulation implementation
2013	EMIR, CRD/ IV CRR, AIFMD
2014	Omnibus II, Solvency II
2015	Central Securities Depository, Closed-out Netting, MiFID II, MiFIRv
2016	IORP, FICOD 3
2019	Full implementation of Basel III including Full Coverage Ratio, Conservation Buffer and Net Stable Funding Ratio.

and also how treasury and capital markets businesses could benefit from them.

Trend 1: Regulation

The above table lists the major regulations governing treasury and capital markets, and important milestones under each.

Dealing with the regulatory requirements of a "new normal" environment calls for a smarter approach, one that is more agile, proactive and looks at implementing holistically to optimize resources and meet regulatory deadlines. Needless to say, there are many challenges:

• **Regulations in flux:** Regulations go through multiple iterations before they are finalized, and even after that, can be interpreted in different ways.





Banks need to be nimble and stay in continuous touch with regulators during implementation.

 Duplicating regulations: This could happen in many ways. For example, Europe is a few years ahead of the United States and Asia in implementing Basel III. It is also possible that Dodd Frank and EMIR would impact the implementation of OTC clearing. to withstand the uncertainty and frequent changes in regulation. An integrated solution with the following capabilities is the need of the hour.

 Portfolio control: Managing delivery at program and project level in an integrated and controlled manner, with adequate governance to provide visibility at appropriate levels within the organization.

In reality, the risk management function hasn't changed fundamentally from what it was five years ago. However, there is a need for a change in attitude. Banks must once again focus on managing risk actively, because clearly, risk will not go away.

• **Resource constraints:** SMEs in risk, finance, legal and IT departments are sought by multiple regulatory projects at the same time.

Banks must obviously address these challenges. But they must also find a way to deal with the spectrum of regulatory change in a consistent manner, in order

- Regulatory coordination: Understanding the moving regulatory landscape, and responding with agility both from a communications and scope management perspective.
- Strategic design: Identifying and resolving interdependencies and commonalities, and

understanding the impact of changes to the regulatory landscape.

Trend 2: Risk management

It is a bank's basic function to manage risk and provide a return to shareholders in line with the accepted risk profile. The credit crisis and ensuing global recession seem to indicate that banks fell short on this front. How else can we explain why banks bought Credit Default Swaps with gusto or sold cheap short-term mortgages in the U.S. market? Now, is there a way out?

In reality, the risk management function hasn't changed fundamentally from what it was five years ago. However, there is a need for a change in attitude. Banks must once again focus on managing risk actively, because clearly, risk will not go away. Here are some suggestions:

- Establish a language to categorize and discuss risk: There are many acronyms in use and it is critical that risk managers within banks explain risk in business terms. This will ensure that risk departments are taken seriously.
- Develop a "big-picture" view and focus on what is most critical: Banks need to be mindful of credit, market and operational risks; but within each, they must focus on the most important aspects.
- Centralize processes and decentralize decisionmaking: Risk management is most effective when practiced consistently across the organization. At the same time, the power and discretion to apply these processes must percolate downwards.
- Define joint responsibility: Risk cannot be managed effectively unless the risk management and line functions take joint responsibility for it.
- Quantify risks, and the costs and benefits of managing them: It is critical for organizations to be mindful of the risks inherent in transactions involving

exotic instruments. They should factor in adequate safety measures before betting on these instruments. A golden rule is "when in doubt about your complete understanding of the instrument – stay away".

 Align IT with risk management: Treasury and capital market operations should have powerful IT support to handle the attendant risks.

Trend 3: Cost control

Trading and capital markets businesses saw super normal profits prior to the crisis and sustained liquidity injections by Central Banks around the globe, this might have masked the intensity of the problem thus far. But the fact is that it costs simply too much to run a treasury and trading business in a bank. As margins shrink and Central Banks start pulling out excess liquidity, the problem will only worsen. That is why progressive banks have already launched well thought out "change the bank" projects, targeting cost.

The widening gap between the products on offer and clients' real needs — coupled with under performing products — has critically undermined clients' trust in their banks.

Treasury costs stem mainly from two factors – people and technology. Although there are no clear-cut guidelines on the optimal spending on people and technology, common sense dictates that banks link these costs to the current and future profitability of the business. It is worth understanding how the manufacturing industry, and the automobile industry



in particular, has achieved cost optimization. These industries followed a "zero cost budgeting" principle, which drove them to rethink every activity and explore its components in detail. A similar process of discovery would enable banks to pursue real efficiency gains by deploying innovative processes using all the tools and partnering models available.

Popular strategies include:

- Moving away from multiple verticals (one system per asset class) to a single cross asset IT solution
- Moving away from separate front and back office systems to a single integrated cross asset solution
- Using a single system to take care of operations in multiple countries or businesses (multi-entity solution)

The above, coupled with the alignment of costs of individual businesses with current and future revenues, makes for a successful strategy.

Trend 4: Client centricity

In the years leading to the crisis, treasury and capital markets businesses moved away from their traditional role of client-focused intermediary, to focus instead on product development. In doing so, many firms turned into product factories, selling to a diverse set of clients. The product factory silos became increasingly isolated, which made it hard to view and serve clients in a unified manner. Today the shortcomings of this product-driven approach have become very evident. A combination of risk aversion, higher capital requirements and margin pressure is shifting the focus away from products and back towards client intimacy and satisfaction.

Again, banking organizations must address two critical problems:

A crisis of relevance and trust: Banks' focus on product development and sales has led clients to believe that they indiscriminately push products through different parts of their organization without understanding client needs. The widening gap between the products on offer and clients' real needs — coupled with underperforming products — has critically undermined clients' trust in their banks.

An economically unsustainable product range: By effectively turning into product factories churning out products through product-focused sales teams operating in silos, treasury businesses have made it hard to create and maintain an integrated and unified view not just of client need, but also of client profitability. They are also finding it difficult to assess whether the considerable complexity and cost of a modern capital markets business actually adds value.

Treasury and capital markets businesses can address this problem in a three-step process: conduct basic analysis to understand clients' needs and buying behavior; categorize clients into different groups; and realign product portfolio and delivery channels according to their needs. These steps are sure to realign treasury and capital market businesses with their basic objective of serving clients well.

Summary

We foresee four basic trends impacting banks' treasury and capital markets businesses going forward. These are regulatory change, risk management focus, cost reduction and client centricity. With the right approach, banks can align their organizations with these trends and win in the "new normal" world.

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The regulations and their aftermath

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An interview with **Manfred Wiebogen,** Director International Markets for Volksbank AG Vienna and Hon President of ACI.



CI was founded in Paris in 1955 as Association Cambiste Internationale (Forex Club), but is better known today as the ACI Financial Markets Association. The ACI has 13,000 members from more than 60 countries who are primarily trading or sales professionals dealing in products ranging from Foreign Exchange (FX) and interest rate products, as well as many other securities, banknotes and bullions, precious metals and commodities and their derivatives. In light of the financial crisis and the regulatory response that has followed we discuss the implications with Manfred Wiebogen, Director International Markets for Volksbank AG Vienna and Hon President of ACI.

Q: What are you seeing as change in the markets today?

A: What I have seen developing recently is that the markets have changed considerably, particularly since the crisis of 2008, as we are being increasingly squeezed by regulation. These markets are wondering what they will have to do to survive as a result, and this is what concerns me. Obviously we cannot go back in history to the markets as they were, we have to think of the future, but we need to remember that we had all of these heavy implementations of risk management tools and regulations before, but this did not stop the industry from failing.

Q: Do you think that the regulations being drafted will resolve the issues we face?

A: Yes and no. For example, the first change I saw in risk management was back in the early 1980s with the rise of safety and risk standards. These became more sophisticated over time and then we had a formalised risk management function in the 1990s. Over time, the regulators and regulations came into force to ensure that these practices were embedded in the fabric of every bank and now, in some way, all decisions and all activities of a bank have to be reported to the local regulator or local central bank.

Now blaming the financial industry for some recent failings will be too simple. Let me express it this

way: A lot of information, bank's position etc. are regularly reported to local authorities but also to the supranational BIS. As a bank we do know about our

What I have seen developing recently is that the markets have changed considerably, particularly since the crisis of 2008, as we are being increasingly squeezed by regulation.

positions, but we don't know the positioning of our competitors. Regulators do know about it, again they receive a global scope from all the massive reporting! I would see it as a major skill of regulators to identify any actual or future local/regional/global risk or bubble arising from currency, interest rates and product depending imbalances. To admit this is not an easy task and needs proper understanding of products and markets. The financial industry is forced to have heavy reporting, or the implementation of risk management tools and much more. The obligation for regulators should be the proper analyses of any impacts on regional or global product engagement or cash flows, engaged by firms operating in financial markets which could lead into possible and dangerous mismatches.

Q: Why do you think risk management and regulation failed?

A: Within some process chains we do not understand the products we deal with enough. This became the reason for all of this regulation and risk management. The industry is dealing in high sophisticated products; structured products and other complex derivatives. There is a need for it, coming from the industry and investors. But let me stress these are good products. They are very useful products. They help a business and a bank to invest, focus, leverage, grow and build. But they can also become very dangerous products if they are used incorrectly. Many market entrants start handling with derivatives. Their missing link will be the understanding of the benchmark, underlying the products and markets in general. How markets will react in times of political/economic instability, market illiquidity and who still has the access of understanding i.e. of a 'gamma bomb' or of a future 'passiva risk'? For many years we as ACI are offering education and certification to the entire industry and the regulators. But I have to admit, we receive little support from authorities – in a large part we are left alone with our efforts.

Q: Is this the right focus?

A: In some areas we need to define derivatives properly and too many of the financial markets products are being placed automatically in the derivatives bucket. Most regulators are referring at 'derivatives' in general. But for public, press and media, derivatives are the devil's tool. For example, I am not comfortable with placing FX swaps and forwards under the definition "derivatives", as a derivative product is a product where you have an unknown future fixing creating unknown future cash flows, but this is not the case with FX swaps and different view of these areas than the European view. This will be a big challenge for everyone.

Q: Why is there this divergence of regulatory view?

A: Because regulators have or have not identified this issue of hedging versus speculation. Some nations treat regulation stricter than others - by knowing or not unknowing. In avoiding additional costs the financial industry will be forced once again to move towards loopholes or regulatory arbitrage. One example might be the discussed Financial Transaction Tax in Europe. The problem here will be not just the taxation but more so the liquidity drain caused by it. When it comes to the FTT issue some regulators (countries) don't yet differ between speculation and hedging. It looks to me as if there is an absolute lack of understanding, again of what a derivative is and what is the purpose of the product! Another concern will be the Basel III implementation. There are still regulatory differences that will lead to regulatory arbitrage. Countries will be able to do more or less, sooner or later. We got e.g. the CVA risk capital charge to deal with in the future. The costs associated with the CVA is now estimated to become two to three times higher than the previous regulatory environment. At the current stage, the available concept would create a divide with other

Well there has been a lot of regulation developed in a very short time with very short timescales for implementation. What is the reason for this? Politics.

forwards. This is definitely not the case for the products I've mentioned. These have much more robust views on their flows and operations than, let's say, credit default swaps. So we are in a market where anything that relates to a derivative is being regulated and squeezed, but not everything that is a derivative fits this definition. Even when we have a definition, it is also not defined. For example, the nature of how FX swaps and forwards has different interpretations or treatment by different authorities, with Dodd-Frank in the USA developing a jurisdictions. Whilst Europe moved for exemption of some CVAs there is no actual exemption proposal in the US. Some Asian countries or Switzlerland will have a blanket CVA charge in their final rules. The challenge will be how to regulate without creating a negative burden for institutions – we are living in a globalised world. Cash flows are easily routed within seconds from one financial place to another one. Above all, clear and precise differentiation is needed between hedging, liquidity management or pure speculation.



Q: How do you see this being resolved?

A: Well there has been a lot of regulation developed in a very short time with very short timescales for implementation. What is the reason for this? Politics. Dealing with all the subsequent requirements on the bank's side, and how tricky the implementation of these requirements will be, is then the bank's issue. We therefore have to work with politicians, not just here in Europe but also across the world. I would not call it lobbying, but developing joint views on how the industry needs to look. ACI is offering its expertise (we are the 'front players', the traders, in the daily business) to regulators. That is the key, to have the banks and politicians work together. This means banks need to explain to the regulators and politicians how the products work, what they are for and how they are justified. The danger for the industry is that this can come across as lobbying, and politicians will feel they are being pushed in a certain direction. That is a fine line.

Q: Do you think that line is ever crossed?

A: Well, possibly. An example is again the financial transaction tax. That poses a real risk to the industry. If the industry is taxed in this way, it would be a real structural change to our industry. It would hurt liquidity management and the whole way we do FX Swaps and Forwards or Repo business which, as mentioned earlier, are the backbone for liquidity management. If we tax these products, then we will have huge problems which will be difficult to solve, particularly for short-term liquidity management in both banks and the businesses they serve.

Q: Are there any other areas of concern in this space? A: The industry is also concerned about Basel III, as this will have a significant impact upon liquidity ratios and capital.

Q: And how do you see the long term for the industry?

A: At the end of the day, I have seen a lot of change in the industry over the last thirty years. Markets boom and bust, industry areas grow and wither, and companies appear and disappear. Each time we have an issue, everything is reviewed and regulated, and then the markets move on. I would equate it to the metaphor of the tree. The tree grows and, if left unchecked, grows out of shape. That is why it needs pruning. Every few years the markets need change and regulation, to cut them back and to keep them in shape.

About Manfred Wiebogen

Since 2007, Manfred Wiebogen is President of ACI, The Financial Markets Association. At Volksbank Austria, a cooperative banking group, he acts as Managing Director of Strategic Asset and Liability Management. Prior to this function, from 2000 on, he was Head of International Treasury Markets, being responsible for the CEE Treasury operations of Volksbank in Czech Republic, Slovakia, Hungary, Croatia, Slovenia, Bosnia Herzegovina, Serbia, Romania and Malta. He started his banking career in 1982 within the savings bank sector of ERSTE Bank, and occupied posts as Money Market and FX Trader and later Head of Interest Rate Derivatives.

Regulations: the change and the challenge

An interview with Harry Newman, Head of Market Initiatives EMEA for SWIFT.



SWIFT is the Society for Worldwide Interbank Financial Telecommunication, a memberowned cooperative through which the financial world conducts its business operations with speed, certainty and confidence. More than 10,000 banking organisations, securities institutions and corporate customers in 212 countries trust SWIFT every day to exchange millions of standardised financial messages. In light of the financial crisis and the regulatory response that has followed we discuss the implications with Harry Newman, Head of Market Initiatives EMEA for SWIFT.

Q: What trends are you seeing taking place in treasury and counterparty risk in the back office of banks?

A: Regulations are driving everything in one way or another. That may be initiatives such as TARGET2-Securities (T2S), a new market infrastructure designed to improve the landscape of post-trade processing in Europe, or a regulation to improve capital and financial resilience such as Basel III. It is no secret that the regulators believe that the crisis of 2008 has taken a chunk out of the global GDP and will regulate to try to make sure that this does not happen ever again. They are now moving to implementation, and banks' back offices are deeply involved in dealing with the implications of this.

Q: Is regulatory change a major challenge?

A: Basel III is a key development, as it requires that banks have more liquidity - and more knowledge of their liquidity positions. There's a trade-off between the knowledge you have of those positions and the technology you have invested in to manage this, and the amount of capital you need to hold to cover those positions. The better the insight your technology infrastructure can provide you with into your liquidity positions, the less capital you will have tied up in covering your positions.

Having said that, the sheer quantity of regulatory driven change means that the ability to invest

elsewhere is very low. One of my bank contacts put it pretty succinctly when he said to me the other day: "My discretionary spend is negative." Although all of these regulations will benefit the market individually and collectively make the market more robust, there is an issue about the sheer quantity of it and that it is being pushed through in such a short time, particularly at a time when banks are trying to rebuild their balance sheets. That is a real issue for them.

Q: How big a change are these developments from a technology view for the banks themselves?

A: Let's take liquidity management as an example. One of the big issues today is knowing your liquidity position. If you are a well-organised institution who knows your liquidity position already all the time in real-time, then this will not have much impact on you.

It is no secret that the regulators believe that the crisis of 2008 has taken a chunk out of global GDP and will regulate to try to make sure that this does not happen ever again.

This is not to do with capital requirements by the way, but the knowledge of your liquidity and whether you can cope with market impacts on that liquidity. What happens if your settlements fail for example? The technology impacts of this can be quite significant because if you are not well-organised in this area and do not know what your position is in real-time, then you might be dealing with incorrect information. It can take a lot of effort to get to a position where you know the right information - and then you have more effort to start to run simulations of what might happen in certain scenarios. What would happen if this went wrong or that went wrong? It depends to some extent upon what you did in the past, but this is a challenge for all banks: how to get a real-time view of their liquidity positions. That is one side of the coin.

On the other side, initiatives such as T2S are having major impacts on the back offices of banks, in terms of the way in which they deal settlement in the securities industry. That applies primarily to those who will be directly connected to T2S at the outset, but, in the future, the question is how it will impact the rest of the marketplace. For example, if you are a buy-side firm, you may well be able to get better information from T2S to control your risks around securities settlement. You should be able institution, you have a choice therefore to invest in the systems to make sure you are fit to comply in real-time, or have even more capital and liquidity to cater for your lack of knowledge of exposures and risk.

Q: Are your clients – the SWIFT bank community – investing heavily in these areas from just a compliance viewpoint, or are they investing in getting better risk management?

A: Many are investing heavily to make sure that they have a better knowledge and management of liquidity risk. It does depend where they are. The UK is probably in a position of first mover in Europe, in terms of managing liquidity risk in real-time using technology. All of the

As an institution, you have a choice therefore to invest in the systems to make sure you are fit to comply in real-time, or have even more capital and liquidity to cater for your lack of knowledge of exposures and risk.

to get more information about how the settlement is progressing, current status and more from T2S - over and above what you can get today. How this will pan out no-one yet knows, but there is a major debate just beginning about what the impact of this will be.

Q: It sounds like regulations are pushing us towards markets working in real time and surely that is a good thing?

A: Yes, it is a good thing, and I don't think we should get into a mind-set of "oh dear, how awful these changes are that the regulators are forcing upon us". Instead, we have to accept that these changes are moving us towards a better landscape, particularly from a risk perspective. This is exactly what we need to do. Knowing more in real-time and knowing your exposures and positions in real-time is a critical factor for a bank, and so if the regulations make that happen, that is a good thing. The issue arises when you need more capital and more liquidity to cover your lack of knowledge of those positions and exposures. As an organisations involved in the UK market are investing in some form to better manage liquidity. Some are putting in place systems which allow them to get better real-time feeds from their operations from a number of places, but it does vary, mainly based on what their current back office can do. We are working with a number of banks that have a disparate back office infrastructure, based on a number of different operations. Some of these banks are the result of mergers and acquisitions over time, with different platforms and operations in different countries. Those firms have back offices that are more fragmented, and we are seeing those clients put in place technologies that improve those infrastructures and bring them together. Others have already built unified payment and settlement infrastructures, and they are in a much better position. Having said that, I know of no bank that believes their infrastructure is yet everything they would want it to be to meet the forthcoming regulatory requirements. There are always things that need improving. Specifically, getting information from each other and from market infrastructures about which

Inside Talk



areas of their liquidity positions require coverage and investment is absolutely key.

Q: We do see standards changing things here though, don't we? Areas such as ISO 20022 and more. Will we see a rationalisation of the whole end-to-end process one day?

A: Will change ever stop? No. We do see increasing standardisation in the form of adoption of ISO 15022 and now ISO 20022, and that is being primarily driven by these new infrastructures such asT2S. If you've got a big legacy system and it works, then the benefit of moving is difficult to justify, but if you're dealing with a new terrain or a major political drive to do things differently, as in Europe, then you will move towards standardisation - and that standardisation is all based around ISO 20022. Will we see everybody move there? Perhaps one day. It will take a long, long time, and we will see different market segments moving towards 20022 as market movements require.

Q: SWIFT will influence how fast that happens. What role do you see SWIFT taking through this process?

A: Our role is to facilitate this where it makes sense. This falls into three clusters. The first is where there is something new or regulatory driven, like T2S. Another is where there is a business case and so, for example, the funds sector is an area where this makes sense. And then there may be others where it may not make sense because it is not broken. Correspondent banking for example. Is that really an area or case where people want to see lots of investments in change? Not at the moment. We are not going to drive these individual segments therefore, as this will be a community decision. We are going to facilitate things however when a market segment decides to move. Our role is, as a standards body, to work and provide the standards and work with the communities to provide the support that they need and expect. At the same time, as a network provider, we are going to provide the facilities to carry these services, such as ISO 20022, and ensure that this will work. But we are not going to force communities to move to ISO 20022 where there is no business case for change.

Q: Are there any best practices for technology in risk management that you've picked up and would recommend?

A: The best advice I can give is that you can do an awful lot without reinventing the entire system. There are many capabilities that banks have created to achieve efficiencies or control over the years, but that they are just not using. An example is notification of delivery. Banks have developed a lot of confirmation messaging to ensure that when a payment or settlement is sent they can be confident it gets delivered. There's a great deal of information flow that goes around that process which could be useful to build into risk management practices without major change. So I would recommend that companies look at what information they capture today but are not leveraging. This is a relatively easy change as it means you do not need to reinvent systems, but to look at how to better use what you have already.

Q: Final thought: do you think the way banks use technology in the future will ensure that we avoid another crisis through better risk management, or will it create the next crisis?

A: The thing about technology is that it can handle ever-more information at low cost and present it easily. If you go back 20 years, people were dealing with computer printouts to sign off millions in deals at the end of the day in perhaps a 20 minute window each day. What technology does is allow control to be built in so that you have better information about what you are doing and what your position is across many areas. It also allows you to prebuild warnings and alerts and controls around risk throughout the operational process. That's a great advantage. The cultural issue is then about using those capabilities and we are not anywhere near, yet, what technology can do across the board from that perspective.

About Harry Newman

Harry Newman is head of EMEA Market Initiatives at SWIFT. He is responsible for SWIFT's banking and securities strategy in EMEA and for managing a series of market initiatives, including TARGET2-Securities (T2S).

Regulatory trends and the impact on technology

An interview with Justin Chapman, Senior Vice President and Global Head of Industry Management for Operations and Technology at Northern Trust.



n August 1889, Byron Laflin Smith created The Northern Trust Company to serve Chicago's most affluent individuals and organisations. Over a century later, Northern Trust is a leading provider of investment management, asset and fund administration, banking solutions and fiduciary services for corporations, institutions and affluent individuals worldwide. In light of the financial crisis and the regulatory response that has followed we discuss the implications with Justin Chapman, Senior Vice President and Global Head of Industry Management for Operations and Technology at Northern Trust.

Q: What trends do you see today, in terms of derivatives, regulation and risk?

A: It's probably best to start at the macro level, where we see a change from traditional bilateral agreements and functions with central treasury books into a collateralised structure backed with electronic support on infrastructures. Obviously the two major developments are EMIR (the

In light of the new regulations, moving us into a much more secured environment, a key challenge is reduced liquidity within the market.

European Market Infrastructure Regulation) and Dodd-Frank which are trying to move investments from the Over-the-Counter (OTC) sector to some form of centralised clearing and settlement using a Central Counter Party (CCP). Those two regulations are probably the most relevant from the treasury side, as these are impacting all aspects of foreign exchange (FX) hedging. The other interesting dynamic that goes alongside all of this is how that plays off into the support functions. In light of the new regulations, moving us into a much more secured environment, a key challenge is reduced liquidity within the market. Therefore, in terms of treasury functions managing and mitigating risk, the transactions that go around this will now be processed under different mechanisms going forward. This is to de-risk those transactions and also to comply with other rulings, such as the capital requirements of Basel III. This will force everyone towards a central clearing which has an impact on other structures, with the biggest drain today on the collateral space. Are these organisations geared up for providing securities or cash off their balance sheet to collateralise those trading activities? This is a key question. That's the main conversation we are having in our bank and with other corporate treasuries. The dynamic shift of operations and the shift of focus upon risk and liquidity are going to have many connections from the industry perspective, but also changes the mechanic and requirement for that liquidity and the way in which banks look at liquidity overall. In particular, it means the counterparty has to have that cash or collateral available to cover their securities dealing intraday, and that is a big change.

Q: Do you think it's changed the way in which counterparties are reserving and managing their collateral already?

A: It really depends upon the structure and focus of the organisation. We have a significant number of clients who are working on models to see how much impact there will be on their reserves in order to cover the needs for supply and demand for increased collateral in that new world. Some are already balancing their hedging strategies between their needs for supply and demand, and that's a good place to be as it allows them to implement the new risk management requirements in a cost-effective structure. Where it becomes more difficult is for organisations that have not organised their books to facilitate that supply and demand modelling and balancing. They may not have the eligible platforms or cash on their books in the situation where they have intraday calls for collateral. Then they are in a difficult position, as there is balance between risk management in the treasury function and actually using those assets to make a decent return on cash and securities on the

principle book. What these firms should be doing is to secure assets that meet collateral requirements that have little or no impact on their overall investment strategy, or potentially have a large amount of cash on their books to meet the new margin requirements. In the current low interest rate environment, it's probably a lot easier to manage that cash flow in a predictable fashion, but if you have a significant hedging strategy or if you are in a stress situation where interest rates rise two or three percent, the demand for that margin is going to competently outweigh the supply that firms have on their books in most cases. Then they will have to look for service provision for assets on their books or transform them. That leads into other on the cash, but if interest rates shift, then this could change that picture dramatically.

Q: What will happen with technology in the back office as a result of all this?

A: This is the biggest change area: the nirvana of straight through processing in real-time. Most banks will also have their own internal optimisation change process too, to ensure that they have the technologies to manage their asset holdings, their pension fund holdings, their cash positions and all those other assets they have within the organisation. That's a big area of investment for most companies right now.

This is the biggest change area: the nirvana of straight through processing in real-time. Each transaction in the future will have different collateral requirements and each bank will need optimised systems to identify what assets service this collateral requires most effectively.

challenges that the regulator is trying to achieve, in terms of reducing the amount of leverage and financing through the OTC derivatives value chain. There are some solutions to this too, but it really does change the dynamic. What we are doing with those institutions we work with, and within our own bank, is modelling current demands for collateral and if they did move into the clearing space where would the stress points occur? What market situations would generate that level of stress? Are there moments where demand could not meet supply needs and, if so, what can be done to move assets or cash in real-time to meet those challenges? That may involve transformation of assets or refinancing to support those transactions. But then there is a level above this that may be even more challenging, as interest rate shifts could create stress that is significant and could not be supported by asset transformation or refinancing. What can you do then? Intraday variation margins could result in auctions of bidding for cash to support trade flows. This is why there is not a lot of cash available at the moment, as many are not getting returns Then we need to optimise the books of the banks to deal with any collateral needs wherever they are in the world, as they occur intraday. A big part of that change is that many of the banks, counterparties and organisations that they use through the value chain, do not have the optimisation tools in that process to deal with the needs of the organisations' treasury functions, particularly to look across all of these counterparties to leverage all of the cash and securities in their operations which are at their disposal. This is where the other major focus will be for technology in order to focus cash and liquidity, not just from a cash perspective but also from an equities perspective in terms of settlement of those transactions.

There will be a real big push for provision and optimisation across different venues from a proprietary perspective, and also from other counterparties who may be able to assist firms in financing or transforming the existing assets they have on their books.



The industry as a whole is not joined up at the moment .Some core providers are trying to get there, and there is still work to be done. Then you have some systematic industry solutions that will provide this as a backbone, particularly the Euroclear and Clearstream models.

Q: What happens if you are one of the firms that are severely hampered by the technology here, as not all firms will be able to invest in keeping up with the optimisation needs in this value chain?

A: Well it's clear that those banks will need to outsource far more of their treasury functions than they ever have before. You are clearly going to have that need identified and resolved within the bank. As a custodian, the optimisation of products and collateral management processes that go with this are absolutely key for us going forward. For many investment banks, they will also be doing this for their own books. For the other banks that have not got this and cannot afford to invest, then these are the firms that will have to source other organisations who can provide them with those services and there are definite product opportunities for the banks that can invest in those areas.

Q: What about the regulations themselves. They appear to have inconsistencies. Does this raise any issues?

A: Of course, as every region and area appears to have slightly different requirements and interpretations. For example, even the capital requirements for Basel II vary country by country, and different levels of capital change based upon bilateral agreements between counterparties and organisations. This is what I mean when discussing optimisation of collateral. Each transaction in the future will have different collateral requirements and each bank will need optimised systems to identify what assets service this collateral requires most effectively. What route and structure of collateral per transaction can be delivered by the technology infrastructure in the most optimised way? The systems will need to identify the balance between the cost of financing versus the cost of capital at the front end. It is not just a one size fits all approach either or even a call based upon country by country capital needs, but making the right calls on a transaction by transaction basis. This will be a critical change in terms of how you hedge

and manage risks from not just a capital view, but from a collateral mix and the cost of getting that collateral.

Q: Do you see an end game view here, and what this will mean in terms of competition and liquidity in the markets and the market structure?

A: The service providers will change because the margins they produce through charges to the clearing brokers will be reduced. As asset managers and other organisations enter the clearing chain and the collateral chain, we will see a lot more segregation of assets which will then deliver a requirement for reunification downstream to see the total picture. It will also drive a lot more movement into shadow banking as well.

The global custodians will be leveraging themselves far more heavily into the optimisation process which will reduce the opportunity for the middle players to make money, as the brokers used to focus heavily in this area. That model will change and the winners will be the ones who invest in the optimisation technologies and also the companies that can deliver the balancing services between the supply and demand chain for collateral. If you have a large book of assets with clients who can supply those assets along with a large group of clients who will be demanding those assets, then you are in an ideal position. Especially if you have the right optimisation technologies across that value chain.

About Justin Chapman

Justin Chapman is Senior Vice President and Global Head of Industry Management, Operations and Technology at Northern Trust. He is a member of the chief Operating Officers Executive Management Team reporting to the organisation's COO, and is responsible for strategic implementation, process and change management for industry engagement across operations and technology globally. He manages engagement and industry strategy across all disciplines giving him a holistic view across all industry and strategic change from local, regional and global perspectives. His experience extends to over 23 years in the securities industry.

Pepping up the Value of Structured Products



o, which technology application should you choose to amp up the productivity and performance of your structured products business? The key to answering that question lies within the innate utility of structured products.

The popularity of structured products is founded in the fact that standardized products don't address all investor requirements. Structured products are specifically designed to fulfill needs that otherwise fall between existing investment options. Customization, therefore, is key.

Structured products are more multivariable optimization strategy than they are monolithic investment. Like any other investment, they operate at the intersection of three critical variables – investor risk profile, market trends and asset allocation – but then they are expected to leverage more risk-reward permutations than conventional products. Flexibility, therefore, to quickly optimize across diverse profiles, trends and asset classes, is mandatory. What's more, all of this must be accomplished while ensuring the highest levels of investor transparency and regulatory compliance.

So, these are the bare minimum standards against which you should judge structured products technologies.

Now, should solutions be deployed separately for the structured products business or be integrated as a module in the cross-asset class treasury and trading platform? That is purely a function of enterprise strategy. But as more and more structures become wholesale, and buy-and sell-side activities converge, there are distinct advantages to be derived from consolidated platforms. But that's a discussion for another day. I shall limit the scope of this article to discussing expectations that you should have while choosing, enhancing or evaluating solutions for your structured products business.

Chances are, you already have an existing portfolio of structured products and, logically, that is where the evaluation process has to be rooted. You have multiple structures that are currently on offer for investors. You also have structures from the past that could very well be back in vogue, as-is or with modifications. Work with the vendor to replicate all these structures in the Consolidated Treasury and Trading Core System (TTCS). But be open to the possibility that some exotics may not be completely replicable.

Check if the system has the capability to break down complex structures into their plain vanilla components. You should adopt the 80-20 rule here – ensure that it is possible to reduce at least 80% of the risk or value of exotic structures into their plain vanilla components. Exercise a 90-10 option for the more popular structures.

Structured products are specifically designed to fulfill needs that otherwise fall between existing investment options. Customization, therefore, is key.

Even if you are doing back-to-back business in some structures, involve your risk department and design a hedging strategy. Now, the strategy could operate at the trade or portfolio level, which should be reflected in the TTCS. Understand how the system demonstrates exposure and position matching between the underlying and the cover trades. The system should be capable of alerting you to open positions that are beyond tolerance levels. It should also have the algorithms to compute and suggest the collateral required to cover those open positions.

Evaluating pre-trade features

Rather than hard coding structures into the system, use a template-based approach for the product factory. This works best and allows you to combine components from plain vanilla products and create new structures on the fly. Some solutions call this 'strategy' or 'linked group' of trades, but the essential functionality is to create new structures by combining components from plain vanilla products and identifying the resultant structure as appropriate to investor needs.

The template approach groups multiple plain vanilla components into a representative structure that corresponds to client-specific requirements. It should also be possible to dice this structure back into its vanilla components so that pricing calculations are made easier. (In most cases the sigma of the values of individual components delivers the value of the structure.)

The resultant structure should then be put through a simulator built into the TTCS. This should allow you to simulate individual market components that affect the value of the structure. You should also be able to simultaneously change two or more or even all the market components to build a better understanding of the structure. More importantly, this provides investors with a transparent and simplified view into the symbiotic relationship between returns and different market conditions. An additional benefit here would be the ability to directly offer the simulator as a component to your investors. This can prove to be an exceptionally useful feature considering the prevailing tendency to dismiss anything that is even ever so slightly complex as toxic.

Now that you, and more importantly your investors, understand the different values that can be realized under various market scenarios, it will be easier to define stop-loss thresholds for individual or even a portfolio of structures. Check if the TTCS allows you to define tolerance levels for individual market components with alerts as well as set stop loss limits at the level of individual structures and/or the portfolio.

The system should also be able to compute placement fees as well as other costs related to structuring, development etc. and present it to investors transparently to enable quick decisions.

Assessing post-trade capabilities

Now that the investment decision has been made, the system should be capable of updating, in real time, the positions (FX, Interest Rate, Equity, etc.) and risk exposures specific to the structure or portfolio. And since it is possible to slice the structure into individual components, it should also be possible to route risks to the relevant interbank trading desks. But check that anyway.

For trades with investors, the system should be able to generate term sheets for the structure as well as confirmations for the individual components. The simulated valuations, at say +/-10% of current levels

Regular, if not frequent, online valuation of structures is hygiene; valuations at the end of every business day are mandatory.

of the most important market factors associated with the structure, are an important part of the confirmation docket that will be sent out to investors.

Regular, if not frequent, online valuation of structures is hygiene; valuations at the end of every business day are mandatory. And to enable ease of valuation, the system needs to have the functionality to decompose the P&L associated with the portfolio. At a basic level, the P&L decomposition should help explain the change in the value of the structure over the course of a trading day. But it should also be able to deliver insights at a more granular level – for example, the change in value due to the movement of market rates or modifications in the terms of the trade; or the impact of significant events like option exercise, coupon settlement or maturity on a structure's performance. Changes to the basic Greeks day-over-day should also be explained by component.

Stratagem



Any straight through processing TTCS will take care of accounting and General Ledger. But it is also essential to check if it conforms to accounting standards, allows you to define hedge relationships, and has dashboards to retrospectively demonstrate hedge effectiveness using historical market rates.

In any business environment characterized by multiple structures, and where new ones are being introduced all the time, the ability to run what-if trades becomes vital. This feature allows you to ensure that you are within the prescribed credit risk limits before you strike a deal. This can help you arrange for more limits or compute collateral requirements in advance. Running 'Value at Risk' computations on what-if trades using incremental and marginal numbers also enables effective risk management.

You should also be able to do an early or partial termination at a trade, position, or portfolio level, or for all trades at the counterparty level. The system should allow you to do this using either the real time market rates mapped to it or slightly off-market negotiated rates.

Another very important aspect to be considered when it comes to structured product solutions is tax computation. For income tax purposes, structured products are considered contingent payment debt instruments. This means that investors will usually have to pay income tax each year on imputed annual income even though they may not receive a cash payment until maturity. In addition, any gain realized upon the sale of these products must be treated as ordinary income, not capital gains. Given these circumstances, it would be a good idea to check if the solution has the requisite custom tax computation tables needed to account for these unique characteristics.

Let us sum all this up into an evaluation checklist for structured products solutions:

- Can you replicate at least 80% of the value and risks of your structures?
- Can you combine components of plain vanilla products and create new structures?

- Are you able to match positions between the underlying and the hedge trade?
- Does it allow you to decompose structures and run pricing and risk analytics?
- Can you simulate structure values for variations in individual market components?
- Does it allow you to define tolerance levels and stop loss limits at the level of individual market components, structures and/or portfolio?

Structured products, as a class of investments, continue to grow in popularity because of their customizability, flexibility and versatility.

- Can it compute costs and fees and present both transparently?
- Can it automatically route risks, trades and positions to the relevant desks?
- Does it auto-generate term sheets and confirmations?
- Can it streamline and simplify the valuation process by enabling P&L decomposition?
- Does it come with dashboards to retrospectively demonstrate hedge effectiveness?
- Can you do what-if trades?
- Does it allow for early or partial termination?
- Is it configured to account for the taxation characteristics unique to structured products?

Structured products, as a class of investments, continue to grow in popularity because of their customizability, flexibility and versatility. It is therefore only natural to expect that the solutions that drive these unique investments are at least as, if not more, customizable, flexible and versatile.

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The Need for Risk Aggregation



here was a time when 'The sun never set in the British Empire'. Decades later, we could say something similar about trading and capital market operations, which are ubiquitous and being performed in some or the other time zone around the world at any given time. Though this model of 24X7 trading presents an endless window of opportunity to a global investment bank and other financial institutions with branches and subsidiaries across the globe, it also raises the specter of potential losses due to lack of systems and processes for risk consolidation.

Regulators the world over have recognized this threat and have initiated measures to contain it. In a January 2013 Reuters report, the Basel Committee on Banking

The financial crisis that began in 2007 revealed that many banks, including globally systemically important banks (G-SIBs), were unable to aggregate risk exposures and identify concentrations fully, quickly and accurately.

Supervision said that, "The financial crisis that began in 2007 revealed that many banks, including globally systemically important banks (G-SIBs), were unable to aggregate risk exposures and identify concentrations fully, quickly and accurately". To contain this threat, the Basel Committee has set out principles these banks must implement by January 2016 to strengthen their aggregation of data on risks. The 14 principles cover the following four sections:

- Overarching governance and infrastructure
- Risk data aggregation capabilities

- Risk reporting practices
- Supervisory review, tools and cooperation

These principles cover risk aggregation and reporting from a governance perspective. However, risk aggregation is equally important for risk monitoring and management by the trading desks of investment banks, as well as by retail and wholesale banks having multiple branches where retail customers transact in products like foreign exchange. With some of these banks offering exotic instruments like structured products to retail customers, the consolidation of the risks arising from options embedded in these products, in order to manage them effectively, assumes higher importance.

The challenges and solution

The two main challenges for risk aggregation are:

- Lack of availability of IT systems and infrastructure
- Cost

Lack of systems for risk aggregation

The first challenge that all banks, including investment banks, retail banks and wholesale banks would face is the lack of system support for performing risk aggregation. The 'Principle 2' specified by the Basel Committee mentions: "Data architecture and IT infrastructure – A bank should design, build and maintain data architecture and IT infrastructure which fully supports its risk data aggregation capabilities and risk reporting practices not only in normal times but also during times of stress or crisis, while still meeting the other principles."

What this essentially means is that banks have two options – change their data architecture and IT infrastructure, or look at an aggregator system (something like a data warehouse) that can take inputs from their existing systems online and in real-time, and provide the required risk reports and views to the regulators, senior management, auditors and trading desk.

More often than not, the first option turns out to be both arduous and complex. Banks, with their global operations and wide branch network, usually maintain multiple systems to manage different products. For instance, they might have separate systems for handling

Banks must exercise due diligence while selecting the system, and then proceed to integrate it with the other systems in their ecosystem, neither of which is easy to do.

FX trades and derivatives. Sometimes, the system used in the parent country might be different from the ones used in other countries, for the same product. All these systems need to be changed to provide risk aggregation capabilities after which the consolidated risk must be presented in the main/head-office system. Assuming all these systems already have a communication channel for talking to the main system, the same can be used to transfer risk data. If that is not the case, then this channel also needs to be built.

The other option, namely the aggregator system, also has its limitations. These systems are similar to data warehousing or business intelligence solutions that need some changes before they can meet risk aggregation needs. Banks must exercise due diligence while selecting the system, and then proceed to integrate it with the other systems in their ecosystem, neither of which is easy to do. Having an online interface, which aggregates risk data in real-time is the ideal situation to be in, but not practical due to issues like network connectivity and impact on the performance of existing features. The practical approach is to have batch uploads, but they are not of much use during periods of stress.

Cost of risk aggregation

The last thing a bank's management would want to do in these times of economic uncertainty, tough competition, and margin pressure is to shell out money to achieve risk aggregation, even though their bank would ultimately benefit from it.

The option of changing the data architecture and IT infrastructure to enable risk aggregation calls for an impactful revamp of existing systems. The bank would have to spend not only on new hardware and network connectivity, but also on training, as well as on testing the changes made to interfaces and user screens on account of the change in the underlying architecture.

The option of including an aggregator system in the current IT architecture would entail not only licensing, implementation, and maintenance costs but also costs of building, testing, and maintaining interfaces from each existing system, going forward. The new system might also warrant new hardware, thereby adding to the cost.

Is there another solution?

Banks can also consider a third option of simplification to meet their risk aggregation requirements.

Typically, a global bank's IT ecosystem consists of scores of interconnected trading systems, some home grown, some bought off-the-shelf. There could be separate systems for handling different products, for e.g., one for FX and MM trades and another for derivatives; or there could be different systems for handling the same product, e.g. FX, but in different geographies. Managing multiple trading systems across products or geographies or branches increases cost and effort. There are license costs, annual maintenance costs, hardware costs, integration costs, and last but not least, training costs.

Risk aggregation through simplification

The way out is to simplify the IT landscape by replacing the existing systems with one or multiple multi-entity



enabled systems, capable of handling a wide range of trading products across geographies. The multi-entity enabled architecture of such systems enables banks to handle multiple logical entities that are partitioned from each other, as well as aggregate data across entities, with a single or minimal number of installations.

Each country of operation is set up as a separate entity; an inbuilt access mechanism allows only those traders, mid/back office users pertaining to a particular entity to access its data. This means that traders and other users of one entity cannot access data related to the

Hardware costs:

For a bank with operations restricted to one region, say, Western Europe, a single installation and a single database on a multi-entity enabled system would work just fine. The bank need not replicate the system in different countries, nor establish separate hardware and databases.

Implementation costs:

The cost of implementation also comes down because it is handled from a single location, by one team. Banks with operations spread across the globe have the option

The way out is to simplify the IT landscape by replacing the existing systems with one or multiple multi-entity enabled systems, capable of handling a wide range of trading products across geographies.

trades and counterparties of other entities. However, a bank's central risk team could be allowed to access data belonging to all entities for the purpose of aggregating risk. This central risk team could be the one that is responsible for monitoring and reporting aggregated risk data.

Centralized risk monitoring and management

In addition to enabling risk aggregation for regulatory purposes, such multi-entity systems can also facilitate centralized trading and consolidated risk monitoring and management. For instance, a bank could establish a global hierarchy of FX books in which all entities could trade. All FX trades would be captured in this book hierarchy, giving all traders, across entities, a truly global view of the bank's FX position allowing them to manage the FX risk centrally. The chief dealer and the risk manager could be given permission to access the global books and all entities enabling them to monitor bank-wide risk.

Reduced TCO

The above option reduces costs on several fronts.

of deploying more than one installation. For example, there could be one installation catering to operations in North and South America, another for handling Europe and the Middle East, and a third for South East Asia, China, Japan and Australia. Local regulations could be a decisive factor in the number of installations, where they prohibit business data from crossing national borders; in such cases, a separate installation is required in each country.

Integration costs:

Having a single system, which is logically partitioned for different entities, substantially reduces integration costs. There is no need for data to be handed off from one system to another. Integration is required only if there are two or more such installations. However, since such integration would be carried out within the same system and through the same vendor, it is likely to be less complex.

Running costs:

This model also allows a bank to centralize backoffice operations in line with its single or multiple installation(s) of the multi-entity system. This streamlines operations as well as cuts down the cost of personnel.

IT and maintenance costs:

Using a single installation to cover multiple entities offers opportunities to rationalize IT and maintenance support. It also saves the cost of system upgrade, by planning and executing it centrally.

In conclusion

The risk aggregation guidelines and requirements prescribed by regulators are necessary for the survival and stability of the financial system, and in turn that of the economy. The financial crisis proved the old adage, 'What cannot be measured cannot be monitored'.

Meeting these guidelines is not going to be easy. Any change brings along with it new or changed processes, new systems or changes to existing ones, and costs time, effort and money to bring it about.

Banks' options include:

Revamping their existing system and data architecture and IT infrastructure: This could get complicated, especially when the existing IT landscape is highly complex. Global banks are likely to have a mix of systems handling the same or multiple products and operations. Changing all of these in a coordinated way will cost resources and time.

Adding an aggregator system: A new system would entail implementation, maintenance and integration costs, as well as further complicate the IT landscape. Also, it is likely that the risk aggregation data will be of a batch nature, rather than real-time, owing to integration and performance issues. **Simplifying by using multi-entity systems:** This is almost a mix of the previous two options. Multi-entity systems capable of handling multiple products and entities have an inbuilt data consolidation architecture that can be used for risk aggregation. Thus, instead of changing the architecture of existing systems, banks

They say, 'The best time to change is during a crisis', or in this case, in its aftermath.

can replace them with a new multi-entity system. This will save costs by reducing hardware, minimizing integration, centralizing IT and streamlining operations.

They say, 'The best time to change is during a crisis', or in this case, in its aftermath. The crisis has given banks an opportunity to seriously look at streamlining their systems by replacing them with a lighter alternative. This would not only help them adhere to the risk aggregation guidelines but also save money.

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Designed Extensible:

Building smarter banking systems Iux is a fundamental characteristic of the global banking ecosystem; regulations, standards, competition and customer preferences are all constantly evolving.

Let's just consider a couple of quick examples to establish the dynamic nature of the banking sector.

Banks across the globe have to conform to and enforce extremely strict Anti Money Laundering regulations that stipulate the monitoring and reporting of transactions that cross pre-defined threshold limits. therefore needs to be designed to accommodate capabilities that probably cannot be anticipated but can definitely be expected. For the banking sector, the ability to quickly configure systems to evolving market conditions is not a luxury; it's insurance against obsolescence.

In system design, extensibility is the principle that allows for the extension of systems to accommodate functionalities that may be required in the future. This extension can be in the form of an additional functionality or a modification to an existing one,

The ability to enhance or expand capabilities without making major alterations to the underlying system architecture becomes critical.

Now, these limits themselves can change, based on different transactional circumstances or even a revamp of regulation.

Banks also operate across multiple systems, like the Reuters Dealing platform for trade capture and the SWIFT system for sending and receiving messages. All these interfaces require different configurations and custom requirements, which can also change based on geographic location. For example, there is a SWIFT Release every year with a new set of changes.

Banks therefore need the flexibility to be able to quickly respond to these constantly shifting targets. It is critical for them to have the capabilities to rapidly add new business rules, launch new products, and modify processes.

It naturally follows that banking solutions too need to be designed to respond in real-time or near-real-time to evolving banking needs. The ability to enhance or expand capabilities without making major alterations to the underlying system architecture becomes critical. Any efficient banking system, solution or architecture but the objective is to allow for the creation of new functionalities with minimal effort and without compromising system performance. Any well-designed architecture, therefore, must provide the tools to enhance system functionality without the need for significant interventions at the infrastructure level.

Extensibility is a fundamental feature of Financial systems architecture and hence they are designed with hooks (script hooks, user hooks etc.) and mechanisms for extending system capabilities with minimal intervention. Those systems are designed with extensibility tool kit, comprising features like Scripting Engine, Workflow, and Application Interface capabilities, affords banks the flexibility to add, modify or create features and functionalities required to cope with their dynamic business needs. It allows banks a simple and quick approach to upgrading system functionality while efficiently managing objectives of cost and time.

The ever-changing dynamics of the banking sector are as much an argument for extensibility as a showcase of the challenges therein. The sheer scope of possibilities



 by regulation, geography, market, operating structure, etc. – demonstrate the value of extensibility in system design.

Banks in Croatia, for instance, have specific regulatory requirements regarding the accounting and the payments of their local currency products. The accounting requirements for a money market product differ drastically from those of a local currency security or FX deal. Local payment messages, like MT202 and

The ever-changing dynamics of the banking sector are as much an argument for extensibility as a showcase of the challenges therein.

103, must have the defined set of values in Tag 72 and Tag 21 for different FX/MM/Security/Repo products dealt through the Central Bank. Moreover, the tag values as well as the accounting specifications can change in the future.

All these requirements have to be achieved using extensibility features in the banking solution if 'time to delivery' is to be optimized. A framework can be created in the solution to customize tags to address SWIFT tag-related requirements. There can also be a template file containing the list of tags for each message and this should be extensible. It is also possible to customize the various tags, like Tag 72 and Tag 21, using PL/Sql and parsers that are available in the framework. Where required, the same framework can be used to add new tags. The solution should also incorporate an accounting events of a product like interest accrual, interest settlement or principal settlement, as per the bank's requirement.

Meanwhile, in the Czech Republic there are different regulatory specifications for calculating Credit Limits and Market Limits. The specs vary from product to product and can also change over a period of time. All these changes need to be deployed on the fly, as soon as they are decided by the risk committee, reinforcing the case for extensibility.

In case of a multi-entity setup for a banking conglomerate, there are regulations that specifically govern transactions between member banks and their affiliates – like, for example, a prohibition on installment purchases exceeding 21 months which was later changed to 15 months. Such regulations keep changing, making extensibility virtually indispensable.

Apart from ensuring regulatory compliance, extensibility also plays a central role in enabling requirements unique to a market or a bank's operating structure.

Banks in the Philippines need to include additional validations in the workflow of a deal. The product provides only a generic workflow – Front Office (FO) inserts, Middle Office (MO) completes and Back Office (BO) accepts the deal. Some banks might need additional controls at the Front and Back Offices. If the Front Office consists of junior and senior dealers, the system must enforce checks on all the exceptions raised in a deal entered into by junior dealers. The system should also enforce checks for senior dealers to validate and approve these exceptions before the deal goes to the Middle Office.

The solution in this case would be to provide various user hooks to raise bank-specific exceptions at the deal capture stage, in addition to the standard product exceptions. It is also possible to provide various script hooks at the deal events so that exceptions available on a deal are captured in these scripts and appropriate action is taken.

Different banks in different locations might also have their own set of charge collections or brokerage fees. While one might have a simple five or seven percent for amounts below and above a certain value, others could have a more complex set of conditions, like FX deals in local currency, FX deals in foreign currency, MM deals

Extensibility helps banks to quickly traverse the gap between current system functionality and future functionalities that are enforceable, desirable or advisable.

in local currency, MM deals in foreign currency etc. Extensibility can create the flexibility that a bank needs to deal with such market-specific requirements.

Reports are an integral part of any banking solution and even here the nature and structure of reports can vary from bank to bank, from market to market and even over a period of time. With extensibility, it becomes possible to alter structures of existing reports or even create new ones if required.

Given the inherent mutability of operating conditions in the banking environment, banks cannot afford to waste time and resources in upgrading their solutions to cope with new requirements. Moreover, in a lot of instances there is a need for banking systems to almost instantaneously adapt to changing regulations, standards or other fundamental operating principles. Extensibility helps banks to quickly traverse the gap between current system functionality and future functionalities that are enforceable, desirable or advisable.

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Will you be EMIR compliant by 2014?

n the new normal economy, the IT world of finance is coming to terms with the reality of heightened scrutiny and regulatory investigation. Though many of the changes that are getting into the phase of compliance implementation are not really changing the structure of the way data attributes are extracted, processed and reported, there are changes which are demanding structural changes in the way application and IT landscapes are built. This is to align with the regulatory mandate across the banking and financial services industry.

In the context of Europe, the European Market Infrastructure Regulations (EMIR) is an example of legislation, which calls for a rethink of the way in which trade related data is extracted, processed and The EMIR will require that entities entering into any form of derivative contract, including interest rate, foreign exchange, equity, credit and commodity derivatives report each one of them to a trade repository. This means that depositories and central counter parties (CCP) need to focus on building sound risk management practices. A CCP should be in a position to take all potential risks that a trade or collection of trades poses to the trading entity as well as to the stability of the financial system as a whole.

Containing systemic risk as well as protecting orderly market practice in derivative trading must remain at the core of trading practices, across market participants. In other words, a CCP should take all the factors leading to a loss event into consideration to protect taxpayers

In the context of Europe, the European Market Infrastructure Regulations(EMIR) is an example of legislation, which calls fora rethink of the way in which trade related data is extracted, processed and converted into meaningful information from a regulatory perspective.

converted into meaningful information from a regulatory perspective. The European Commission, in its drive to help economic recovery, proposed a regulatory framework for financial services organizations, which adequately addresses the risk associated with the aggressive position file up in derivative contracts.

The Commission, in its communication of 3rd July 2009, titled 'Ensuring efficient, safe and sound derivatives markets' detailed various measures to make information more transparent and easily available across the facets of trading and trade practices. The Commission further established the European System of Financial Supervision comprising three European Supervisory Authorities (ESAs) to monitor compliance and adoption of regulatory prescriptions.

from any fallout of bad business decisions. A series of directives from the Commission prescribes a method for calculating and measuring risk based on the asset class and associated liquidity criteria. It further defines the marketability of collateral that an entity may hold to support trading positions in the derivative market, specifically in the OTC context.

Although these prudent measures have been cited as the reason for the curtailment of transactions in derivatives trading, and the higher cost of operations for orderly market making, they are vital for mitigating systemic risk in volatile markets. For a derivatives trading organization, higher margin calls and haircut calculation in determining collateral value have changed the way in which its collateral management function operates. Enterprises that have traded but not necessarily cleared must commit more capital towards the position that they own on the books. Further, such trades must be marked to market on a daily basis on the value of the outstanding contract. However, there is a lot of complexity in benchmarking the price point for certain asset classes, which may not have a liquid market, on a day-to-day basis. Though the Commission mandates the adoption of a reliable and prudent marking model to define the exposure to build collateral to support derivatives trading, from an IT implementation perspective, it is as yet unclear as to to the regulatory mandate. The key tenets of the EMIR regulations prescribe the following:

- Reporting obligations for OTC derivatives
- Clearing obligations for eligible OTC derivatives
- Implementation of measures to reduce counterparty credit risk and operational risk for bilaterally cleared OTC derivatives
- Standardized rules governing derivative and OTC transactions

All firms situated in the European economic zone must adopt these measures, and remain compliant even

EMIR, which came into force in August 2012, appears to be set for implementation by early 2014. Considering the various concerns expressed by trading organizations, it is likely that the compliance date will be pushed further.

what type of data attributes will be needed in order to arrive at a reliable algorithm which provides decision making input and also conforms to the rule book of prudent trading practice.

Implementing new risk management standards, including operational processes and margining for all bilateral over the counter derivatives may require new applications and IT infrastructure to be built.

EMIR, which came into force in August 2012, appears to be set for implementation by early 2014. Considering the various concerns expressed by trading organizations, it is likely that the compliance date will be pushed further. It is the industry's view that most of the building blocks, such as connecting with CCPs and extracting all required information from multiple source systems and databases to create meaningful information and reports need to be built and operationalized by early 2014 in order to conform when trading with organizations not based in Europe. In this way, these regulations assume pan-global coverage given the interconnected nature of global derivatives trading.

Key challenges facing derivatives trading organizations

• **Rising cost:** According to the Commission's directives, all OTC derivatives contacts and positions exceeding the threshold limit must be reported to ESMA. Key information, such as trade type, underlying maturity, notional values, and price and settlement dates must be reported. The focus on sharing information to mitigate systemic risk will make trading, especially in the case of cleared OTC transactions more expensive, as the trading firms will have to pay additional clearing fees. In addition, derivatives trading organizations will be subject to a higher defined collateral requirement. Considering that the emphasis is on the nature of liquidity of

collateralized assets, the need for arranging high quality collateral will further push up the cost. EMIR compliance requires firms to post margin in cash or cash equivalent or in designated eligible securities, such as treasury bills. In certain instances, firms may be levied capital charges and asked to adapt mandatory risk management processes or build new ones. Under the new directives, when calculating trading positions based risk, it needs to include the entire OTC derivative contract entered.

- Building data architecture to provide input: In the past, OTC trading was primarily based on verbal confirmation followed by detailed documentation between the trading parties. It was difficult to capture all the details of the contract in the system. To enhance speed and agility, the organization often relied on the key attributes of the term sheet. Documents were made available only in case of specific need or dispute over agreed conditions and obligations. The organization is now expected to move from this manually intensive practice to a system and application driven approach. Considering that trading related information is held across multiple interfaces and databases, and that a significant part of that information resides in documents, trading organizations will need to build new data dictionaries to provide a framework for automation. Building data dictionaries, catering to different types of trading poses significant challenges both from an understanding and computing perspective.
- Need for a new set of risk management controls: As per the new mandate on risk measurement and a management framework for regulators, the reporting of related compliances would require changes to be made to current processes. New control systems need to provide information on the nature of asset classes, such as market conditions, stress testing results, and liquidity on a real time basis to be in a position to understand the derivatives contract risk at a portfolio level. Organizations need to be

capable of providing information on the liquidity of uncollateralized obligations. These changes might further influence changes to existing processes, may increase automation to avoid manual entries and clearly define the control points across organization.

- Need for real time and periodic reporting of trades: Complying with emerging regulations, such as MiFID or Dodd Frank calls for a relook at the trading organization's reporting environment. Organizations now need to build reporting infrastructure, cutting across multiple functions and systems and be in a position to process massive volumes of data for reporting and record keeping. Since EMIR defines CCP differently from Dodd Frank and MiFid, the data needed to generate its reports will also have to be processed differently.
- Building an extraction layer taking diverse needs into consideration: As in any large enterprise, building an extraction layer to dig deeper into data/ attributes residing in multiple sources is not only a time consuming exercise, but also a complex one. There are instances where the quality of trading data is suspect and might therefore require cleansing before being made available to the extraction layer for building reporting databases. Enterprises might have to develop a comprehensive blueprint for the data attributes to lower the risk of inaccurate reporting of trading details.

Derivatives trading organizations have to overcome some of these challenges in a relatively short span of time. The dynamic nature of regulations demands flexibility and adaptability both from the process and system perspective. Considering that OTC and derivatives trading are crucial to business success and profitability, business leaders within trading organizations are unlikely to wait long for a response from IT.

Way forward for building a next generation IT landscape to support the changing needs of EMIR Response to changing regulations as well as efforts at building next generation IT infrastructure to enable compliance by trading organizations must be based on the principles of efficiency, economy and agility. Though there are multiple ways in which a solution can be conceptualized and implemented, the block building

The dynamic nature of regulations demands flexibility and adaptability both from the process and system perspective.

principle has to be simple and straightforward, so that the new IT infrastructure is able to support emerging and changing regulations in the years to come. In this context, the following design principles can be taken into consideration:

- Separating the reporting infrastructure from other compliance initiatives: Derivatives trading organizations need to have a comprehensive understanding of the reports meant for internal consumption and those which need to be submitted to different regulators across geographies. It is our view that it is possible to map overlapping data attributes between the requirements of multiple regulators and create a metadata repository for building the blue print.
- Empowering business users to directly upload data from Excel to the hub: As such, utilizes MDM inherent metadata to map into landing tables to increase the possibility of automation in trade details capture. Considering that traders will not welcome the additional effort they must make to submit details of trades, these initiatives must be

"plug & play" and have the ability to manage records that are rejected when data is loaded into the MDM hub. Users must be allowed to take corrective action on single or multiple records, flag them for reprocessing, or delete them from the reject list.

- Build real time insight into the margin, lending and collateral management system to evaluate clients' margin lending positions, based on their margin loan and portfolio value of stocks, options, and other financial instruments. It is important to build flexibility into the architecture and data model to enable the calculation of risk positions.
- Building interface with CCPs and depositories: The last leg of reporting always depends on the message interface between third party entities and trading organizations. Considering that message interface structures will change from time to time, it is important to build robust message adapters to enable seamless interfaces. This will further help trading organizations to manage their reporting obligations in real time.

Eventually, the EMIR reporting infrastructure needs to integrate with the overall strategies of the organization to mitigate risk and be in conformity with regulatory mandates. Therefore, the program should enable easy access to information for critical decision makers irrespective of location, to enable them to comply with changing regulations in letter and spirit.

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Treasury in the cloud

Techwatch



Through this transition, the Department of Treasury was able to optimize and bring down their cost of operations, organize data and information much better, deploy infrastructure for interactive graphical

The key question today is no more "Should we use the cloud?", but rather, "What is the best way to do so?"

data visualizations and better usability, integrate social networking and provide fast search capability with excellent scalability and performance.

These days, everyone is talking about cloud computing.

The adoption of cloud computing and transition of applications from on-premise deployments to the cloud is a top priority of every Chief Information Officer's agenda. Analysts estimate the cloud computing market at over USD 150 billion at present. Industry research also indicates that over the past 10 years, enterprise workloads have moved away from onpremise deployments to the cloud, and the pace of this transition is only increasing by the day.

The key question today is no more "Should we use the cloud?", but rather, "What is the best way to do so?"

Before executing a cloud strategy, you need to evaluate your bank's readiness for it, as well its acceptance among different departments, including Treasury. It is natural to ask questions such as:

- Are we okay to move the bank's Treasury and other data outside the bank's network?
- Are we okay to rely on somebody else to manage the data on our behalf?
- Are we still in control of our data? Where is the data residing?
- Can we ensure that the data is available all the time, whenever we need it?
- Is the cost saving significant enough to justify the risks?

and so on...

The answer to these questions is, without a doubt, a huge YES. A cloud solution today addresses all of these concerns quite effectively.

The cloud provides unlimited ability to scale, improve performance and ensure high availability at a fraction of the cost of on-premise deployment. It converts any capital expenditure (Capex) related to data center infrastructure, applications and other enterprise software to operating expenditure (Opex). With a payas-you-use kind of cost structure, it dramatically reduces upfront investment in infrastructure and application licenses. It brings in operational efficiencies in terms of time to deploy and run, reduces dependence on manual work and enables automation and flexibility. This enables you to leave data center management to specialists and focus on your business' core competence.

With the multi-tenant model, cloud based applications bring further efficiencies through consolidation of infrastructure and applications and reduces operational overheads across multiple tenants. The tenants could belong to the same or different organizations.

Cloud technology can have many perspectives. One variant of the cloud is the Application Service Provider (ASP) model that essentially offers a private cloud – a hosted and managed service offering dedicated to one bank. Although this provides most of the benefits we discussed, it might not do so to the best possible extent. The other variant is the Software-as-a-Service

(SaaS) model, which enables true cloud deployment and brings forth all the benefits that we discussed, and more. The SaaS model is primarily associated with a public cloud or infrastructure shared by multiple enterprises. The choice between these alternatives is essentially determined by a bank's risk appetite. The benefits of scale are available in both models; however, the SaaS model offers more because of its lower Total Cost of Ownership (TCO). On the other hand, the ASP or hosted model offers better control over the data related analysis. Analytics can be resource hungry and a cloud-based solution is best designed to scale up automatically when required. Be it Algorithmic Trading, Monte Carlo calculations for metrics like Value At Risk, or complex calculations for Hedge Funds, they can all take advantage of real-time analytics that the cloud offers without compromising on performance.

In recent times, the Treasury Department – like many others – has increasingly felt the need to support the

In recent times, the Treasury Department – like many others – has increasingly felt the need to support the mobility needs of its users, who expect to be able to approve settlements, track trading transactions, or view reports when on the move.

and IT management processes owing to its dedicated infrastructure and application instances.

The scenario is no different from a Trading and Treasury perspective. The relevance of the cloud to these departments in enterprises, including banks, is probably even higher than to other lines of business.

Trading and Treasury applications, by nature, have a high need for interface with many external applications outside the bank's network. With desktop-based or onpremise deployments several point-to-point Straight Through Processing (STP) connections must be set up, to process information in real-time, across the bank and its clients and brokers. This can be optimized to a great extent by deploying the solution on the cloud and providing a web interface to all clients, brokers and users. Also, this automatically enables real-time processing across all participants in the Treasury activity life cycle.

In addition to the above, the cloud opens up possibilities such as the use of advanced Analytics for Tradingmobility needs of its users, who expect to be able to approve settlements, track trading transactions, or view reports when on the move. Deployment of the application on the cloud is a faster way to enable access over tablets and hand held devices.

A significant benefit accruing to banks moving to the cloud is easier management of changes and upgrades to application software. It is a well-accepted fact that a bank's enterprise landscape consists of a heterogeneous mix of infrastructure and application components. Managing all of these such that they work seamlessly over time, amidst updates and upgrades, is a Herculean task for the IT team. Moving the landscape to a hosted or cloud model transfers this task to the service provider. To manage this task efficiently across multiple tenants, the service provider has to necessarily bring in better practices, discipline and automation. This really works to the banks' advantage, especially the large ones.

Initially, the cloud model was perceived to be better suited to smaller organizations, because the larger ones



could anyway afford their own infrastructure. But that theory now no longer stands. Large organizations can actually benefit from the cloud even more, because it helps them overcome the limitations of their inflexible, non-scalable and nearly impossible-to-migrate legacy applications, which have been tinkered with repeatedly over the years. Legacy applications are one of the biggest reasons why large banks resist change. By moving to a vendor provided application with a hosted service, banks are assured of flexibility, scalability and upgradability of their application portfolio. The cloud enables them to keep pace with the latest infrastructure and technologies, minus the big upfront investment and long wait to ROI.

In summary, although the cloud started out as a model for smaller banks to hire infrastructure and

application software, in recent times, it has turned into a key element of corporate strategy for banks of all sizes. Banks' Trading and Treasury departments stand to gain tremendously from cloud adoption. The gains range from lower operational cost, higher flexibility and scalability to better STP capability, greater synergy with initiatives on analytics and mobility, and a definitive step towards the future-proofing of infrastructure and application technology.

It is time for us to harness the capabilities of the cloud.

Author: Ravi Venkataratna Lead Product Manager -Finacle, Infosys

Spain – Country Focus

Totalina



he Kingdom of Spain, as it is formally known, consists of 17 autonomous regions and two autonomous cities. Spain's autonomous regions have their own local Governments, which take care of the region's spending and financing to a large extent.

Spain underwent an extended period of economic growth from the mid 1990s until 2008 when economic downturn hit the Iberian nation. During this period, Spain witnessed rapid expansion, growing faster than other major economies in Europe and considered one of the best economies at that time.

Real estate and construction activities played a major role in Spain's economic growth, which grew out of recession to become the 8th largest economy in the world by 2006. Real estate growth was aided by availability of cheap credit from credit institutions. The booming economy also encouraged immigration, which in turn improved real estate demand. Spain's regional Governments made huge investments in infrastructure, which was supported by high tax collections during the boom period.

The real estate price bubble finally burst in 2008 during the Financial Crisis and subsequently worsened with the European debt crisis.



Regional Governments were left with no option but to seek a bailout from the Central Government. The Spanish Government requested external help to bail out its banking sector and entered into a Memorandum of Understanding (MoU) with the European Commission, European Central Bank and European Banking Authority for funding through the European Financial Stability Facility (EFSF). The MoU prescribed some major policy changes in the Spanish economic and financial sector, which are now being implemented by the Government.

Economy since 2008 crisis

The Spanish economy went into recession with real GDP growth contracting in 2008. The economy recorded a sharp fall at -1.4% in 2012, and 2013 is expected to be another year of decline. Unemployment rates have hit record highs, reaching 27%.



Silver lining

Spain's public finances are stressed, no doubt, but the ECB's Outright Money Transactions (OMT) has helped reduce funding costs and lowered the chances of Spain requesting a bailout in 2013. The real estate troubles aren't over, but deleveraging, which is in progress is expected to re-allocate capital to other sectors in the long run.

Also, in a recent report on financial sector reform in Spain, the International Monetary Fund (IMF) sounded positive about the efforts, commenting that the reforms were on track and that a major part of the work had been done.

Spanish banking sector

Spain is home to some of Europe's largest banks, having a global presence. Santander, BBVA and Caixa Bank are part of the Forbes Global 2000.

According to an IMF study, Spanish banks have huge

operations with assets amounting to about 320 percent of GDP with top 5 banks accounting for 70 percent of the assets.

The Spanish banking sector has long been dominated by two types of banks, namely, Savings Banks (cajas de ahorros) and conventional Commercial Banks.

Spanish Savings Banks (SSBs) have been an integral part of Spain's financial sector. SSBs started as local

According to an IMF study, Spanish banks have huge operations with assets amounting to about 320 percent of GDP with top 5 banks accounting for 70 percent of the assets.

non-profit establishment operating locally to fund economically disadvantaged sections of the society.

Over time, Spanish Savings Banks (SSBs) have evolved into Universal Banks to compete with Commercial Banks and have gradually expanded their operations across Spain. The expansion of SSBs increased the availability of credit across sectors and was partly responsible for the credit boom prior to 2008.

Spanish Commercial Banks together with SSBs dominated Spain's credit market and catered to a major part of credit demand. The property sector's share of private debt increased over the years of economic boom.

Credits and deposits growth

Image Source – Financial Stability Assessment Report by IMF





Exposure of Credit Institutions to the Property Sector as a Percentage of Private Credit

Image Source – Financial Stability Assessment Report by IMF

In 2008, with the real estate market going into a tailspin, banks were forced to take huge losses. Spanish banks, thanks to robust capitalization and provisioning, withstood the initial impact of the meltdown. However, as the crisis worsened and the economy went further into recession, non-performing assets increased drastically sparking asset repossession.

Banks' ability to raise funds from the wholesale market was severely impacted. Domestic banks were the worst hit, and had to depend on the ECB for recapitalization.





Banking reforms

Spain's MoU with the ECB in return for funding came with stipulations of banking reform. Following the MoU, the banking sector underwent some major changes:

- Bank-wise stress tests were conducted and the funding requirements of individual banks were determined for ESM funding
- Based on the results of the viability tests, many smaller banks were merged or sold to larger banks.
 Spain's Fund for Orderly Restructuring (FROB) was responsible for the activity
- A separate asset management company (Sareb) was set up to transfer non-performing assets to clean up banks' books and in turn reduce the banking sector's dependence on the Central Bank for liquidity
- Minimum capital requirements were increased and so were provisioning levels for real estate exposures
- The reforms led to mergers among SSBs and acquisitions. The mergers resulted in some SSBs acting as holding companies in the newly formed Commercial Banks

Image source: IMF Report Titled Spain: The Reform of Spanish Savings Banks Technical Notes

Bank of Spain conducted an independent bottomup stress test with external agencies, which revealed that, whereas the larger Spanish Banks did not need external funding, some of the newly formed banks were vulnerable to shocks. The results reiterated earlier top-down stress test results, which showed varying loss absorption capacity across banks, and highlighted the need for further balance sheet cleansing.

The process of banking reform, which has already changed the banking landscape radically, is likely to continue. Banks continue to recognize losses from real estate, and deleveraging is still underway with bad assets moving to SAREB. With banks recognizing losses and setting aside funds for provisioning, profitability is under pressure.

Challenges for financial markets

Over the past few years, Banco de Espana (BdE) and the Comisión Nacional del Mercado de Valores (CNMV) – the agency in charge of supervising and inspecting the Spanish Stock Markets – have ensured that they have the required resources for effective market regulation and control. However, they have a big task on hand to keep pace with the evolving European regulatory and operational framework and ensure that their supervisory mechanisms adapt to the changes.

It has been noticed that despite the restructuring and consolidation of the banking sector and substantial loss recognition, Spanish banks' access to wholesale funding markets remains limited. Banks have also seen an impact of Sovereign debt holdings in their trading and available for sale portfolios. One of the main challenges for Spanish banks in the near future would be the management of exposures to sovereign and corporate debts.



A noticeable departure from the traditional source of funding for Spanish banks is evident with structured finance products like covered bonds (cédulas hipotecarias) and mortgage-backed securities (MBS) no longer being available for issuance, largely the result of a sharp decline in mortgage credit in the Spanish market since 2009. Earlier the mortgages provided the asset backing required to support the overcollateralization of securitized products like covered bonds, but now with the underlying mortgages no longer available it is anticipated that the issuance of covered bonds will continue to decline. At present, securitization markets are largely illiquid throughout Europe and any attempts to restart them will take some time. When conditions improve, investors in these markets will consider the transparency of underlying assets, before putting their money.

After the limits on deposit rates were removed last year, there was an increase in the issuance of structured products like high yield deposits. Concerned about banks' solvency ratios, the regulators stepped in to arrest this trend. As a result, there has been a hike in other fixed rate products like structured principalprotected funds and insurance products. Since there are no restrictions on the yields that non-financial institutions pay on their liabilities, this could be seen as an opportunity to create an alternative market for corporate bonds among retail investors. It is important to note that in the past three or four years, the income from structured products has reduced by more than 80% compared to the highs of 2007-08.

With the amendments to MiFID – called MiFID II – along with the proposed revisions to the Market Abuse Directive (MAD), called MAD II, looming around the corner, there is a need for a thorough review of the internal processes pertaining to banks' advisory services. MiFID II expands the product range under coverage, and adds to customer protection criteria including assessment of product suitability. It also calls for more stringent procedures to precede the distribution of complex products. Structured retail deposits will have simple structures and capital protection. Issuers will be required to demonstrate the

One of the main challenges for Spanish banks in the near future would be the management of exposures to sovereign and corporate debts.

suitability of these products to client needs and risk profiles, making the market more conservative. In Spain, no particular qualification is currently required to sell these products and the higher commissions offered by structured products – compared to traditional products that use commissions to make them more attractive to sales representatives – will no longer be an option.

MiFID II also recommends changes to guidelines relating to trading venues for OTC Derivatives, with the introduction of Organized Trading Facilities (OTFs). Firms operating OTFs will require separate permission, and will be restricted from executing trades against their proprietary books to ensure that the operators of trading venues do not have any conflict of interest.



Trends

This year will see banks adapting to a capital markets landscape that is evolving rapidly in line with global trends. The main factors influencing this change are:

- Regional regulatory landscape
- Focus on Private Banking operations

Globalization opportunities

The larger Spanish Banks have always had global operations. But now, with the local economy under pressure, they are expected to increase their presence in foreign markets. These opportunities in regulatory arbitrage would allow banks to also help their clients achieve cross -border efficiencies.

Operational innovation

Along with complying with regulatory reporting mandates throughout the trade life cycle, market participants should focus their attention on driving cost transparency in operations, as well as on real-time monitoring and reporting. As we see a clear shift in volumes and evolution of product strategies, IT planners should be prepared to up or downsize their infrastructures to drive a more flexible, variable-cost operating platform. With clients now clearly articulating their demand for best execution at the lowest price, this would call for higher investments in information systems and infrastructure.

Product and process innovation

The search for new OTC products offering greater margins has begun in the light of dwindling trading incomes. The new regulatory framework will drive banks to give equal importance to product and process innovation and explore growth avenues in a fee-based revenue model. Banks might need to learn to adapt their innovative approaches to processes and service levels to clearly differentiate offerings, which will be largely driven by changes in their technology platforms.

Customer focused solutions

A marked decline in their proprietary trading operations has compelled banks to focus on customers and grow their wealth management operations as well as make fresh investments in private banking and wealth management platforms.

Risk management and regulatory compliance

The need for a comprehensive risk management system cannot be overemphasized. Banks will continue to focus on enhancing their multi-entity risk management infrastructure to manage credit, market, and operational risk, as well as on consolidated risk reporting across regional and global operations to comply with the stringent regulatory reporting requirements.

Review of existing capital markets and trading related IT infrastructure

Banks will be under huge pressure to review their current IT infrastructure not only from a cost perspective but also from a standpoint of the viability of maintaining large capacities in an environment of negative growth and banking consolidation. Banks have already started re-evaluating the need for complex trading and structuring infrastructure installed during the market boom. These systems might no longer be needed, what with banks managing their trading desks and back offices with integrated front to back cross-asset platforms providing a balance of business functionality, usability and lower ongoing maintenance costs.

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IDBI Bank: Upgrading performance



Profile

Headquartered in Mumbai, IDBI Bank Ltd. is one of India's leading commercial banks, riding on the back of a robust business strategy, strong workforce and stateof-the-art information technology platform. The Bank offers a diversified bouquet of banking and financial solutions to clients in the retail and corporate arena through a network of 1111 branches and 1782 ATMs across India.

Besides commercial banking and project finance domains, IDBI Bank also has an active presence in associated financial sector businesses like Capital Markets, Investment Banking and Mutual Funds. The

With the upgrade, IDBI would be able to leverage the additional product features of the higher version as well as move into higher level of flexibility, efficiency and compliance.

Bank has already set up an overseas branch at Dubai and also has plans to open overseas offices in some of the other leading financial centers.

As on March 31, 2013, IDBI Bank had a balance sheet of INR 3230 Billion and business size (deposits plus advances) of INR 4230 Billion.

Overview

IDBI Finacle Treasury upgrade

In 2012, IDBI decided to upgrade its Finacle treasury solution to the latest version of 10.10.9. With the upgrade, IDBI would be able to leverage the additional product features of the higher version as well as

move into higher level of flexibility, efficiency and compliance. The project scope involved upgrading the India Instance of IDBI from FT 6.6.1 to FT 10.10.9 and the implementation of FX Time Options, FEDAI and FIMMDA Valuation modules. The CSGL instance of IDBI, where only the Securities module is being used, was also upgraded.

Key business drivers

Choice of transformation partner: Familiarity breeds trust and satisfaction

The Bank had been using Finacle Treasury since 2006 and its satisfaction with the product as well as the support played a key role in the decision to extend the relationship. The pricing as well as product features of the latest release made the decision much easier. For example, the FX Time Options module for Forward Contracts available in the higher release would help them reduce operational costs significantly.

Transformation challenge: Ensuring "customs" were carried through

A huge number of customizations and custom interfaces had been developed since the Bank went live with Finacle Treasury in 2006. One of the key challenges was to carry them forward by porting them to the latest version or making them a part of the product. The final solution involved combining both approaches.

Additional transformation benefit: Flexibility, efficiency and improvement in compliance

The higher FT Version facilitated improvement in flexibility, efficiency and compliance, prominent among them being the streamlining of utilization and cancellation events for forward contracts, dealer-wise book management and performance monitoring etc.

Implementation schedule: Nine months from start to finish

The project was divided into two distinct phases.

Phase 1 focused on the upgrade and also included the migration of customizations and implementation

of new features of securities. Migration scripts were written for the upgrade from Finacle Treasury 6.6.1 to version 10.10.9. Since the database size was more than 100GB, the scripts were fine-tuned, thereby reducing the time taken for the migration scripts from 20 hours to less than eight hours.

This phase also involved the delivery of a lot of value additions, the most important of which was the redress

- Provision of customized tools to update rates for FEDAI rate capture, credit spread curve upload and last traded data upload for FIMMDA
- Implementation of security position and stop loss limits, issuer-wise exposure at book value, FX Position and FX Stop Loss limits

Business benefits: Efficiency and effectiveness The LiMo architecture of the new version of Finacle

The new system has more flexible extensibility features, reducing the time taken to create custom reports or new customizations.

of points raised in the bank's RBI audit. Apart from this, there was also the implementation of "Yield Based When Issued" securities, the inclusion of a new report to fully reconcile Forward Contracts in FT with FC and an FT Excel add-in for uploading MRS Rates.

Notwithstanding the multiple customizations, the value additions and migration of the huge database, Phase 1 went live in a record span of just three months.

Phase 2 focused on the implementation of the FX Time Options module and related value additions. To de-risk the impact of changing requirements, this phase was split into multiple go-lives, with each focusing on one new feature at a time. Phase 2 went live in six months.

A key distinguishing feature of this project was the number of value additions that were delivered as part of the implementation:

- Delivery of CCIL Phase 1 and Phase 2 requirements, even though it was not part of the scope of this project
- Implementation of Sec Pos, dealer-wise trading books for FX and securities and accounting for RIDF
- Implementation of a robust rule system for FX using a product template
- Implementation of FEDAI and FIMMDA valuation, both SLR and non-SLR

Treasury imparts significant performance benefits to IDBI in comparison with the older version, which was based on CORBA. The new system has more flexible extensibility features, reducing the time taken to create custom reports or new customizations. Earlier, the Bank had to depend on Infosys for customizations.

The higher version also takes care of most of the RBI audit observations raised in the older version, most prominent among them being improper handling of utilization and cancellation events for forward contracts.

Blotters and Dashboards, a key feature of the upgraded system, now provides business teams with a unified view of data. Earlier, they had to access data from multiple places in the system.

Previously the Bank used a combination of deal types to handle Merchant Transactions and Forward Contracts. Now they only use the FX Time Options module, which helps reduce operational costs.

EOD duration was reduced to three hours from six.

Key elements of transformation

• Upgrade India Instance of IDBI from FT 6.6.1 to FT 10.10.9



- Implement FX Time Options Module, FEDAI and FIMMDA Valuation
- Upgrade CSGL Instance of IDBI
- Port customizations and custom interfaces, developed for the older version, to the latest one
- Provide a host of value additions

In Summary

The upgrade to FT 10.10.9 provided distinct benefits to IDBI both in terms of the additional features, and improvement in flexibility, efficiency and compliance. The project also delivered a number of customizations, custom interfaces and value additions as part of the implementation enriching overall satisfaction. Going forward, the upgraded Finacle Treasury is expected to facilitate the Bank, through its treasury operations, in its path of becoming the most preferred and trusted bank enhancing value for all stakeholders.

Reflecting on the successful upgradation of Finacle Treasury Mr N.S. Venkatesh, Chief General Manager & Head Treasury said that the implementation was a good example of a synergetic team effort from IDBI Treasury and IT along with the Infosys implementation team culminating in superior value addition to the treasury system of IDBI Bank. The upgradation has facilitated improvement in straight through processing, operational efficiency and flexibility besides taking care of the requirements for better trading book management, valuation and risk management. **SMAC, a treasure** trove for the treasury?



artner calls it the "nexus of forces". Others, who can't resist the obvious opportunity for word play, warn against being "SMACked in the face".

Isn't it ironic that one of the brightest stars on the technology horizon is being described in such dark terms? For that's what the convergence of Social, Mobility, Analytics, and Cloud (SMAC) is. Bright, beyond doubt.

It's easy to see why. Each of these technologies has revolutionized or disrupted business and life on its own; in tandem, they are creating the technology platform of tomorrow. Not to mention, unimaginable in the context of treasury operations and their corporate users.

While it is fair to say that a predominantly "consumer" phenomenon like the social web or mobility might not move the world that treasuries live within, it could still add significant value. This article explores the role that each element in the SMAC stack could play inside treasuries, and the potential benefits.

Social: The Facebook Universe alone has over a billion citizens. Just as retail organizations look upon them as a billion potential customers, treasuries must recognize that among that one billion, there are many who

Over the next few years, social media revenue from advertisements, gaming and subscriptions will touch US\$ 34 billion; the world will clock 9 billion mobile devices and US\$ 52 billion in app revenues; and the cloud will grow at 18% annually.

opportunity. Consider this. Over the next few years, social media revenue from advertisements, gaming and subscriptions will touch US\$ 34 billion; the world will clock 9 billion mobile devices and US\$ 52 billion in app revenues; and the cloud will grow at 18% annually. These are numbers that the treasury operations in banking and corporate institutions can no longer afford to ignore.

Perhaps the treasury function is a victim of its own image. An operation, which is typically centralized, not customer facing, and controlled from the head office by greying executives but executed by young executives in trading rooms, the treasury business is generally perceived as stuffy and boring. So, even as retail banking operations rushed to embrace innovative, customer-friendly technologies, the treasury remained unmoved. Next-generation consumer technologies, considered vital in other areas, were deemed irrelevant "consume" their services as "parties" and "counterparties". There is an interesting opportunity – as yet untapped - to extend those relationships in the social sphere. For instance, banks can set up a forum where treasury managers can gather in a social, peer environment to discuss and debate, almost in real-time, issues like the movement in prices of precious metals and commodities; interest rate fluctuations; discharge or dishonoring of sovereign debt, and so on. Wells Fargo shows how. A decade ago, the Bank set up advisory councils, with around 100 treasury client representatives on board. Recently, it decided to add an online extension to enable a much larger group of users of its wholesale banking platform to join the discussion. It's a win-win – the Bank will get valuable input from customers, who in turn, would get a chance to engage with their peers.

In fact, social media opens up an alternative source of information – the voice of customer – for the dealing

room, which today, depends entirely on Reuters and Bloomberg for the latest news, rates, events and so on. What's more, at a time when Internet access has been deemed a basic human right by the United Nations, it seems quite regressive to isolate treasuries and dealing rooms from the online community.

Mobility: On an average, people send between 94 and 100 messages every day from their tablets or smartphones. Asia is home to 1.6 billion unbanked along with 2.6 billion mobile phones. If these who are largely responsible for managing risk in a post-crisis era, functioning without robust analytics infrastructure. At the same time, regulators and Government authorities could also employ analytics to understand the risks and implications of high speed or flash trades as they happen, and take measures to prevent any mishaps because of such trades or at least mitigate their consequences. In fact, it is fair to say that analytics can empower the authorities to assess the impact of such trades on the external ecosystem comprising banks, corporate entities, and the overall

The cloud is evolving into holistic solution, which not only hosts software and hardware infrastructure for treasury clients, but also provides them with services, content and integration with the solutions of other providers.

numbers are too grand – or too obscure – to comprehend the import of mobility, here's a simple, easy description: it's about being able to connect from anywhere, at any time, from virtually any device, on demand. Banks and corporate treasuries must leverage mobility to deliver treasury products and services quickly, efficiently, and on time to the members of the trading community, as well as get them to connect and collaborate via the mobile web. Once again, Wells Fargo may be cited as an example. The Bank offers mobile services to commercial customers enabling them to access intraday balances, change passwords, or approve wires, among other things. Notably, all these services were designed based on customer input.

Analytics: In the context of the treasury function, time is indeed money. Traders need to put both learning and gut feel into split-second decisions to make profits. For them, analytics software, with its ability to inform such decisions in real-time, is an invaluable asset. It is impossible to imagine treasury managers, economy. With trades going increasingly online and thereby drawing participation from smaller corporate entities, retailers, and even small and medium enterprises, the importance of having adequate protection against unscrupulous practices or rogue trading, cannot be overstated.

Cloud: And it is the cloud, which puts the power of analytics within the reach of the smaller treasury operators, enabling them to access the software and tools that they need as a service, without investing in expensive licenses or hardware infrastructure. That being said, the cloud represents much more than a cost saving opportunity to the treasury business, which today, is venturing beyond its traditional space of commodity, currency, and Government paper into areas like weather exchange and carbon trading. It makes sound commercial sense for banks and corporate treasuries to share the cost of the solutions required by these new age businesses rather than acquire them on their own; the cloud offers a simple and elegant way to do this.



That's not all. The cloud is evolving into holistic solution, which not only hosts software and hardware infrastructure for treasury clients, but also provides them with services, content and integration with the solutions of other providers. Indeed, there are many who dub it the "new outsourcing".

Having established the need for SMAC in treasury, let's briefly explore its technology aspects. The treasury function differs from front office-led activities like Customer Relationship Management (CRM) or Internet Banking in that it spans the front, mid and back office. Consequently, it offers several opportunities for deployment of the SMAC constituent technologies.

In banks' front offices and in dealing rooms – typically filled with young traders until they burn out from job stress-there is a case for using social technology to foster collaboration to improve efficiency, reduce monotony, and relieve stress. For example, linking trader blotters to Facebook can enable a closed community of traders to view the activity of group members, exchange notes, and collaborate to mutual advantage. Alerts published in social media about suspicious trades and traders could deter perpetrators as well as caution the general trading community.

The mid office is the scene of risk management action. It handles limits management, exposure tracking, regulatory compliance and so on. Burnt out dealers are often redeployed in the mid office, which can benefit from their years of experience and knowledge of risk. A technology like mobility can extend those benefits by enabling mid office executives to function effectively even on the move, at any time of day or night. It also allows other bank staff to easily access these executives, many of whom are subject matter experts, and likely in short supply. Similarly, analytics can enhance the efficiency of mid office executives by enabling them to assess transactions in split seconds, even before they are completed, and take timely, appropriate action based on that insight.

The back office is where treasury transactions are settled. Accounting related decisions are taken here. The back office is responsible for monitoring positions, Central Bank filing, MIS and regulatory reporting, and other activities. Many of these are conducted in batch processes, unlike front and mid office functions, which are almost always fulfilled online, in real time. Accordingly, the back office offers much scope for the use of analytics and cloud both, because most of its functions can be outsourced to third party providers. The back offices of multiple banks can easily share a platform on the cloud hosted outside their premises, and often outside their home country - and continue to make settlements, create accounts, and generate ledgers and reports, with total ease. In doing so, they can not only save costs of infrastructure and workforce, but also reallocate work to the most appropriate destinations, where it can be turned around while the markets are still sleeping, and delivered even before they awake.

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The Bankers' New Clothes

n their recent book "The Bankers' New Clothes", authors Anat Almati, Professor of Finance and Economics at Stanford's Graduate School of Business and Martin Hellwig, Director at the Max Planck Institute for Research on Collective Goods, have reconciled seemingly opposite poles by entertaining and enlightening readers in equal measure. That's an apt setting for the book's main goal, which is to show that it is indeed possible to create a secure and healthy banking system, without compromising growth or increasing costs – an argument that sounds like a contradiction in terms and runs counter to the stated position of banks, regulators and lawmakers who have always justified inadequate regulation and enforcement as the trade off for stimulating lending.

ANAT ADMATI & MARTIN HELLWIG

Using plain English and simple illustrations, the authors debunk every argument in favor of the status quo, terming it as the self-serving rationalization of bankers, who are the only ones to benefit from the industry's systemic weakness, while the larger economy and public both suffer. They go on to say that not only is regulatory reform necessary to avoid a recurrence of 2008, but that it can be achieved without any cost to society; they also propose a number of actions, the most important of which is getting banks to increase their equity capital, and thereby assume their fair share of risk.

That being said, "The Bankers' New Clothes" isn't a rant against the industry and the lawmaking machinery. The authors gently guide readers through bank balance sheets at the end of which the answers become evident even to those with little financial knowledge. The beauty of the book lies in its ability to draw people into the narrative. Steering clear of arcane concepts and mind numbing details, the authors encourage readers to think, dissent, debate, and arrive at their own conclusions, in the firm belief that an informed and engaged public must influence the direction of banking reform.

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