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Basel III is a comprehensive set of reforms which impacts as much on strategy and operations as capital levels. The intention of regulators is to ensure that the key prevention lessons from the Global Financial Crisis (GFC) are embedded in all banks. Judgement will be a key part of implementation, imposing uncertainty on banks with regards to satisfactory implementation – this is deliberate as regulators wish to hook boards into the process of risk management to a far greater extent than has previously been the case. Derivatives as a product class have been poorly handled – settlement, reporting, limit setting, netting and collateral management all being under invested in by pre-GFC banks. This paper sets out the issues banks should be considering when designing and implementing their Basel III programmes for Derivative products. The costs and impact are significant. McKinsey estimate costs as likely to be between 4 and 6 million dollars and take 15 to 25 FTE man years for implementation for a typical IMM bank. There have been significant changes to the regulatory landscape across the globe as a reflection of the 2008 crisis and one of the major impacts have been in the areas of counterparty risk measurement, capitalisation and management. In this paper we will discuss the various paradigms of CVA: Definition, Calculation, Challenges and the Outlook.
Overview
The world has become much more uncertain as a result of the GFC. Decade old beliefs are having to be re-thought - bank and sovereign failures may rise again, the global recession is proving very resistant to central bank actions (with triple dip making the fears around double dip look tired) and the concept of a risk free reference rate appears quaint.

Regulation is about prevention, not cure, and therefore must work within this uncertain environment. Regulators and Supervisors have sought to learn as much as possible from the Global Financial Crisis (GFC) in order to identify criteria that could help avoid a future GFC. Much good material on core lessons has been published, with each successive review highlighting further learning points covering a broad range of responsibilities. Basel III builds on these learning points – introducing a package of reforms that are intended to embed minimum standards for risk management in banks.

One area of pressing regulatory concern has been the growth of the derivatives markets. Pre crisis - banks were able to assume that derivative counterparties would generally be of the same credit quality as themselves, with a stable outlook and of high quality i.e. unlikely to fail. Post GFC many derivative counterparties are of low quality and subject to an uncertain outlook – yet will still be of importance to market activities.

Basel III has sought to raise both capital and operational requirements. Capital for derivatives has been raised by applying stress criteria and introducing a CVA (Credit Value Adjustment) charge. Operational requirements cover reporting, stress testing, data, netting, collateral and the use of CCPs (Centralised Counter Parties).

CVA is a quantitative capital add on intended to both ensure an increased degree of protection against correlated failures, and incentivise activities that are intended to reduce overall systemic risk.

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### Basel Accord - Measuring Counterparty Risk

<table>
<thead>
<tr>
<th>Basel I</th>
<th>Basel II</th>
<th>Basel III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MIM + Add on based on the issuer type underlying and maturity.</td>
<td>2. IRB Approach covering PD and LGD</td>
<td>1. Basel III Capital for CCR - Basel II Credit Capital + Capital CVA</td>
</tr>
<tr>
<td>2. No Capital charge for loss due to change in the counterparty credit spread</td>
<td>3. MIM + Add on based on the issuer type, underlying and maturity</td>
<td>2. Capital CVA - market risk capital charge stressed VaR on credit Instruments</td>
</tr>
<tr>
<td></td>
<td>4. No Capital charge for loss due to change in the counterparty credit spread</td>
<td>3. CVA VaR is net of eligible hedges</td>
</tr>
<tr>
<td></td>
<td>5. Computation of EPE using non stressed market data on 1 Y horizon</td>
<td>4. Computation of EPE using stressed parameters using full maturity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Assuming higher correlation among FI</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Collateral lag period is assume to be 20 days</td>
</tr>
</tbody>
</table>
Banks will need to plan the implementation of the new regulatory model. Key workstreams will include:

1) Design / implement credit value adjustment approach
2) Stressed expected positive exposures models
3) Compliant collateral management process

The operational aspects are potentially challenging. The data required will need to cover a 3 year period – the period used will need to be aligned to the Board’s risk outlook. If they view markets as uncertain it would be prudent to use a 3 year period where extreme financial movements took place, if they view the outlook as positive then less volatile periods might be valid. Therefore simply gathering three years’ worth of data is unlikely to be sufficient – longer data runs may need to be held in memory to support modelling demands. At least annually Boards will need to re-validate the data used – budget will be required to support the purchase of data if required as well as ensuring data cleansing is given a high priority.

The selection of the data will need to be justified and documented (including the debate) in order to satisfy regulators that key modelling assumptions are understood and that the Board are discharging their duty of care adequately.

Scenario generation would benefit from a more formalised process as a result. Several calculation techniques may be applied – Monte Carlo, Path Dependent, Conditional Distribution etc.. Many risk functions have focussed on improving accuracy by increasing the number of simulations. Those firms that managed the crisis relatively well, tended to be able to compromise between speed of reporting and accuracy. There are risk management benefits in being able to generate ‘good enough’ value estimations, in a timely manner. Firms will therefore need to understand their systems capabilities and their reporting requirements under stressed conditions. Again Boards will need to evidence understanding and document their decisions.
Pragmatism is required with each Board having to establish the acceptable trade-offs between accuracy and speed of reporting. 80% accuracy for 20% of the time has been deemed attractive by the quant community – on multi billion dollar exposures this can be intimidating for Boards to accept and endorse. Are they confident that 80% accuracy would stand up to regulatory and legal challenges regarding the discharge of their responsibilities in the event of a bank failure?

CVA should be fully integrated with the rest of the trading book for the purpose of calculating regulatory capital. CVA should be met (ideally) through VaR, stressed VaR and IRC. While ISDA continues to work to achieve this, Basel III does not deliver as CVA VaR is a standalone calculation, while EEPE (Effective Expected Positive Exposure) is used to cover counterparty risk. Banks need to establish how they measure all in costs of counterparty replacement and integrate this into pricing decisions.

While Basel III insists on Portfolio Level calculations, the start point of any such calculation is individual contract level exposures. Firms will need to capture many details at the contract or counterparty level in order to facilitate reporting (and analysis) at the portfolio level. Without this granularity, stress testing of risk dimensions may be critically lacking. Typically firms would be seeking to build Exposure or Price centric analytics. Price centric reporting will usually require greater investment in technology to implement. At a minimum banks should be able to identify, in a timely manner, counterparty spread sensitivities, exposure sensitivities and cross convexities.

The industry is still evaluating how best to manage CVA portfolios. Centralised CVA desks have been implemented with a mandate to sell insurance to the derivatives trading desks. The CVA desk would have responsibility for managing all risks post inception of the trade. This approach would allow Boards to set and validate risk limits and greatly facilitates the identification of risk concentrations.

However risk management requires dynamic rebalancing of hedges – and for large exposures the rebalancing requirements can be intensive and costly. Crowded trades can be a special challenge and remain a focus of regulatory attention.

Basel III removes transactions with a central counterparty (CCP) or securities financing transaction (SFT) from CVA calculations. Centralised exchanges are considered to be operationally robust and to have minimal counterparty credit risk. From a regulatory perspective they also provide an easy intervention point to support the smooth operation of the markets in a crisis.

CVA Definition and Calculation

CVA reflects how much the default-free price of a derivative should be adjusted to account for the possibility of a counterparty default. In terms of capital, it translates to how much must be held in reserves to cover the risk of changes in the Market to Market (MtM) values of OTC derivatives. It is worth noting that almost two-thirds of losses that occurred during the financial crisis arose from MtM movements rather than outright defaults.

CVA from a pricing perspective should not be considered in isolation. It is a component of a theoretical value (TV) of a derivative; which is also made up of the default free value, debit valuation adjustment (DVA) and funding valuation adjustment (FVA) – which essentially price in a bank’s own default and changes in funding liquidity respectively.

From a capital perspective, it is important to consider how CVA fits in with the other components of trading book capital such as market risk, counterparty default risk, liquidity risk and operational risk.

CVA enables a consistent workflow for pre-trade pricing and product structuring; with an interaction between different departments in a bank.

CVA enables the bank to decide on the best way to manage the exposure and to choose the appropriate hedging strategy. It also enables effective valuation of OTC derivatives in a manner that correctly reflects the market price of counterparty risk paying careful attention to how different parts of the bank view market to market (MtM) risk.

Calculating CVA requires a strong understanding of how a derivative product is financially engineered, how it is booked, how it is priced and how its risk is managed. The computational finance workflow in terms of data acquisition, modelling and reporting must be effectively mapped out and embedded into an organisation’s processes.
**CVA Capital charge**

Basel III also introduces an additional capital charge to cover the risk of losses arising from counterparty risk – measured as a fall in mark to market values. Basel III is prescriptive about the calculation assumptions and approach, but the calculation process to be applied is dependent upon existing approvals for modelling of CCR (Counterparty Credit Risk) and the interest rate risk of bonds.

If IMM (Internal Model Methodology) approval has been received for both CCR and market risk internal models then banks must calculate additional capital charge by modelling the impact of changes in the counterparties credit spread on the CVAs of all OTC derivatives using an internal Value at Risk (VaR) model for bonds.

To overcome the limitations of VaR, stressed VaR must be used. The VaR model is limited to changes in the counterparties credit spreads and does not model the sensitivity of CVA to changes in other market factors.

Banks without IMM approval must calculate a standardised CVA risk capital charge using the Basel formula. This is calibrated to incentivise movement to the IMM approach.

For banks using the IMM to calculate CCR, Basel III requires determining the default risk capital charge by using the greater of the portfolio level capital charge based upon EEPE calculated using either:

(i) current market data or (ii) a stressed calibration (3 year peak). The EEPE should be applied at the portfolio level thereby incentivising netting, collateral, enhanced risk reporting and risk management.
Data

Regulators require that reports issued to them meet the same standard as published financial data. This implies full reconciliation to audited account data and at least a 99.5% accuracy rate – no more than 1 ‘fail’ per year – across all regulatory reports. Many firms are struggling to meet this criteria for two key reasons:

Firstly, many banks are still completing mergers and acquisitions. While they may have informed regulators that these are materially complete – it is rare that a full rationalisation of systems, data and processes has been completed. Too many reports are being stitched together manually, or at best in a semi automated fashion using desktop tools. Neither is acceptable.

The lack of automation reduces the ability to reach a view across the whole of the risk profile of emerging risks – especially concentration risks. This was a critical cause of failure as identified by the Senior Supervisors Group and was highlighted in the FSA report on the failure of RBS. WIPRO have diagnostic tools to help firms identify where they are behind their peer group and need to focus investment.

Secondly many firms have faced restricted budgets and therefore have maintained ‘legacy’ systems well beyond their shelf life. Issues that we have seen include lack of developers, poor or missing documentation, weak understanding of downstream data dependencies. All of these limit the ability to produce effective reports and also contribute to a weakened risk control framework. In some instances operational events of a material nature have arisen.

WIPRO would advocate leading practise as having some of the following features:

Key Indicators limited to 25-30 items

• Reports produced ‘in memory’ as far as possible.

• Data team in place with quantifiable goals

• Clear ownership of data and responsibility assigned for its quality

• Elevation of material issues outside of the technology function

• Scalability designed in and tested
CVA Capital charge calculation

The CVA Capital charge applied depends on the capital methodology approvals granted to the bank by financial authorities and determines a standardised or an advanced CVA risk capital.
**Advanced CVA**

The regulatory Advanced CVA risk capital charge is calculated and used by institutions that have regulatory approval to use the internal model method for counterparty credit risk capital and specific risk VaR model approval for market risk capital purposes (since the advanced approach makes use of these risk models).

Under the Advanced approach, the CVA risk is represented as credit sensitivities to counterparty and subject to a standalone market risk capital charge based on VaR, stressed VaR and a multiplier. The credit sensitivities are determined according to prescribed formulae including the use of regulatory expected exposure and stressed expected exposure from the institution’s approved IMM model.

\[
CVA = \left( \text{LGD}_{\text{MKT}} \right) \sum_{i=1}^{T} \max \left( 0; \exp \left( -\frac{s_i \cdot t_i}{\text{LGD}_{\text{MKT}}} \right) - \exp \left( -\frac{s_i \cdot t_i}{\text{LGD}_{\text{MKT}}} \right) \right) \left( \frac{\text{EE}_{i-1} \cdot \text{D}_{i-1} + \text{EE}_i \cdot \text{D}_i}{2} \right)
\]

\[
\text{Regulatory CS01}_i = 0.0001 \cdot t_i \cdot \exp \left( -\frac{s_i \cdot t_i}{\text{LGD}_{\text{MKT}}} \right) \left( \frac{\text{EE}_{i-1} \cdot \text{D}_{i-1} - \text{EE}_i \cdot \text{D}_i}{2} \right)
\]

**Advanced CVA Capital Charge calculation flow**

- **Trade**
  - Discount Factor
  - Credit Spread
  - PD (Market Implied)
  - LGD (Market Implied)
  - EE

**CS01 Calculations**

- Sensitivity Calculation
- CVA VAR Calculation
Standardised CVA

When a bank does not have the required approvals to use Advanced CVA to calculate a CVA capital charge for its counterparties, the bank must calculate a portfolio capital charge using the following formula:

\[
K = 2.33 \cdot \sqrt{\frac{1}{\sum w_i \cdot (M_i \cdot EAD^{\text{total}} - M_i \cdot EAD^{\text{foreign}}) - \sum w_i \cdot M_i \cdot B_i}} + \sum 0.75 \cdot w_i \cdot (M_i \cdot EAD^{\text{total}} - M_i \cdot EAD^{\text{foreign}}) \cdot \beta_i}
\]

- \( h = 1 \) (one-year horizon)
- \( B_i \) and \( B_{\text{Ind}} \) denote the hedging positions in single-name and indices

Example: A sample calculation for standardised CVA is given below:

<table>
<thead>
<tr>
<th>Entity -&gt;</th>
<th>Non-IMM</th>
<th>IMM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counterparty -&gt;</td>
<td>ABC</td>
<td>XYZ</td>
</tr>
<tr>
<td>Counterparty Rating -&gt;</td>
<td>AAA</td>
<td>BB</td>
</tr>
<tr>
<td>( W_i ) (Based on the counterparty rating)</td>
<td>0.007</td>
<td>0.02</td>
</tr>
<tr>
<td>( M_i )</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Net EAD</td>
<td>20,000</td>
<td>10,000</td>
</tr>
<tr>
<td>( EAD^{\text{Total}} )</td>
<td>15,738.77</td>
<td>10,000</td>
</tr>
<tr>
<td>( M_i^{\text{hedge}} ) (Maturity of hedge instrument)</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>( B_i ) (before discounting)</td>
<td>3,000</td>
<td>2,000</td>
</tr>
<tr>
<td>( B_i ) (after discounting)</td>
<td>2,654.4</td>
<td>1,687.5</td>
</tr>
<tr>
<td>( W_{\text{Ind}} ) (Index Hedges)</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>( M_{\text{Ind}} ) (Maturity of index hedged)</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>( B_{\text{Ind}} ) (before discounting)</td>
<td>2,000</td>
<td></td>
</tr>
<tr>
<td>( B_{\text{Ind}} ) (after discounting)</td>
<td>1,407.02</td>
<td></td>
</tr>
<tr>
<td>( K = 2.33 \cdot \sqrt{\left[ \sum 0.5 \cdot w_i \cdot (M_i \cdot EAD^{\text{total}} - M_i \cdot EAD^{\text{foreign}}) - \sum w_i \cdot M_i \cdot B_i \right]} \cdot \left[ \sum 0.75 \cdot w_i^2 \cdot (M_i \cdot EAD^{\text{total}} - M_i^{\text{hedge}} \cdot B_i) \right]^{0.5} )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Credit Risk Mitigation
At the contract level, four mitigants of credit risk are available:

• Tear ups
• Collateral (CSAs)
• Liquidity1
• Netting (ISDAs)

CVA System Design
A large bank will, on a typical day, process millions of derivative trades. CVA calculations require that for each time point, and for each product, a separate simulation is run to estimate the EEPE. This data then needs to be aligned to collateral valuations, netting agreements and regulatory criteria (differing by country) to reach a portfolio position. At the same time a stressed calculation using at least 12 months of data relevant to each product set must also be calculated. Finally the two streams of data may be compared to produce a CVA value.

With 50 to 100 future dates and upto 2,000 market paths, computation resource demands are large. Reports are typically required at least daily, and under stressed conditions this would increase to several times per day, with various hypothetical portfolios being run to assess trading options.

Ideally CPU capabilities would allow all simulations to be run in near real time. Large banks will have CPU farms with many thousands of CPUs but this is still insufficient to provide the near real time calculations desired. Technology continues to evolve enabling faster and more CPUs to be applied but it is probable that technology will continue to chase the problem, not overtake it.

Systems therefore need to be designed to be scalable and modular. Efficient model design and a good understanding of risk management requirements – essentials as opposed to nice-to-haves – can greatly reduce the demands placed on the CPUs.

Collateral
Collateral is intended to be a high quality asset which can be sold at the underwriting counterparties request to offset loss positions. It is exchanged between two parties subject to a legal agreement reached prior to commencing the trade. The legal framework most commonly used is the ISDA Master Netting Agreement in conjunction with a Credit Support Agreement (CSA). By applying both netting and the right to sell collateral – counterparties are able to avoid cherry picking of key assets, offset debts with positive trades and contractually ensure a maximum loss amount, usually set in line with the firm’s risk appetite.

Most firms have some form of collateral process in place. Typically this is limited to USD cash as a collateral type, thereby avoiding complex valuation calculations with ensuing scope for disputes. Basel III incentivises the use of broader types of collateral at the same time penalising any valuation disputes – para. 41(ii) of Annex 4 has been revised so that if a bank has experienced more

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1 - Derivatives can be exited at short notice provided the Mark to Market value can be agreed. Standardised processes exist for establishing the MTM value.

Stress assumptions need to be consistent with the bank’s appetite for, and capabilities to use, the four mitigants. If liquidity evaporates under likely stressed conditions then this must be reflected in the stress calculations. Typically this extends considerably to the factors that need to be tracked against each contract – leading to CPU challenges (see CVA System Design Box).
than two margin call disputes on a particular netting set over the previous two quarters that have lasted longer than the applicable margin period of risk, the bank is required to reflect this history appropriately by using a margin period of risk that is at least double the supervisory floor for that netting set for the subsequent two quarters. All margin disputes, regardless of size, must be counted.

Many firms as they experienced stress preserved collateral by disputing valuations. Therefore disputes became a potential stress indicator. As such it makes sense that banks should require more collateral when under stress. The ability for banks to raise this additional collateral under stress would appear limited, hence prudent boards would be encouraged to assume a doubling of the supervisory floor as part of their stress calculations, or make a strategic move to work with counterparties and collateral types that minimise margin call disputes.

Achieving this would suggest a greater degree of transparency on collateral management operations to counterparties is likely to be required. Interestingly there is nothing to prevent banks contracting out collateral management with scope for a contract to set robust and independently monitored standards.

Wrong Way Risk
Wrong-way risk is defined by the International Swaps and Derivatives Association (ISDA) as the risk that occurs when ‘exposure to a counterparty is adversely correlated with the credit quality of that counterparty’. In short, it arises when default risk and credit exposure increase together.

Usually credit risk measurement involves assessing the creditworthiness of the counterparty and the size of exposure independently. In a ‘wrong way risk’ this is insufficient and ignores a significant source of potential loss.

Basel III seeks to address this through both stress testing and an explicit capital charge. Banks must have ‘procedures in place to identify, monitor and control cases of specific wrong way risk, beginning at the inception of a trade and continuing through the life of the trade’. This will place further demands upon databases, reporting and control frameworks. Further hedging actions, such as use of sing name credit default swaps may no longer be considered to be effective where a legal connection exists between the counterparty and the underlying issuer. To identify comprehensively all such situations prior to approving a trade will be a major challenge for many risk systems – yet without this capability, pricing will typically be out.

Implementation
Basel II was an opportunity to learn about the implementation of risk programmes for many banks. Very few took the opportunity to learn – with most institutions seeking to minimise costs often at the expense of prudent risk management or effective risk management frameworks. Basel III embeds regulatory judgement to try to ensure that short cuts (or avoidance) that compromise risk management capabilities will be addressed through on site reviews and, potentially, legal challenge of Boards decisions.

Basel III is unprecedentedly complex. While it builds upon Basel II, it introduces many new concepts and is prescriptive on operational requirements as well as the management approaches to be taken. Many areas are a matter of judgement; it will take some time for national regulators to communicate their interpretation leaving Boards exposed to legal risks, often at a personal level.

Banks therefore need to build a linkage between planning, strategy and risk management.

This will stretch skills and capabilities hugely, with fewer banks having invested adequately in risk management training in order to have a senior management team with the necessary strength of understanding to implement an effective risk strategy.

Banks must be able to determine short timescales, where technology projects are:

1) Long term stable designs that fully address regulatory requirements
2) Short term enhancements to deliver minimum requirements ahead of regulatory finalisation
3) Areas that are unlikely to be of material benefit i.e. exiting of a product set or country may be more effective.

Few banks have the resources to be able to conduct this assessment across Basel III, Dodd Frank, Recovery and Resolution Planning while reworking their client offerings to be more capital and liquidity effective. For the largest banks, additional challenges exist as most are still going through significant M&A integrations.
Conclusion

Banks need to place risk at the centre of their business – moving ahead of regulatory minimums. The key measure of success is the ability to form an overview of the risk profile of the business quickly and accurately – with Boards defining ‘quickly’ and ‘accurately’ conservatively. This will require material investment – integrating planning, strategy, risk and technology functions.

Basel III steps well beyond Basel II in that it covers operational and strategic considerations. Therefore Boards should define minimum standards in four areas to be confident of meeting the implementation challenge:

- Measurement
- Limit Framework
- Collateral management (operations, legal process and disputes)
- Clearing and Settlement

Standards defined must be in line with both regulatory judgement and peer group levels. Ultimately Boards must apply their own judgement in a consistent and well documented manner. The use of experts (internal and external) adds value by ensuring seasoned judgement and experience is embedded in all areas so as to minimise costs, optimise use of capital and enhance the risk control framework. If done well, Regulatory compliance should be confidently achieved.
Lukasz Maciozsek

Lukas is a Tax Compliance Senior Consultant with 12 years of experience in all aspects of IRS tax withholding and information reporting. Specific experience in IRS Chapter 3, Qualified Intermediaries IRS audits, tax lot accounting reporting systems implementation, FATCA project management. Engaged in design and implementation of future target operating models for tax reporting and operationalizing tax compliance regulations. Experience in deployment of tax control frameworks to mitigate operational risk and tax exposures.

Rajesh Varma

Rajesh Varma is a Financial Risk Management and Compliance Professional with multi-functional experience of more than 14 years across financial risk management, treasury, ALM, institutional compliance, investment banking, fixed income, derivatives and capital markets. Rajesh has worked on multiple consulting and technology assignments on banking risk and compliance with various global banks across US, Europe and APAC. He has originated and lead complex projects on counterparty credit risk, Basel II IRB, operational risk AMA, ICAAP and stress testing at many leading banks. He has also led and managed multiple assignments/initiatives in AML, trade surveillance and post-trade compliance and also cross-border tax, FATCA. He holds the FRM certification and International Certification in Banking Risk and Compliance from GARP, USA.
Cross Border Taxation:
FATCA and the Modern Trojan Horse

This White Paper focuses on:
- An introduction to the cross border taxation area
- Understanding tax compliance regulations and regimes
- Analyzing FATCA and its implications
- The IGA frameworks and plans for FATCA compliance
- FATCA implementation considerations
- Future cross-border tax roadmaps

The global business world has seen dramatic strides in its approach towards and frameworks of direct taxation in the last few decades. This is especially true in the last few years when the importance of cross border tax income for governments have grown significantly because of the bludgeoning fiscal deficits faced by most nations.

Introduction
For the uninitiated, here’s a small summary. Direct tax i.e. tax on incomes can be divided into four main categories - from employment, residential property, business and from investments. Now income from each source can be taxed either by the fiscal authority of the source country or the fiscal authorities of the residency of the tax payer. Almost all nations have agreed to tax the first three types of income in the source country. However, a consensus on investment income is still to emerge.

The challenge is that each country wants to tax both incomes – income generated at the source (earned in its jurisdiction) as well as received by its resident from other sources/ nations across the world. So far the past few years, governments across the world have been honing their taxation statutes and legislation to develop increasingly effective and globally acceptable methods of tax compliance. In the next few pages, we will try and analyze the background, understand the current situation and try to look at the business roadmap in global income taxation.
Basics of Income Taxation

Investment income is primarily the financial income from dividends, interest and capital gains. The taxation of cross border investment income varies between nations for each type of investment income. In addition, the process is made more complex because of the intermediate investment structures used by various entities and individuals. Now there is a consensus among nations that every investment income ought to be subject to tax only once. This means taxing the income either at the entity level or the final investor recipient. The taxation is therefore based on the residency or nationality status of the individual and entity.

In the past few decades, many of the developed nations have been attempting to bring a structured approach to cross border taxation through bilateral tax treaties. The bilateral tax treaties ensure sharing of required information between participant nations and ensure that all taxpayers are complying with their tax obligations related to foreign income. Give this scenario, we will look at some key approaches towards tax information sharing.

Tax Information Exchange (TIE) Approaches

The implementation of a tax information sharing regime has been facilitated by the digitization of tax records in various nations in the last few years. The key approaches in this context include:

1. Voluntary Tax Compliance Program that urges resident taxpayers to provide information on their foreign income and assets

2. Requesting Banks operating within the nation to provide information about the investment income paid to foreigners (an example is the Qualified Intermediary system in the US)

3. Bilateral agreements between the governments of two nations. Tax treaties typically provide for provisions to ensure that the transferred tax information is kept confidential and used for the agreed purpose only. These are of two types:
   a. Automated tax information exchanges: ongoing basis between two tax authorities
   b. Tax information exchange upon request: When requested by a tax authority to its’ foreign counterpart. Most of the bilateral treaties are exchanged upon request.

The tax treaties, however, have also been not very effective and face various challenges including:

1. To be effective, each nation should have a bilateral treaty with other nations which is a practical impossibility.

2. The treaties between the most important nations from where the investment originates, or is invested, are often missing. The complexity is greater if the source investment is made from a country that does not have income tax regime (like a tax haven) or where customer privacy norms are stringent to prevent information sharing.

3. Most of the existing bilateral treaties provide for the collection of information only on request and not on an automated basis. Limited information is provided under these treaties which can at best be used as evidence in criminal cases and not to facilitate regular tax collection.

There have also been strong arguments against the TIE (tax information exchange) programs, with most of it centering on the privacy rights of taxpayers. It is fact that for the TIE to be effectively undertaken, nations have to develop a conducive regulatory environment by appropriate enforcing security, privacy and governance laws to support the TIE. In addition, enhancement of legal protection and privacy laws are required to ensure taxpayer rights stand protected. These implementations will require significant changes in the technology architecture and implementation roadmap for cross border tax systems.

Approaches to effectuate Tax Compliance

The US has been taking a number of steps to facilitate and enable a favorable environment for international tax compliance. In the United States, one of the most significant challenge is not only the multiplicity of new tax requirements, ranging from the new Cost Basis Reporting requirements to the payment card and third-party payments (6050W) requirements. Most importantly, it’s the overwhelming challenge of implementing a control framework across segments and silos of systems which lack co-ordination and integration from an enterprise risk management perspective.

The 2012 release of the new W-8-BEN-E (Certificate of Status of Beneficial Owner for United States) has offered
us a glimpse into the new and enhanced documentation requirements. Again, the nature of self-certification is becoming more complex and a daunting task for foreign entities which do not regularly face off to US financial institutions.

Notably, the IRS has approved several vendors with respect to client identification and signed MOUs (memorandum of understanding) with several. The electronic (paperless) form of client identification has become the way of the future. It renders the manual validation of forms obsolete and warrants error proof customer identification which can withstand the IRS audit.

The MOUs could be obtained from the IRS by the financial institutions themselves. They serve the purpose of validating a tax documentation process, hence the identification and classification of individuals and entities is conducted accordingly to the IRS regulations. It is typically facilitated by asking a series of questions and soliciting any supporting documentary evidence when needed.

In recent years, the IRS has ramped up its data across referencing capabilities. The US TIN matching program for US TIN and SS number holders has been in place for many years. The emergence of FATCA required FFI EINs which will expand the IRS's reach in this domain. The IRS elevated its enforcement by designating US tax reporting a Tier 1 issue and tightened the net to curtail underreporting. As an example, the IRS released final Forms 1065, U.S. Return of Partnership Income and 1120, U.S. Corporation Income Tax Return for 2011 which asks taxpayers whether they filed all required Form(s) 1099. This question is a clear indication of the IRS' efforts to shift the gravity center and close simple administrative tax reporting loopholes which have been difficult to close.

More importantly, the IRS and Treasury are determined by a congressional mandate to address systemic offshore tax evasion and common place tax reporting avoidance by misinformed expatriates, dual citizens, and resident aliens. It is in this context that the US Government through the IRS evolved the proverbial Trojan horse, the FATCA legislation. FATCA today threatens to rewrite the boundaries of global tax compliance in the guise of a single diminutive regulation but with enormous global implications.

**FATCA: A paradigm shift in tax compliance**

The US FATCA is a new regulatory paradigm which emerged in the last few years which is paving new roads in the area of cross border tax compliance. FATCA (Foreign Account Tax Compliance Act) was signed into law on March 18, 2010, as part of the Hiring Incentives to Restore Employment Act. FATCA mandates Foreign Financial Institutions (FFI) to report details of US citizen/ tax payer accounts and includes a 30 percent withholding tax on certain foreign entities that refuse to disclose the identities of these U.S. persons.

The Foreign Financial Institutions (FFIs) that fall under the ambit of FATCA would include commercial and private banks, credit unions, building societies, financial intermediaries, brokers, investment companies, investment banks, asset management companies, mutual funds, wealth management, securities houses, insurance companies and possibly even hedge funds. The legislation is expected to impact around 50,000 to 100,000 institutions worldwide and would also significantly impact large US banks with global operations and multi-location customer base. Most asset/ liability products as well as trading transactions would come under the ambit of FATCA.

The US IRS had issued a number of guidance/ advisories in the last couple of years which were aimed at clarifying the FATCA compliance obligations and their implementation aspects. The much-awaited proposed FATCA regulations (388 pages long) were released on February 8th 2012 by the US IRS (Internal Revenue Service) and seek to provide the significant detail and clarifications required by the BFSI industry for this challenging compliance mandate.

**Impact of FATCA**

The FATCA compliance would impact a large number of processes and operational activities across the banking and investment management life-cycle. The impact on key banking processes within the organization’s business and structural framework would need to be accurately diagnosed, analyzed and documented. These impacts would need to be validated with key stakeholders, broken down to key process enhancements/ modifications and converted to specific business requirements for developing enhancements to already existing solutions/ systems.
Significant changes may be required in basic banking data structures, account data templates, core banking data models, customer information databases, payment data marts, data management processes and also entail requirements for additional data collection, data validations, data cleansing and data testing. The data collection and analysis would require maintaining a careful balance of privacy and client relationship management considerations. The data management process acquires prime importance in the FATCA implementation as banks with inadequate and non-accurate client data may end up misclassifying clients and erroneously undertaking withholding on their business transactions which may render them liable for legal action and/or penalties. The consensus is that implementation of FATCA is likely to consume significant resources, efforts and time over the next 2 to 3 years.

The implementation of FATCA could also be a key milestone in furthering the standards of corporate governance globally. The FATCA information could be a key ingredient in unlocking the maze of cross-holdings and ownership chains which constrain the effective identification of beneficial ownerships, key to effective corporate control and supervision.

The FATCA implementation may have a number of common inputs and system requirements with other compliance legislations. For instance, the deposit insurance legislation applicable for the geography for FSCS in UK and FCS in Australia. It may make good business sense to look at using some of the developed or planned infrastructure for deposit insurance in the FATCA implementation. This could include parts like the unique customer identification, unified customer view across multiple accounts held by a single customer, historical information on average balances etc. Particularly for multi-location US banks, there may be a good potential to leverage any similarities or common points between the deposit insurance requirements of the Dodd-Frank Act and the FATCA legislation.

Banks and institutions also have a good opportunity to explore the use of KYC and AML systems for some core parts of the FATCA implementation. KYC systems are one of the most significantly impacted applications as they are custodians to large amounts of customer data and are a reference source for many operational and strategic banking solutions and processes.

The KYC information is by nature the key source to scour for complying with all customer information and protection regulations. A better structuring of the KYC information based on residency, citizenship and tax information and its integration with transactional processes could be key to enhancing the quality of these key compliance initiatives and reduce the chances of any penal action. Also it is imperative that the KYC solutions be suitably enhanced to capture FATCA information on a regular basis for all new accounts.

In this new regulatory climate marked by an escalation of tax information exchange across jurisdictions and the IRS pressuring tax heavens to turn over any US taxpayer’s financial and personal data, there is also a compelling business need for financial institutions as well as multinationals to conduct a comprehensive operational and governance assessment.

In fact, FATCA has already started to aggravate the taxation woes of US tax payers and various domestic entities with financial assets in the overseas markets. The recent emergence of a new tax Form 8938 (Statement of Specified Foreign Financial Assets), which created some confusion amongst US tax payers with long standing FBAR reporting (Report of Foreign Bank and Financial Accounts) is an example of this.

The new Form 8938 is just a prelude to much more stringent and expansive regulatory regime which is bound to create ripple effects amongst foreign financial institutions as well as non-financial foreign entities for many years to come. In its essence, FATCA is designed to lift the veil of privacy in the banking world across all jurisdictions and make use of financial institutions to become reporting and enforcement agents of the US tax authorities. Although, the primary objective is being highlighted as merely identifying US persons and reporting world-wide income for these actors, whether they be significant owners of foreign corporations or beneficial owners of offshore trust schemes or other flow through entities, there is a real punitive measure for those who abstain from participation in the IRS program or refrain from providing required documentation. Seemingly, there might be no way out of the IRS regulatory net as it is cast broadly and the effects of the new regulations are more pervasive than ever before.
The FATCA effect: The Inter-Governmental Approach (IGA)

The most important aspect of the FATCA implementation is the Intergovernmental Framework for FATCA implementation agreed on between United States and 5 leading European nations (UK, France, Germany, Italy and Spain) which establishes an alternative information reporting regime with participating foreign jurisdictions (FATCA Partners). According to this agreement, the Foreign Financial Institutions (FFIs) established in these nations (also referred to as FATCA Partner FIs) do not have the obligation to enter into a separate agreement directly with the IRS. More importantly, this mechanism has the potential to solve one of the stumbling blocks for FATCA implementation – the reporting requirements for FFIs in nations that prohibit divulging private information of its account holders.

This framework will enable the US to leverage the old established treaty exchange agreements by making the Financial Institutions (in FATCA partner nations) report confidential information to the local tax authority rather than to the IRS directly. From then on it would be one government tax authority communicating with another government tax authority.

The IRS, in consultation with partner nations, has come up with two versions of the model agreement:

- **Reciprocal version:** Under the reciprocal version of the Model IGA, the United States will provide information to the tax authorities of the FATCA Partner jurisdiction, on a reciprocal basis, with respect to accounts of nationals of the FATCA Partner in the United States.

- **Non-Reciprocal version:** Non-reciprocal version of the Model IGA does not involve any provision of information by the United States to the FATCA Partner jurisdiction.

- **Both versions** establish a framework for the reporting done by the financial institutions of certain financial account information to their respective tax authorities. This shall be followed by automatic exchange information under existing bilateral tax treaties or tax information exchange agreements. Both versions of the model agreement also address the legal issues that had been raised in connection with FATCA, and simplify its implementation for financial institutions.

Under the IGA, an FFI could satisfy the reporting requirements of FATCA in two ways:

- If the residence country of the FFI enters into an agreement to report the information required under FATCA, (pursuant to an income tax treaty, tax information exchange agreement, or other agreements with the US (the FATCA partner)).

- Or if the FFI collects the information required under FATCA and reports this to its residence country government for automatic exchange by that government with the US.

The quid pro quo for this undertaking by FATCA partners would be that the US government will agree to report information on FATCA partner taxpayers and automatically exchange such information with FATCA partners. The benefits of this approach are:

- Extension of FATCA deadline: IGA provides an additional six months (until 31 December 2013) to have new account on-boarding procedures in place that comply with the FATCA requirements.

- FFIs established in the host country of the FATCA partner would not have to enter into separate agreements with the IRS.

- The legal impediments to compliance, (such as those related to data protection) have been addressed as the FFIs would report US account-holder information to the FATCA partner tax authority, pursuant to domestic enabling legislation.

- Significant reliance on self-compliance as the FI has an option to solicit documentation for the accounts for which US indicia has been established.

- Elimination of withholding of Tax information exchange upon request: When requested by a tax authority to its’ foreign counterpart, most of the bilateral treaties are exchanged upon request.

- Additional carve out of exempted products for partner country FIs.

- Greater clarity on FATCA impact for insurers.

- The due diligence requirements for account classifications are more closely aligned to the requirements under the existing anti-money laundering rules.

- Reciprocity of information reporting from United States.
It is estimated that the benefits realized by the FFIs due to the reduced burden from the new proposed regulations along with the joint statement, can reduce the implementation and administration costs significantly. Nevertheless, FFIs would still have to implement procedures to identify and categorize entity account holders and to identify and report US account holders, generally as specified under the proposed regulations, albeit to their home country tax authority. The IGA also brings forth a greater challenge for global organizations which are not operating solely within FATCA Partner jurisdictions as they would have to run multiple track implementation programs that reflect both the FATCA requirements under the regulations as they will be finalized and the requirements modified under an IGA, which will complicate their progress toward compliance.

Implications of IGA on Global Tax Compliance

The IGA is a pioneering international tax development because of its implications on tax transparency and exchange of information. The IGA when implemented would be able to minimize or eliminate local law conflicts that could prevent FFIs from complying with FATCA. These conflicts include privacy and data protection laws, account opening/closing provisions, anti-discrimination provisions. This is essential because without the harmonization of domestic regulations with FATCA, the FFIs that opt to comply with FATCA could become subject to regulatory sanction or proceedings that could result in civil or criminal penalties.

The outcomes of IGA could well act as a catalyst beyond FATCA as partner nations have committed to establish rules by 2017 that will require financial institutions to include the other jurisdiction’s taxpayer identification numbers in the information to be obtained for specified accounts. In addition, the parties have agreed to work on a common tax reporting and exchange model with other jurisdictions, the OECD countries and where appropriate, the European Union (EU). The United States has also committed to pursue reciprocity with respect to equivalent levels of automatic exchange of information.

This could well bring into fore a standardized model for global tax reporting which could be replicated across the world as the primary obligation of Tax Information Exchange Agreements (TIEs). The IGA presents itself with a unique set of advantages and challenges, but it is imperative that the partner nations ensure equal obligation from United States as well by implementing local laws consistent with FATCA. Otherwise the IGA would dilute its purpose and partner nations will end up gathering information according to the measures embodied in the current proposed FATCA regulations and not in accordance to the FATCA country partners’ information gathering measures.

Charting a new future for Global Tax Compliance

These significant developments in the last few years bear tremendous significance to the global tax compliance landscape. Banks and Financial Institutions would have to soon start considering cost optimization measures to be able to not only comply these regulatory regimes but also meet their financial objectives. With the world economy still reeling from the aftermath of the slowdown that jilted the fundamentals of the business and operational model of financial institutes, it is of utmost importance that the systems and processes adopted by FIs are scalable to meet the needs of future compliance regulations.

There are multiple instances of governments pushing for similar tax reforms across the globe; UK is already pushing to pass a FATCA like law in its parliament. The OECD has already organized in conjunction with the Business and Industry Advisory Committee (BIAC), a briefing on the model of intergovernmental agreement on improving fiscal discipline and the application of FATCA (“Model Intergovernmental Agreement on Improving Tax Compliance and Implementing FATCA”) at the OECD headquarters in Paris in September 2012.

It would therefore not be inaccurate to associate the FATCA compliance with the famous Trojan horse which enabled the conquest of Troy through harboring a similarly huge number of potentially power tax compliance regulatory offshoots threatening to eliminate the scourge of most developed economies – tax evasion and money laundering. The end result would however be far from a Greek tragedy – the eradication of global tax evasion could enable the stimulation and regeneration of a powerful, vibrant and healthier global economic system.
Pradeep Godbole

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Christine Donahue:

Christine is a Financial Services Risk & Compliance Anchor at Wipro. Prior to joining Wipro, Christine worked at the Federal Reserve Bank of Boston, one of the primary regulators in the U.S., where she was responsible for oversight of compliance, legal and operational risk practices of U.S. based financial institutions in Boston. Christine worked at State Street Bank for 19 years as Vice President where she spearheaded the successful implementation several regulatory programs. During the course of her 23 year career in the financial services industry, she has handled multiple roles that include client and vendor relationship management, project management, business process and internal control design, compliance and operational risk program management. Christine has a BS in Management from Bentley University and is a member of the Risk Management Association (RMA), GARP and SIFMA.
Risk Based Approach (RBA) for ‘Cost Efficient & Compliance Effective’ AML Program

AML is again at the top of the regulatory agenda

Anti-money laundering (AML)/ Know Your Customer (KYC) regulatory requirements have been in place of banking and financial services for quite a while now. However, with the growing links between money laundering and terrorist financing, crime & corruption, there has been renewed regulatory focus on AML globally. More recently, there have been multi-million dollar fines and penalties levied on financial institutions including ‘cease and desist orders’ and even the closure of businesses in some cases. An analysis of these cases shows that the AML programs were deficient and therefore not in compliance with regulations. The key areas of focus/ deficiencies noted from the regulatory actions are summarized below -

**High Risk Country Dealings**
- Countries on US sanctions list - Iran
- Countries facing challenges in AML implementation - Mexico
- Offshore centers - Cayman Islands
- Countries facing challenges in anti-terrorism - Saudi Arabia, Bangladesh
- Exclusion of high risk countries from monitoring based on volume of business/ reliance on group entities

**High Risk Customer Dealings**
- Incomplete documentation/ verification of high risk customers
- Inadequate due diligence/ enhanced due diligence on foreign correspondent customers, retail, banking customers and international personal banking customers
- Casa de cambrio (CDC) and other foreign correspondent customers

**High Risk Products Dealings**
- Clearing suspicious bulk travellers checks Offering Bearer Share Accounts
- Remote deposit Capture/ international cash letter instrument
- Physical transport of large cash
- Casa de cambrio (‘CDC’) accounts

**Deviencies in Transaction Monitoring & SAR processing**
- Exclusion of transactions from transaction monitoring
- Failure of file Suspicious Activity Reports ("SARs") on timely basis
- Incomplete SAR

**Group Compliance**
- Lack of visibility of all AML program and control and monitoring from head office over geographical entities
- Inability to assess and monitor client relationships on a bank-wide basis

**Deals with Sanctioned countries/parties**
- Wire stripping to hide payment details
- Circumventing controls relating to transactions with countries on US sanctions list - Iran
AML regulations are changing

The regulators are working to improve the effectiveness and also enforceability of AML regulation by bringing more clarity into methodology and application of the regulation. The issuance of the European Union (EU) AML Directive IV has had a major impact on AML regulation as well as expanding AML scope to include tax crimes. The same framework is likely to be used for incorporating other money laundering scenarios such as carbon trading which is a new activity used for money laundering. In addition, another positive change is the use of the home host concept under Basel II. This concept will avoid regulatory arbitrage and also give clarity to regulatory coverage and authority to take action/ prosecute, etc. Some of the key provisions of EU AML Directive IV are summarized below:

**Minimization of Compliance Arbitrage**
- A single Framework for AML / Sanctions / Tax Crimes and new predicate offences
- Acceptance of BASEL principles for compliance and Home Host Issues
- Standardization of PEP assessment
- Creation of Register of Beneficial Owners / Private / Public Cooperation structures

**Acceptance of Risk Based Approach**
- Clear Guidance on Risk based Approach (RBA)
- Three levels of CDD
- Customer AML Risk Rating
- Onboarding
- Triggers - transaction or external information
- Periodic review and monitoring
- Focus on high risk customers, high risk products, high risk transactions

**Adoption of Harmonization and consistency**
- Group Wide Consistency
- Risk Ratings
- Approvals
- Review and Monitoring
- Striking a balance with data protection rules

**Sources of Efficiency**
- Harmonization of transaction thresholds
- Recognize customer identity documentation and electronic identification
- Harmonization of simplified CDD

**Risk Based Approach (RBA)**

The regulators are keenly aware of the compliance costs and business pressures involved at financial institutions in order to be in compliance with regulations. Hence, the regulators are moving away from ‘rule based approach’ to ‘risk based approach’ so that resources are focused on identifying and monitoring high risk countries, customers and products rather than potentially the entire customer base. RBA will be an important and integral element of AML programs going forward.

The RBA process begins with customer identification, verification of documentation and checks against the negative or sanction lists. The next step in the process is to assess the customer risk, country risk and product risk to determine the customer AML rating. This rating result determines the level of on-going monitoring/ due diligence and will result in either the customer assessed as prohibited, simplified/ standard/ enhanced CDD. On an ongoing basis, the transactions will be monitored in batch/ online mode which will either process, prohibit the transactions and/ or identify them as suspicious transactions. Suspicious transactions will be reported to FIU. Suspicious/ prohibited transactions will feed into customer rating process and may also lead to a reassessment of customer rating. The picture below summarizes the key features of RBA:
In terms of impact of RBA, the financial institutions will need to create/modify its existing AML rating models and these models will have to be periodically reviewed and refined. An analogy can be drawn here between AML and credit rating/scoring process as shown below.

In credit rating/scoring process, once the customer identification and verification is done, the customer records are checked against credit bureau, then rating and scoring model is run to get the customer score. This customer score determines the pricing as well as credit limits. On an ongoing basis, the transactions are monitored against credit limits, exception approval, NPA monitoring and reporting is done.

In AML, once the customer identification and verification is done, the records are checked against negative/sanctions list. AML rating can be done based on customer category, country, products used. This rating will determine the level of CDD. On an ongoing basis, the transactions are monitored and any suspicious transactions monitoring and reporting is done.
Operationalizing Risk Based models

We recommend a division of customers into natural persons and other entities since the assessment parameters may be different for both categories and may assist in compliance with future regulation. The financial institutions will need to determine factors relating to each customer type. In addition, inherent customer risk also needs to be considered for e.g. politically exposed person, casinos which may result in enhanced due diligence. Similarly, the country risk needs to be assessed. Ratings published by UN or other international agencies, corruption survey etc., can be used here to assess the inherent country risk. Next, the product risk needs to be assessed considering the inherent nature of the product for e.g. cross border payments.

The standalone ratings for customer, country, product may show lower risk but a combination of any two or more aspects may increase AML risk substantially for e.g. cross border remittance from countries facing terrorist/AML challenges. Hence, a combined rating for these three elements needs to be considered. Based on the customer score, level of customer due diligence (CDD) will be determined. In building these models, the financial institutions will need to use parameter weights, statistical techniques, back testing and validation techniques before the models are adopted. Here again, there is lot of learning from credit rating/scoring process which can be applied to AML models - development of models, statistical techniques or rules to use, back testing and fine-tuning of models, which should be part of RBA going forward.

On an ongoing basis, transactions need to be monitored. Various techniques such as rules, text mining, predictive/behavioral analysis, network analysis can be used to identify transaction patterns. This monitoring could result in transactions being prohibited, requiring pre-investigation, and post-investigation or straight through processing.
In order to gain efficiencies in an AML program, the institutions should focus on using RBA on identifying the majority of customers under simplified/standard CDD and processing the majority of transactions under straight through processing. The institution would then be able to focus resources on the higher risk customers/products as needed while ensuring that there are no errors/anomalies in customers being classified for standard/simplified CDD. The picture above depicts the transaction pyramid and the area of focus for the financial institutions.
Building Cost Efficiency and Compliance Effectiveness

We have identified areas below where the financial institutions can achieve efficiency while maintaining effectiveness of AML program.

• **Data:** At the data level, the financial institutions can consider implementation of a global compliance data model and data dictionary which can provide consistent compliance language across the organization.

  The financial institutions traditionally have challenges in customer data due to multiple legacy systems and mergers/reorganizations. The financial institutions should conduct data availability and quality analysis to identify and remediate identified gaps which could assist in moving some customers into standard/simplified CDD.

• **IT Systems:** The financial institutions have traditionally implemented point solutions across the entities or business groups. If the financial institutions can consolidate AML into single application with multiple databases, it could provide efficiencies in data handling, use of data for analysis and reporting and can also improve system performance in some cases. It could also bring obvious benefits of operational performance and maintenance of IT systems.

• **Customer classification:** We believe that customer classification into natural person and other entities can drive efficiencies since the evaluation parameters are different in these cases.

  The financial institutions could obtain additional documentation/verification through electronic verification so that majority of those customers classified as natural persons could move to a standard/simplified CDD.

• **Reduce false positives:** This has always been an area where a tremendous amount of effort has been involved to investigate and close these items. There is an opportunity to create separate AML rating models based on customer types and back tested activities which could assist in reducing the number of false positives and/or increase the number of straight through processing transactions. The financial institutions could also build predictive models for reducing false positives.

• **Improved assurance:** Since AML is a repetitive process, there are opportunities for right sourcing which can be used for control testing & assurance. In addition, there is an opportunity to automate or use right sourcing in performing reconciliation activities.
AML Functional Architecture
Considering the large number of customers and large volume of transactions, technology will play a critical role in bringing efficiencies to AML program. Reference functional architecture of AML program is shown below:

Possibilities of further improvements through holistic approach to compliance data model
There are significant synergies and efficiencies in AML programs and various other compliance initiatives with regards to customer data. While the focus of each of the initiatives may be different the underlying focus of each of these initiatives is documentation, identification, verification of customer information. The only difference is in level of documentation and the amount of analysis required. So there is an opportunity to build a global compliance data model which can provide data efficiencies, effectiveness and accuracy across multiple compliance programs. The table shows the convergence and divergence between various compliance initiatives and related data requirements.
AML Maturity Framework

Wipro’s AML maturity framework is presented below –

<table>
<thead>
<tr>
<th>KYC</th>
<th>AML/ Sanctions/ Anti corruption/ Predicate / Tax</th>
<th>Credit Risk</th>
<th>Fraud</th>
<th>Customer liquidity behaviour</th>
<th>FATCA</th>
<th>Suitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of customer with documentary proof</td>
<td>Sources of cash inflow and outflow</td>
<td>Evaluate customer’s ability and willingness to pay</td>
<td>Identity fraudulent behaviour and connections on social network</td>
<td>Sensitivity of withdrawal, renewal, repayment, borrowing to changes in the interest rates seasons, bank’s own rating and stress</td>
<td>Identify tax obligation jurisdictions for customer</td>
<td>Assess skills and experience in dealing with certain products</td>
</tr>
<tr>
<td>Customer demographic details</td>
<td>Customer demographic details</td>
<td>Customer demographic details</td>
<td>Customer demographic details</td>
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<tr>
<td>Documentary proof for identification</td>
<td>Documentary proof for identification</td>
<td>Documentary proof for identification</td>
<td>Elevation and controls</td>
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<tr>
<td>Record keeping</td>
<td>Financial details</td>
<td>Financial details</td>
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<td>Financial details</td>
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<tr>
<td>Financial capacity</td>
<td>Product details</td>
<td>Product details</td>
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<tr>
<td>Transaction details</td>
<td>Transaction details</td>
<td>Transaction details</td>
<td></td>
<td>Transaction details (only in case of recalcitrant)</td>
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<tr>
<td>Collateral and guarantees</td>
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<tr>
<td>Rating/ Scoring Model</td>
<td>Rating / Scoring Model</td>
<td>Behavioural Model</td>
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</tbody>
</table>

**水平 1**

**Minimum acceptable level of sophistication**

- Consistency of Metrics across entities, geographies, products, customers
- Use of sanctions / prohibition country / customer / blacklist / negative lists
- Integration of AML in BAU activities
- Data
- Customer / Transaction data model with required level of granularity
- Standardization metadata management
- Approval workflow / Governance & Control over customer / Transaction data
- Automated DQ check woth x% accuracy

**水平 2**

**Expected Best Practices**

- AML risk models use, back testing and validation
- Single IY application with multiple DB
- Configurable rules engine and scorecards to respond to regulatory changes in short time
- Outsourcing of AML activities
- Customer data protection approvals in place for information sharing

**水平 3**

**Industry Best Practices**

- Group level AML process
- Integration between various regulatory initiatives - FATCA, Crime management, suitability etc.
- AML risk priced as a part of customer pricing / risk based pricing
At level 2, the financial institutions should drive towards gaining effectiveness and efficiencies of AML program. The financial institutions should have AML rating models and should conduct back testing and periodic review of those rating models to keep abreast with changes in business strategy and regulations. Ideally the financial institutions should have single AML application with multiple databases so that there is technological efficiency and data integrity. The financial institutions should be able to respond to regulatory changes using configurable rules and workflow engine. Finally, the financial institutions should gain efficiencies in the form of and increased number of customers rated under simplified CDD along with a reduction in number of transactions and false positives that need to be investigated.

At level 3, the financial institutions should gain from the increased effectiveness and efficiencies through group-wide implementation of AML. The financial institutions can also integrate various regulatory initiatives like FATCA, suitability, fraud management. Finally, AML programs require monitoring for high risk customers which involves cost, effort and time.

Way forward

Finally, areas of challenges still remain in the implementation, documentation and on-going activities associated with AML compliance. Data protection and sharing of data continues to be major concern especially for entities in multiple geographies. In addition, there is no agreement in place today on standard customer identity documentation and electronic verification which would be essential in bringing increased efficiencies and effectiveness to AML programs globally. Another drawback in present setup is that there is no industry wise negative list for AML similar to delinquent customers in credit bureaus. Once the credit bureau identifies the customer with bad credit history, it becomes difficult for the customer to shop with other banks. This can avoid future risks. Going forward, some of challenges could be addressed through leadership within industry groups, regulators and major financial institutions with a focus to forge co-operation and change in the future.
Jennifer Ippoliti leads Wipro’s Data Management practice, where she manages a team that develops solutions, drives strategy, and provides thought leadership on data management. Her multi-national consulting experience includes leading engagements in market and reference data strategy, quality, governance, organizational design, operating models, technical architecture, data administration, and outsourcing / offshoring. She is a frequent speaker on data management and LEI Adoption.
Are You Ready For The Legal Entity Identifier (LEI)?

The financial crisis of 2008 cast a sharp focus on the issue of systemic risk in the financial services industry. The absence of a standardized entity identifier left many financial institutions struggling to assess their counterparty risk and exposure to firms like Lehman Brothers. This was not only time consuming, but also fraught with data quality issues, forcing them to take steps based on best guesses and perceptions rather than actual data. It was not the first time that the need for a standard legal entity identifier was felt, but it was the first time that the very existence of financial institutions was threatened due to its absence.

The Dodd Frank Act of 2010 established the Office of Financial Research (OFR) to measure and monitor Systemic Risk. This requires reporting of financial transactions using standard identifiers, beginning with Legal Entities. The Act has extra-territorial impact, as any entity doing business with US firms will be required to report LEIs.

Two parallel initiatives are driving forward LEI adoption. The Financial Stability Board (FSB) is making recommendations to the Group of 20 Finance Ministers and Central Bank Governors (G20) on global LEI adoption. The FSB has solicited feedback from global regulatory bodies and standards organizations, business registries, financial institutions, and other stakeholders in an effort to propose a solution that will be globally relevant, scalable, extensible, and implementable before the deadline of March 2013 set by the G20.

At the same time, the Commodity Futures Trading Commission (CFTC) is requiring a "CICI" (CFTC Interim Compliant Identifier) to be used in reporting on certain swap transactions on an interim basis until the CFTC can transition to the LEI. The CFTC mandate has made LEI implementation very real for the approximately 125 global firms that are affected beginning in October 2012.

How LEI will Benefit the Back Office

The LEI will have a profound impact on the reference data used by finance, risk, and compliance organizations around the globe. Financial institutions deal with multiple identification codes in day to day operations to identify counterparties and issuers. With the implementation of LEI, every legal entity in scope will be assigned a unique 20 character alphanumeric LEI that will not change over the lifetime of the entity. Key benefits will include:

- Management of counterparty and concentration risk
- Improved access to ratings and classification schemas
- A holistic view of the customer, enabling better customer service and cross selling
- Improved corporate actions management (name changes, ownership changes, changes in corporate structure, etc.) because the LEI will be traceable throughout the life cycle of the entity
- Better management of cross-referencing to minimize legal impact in the processes of collateral management, fund-level management, obligor management, risk management, and business distress management
Every entity in scope will be responsible for providing correct information to the LEI solution provider and will need to certify at least annually that the information is accurate, creating a true authoritative source for legal entity information.

Preparing for the Journey Ahead
Legal entity implementation will have its challenges. A recent Wipro poll indicated that the industry views reconciling, cross-referencing, and linking LEI with existing counterparty information as the biggest challenge financial institutions face. Industry participants also anticipate data quality issues, such as inconsistent legal hierarchy relationships, duplicate records, different spellings and IDs for the same client, and outdated information. These issues will complicate the mapping process, leading to a myriad of downstream issues, from incorrectly calculating counterparty risk to trade breaks and settlement fails.

Keeping these challenges in mind, many forward-looking financial institutions have already begun the process of analyzing their current data architectures, determining where entity data is present, and identifying data quality issues within their data. Some have even begun updating their reference data architectures and processes in anticipation of the coming regulatory requirements.

Data Quality and Mapping
De-duplication of internal data is an essential first step in the process, both at the container level and the individual record level. Mapping the LEI standard to existing records can be substantially simplified if the mapping is a 1:1 process rather than 1:Many. Data Quality tools can substantially speed up the process by using fuzzy logic to identify possible duplicates at varying degrees of match probability, but they must be accompanied by an equivalent investment in people to review, confirm, and accept or reject the recommendations of the tool.

Offshore data quality “SWAT teams” can also speed the de-duplication process, by augmenting existing Data Operations staff and taking on the one-off cleanup projects that Operations Analysts don’t have time to carry out. Data quality metrics and dashboards are essential to measure the progress of DQ clean initiatives, up to ensure that quality issues do not creep back in, and to validate the business case for the de-dupe and cleanup initiatives.

Process Reengineering
An often overlooked piece of the data flow puzzle is manual processes. All too frequently, data quality problems originate with manual processes that do not include provisions to keep manually-entered data current. As a result, it goes stale and becomes inaccurate, if not dangerous. Entity data is particularly susceptible to this threat, as so much of it is manually created. How can this risk to data quality be mitigated?

- Project + Process: Any DQ initiative must, by design, include provisions to review and change, if necessary, data creation and amendment processes that could result in stale or inaccurate data. This can be a challenge when the project team resides in one area of the organization, such as IT or Data Operations, and the data entry analyst resides in another, such as Risk.

- Governance: The most successful data quality initiatives are based upon a foundation of enterprise-level buy-in and senior management support. The best partner for a DQ program is a senior business user who knows that your initiative is going to solve her vexing data quality problem. Such a partner can move mountains when it comes to convincing a credit risk analyst to change his process. Another key element to governance is the establishment of working groups that can help identify and prioritize these thorny data issues, so you can get to work on fixing them. And when you do, they will become your strongest supporters.
• **Data Quality Reporting:** Not every process can be automated or controlled. In such case, data quality reporting is your best friend. Reactive DQ control is not as efficient as Proactive, but it will do in a pinch. Use your working groups to set guidelines on what constitutes “stale” for each attribute, and build these guidelines into business rules that will generate aging reports, so stale data can be researched and updated quickly and efficiently.

• **Fix Once, at the Source:** Any process that requires amending data, just to have it be overwritten and then amended again the next day, is a waste of your time. Trace the data back to its source, and get it fixed there. It is imperative that robust data entry processes form the foundation to gather and manage the key attributes of the entity identifier. The business benefits of this effort will be significant, and will strengthen the weakest link in counterparty risk management process: that is, a clear and unambiguous way of recognizing the legal entity.

**Conclusion**

The LEI is just the tip of the entity data iceberg, as other regulators begin to step up and create additional compliance mandates. For example, in September 2012, the European Securities and Markets Authority (ESMA) are expected to publish the technical standards for the European Market Infrastructure Regulation (EMIR) which will regulate derivatives trading, and they are expected to include a legal entity identifier. ESMA also stated that “a Unique Trade Identifier (UTI) or other trade ID should be reported with each counterparty to allow for the matching of each side of the transaction.” ESMA is not the only organization calling for Trade IDs and UPIs (unique instrument IDs.) With these additional identifiers on the horizon, financial institutions have no time to waste in preparing for LEI adoption. Companies who use these regulatory mandates as the foundation for a solid business case to improve and enhance their legal entity data will be the true beneficiaries of the LEI.
Dr. Peter Pop

Dr. Peter Pop commands extensive experience in legal compliance and banking operations covering private banking, investment banking and asset management.
Banking On The ‘New Normal’

In tackling the challenges posed by new regulations and tight global market conditions, banks are taking an integrated view of their risk, financial and compliance systems, supported by new technologies and utility models.

Stringent regulatory norms in key global markets have considerably increased the risk, financial and compliance burden on banks, mandating the banking leadership to consider adopting new technologies and utility models to ensure long-term sustainability of their operations. The regulatory pressure on banks is not likely to ease in the foreseeable future. At the same time, banks are trying to adapt their portfolio and balance sheet to the new normal that is characterized by low economic growth, currency crisis, among other macro-economic concerns.

In meeting the new regulatory demands posed by Dodd Frank Act and Basel III, banks are taking firm steps to prevent any financial crisis in the future. It is important to note that the financial crisis that broke out in 2007, occurred not because of lack of adequate regulation, but for want of adequate transparency in the banking operations.

Walking The Tightrope

Today, SIFIs in Switzerland, UK and the rest of Europe, as well as large banks in the US, are required to comply with larger capital requirements, especially in the wake of the Dodd-Frank Act and new regulatory requirements pertaining to OTC derivatives. However, the Dodd-Frank Act has seemingly assumed characteristics of some of the ill-conceived American regulations in the past, such as, the Sarbanes-Oxley Act that came into effect following the Enron imbroglio. Dodd Frank brings with it a lot of uncertainty for the banking industry, although the objective of the regulation is primarily to mitigate the systemic risks.

Basel III is a different story. It is helping banks to reduce their risks and thereby avoid any future crisis. Banks are called upon to meet higher capital requirements and are also required to keep out doubtful assets from their balance sheet.

The new regulations as well as changes in the OTC derivatives markets and new norms pertaining to capital adequacy with respect to risk-weighted assets are delivering a big impact on investment banking, although it is not clear whether the systemic risks are adequately dealt with.

A helicopter view of the current investment banking landscape suggests that when proprietary trading is taken out of the game, the risks are largely shut out, but at the same time, a significant percentage of jobs are cut due to the over-capacity in investment banks.
A Paradigm Shift

Amid these changes, tax authorities in different countries are putting pressure on banks to share customer information. As a result, data privacy standards are changing in the Swiss, European and US banking industry, triggering significant outflow of offshore wealth. It may be said that the Swiss government has perhaps erred in its judgment by changing its stance on bank secrecy. This will have a big impact on cross-border banking data flows.

Historically, Swiss bank secrecy goes back to 1934 when Switzerland closely guarded bank customer information to prevent intrusion by Italy and Germany to obtain information about people fleeing from those countries for political reasons. Switzerland maintained that it was a neutral country and would not interfere in the financial privacy of bank customers. The country also took a position that tax evasion was an internal matter to be dealt with by individual countries and that Switzerland would not share the financial details of Swiss bank customers. But now with the tax treaties that Switzerland has signed with UK, Germany and Austria on withholding tax, the situation has changed.

It is highly probable that the EU will not be satisfied with withholding tax alone, but would want greater sharing of bank customer data. Take the case of Germany where at the press of a button, all bank customer data can be obtained. For Swiss banks, this is perhaps the beginning of the end of bank secrecy.

IT Holds The Key

Further, with Basel III and other regulatory norms coming into play, banks will have to enhance their data and information quality. IT infrastructure is the key to this, especially with risk, finance and compliance information management systems converging.

In the past, private banking, investment banking and asset management operated in silos. Now banks need to take an integrated view of risk, in consonance with the back office requirements. This is a useful development. It was in the absence of a system like this that UBS, for instance, landed a huge loss of CHF 55 billion in the aftermath of the financial crisis.

Looking ahead, banks would need to integrate risk and financial management systems. But whether they will opt for a utility-based model as a response to consolidation and integration of systems is not clear yet.

Each bank will act according to its own requirements. Banks that seek to move up the analytics value chain will likely assert proprietary control on IT, but when it comes to commoditized operations, outsourcing would be the preferred option. After all, a utility-based model saves huge costs.

Today, compliance cost is eating up banks’ IT operations budget. And yet we are not likely to see an increase in the budget itself. As a result, many banks are pushing IT systems out of their own balance sheets and expect vendors to build those systems. In such a situation, more banks will increasingly opt for the pay-as-you-go model.

Regulations like Basel III have had a sizeable impact on the IT structures of banks, but the cost factor is seemingly the bigger driver of change. Pertinent to note that IT salary and compensation levels in banks are down by 40-50% owing to cost pressures.

As a case in point, at a major European universal bank, the efficiency team was required to save $2 billion out of a $22 billion cost base, on top of a similar amount of savings already being implemented. This led to outsourcing some 5,000 jobs, with 4,000 jobs moving to India alone.

In the case of retail banking, the risks are limited, although in Switzerland, Italy, Spain and Germany, mortgage is part of retail banking and therefore the risks in retail banking are higher there. Nonetheless, when it comes to client deposits, investment funds, savings, credit cards, etc., the risks are relatively low compared to investment banking. Having said that, the balance sheet of a retail bank has to necessarily comply with the same rules that apply to investment banks.

Looking ahead, banks would do well to upgrade their risk, financial and compliance information systems, as well as, push out IT systems to vendors for greater cost saving and for better standardization as needed under Basel III. Also, by adopting a value-creating sourcing strategy, banks will get a bigger bang for the buck.
Guillermo Kopp

Guillermo’s expertise with business and technology transformation spans multiple disciplines to include bank cards, credit, delivery channels, funds transfers, risk management, cash management, and regulatory compliance. Guillermo holds a Master of Science in project management from the George Washington University and a Computer Science degree from the University of Buenos Aires.
The governments of the United States and other leading nations have been launching concerted regulatory initiatives that seek to promote financial stability. A pivotal initiative, introduced by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), has been the creation of the Consumer Financial Protection Bureau (CFPB), an independent regulatory agency within the Federal Reserve System. The CFPB began taking consumer complaints about credit cards in July 2011, and has been gradually dealing with mortgages, private student loans, and other consumer bank products and services. These regulatory developments intend to improve transparency and protect consumers from misdeeds by the banking and financial services industry. Still, organic stability will depend on the way that financial institutions truthfully serve the interests of their customers.

**Regulatory Developments: A Maze Of Rules**

The Dodd-Frank Act includes well-intended provisions to increase capital requirements and ensure the reasonability of fees. Implementation of the Act has lagged, as regulators have been toiling hard to formulate, propose and finalize hundreds of new rules. The constraints and cost burden associated with the rules that will be imposed on most financial firms, ranging from large diversified banks to small community banks, are raising questions about the economic impact on the banking system.

The Dodd-Frank Act has transferred the rule-making authority to the CFPB over several consumer protection provisions. For example, the CFPB has authority over electronic funds transfers (EFT) safeguards that have been granted under the “Regulation E” of the Board of Governors of the Federal Reserve System. The CFPB also has authority over the provisions regarding a consumer’s ability to repay a mortgage loan, as well as related penalties and information retention mandates that stem from the Truth in Lending Act. These provisions are granted by the “Regulation Z” along with various mortgage origination and servicing procedures. Under the Dodd-Frank Act, the CFPB has primary responsibility for administering the Fair Debt Collection Practices Act (FDCPA), and the authority to prescribe rules with respect to debt collection. Above and beyond these regulations, it is high time that banks analyzed more deeply the ability of a customer to put borrowed money to work and pay back the loan amount.

**Protecting Prepaid Money: From The People, For The People**

The CFPB has acknowledged an accelerated growth in the amounts spent through general purpose reloadable cards, which lack the procedural and regulatory safeguards of checking accounts. Hence the urge to regulate “open loop” products that carry significant consumer money are accepted over the mainstream retail electronic payments networks such as MasterCard, Visa, or American Express.

Unlike gift cards, which are already subject to the restrictions on fees and service charges imposed by the Credit Card Accountability Responsibility and Disclosure Act of 2009 (CARD Act), general purpose prepaid cards have escaped such restrictions. The EFT provisions will encompass a broader range of payment cards and extend to general purpose prepaid cards. Other regulatory concerns include the application of disclosure requirements to prepaid cards, and offer customers the opportunity to opt for combined overdraft and credit enhancing offers.
Prepaid Cards: Whose Money Is It, Anyway?

Besides providing the intrinsic convenience and ubiquity of electronic payments, banks will need to add tangible value to their customers. For prepaid products and special purpose cards, some executives in the financial industry wonder whether the benefits of protecting consumers would offset the cost that banks will incur in extending such protection. Protecting customers over the full range of products and services, and particularly on issues surrounding all types of consumer payments, will become a pillar to restore and sustain customer confidence. When processing payments, banks heed anti money laundering regulations as a franchise risk. Banks will also need to make whole consumers for losses that result from deficiencies in the banking processes and controls. By the same token, protecting bank customers will become a matter of brand and institutional reputation, and ultimately, a franchise risk.

The CFPB will continue to prompt financial firms to listen and respond to consumer complaints. As a matter of principle, servicing customer complaints is a central process in which all firms should excel. Customer complaints highlight significant gaps and threats in the underlying financial services that should allow the CFPB and banking supervisors to take corrective action.

Credit Collections: Will Banks And Collectors Heed Both The Letter And The Spirit Of The Law?

According to the CFPB, the two most common credit card complaints reported by consumers are:

1) Billing disputes
2) Identity theft, fraud or embezzlement

As electronic networks keep blurring the lines between commerce and consumer finance, the CFPB report also looks at the debt collection processes of supervised banks as well as debt collectors (which the agency is also seeking to oversee).
The findings published in the 2012 report reveal a relentless increase in demands from collectors for larger payments than allowed, as well as harassing and threatening behaviors. Exhibit 1 highlights the growing relevance of such claims. These egregious practices bring to mind misconduct that epitomizes organized crime rather than banking. To restore consumer confidence, banks must focus more sharply on delivering value to customers, curbing fraud, and resolving gaps in services, financial terms and internal processes.

Debt collections can be better interpreted as a stressful event to consumers. Banks should take such events as an opportunity to salvage the customer relationship and turn around distress into a healthier, productive, and profitable financial structure. A collective industry challenge will be to manage credit costs more effectively and sustain the broad availability of credit both to consumers and businesses with fair terms and affordable rates.

**When Banks Invest On Their Own Account: Loaded Dice Or Rigged Roulette?**

The business model of a typical bank capitalizes on comparatively cheap flows of deposits, liquidity, and fees from individual customers to fund lending operations that are priced at a premium. Banks in turn may reinvest any excess liquidity to improve the returns for their customers or simply shield their deposits and investments. With a plausible purpose to preserve or augment their lending capacity, banks are also allowed to invest on their own account and boost profitability.

The prevailing opacity and asymmetry of the financial system may lay unruly power in the hands of “big money” firms. Notorious cases involving misbehavior by a bank or banking executive have ignited public outrage. The causes hint at engrained conflicts of interest, speculative investments and manipulation of the financial system for unethical profits or personal gain. How will the financial system fend off gambling strategies from infiltrating its ethical fabric? How may regulators prevent gambling behavior in the supervised banks? Upcoming rules will mitigate the danger by rewarding and penalizing the way in which banks assume, concentrate, and securitize risk. Notwithstanding the regulations, banks that put their customers first and institutionalize sound risk management practices will regain credibility and business momentum.

**Scores From “Big Data”: Minding Also The Small Customers**

Banks have relied on credit scores, such as those provided by consumer reporting agencies, to assess the risk of individual customers and price loan offerings. Scoring models must be continually updated to accommodate evolving market conditions, banking products, sources of consumer data, and behavioral patterns. Absent direct interactions with the individual consumer being affected, the accuracy of the reporting agency data, models, and scores are at best questionable. In the eyes of their customers and regulators, banks must avoid relying blindly on reported consumer scores and instead develop a more comprehensive and fair understanding of the customer situation. A more holistic picture of savings and spending behaviors should help consumers improve their credit standing, eligibility for provider incentives, and overall financial capacity.

**The Way Forward: Surpassing Regulatory Expectations**

Banks and regulators must continue to educate consumers, using plain language, about financial matters and their rights to protection. A pending challenge for regulators will be to further consolidate, rationalize, and simplify an unwieldy maze of rules. While plowing through the complexities of new and upcoming regulations, banks should find a simpler way forward: to take good care of their customers ethically, fairly and proactively.
As depicted in Exhibit 2, banks will need to substantially improve their approach to risk management. Paying closer attention to customer complaints, with or without regulatory intervention, would represent a good starting point. A swifter response to complaints and incidents should be followed by transformative actions to remove root causes. Banks should then re-engineer credit and risk management processes to reap the benefits of more efficient “lean” workflows. Streamlined processes that add genuine value to customers will also help banks remove vulnerabilities and improve the effectiveness of controls. Advanced techniques to gauge consumer risk will tap behavioral analytics, and reach beyond transaction data to include the flood of unstructured data in the form of freewheeling text, visual, and audio content from live social media feeds.
Sunil Premanand Pai

Sunil has over 18 years of experience in the Risk and Finance domain working with banking majors like Citigroup and software companies like Oracle Financial Services Software. He is an expert in Basel II/III, Risk Finance Integration and Regulatory Reporting.

Vishal Jaradi

Certified Financial Risk Manager with more than 10 years of experience across risk and compliance domain. Vishal has worked on multiple consulting and technology assignments in building effective Risk and Compliance framework with Banking organizations in India and Middle East. He has lead complex projects on Regulatory Reporting, Basel II STD & IRB, ICAAP, at leading banks across India and Middle East.
Regulatory Reporting:
Controlling cost through standardization and reuse of data and rules.

Background
Over the past several years, regulators have increased regulation, supervision and monitoring of financial institutions; FI's and this is often accompanied with increase in the number and frequency of regulatory reports to be submitted. While regulators aim at increasing transparency and monitor excesses or sign off crisis within the financial system in a timely manner. Financial institutions aim to keep the cost of compliance to a minimum. In addition to new regulatory requirements, regulators have been steadily reinforcing their expectations regarding the data quality and accuracy of the information that is provided to them. This implies additional spend as organizations generate terabytes of data on a daily basis, managing the data quality demands resource allocation in terms of software systems, processes and personnel.

This has led FIs to evaluate their current regulatory reporting infrastructure and look for upgrading their tools and/ or capabilities that can help in meeting not only their existing but their future reporting requirements and keep costs to a minimum.

In this paper, we try to evaluate the reporting requirements of various regulators across major economies, challenges faced by the FIs and suggest the way out in meeting the regulatory reporting compliance issues in a cost effective manner.
The Challenges

External
Volume of Regulations - Regulations like Dodd Frank, FATCA, European Union requirements, Basel III, and other rules are forcing the organizations to rethink and refocus their business strategy. Irrespective of how businesses strategize for regulation, one fact remains that they have to prepare for supervision and reporting. The sheer volume of requirements has increased effort, complexity and cost of reporting.

Non-Standardized Regulations - Despite efforts for standardization by Basel Committee and regional level frameworks like FINREP / COREP developed by EU overall standardization is still work in progress. It becomes difficult for large institutions operating in multi-jurisdiction environment to develop effective compliance framework which can meet the local as well as global reporting requirements.

Internal Challenges
Type of Business - Traditional financial intermediaries (deposit taking and lending activities) are subject to less regulatory requirement compared to those engaged in Investment Banking, Security or Commodities Trading business. Further non standardization exists within large institutions offering regional products based on the local demand of the customers. This has led to creation of regional reporting systems by most of the institutions for capturing the business information which may or may not meet the local and global reporting requirements.

Organizational setup / Scale of Business - There exists very little benefit of economies of scale in meeting the compliance requirement as most of the large organizations operate in multi-jurisdiction environment where regulations are non-standard which adds to the complexity of the implementing framework. On the other side a standalone institutions faces huge cost in establishing the compliance framework compared to their business volume. Further organizations operating in non-integrated business framework also faces tremendous challenges in integrating the systems for building an effective compliance framework.

Business Growth and Integration - Growth of Financial Institution is often driven through new product offering thereby increasing the volume of business (organic) and also through introduction of new business line or acquisition of smaller organizations (inorganic). Magnitude of impact achieved through organic growth is less compared to inorganic growth strategy which is the reason why most of the organizations often go for inorganic growth for business growth. Due diligence, if not carried out properly may result in adding to existing challenges in developing effective compliance and reporting framework.

Data/ Technology – A big challenge
Data availability is the biggest challenge in implementing an effective regulatory reporting framework.

1. Data Integration – Organization often have different systems based on the products or geographies which stores the business data. Integrating these sources with the regulatory reporting system becomes difficult if they are operating on different technological platforms.

2. Reporting at various organization levels, for example - business unit, entity, country, region and group level reporting, lack of standard hierarchies can result in increased reconciliation effort.

3. Reconciliation – Data at most granular level should reconcile with accounting ledgers but in most cases once the data is processed by risk systems the granularity of the results change. Allocating them back to the granular level is challenging. This means reconciled data needs to be managed at several levels of granularity.

4. Intergroup Eliminations – Ability of system to identify and eliminate intergroup eliminations to arrive at consolidated figure poses another challenge. This often happens in risk systems where inter-company transactions may not be segregated before computing risk.

5. Multi-Currency Reporting – Various geographies require reporting in their local currency. System should be capable of handling reporting requirements in local currency and accounting currency. Exposure/accounts in various currencies pose challenge in implementing the framework.

6. Reporting Frequency – Various standardized reports are required to be submitted at different frequency like daily, weekly, monthly, quarterly, half yearly and annually.
7. Ad-hoc Reporting - Apart from the standardized report, system should be able to support generation of ad-hoc reports to cater to event based reporting requirements.

8. Drill Down Feature – Regulators often demand details of figures reported in the standard reports. This requires system with capability to drill down to lowest level of details in the data base used to arrive at the value reported.

9. Data Archiving – Most of the regulatory environment requires storage of data for at least 5 years. System should be able to maintain 5 years of raw data as well as reported data for quick reference in future.

10. Data Security – Financial organization deals with highly confidential data. System used for regulatory reporting enables access to complete organization data. Handling these data pose serious security threat hence reporting system should have safe, sound and secured environment with features like access control, audit logs, etc.

Streamlining the Regulatory reporting process
The regulatory reporting process is more or less standard across FI’s. Based on the jurisdictions and regulators that regulate the legal entities of an FI, the process is as depicted in the figure below.

Wipro Methodology for Regulatory Reporting
The Wipro methodology is based on the following maturity matrix and covers in details the areas where standardization can reduce cost of reporting.
Integrated Reporting –
The Viable Option

To meet the above challenges, one way is to build an effective, safe and sound regulatory reporting framework is through integrated reporting model. Single unit should be created within the organization with predefined role and solely responsible for supporting the regulatory reporting requirements. This unit should identify reporting requirements across the organization, design data model and develop rules/engines for reporting and build entire framework with sound data governance practices. The theme for this integrated framework will be to standardize data and rules used for regulatory reporting, where possible across legal entities, geographies. Figure below provides the framework:

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<td>Asset Reports</td>
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<tr>
<td>Risk Reports</td>
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<tr>
<td>Income Reports</td>
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<tr>
<td>Transaction Reports</td>
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Ideal approach for development of this framework is discussed below from a functional perspective.

Moving from Regulators to Reports –

In traditional regulatory reporting framework, systems are developed based on the requirements of local regulators. This leads to decentralized setup which often creates difficulties w.r.t data reconciliation, inter-group elimination and preparing consolidated reports. System setup should be driven by the type of report than the regulators. Entire reporting requirements can be classified into various categories mentioned earlier which makes the further process clear in terms of data requirements’, developing rules, etc.

Classification and Standardization of Regulatory Reports

While there are numerous reporting requirements to which FIs are subjected to comply with, classifying and standardizing it into following categories based on the purpose of regulation and type of regulators.

Statutory/ Financial Reports - The presentation of financial data regarding organization’s position (Balance Sheet), operating performance (Profit & Loss Statement) and Funds flow for an accounting period in line with the Local Accounting rules (GAAP) or Global (IFRS). It also covers a series of breakdown pertaining to specific items from the Balance Sheet or P&L. They include information on assets and liabilities, interest rates, deposits, lending, transactions accounts, holding companies, vault cash etc.

Prudential/ Risk Reports - Regulation that supervise the conduct of FI’s and sets down requirements to monitors and limits their risk-taking activities. The aim of prudential reporting is to ensure the safety of depositors’ funds and keep the stability of the financial system. These more often follows CAMELS (Capital Adequacy, Assets Quality, Management Quality, Earnings, Liquidity and Sensitivity to Market Risk) and approach for assessment of an organization.
Statistical/ Parametric Reports – This type of reports mostly caters to the economic institutions like government departments involved in initiating strategic decision w.r.t country policies. Examples of these reports are deposit statistics to assess the savings culture/ insurance coverage in the industry, country wise & currency wise exposures/ liabilities for balance of payment, etc.

Transactional/ Operational Reports – This type of reports are generally meant for controlling the business activities of an organization. These include application for registration/ de-registration of particular financial activities, application for merger/ takeover of local/ international entity, large cross border exposures/ liabilities, etc. Reports highly focused on the particular business line like Transaction Reporting for Securities business, Anti Money Laundering Compliance Reports, KYC Reports, etc., can also be classified under these categories.

Often there is overlap between the above categories of reports, and regulators across the regions are trying to consolidate the requirement through introduction of new regulatory landscape. For Example – Europe through implementation of FINREP/ COREP systems which integrates first three categories of the reports mentioned above viz Statutory, Prudential and Statistical Reports.

Identification of overlapping data between report categories – For each category of reports, identify data requirement along with the detailed attributes for each category of reports. Overlapping data requirement between different categories of report needs to be identified in the next steps to arrive at consolidated data requirement. This will enable reusability of the data captured for different categories of the report.

Building Data Model – Once the consolidated data requirements are assessed, data model can be built. Options like product based data model or integrated Risk and Finance data model can be built. Enterprise wide data model for reference, accounting, transaction, position and contract data, and standard results layer for reporting have to be created to enable regulatory reporting standardization.

Building standard rule library – Building an extensive rule library and mapping the rules to requirements is a way to instill efficiencies in the reporting process.

Implementing Reporting Tool – Depending on the technology used in building the compliance framework, appropriate reporting tool should be selected. Once a standard tool is selected the same tool must be used across geographies and reporting entities. Some of the important features which help in selection of the reporting tools are mentioned below:

1. Integration – Tool should be able to integrate with the existing IT framework of the organization.
2. Standardization – in terms of deployment, usage including access control features should be available to address the reporting requirement
3. Performance – ability to handle multi-jurisdictional volume of reports without impacting transactional users.
4. Ease of Use – Features like ease in navigation, ease in creation of adhoc reports, etc. should be available without programming assistance from IT.
5. User Empowerment – so that they can drill down through reports, queries, and dashboards to answer audit questions on their own without Finance or IT assistance.
6. Flexible Output – Reports from the tool should be available in various format like pdf, xls, doc, XBRL, etc

Controlling cost

The cost and complexity of the process is determined by the approach the organizations take towards the setup of regulatory reporting process. The spectrum covers silo approach to managed service where external vendors help the FI with the overall regulatory reporting process. The figure provides an indicative view for each approach on the complexity and costs factored between 1 – 5 levels with 1 indicating low cost and complexity and 5 indicating high cost and complexity. This is based on Wipro’s experience and market data obtained from several sources.
Most organizations have given up the silo approach in the last decade so the focus remains on integrated approaches to streamline costs and complexity. The cost saving is based on maturity of the managed services model. Refer figure below:
Conclusion
Regulatory reporting cost can be controlled at different level primarily by adopting the integrated models for organizing policies, people and processes. Adopting the delivery models will provide the opportunity for Labor Arbitrage and embracing the Utility model for regulatory reporting with managed services topping of the efforts beyond mere cost saving i.e. Cost effective and Compliance efficient service.

Reference – Satish Saini (Solution Architect WBPO) Figure 5

The table below outlines the benefits of the Wipro approach to delivering the model and driving standardization.

<table>
<thead>
<tr>
<th>Regulatory Reporting</th>
<th>Integrated Self-Managed</th>
<th>Integrated Out Sourced</th>
<th>Managed Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Regulation</td>
<td>FI’s will manage regulation and regulation changes</td>
<td>FI’s will manage regulation and regulation changes</td>
<td>FI’s will manage regulation and regulation changes with assistance from vendor SME’s</td>
</tr>
<tr>
<td>Data Acquisition</td>
<td>FI’s to provide requirement and Vendor acts as an integrator</td>
<td>FI’s to provide the requirement with assistance from vendor fro requirement gathering and integration</td>
<td>Vendor - prepares the requirements and the requirements are reviewed by FI SME’s</td>
</tr>
<tr>
<td>Data Consolidation</td>
<td>FI’s to provide requirement and Vendor acts as an integrator</td>
<td>Vendor provides the baseline environment for regulatory reporting and FI’s provide requirements for consolidations</td>
<td>Vendor - prepares the requirements and the requirements are reviewed by FI SME’s</td>
</tr>
<tr>
<td>Calculation</td>
<td>FI’s to provide requirement and Vendor acts as an integrator</td>
<td>Vendor to baseline the calculation based on regulatory requirement, FI SME’s to drive customization with assistance from Vendor SME’s</td>
<td>Vendor to baseline the calculation based on regulatory requirement, FI SME’s to drive customization with assistance from Vendor SME’s</td>
</tr>
<tr>
<td>Reconciliation</td>
<td>FI’s will reconcile and review, vendor will provide the framework for reconciliation and assist in data analysis</td>
<td>Vendor to provide the reconciliation framework and manage the initial level 1 review, FI SME’s to review the reconciliation and attest</td>
<td>Vendor to provide the reconciliation framework and manage the initial level 1 review, FI SME’s to review the reconciliation and attest</td>
</tr>
<tr>
<td>Report Preparation and Review</td>
<td>Vendor will prepare the reports and FI SME’s will review and validate</td>
<td>Vendor will prepare the report and FI SME’s will review and validate</td>
<td>Vendor will prepare the reports and FI SME’s will review and validate</td>
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Wipro’s Risk And Compliance Practice

Recognizing the critical regulatory imperatives across global banking today, Wipro has created the Risk and Regulatory Compliance Practice with a stated goal to enable, assist and partner our customer banks and financial institutions in developing integrated risk management capabilities, designed to drive efficiency, provide better value to stakeholders and drive higher business performance in an uncertain environment.

The Practice comprises qualified practitioners and consultants with extensive business experience in developing frameworks, models, IT design and implementation experience across risks (credit, market, operational, counterparty, liquidity risks) and compliance initiatives like Basel II, Basel III, Dodd-Frank Act, FATCA, KYC/AML, cards and mortgages compliance, trading compliance, fraud prevention, etc. Wipro’s solutions, service offerings and accelerators cover the complete spectrum of risk and compliance initiatives across the financial service industry and enable our customers in optimizing the efficiency and effectiveness of their risk and compliance implementations.

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Wipro Technologies, the global IT business of Wipro Limited (NYSE:WIT) is a leading Information Technology, Consulting and Outsourcing company, that delivers solutions to enable its clients do business better. Wipro Technologies delivers winning business outcomes through its deep industry experience and a 360° view of “Business through Technology” – helping clients create successful and adaptive businesses. A company recognised globally for its comprehensive portfolio of services, a practitioner’s approach to delivering innovation and an organization wide commitment to sustainability. Wipro Technologies has 135,000 employees and clients across 54 countries.

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We hope you enjoyed reading this Journal as much as we did putting it together. We would like to continue in our pursuit to provide the best of knowledge to all our readers. And for that, we would like to hear your comments/suggestions or queries, if any. Please do write to us at meenu.bagla@wipro.com