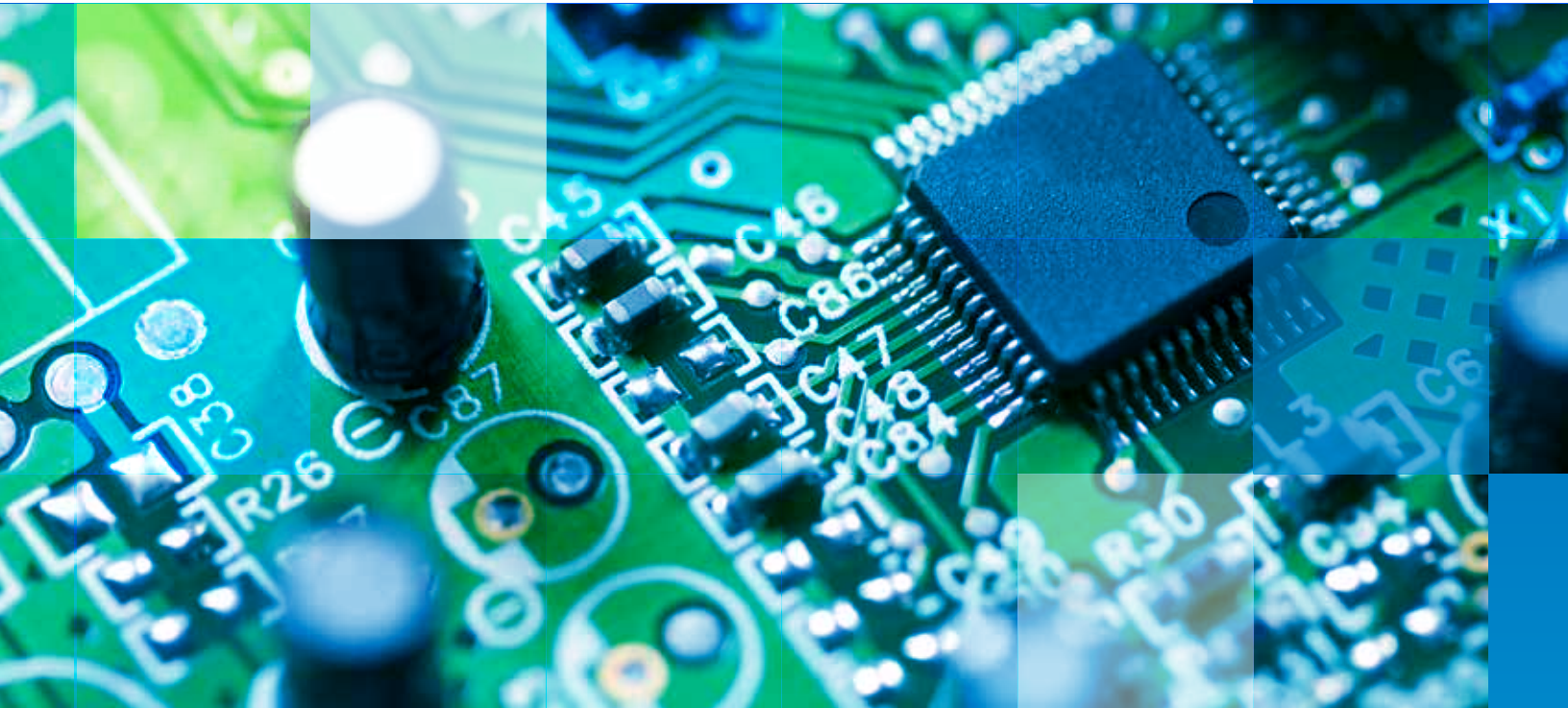
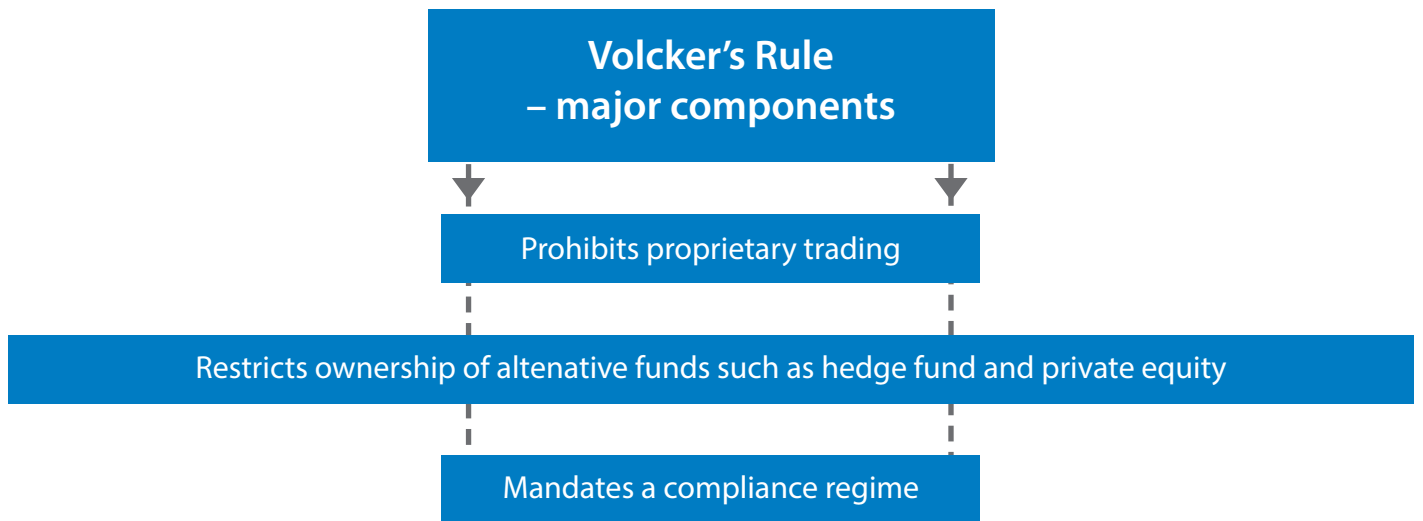


WHITE PAPER

Volcker's Rule:
Enactment and Implications on the IT Industry





In 2010, the Volcker's Rule as in Section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act was passed. It prevents large banks from engaging in speculative trading activities. The rationale is that while banks should support the economy by lending to consumers and businesses, they put their own solvency at risk, in turn causing problems for the economy, by engaging in speculative trading activities. A case in point is the highly leveraged derivative trade on the housing market that many large banks participated in. These investment banks mistook the government policy of 'too big to fail' and got themselves in a situation where they put their own as well as their customers' money at undue risk. This led

to a situation which was disastrous for the entire economy. Volcker observed that while the government should support these banks, it is a bank's responsibility to ensure that they do not take unnecessary risks by getting involved in speculative trading activities.

The reporting requirements of the rule have been phased in from June 30, 2014, to July 21, 2015, for non-legacy covered funds and has been extended to July 2017, at the latest, for legacy-covered funds. The rule is applicable in its entirety to banking entities that have 'trading assets and liabilities' of at least US\$50 billion subject to the earliest threshold. Banking entities with 'trading assets and liabilities' between US\$10 billion

and US\$50 billion need to adhere to the rule with respect to proprietary trading, governance, internal control, independent testing and audits, and maintaining appropriate records. The 'trading assets and liabilities' are measured differently for the US and foreign banking entities. For the **US banking entities**, their worldwide trading assets and liabilities, including those of affiliates and subsidiaries, count toward the threshold. For **foreign banking entities**, only the trading assets and liabilities of their US operations (including US subsidiaries and affiliates) are included. The threshold is calculated for both foreign and US entities as the average gross sum of trading assets and liabilities over the past four quarters.

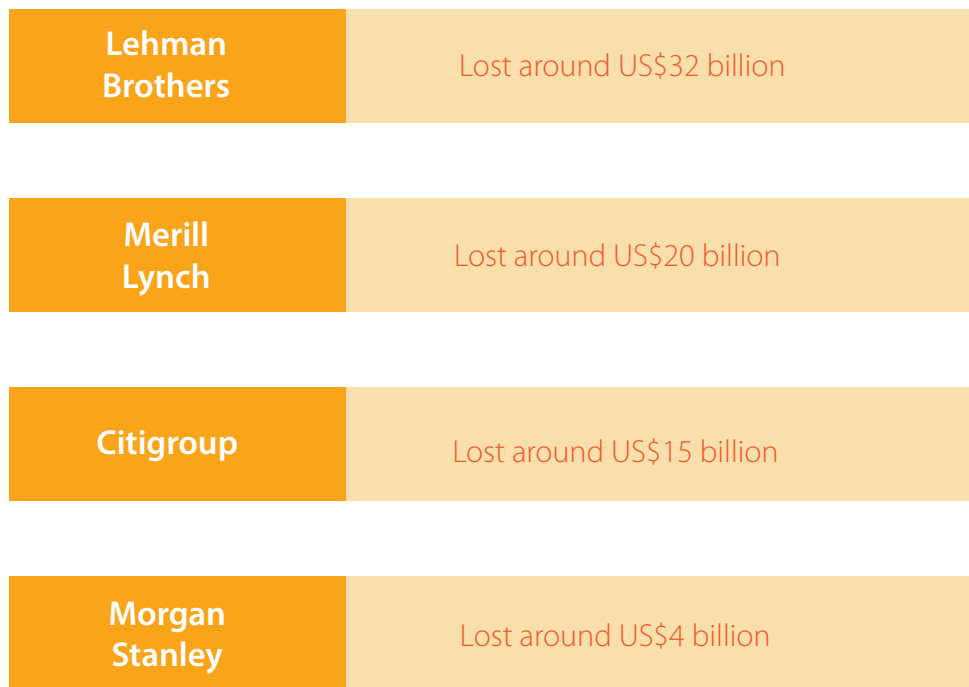
The rule was created to keep financial crises at bay and hence it includes elements to cover some crisis triggers such as:

- Proprietary trading is one of the major reasons for financial crises. It is a cause for creating quick, large losses and unworthy of the risk that the banks must take to increase the money in their accounts while playing with the liquidity of their own organization and the economy as well. The rule shields the bank from market risk and high-earning volatility and in turn, reduces the risk of systematic failure.
- The rule prohibits banks from participating in private equity and hedge-fund activities which directly address one source of the bank's default risk.
- The rule indirectly helps in increasing transparency and lowers the risk of fraud, given the compliance standards that banks need to comply with. There are many reports that banks need to submit to regulators on a daily basis which prevent various fraudulent activities.
- Hedge funds and speculation have a very thin line of demarcation and are considered to be very risky in nature. According to the rule, hedging should not be allowed for some activities such as to reduce assets or liability risks, reduce general losses in case of economy downturn, reduce general market movement, and balance their own revenue decline.

Hence, a rule is needed to restrict the above-mentioned activities, at least to some extent. It cannot eradicate all the dangers but will definitely choke off one danger route for a bank.

Proprietary trading and collateral debt obligations in the context of the 2008 financial crisis

As per a banking survey done in 2009, there are approximately 7,181 banks in the USA. 88% of proprietary trading is being carried out by six of the largest banks in the US, and 93% by four of the largest banks. Based on the news report published in TIME magazine in 2010 following were the losses incurred by the top four banks in the US:



Banks' earnings and concerns with the rule

As per Volcker's Rule, proprietary trading should not be allowed. It recommends that if a bank wants to earn more, it can opt for diversification to increase its portfolios. But banks responded to the recommendation and rule saying that they are using their own money to increase their profits. As per the banking survey done in 2006–07, 18% of the revenues of big banks generally came from proprietary trading, private equity, and hedge funds. Goldman Sachs and Morgan Stanley earn more than 30% from these activities. Other banks such as JP Morgan and Bank of America earn more than 10% from these activities.

Goldman Sachs

GOLDMAN SACHS EARNS MORE THAN 30% OF ITS REVENUE FROM PROPRIETARY TRADING AND OTHER TRADING ACTIVITIES.

Morgan Stanley

MORGAN STANLEY EARNINGS FROM THESE ACTIVITIES ARE SIMILAR TO GOLDMAN SACHS.

JPMorganChase

JP MORGAN AND BOFA EARNS ABOUT 10% FROM THESE ACTIVITIES.

This means that once the rule is effective, it could lead to a loss of US\$2 billion to US\$10 billion for eight of the largest banks in the US. Banks have raised the following concerns:

Total cost of Dodd-Frank is US\$3,600 million and 10–20% is attributable to Volcker's Rule

Loss of amount from market making and private equity as trading activities earn about US\$44 billion and US\$14 billion respectively for banks

Adverse effect on liquidity and transaction cost to potentially increase as risk is more

Banks will become less diversified and less profitable

Post the 2008 financial crisis, primary brokers have stopped keeping too many bonds due to risk, affecting the government, and increasing volatility

IT companies can act as a savior for investment banks by easing the implementation of Volcker's Rule, keeping in mind the cost challenge that banks will face:

- **Buy side**

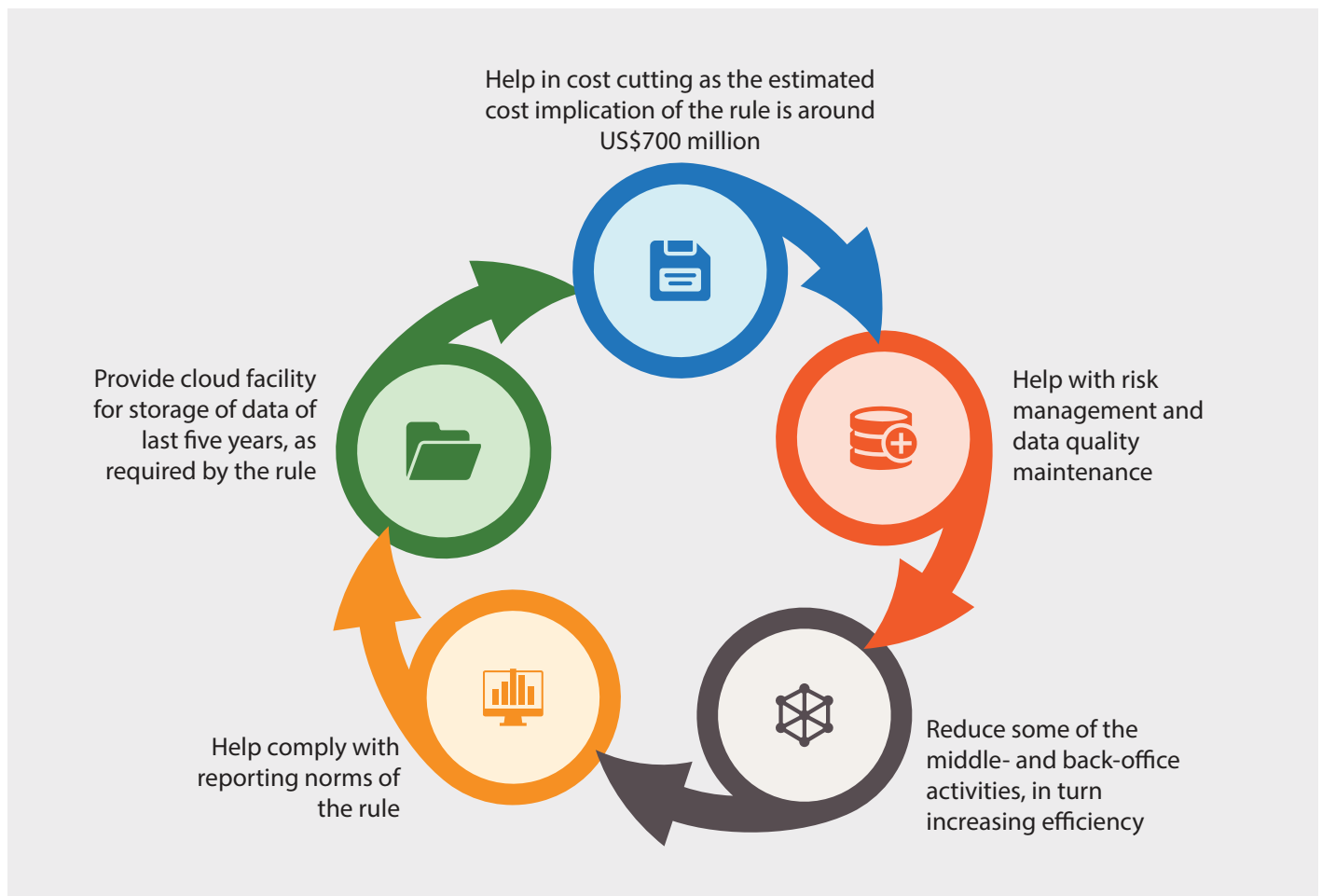
Buy side analysts usually manage hedge funds, private equity funds, proprietary trading, market making, pension fund, and mutual funds. Since some of these activities are now restricted, technology companies can help the banks in filling the gap by providing them with good utility models to analyze the investment and help banks in cutting costs as well.

- **Sell side**

The sell side analyst generally manages individual client accounts and comes up with recommendations for them, i.e., whether to buy certain stocks or sell. Technology companies can help banks in mitigating Volcker's Rule compliance at this end of the firm as well.

- Increased focus on the testing to ensure that prohibited / bad trades are stopped.
- More IT investment to track these activities and automated monitoring, as banks need to adhere to the rule at all points in time.

Other value additions include:



The software or technology build should be able to track and monitor these activities to add value to the bank's process:

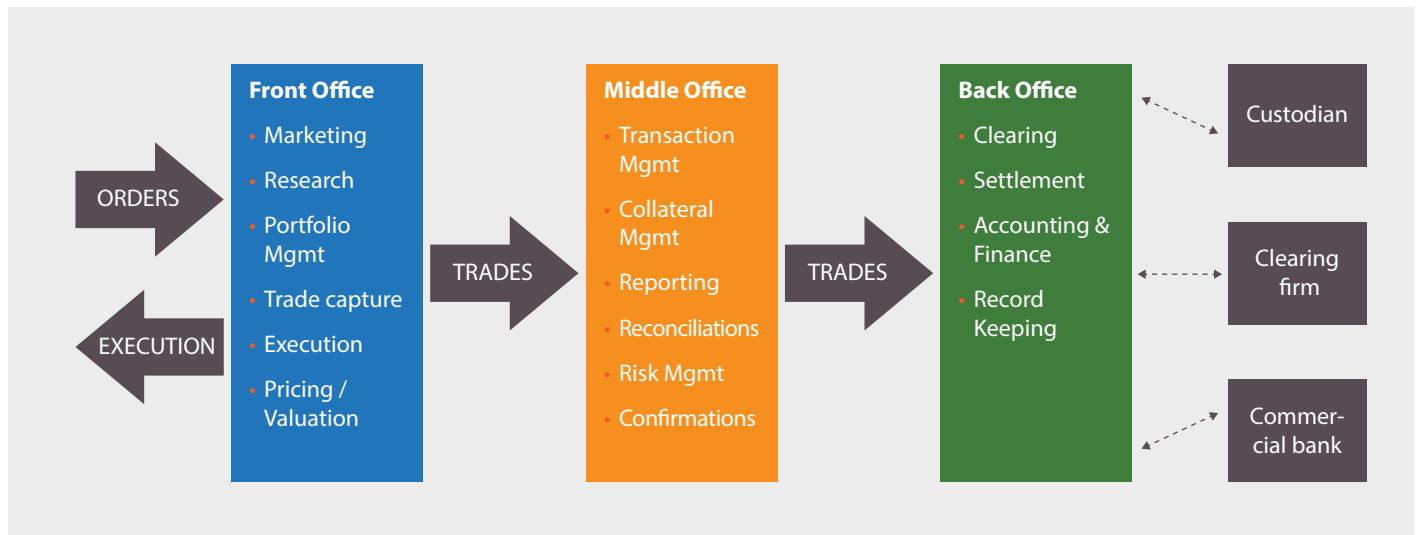


These activities need to be tracked, monitored, and reported to the regulator on a regular basis. Some of the activities

are already reported, so IT firms need to study the current structure of the bank and act accordingly. IT firms can add value to

the bank's process by minimizing costs and making them compliant with the rule.

With the enactment of Volcker's Rule, we expect several changes in the way trading is currently done, including:



• Front office

Earlier, whenever banks felt the risk of loss to their accounts, they would generally try to enter a new trade, hedge that position, and later on, if they felt a profit out of it, they would try to take advantage by speculation. But now, only risk can be hedged under

the rule. Proper documentation will be required to explain how trade is linked with risk and proper monitoring needs to be done. Similar is the case for market making and underwriting activities. Banks need to track the various ratios and report the same to the regulator. To adhere to all these compliances, banks will have to depend a lot on the

IT companies so as to trade smoothly and within the compliance regime. IT companies will have good opportunities as well as challenges to help the banks in mitigating risk within the rule's regime. Hence, in the near future, we expect a few more restrictions in the front office, before the trade is captured and executed.

- **Middle office**

The scope of IT companies generally increases in the middle office to identify good trades and bad ones. All the exemption mentioned in the rule should be properly captured and trades should be linked to these exemptions before sending the same to the clearing house for clearance and netting.

A software will be present to capture all the information of the cleared trade and send it to the back office. Real-time monitoring will be required to capture the flaws, if any.

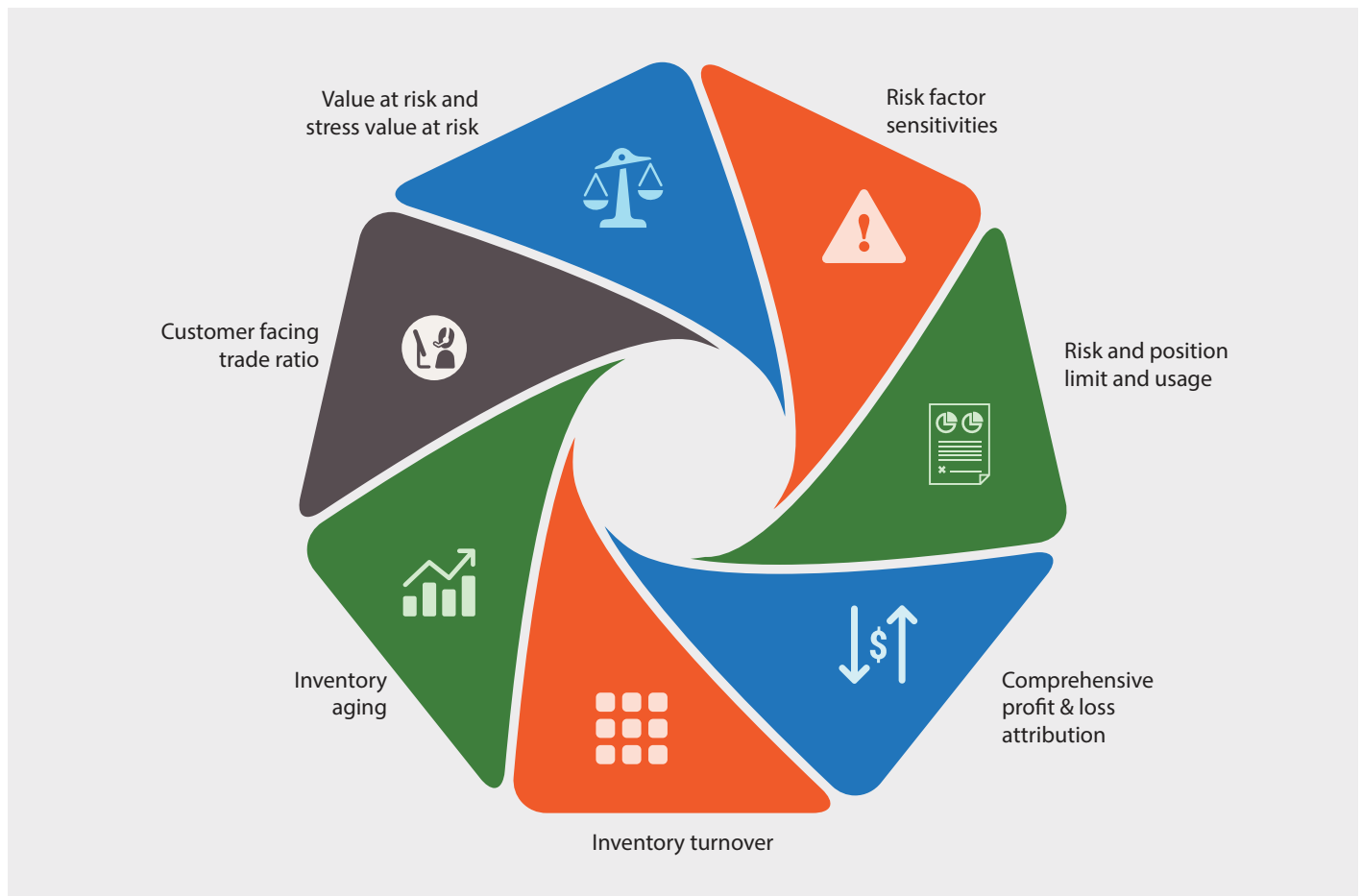
- **Back office**

After Volcker's Rule, there will be a lot of change in the number of regulatory

reports to be presented to regulators, and in the format / layout of those reports. IT companies will play a major role here in understanding the layout of those reports, collating and keeping the data in the warehouse accordingly so that the same can be presented to the regulators on a regular basis.

Reporting requirements of the rule

The rule has come up with various metrics that the regulators will use to determine the market making exemption. The following need to be reported on a daily basis to the regulators:



Banks need to check what they do or do not currently capture. If capturing of data for any metrics is left, then they must take the help of technology and start capturing them.

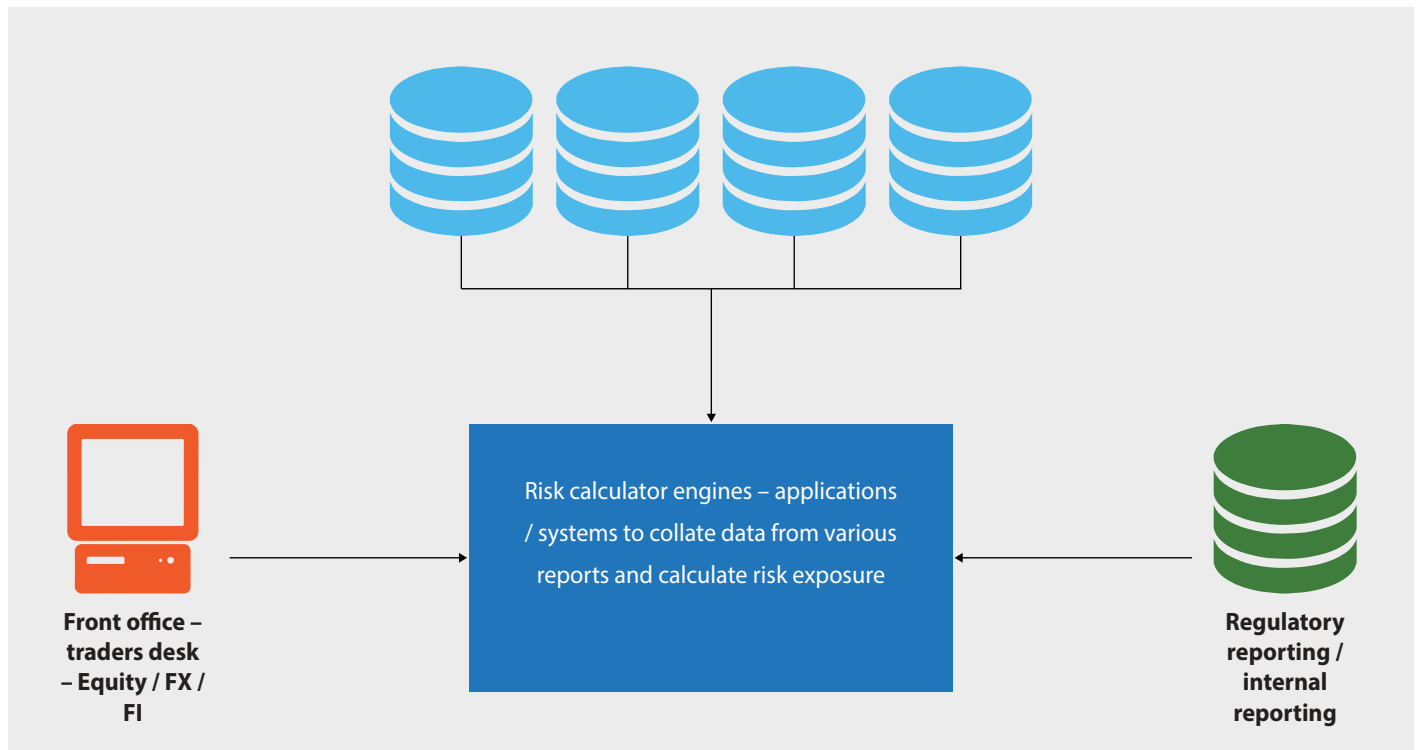
The different reports, their frequency, and other details presented below will be calculated daily and reported monthly for banks having tradable assets of more than US\$50 billion and quarterly for other banks.

Report	The audience	Frequency of calculation	Format	Report description	Reports to be referred
Var and Stress Var	Regulator	Daily / submitted monthly	PDF	Report that contains the measurement of the expected future financial loss based on current market condition and stress condition over an aggregated set of current positions. Var: Limit 3,00,000 Value - 1,038 and usage is 0%. Stress Var: Limit 3,00,000, Value – 1,620 and usage – 0%	Banks will have to use their financial reporting documents, information from trading desk, and buy and sell side research reports to come up with these numbers accurately
Risk factor sensitivities	Regulator	Daily / submitted monthly	PDF	Change in comprehensive profit and loss expected to occur in case of change in one or more underlying variables that are significant sources of the trading desk's profitability and risk	Banks should take help of beta reporting and other reports such as buy side or sell side reports to come up with risk factor sensitivity
Risk, position limit, and usage	Regulator	Daily / submitted monthly	PDF	This is the limit that a particular trading desk is allowed to take based on the value and stress value at risk and risk factor sensitivities. For example, a portfolio having more exposure to FI and less to equity has less risk component, than if the case is otherwise	Banks should take proper measures to come up with the limits. Should take help of the value at risk report and the research reports developed by buy and sell side researchers
Comprehensive profit and loss attribution	Regulator	Daily / submitted monthly	PDF	It is the analysis of the daily fluctuation in the value of the trading desk. Profit and loss of the aggregated positions are divided into three categories – a) Profit and loss based on existing position (old positions). B) Profit and loss based on new position (current day's trading activity) c) Residual profit and loss that cannot be covered under first two points. In addition, the standard deviation of the profit and loss should also be measured	Banks should analyze the profit and loss on a daily basis and make note of the daily deviation

Inventory turnover	Regulator	Daily / submitted monthly	PDF	It is a ratio that measures the turnover of a trading desk's inventory	Banks should check the sales and purchase books to come up with the exact amount of inventory that has been kept
Inventory aging	Regulator	Daily / submitted monthly	PDF	It is the schedule of the trading desk's aggregate assets and liabilities and the amount of time that those assets and liabilities have been held. Inventory aging should measure the age profile of the trading desk's assets and liabilities	Banks should use the inventory report along with the information from the trading desk to come up with the exact age of the inventory
Customer-facing trade ratio	Regulator	Daily / submitted monthly	PDF	It is a ratio of the transactions involving a counterparty that is a customer of the trading desk, to the transactions involving a counterparty that is not a customer of the trading desk	Banks should keep a record of the counterparty position and should analyze the report related to these positions before coming up with the ratio



Once the reports / metrics are calculated and stored in a database the below process can be used:



Conclusion

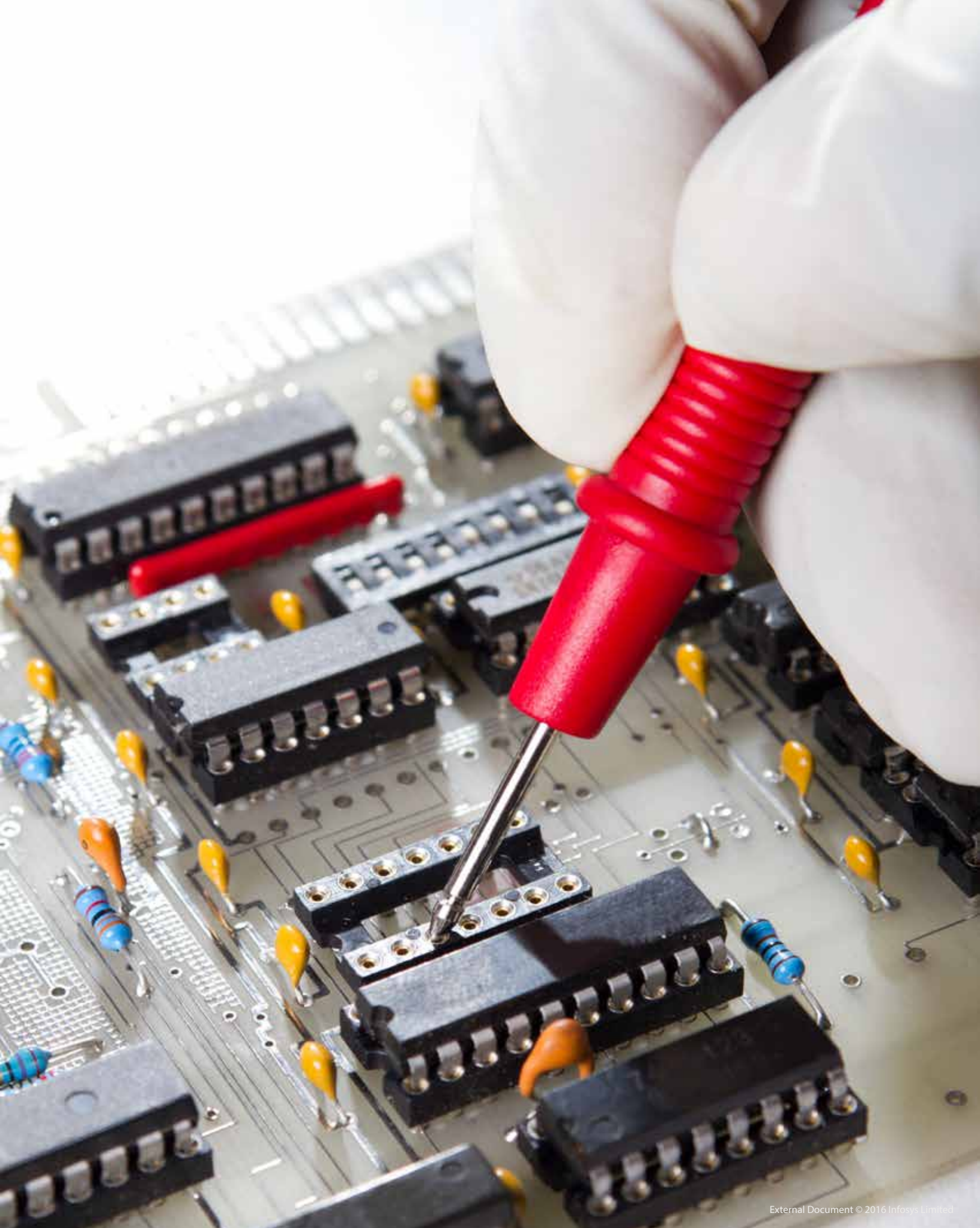
Although Volcker's Rule has been criticized on the ground that 'proprietary trading' is a vague concept and overlaps some of the economically useful activities such as market making, and lacks feasibility and clarity for banks; we believe that once implemented, it would definitely help banks in maintaining more liquidity and transparency in their system. This will eventually benefit end customers and help their own cause of maintaining a competitive advantage in the long term, and the economy as a whole. The rule will

act like a shield for the banks with respect to market risk and volatility and will hence, reduce systematic risk. Volcker's Rule might not be able to prevent another financial crisis alone but will definitely choke off one possible route of banks' failure.

The rule provides a good opportunity to IT companies to help the banks in implementing the rule to its fullest. There are many metrics and reports that the banks need to provide to regulators to be in compliance with the rule. These will affect the banks in terms of the time and

costs which can eventually be reduced with the technological intervention. IT companies have the opportunity to play a large role in helping the banks create a much safer banking environment for consumers and the economy.

This paper focuses on how implementation of Volcker's Rule will affect investment banks and how IT companies can help the banks in the smooth implementation of the rule, keeping in mind the costs and other challenges that the banks will face.



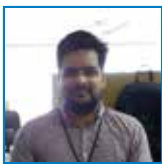


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