



The current state of XVA adoption

A panel discussion examining the hot button issues impacting XVA management challenges and solutions

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For both the sell side and buy side, the key to XVA is to understand how the pricing of derivatives costs are being transferred, however, the measurement, management and optimization of XVA is challenging to define and operationalize. Although XVA has been widely discussed over the past five years, the mandate has shifted to no longer being only about revenue generation, but also revenue preservation. This XVA forum features a panel of industry leaders assessing the major factors driving XVA adoption today.



Satyam Kancharla
 Chief Strategy Officer and Senior Vice President, Client Solutions Group, Numerix

What are the different states of maturity and gaps in XVA adoption in the market today?

Kancharla: While XVA has been widely discussed by derivatives trading participants for about five or six years now, primarily only the largest banks are actively utilizing valuation adjustments in their pricing and hedging strategies, and of those institutions that are using valuation adjustments, not all institutions are utilizing them in the same fashion or to the same degree.

So, there is certainly diversity in the use of XVAs, not just by institution type, but by different regions. Currently, the market differs significantly in level of XVA practice. For example, for most Tier I and some Tier II banks, trading with XVA is already a well-established practice. However, the number of valuation adjustments that are addressed is variable from house to house. The larger institutions have to adopt and manage XVAs at a global level, so for them XVA is the primary driver of their derivatives business structure and transaction decision making.

For the Tier III and regional banks, if they are not outright ignoring XVAs, their adoption of XVA programs is what I call in the “initial” stage. For example, they may only consider CVA, which is the most fundamental valuation adjustment, and possibly FVA as well. But the other valuation adjustments may not be as material or relevant to those at the less-trading intensive end of the spectrum. They also only have a need to manage XVAs at a local level.

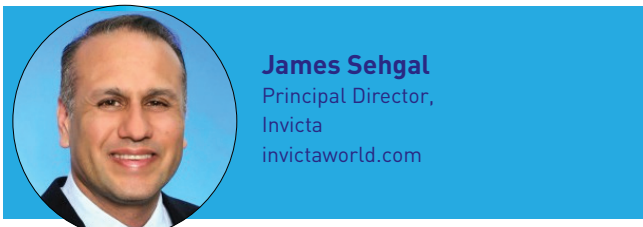
XVA - STATE OF MATURITY

Business Operation	Initial	Local Management	Proactive Global Management	Optimizing
Tier I				✓
Tier II			✓	
Tier III, Tier II Regional		✓		
Issuers/ Intermediaries		✓		
Buy Side	✓			

Source: Chartis Research

There also differences regarding the use of XVAs within an institution itself. Inside an institution there can be multiple perspectives on XVA depending on a particular operation's role and function, such as whether you are on the client-facing business line or on the finance and treasury side. The priorities, needs and processes around XVA will be different for each bank operation.

If we look at it from a buy side perspective, while XVA is still a new concept for the buy side, we can see some institutions diving into XVAs to try to really understand them. Increasingly, XVA costs are being passed on to buy side clients and these firms need transparency into what they're being charged by their provider banks and why.



Sehgal: There are also geographical differences and diversity as to the pace of adoption of regulations and pricing reform. Some jurisdictions and central banks outside of the EU and North America have adopted the Basel III and other BCBS regulation reforms, however, at different paces and time lines, subsequently XVA, even basic CVA and FVA, have not been a priority. Asia Pacific is an example, which has been a laggard relative to European and North American financial institutions. Consequently, the adoption of best practice XVA pricing has been slower, albeit some banks are beginning to implement at a minimum best accounting practice of CVA. However, the inception pricing of respective basic CVA and FVA as a business function or operating model is still lagging relative to global institutions, whereas central portfolio management and pricing of other conceptual VAs, such as ColVa, LVA, MVA and KVA, are even less of a priority.

Given this diverse implementation landscape of XVA, are there any real advantages to being sophisticated with XVA right now versus those institutions that are not taking into consideration XVA costs and not passing them on to clients?



McClelland: The integration of XVAs is crucial to an institution's long-term health. The clearest advantage of being more sophisticated in terms of an XVA framework is being able to accurately price in all of the costs related to a transaction, not just at the inception, but throughout the lifecycle of the transaction. And you want to get this grip on pricing beforehand rather than after the fact. Calculating the costs of the XVA adjustments at the point of trading

is critical to making sure trades are executed at the correct level and that a costly re-mark won't hit the books in the future. For example, you do not want to be in a situation where you are not accurately pricing in margin and funding costs, and then you're looking at your P&L afterward and you realize these trades are actually chewing up that P&L because you are not appropriately pricing over a long period of time.

Sure, institutions that don't price in XVA costs might get a bit more business over the short term because they are not charging what other banks are charging. But by not charging, you are not protecting the derivatives P&L of your institution over the long term. It is true that XVA charges can constitute a significant portion of the mark-up of a derivatives transaction, but implementing XVAs is considered a best practice for proper derivatives business management. Taking a very passive approach to XVA today could lead to costly outcomes later on and could also expose operational inefficiencies.

Sehgal: As stated, the key factor in pricing is transparency. Even for Tier II banks, the longer an institution waits to price in the respective regulatory and risk costs, the greater the disbenefit and cost in the long run. At a minimum, a bank or large financial institution needs to set up an inception pricing framework for XVA and balance sheet management.

Post the 2008 crisis, there were large global institutions that consciously decided not factor in pricing of CVA and FVA and collateral funding in order to increase their market advantage. They subsequently increased the volume of trades on their books, only to realize three or four years later that once they did price in respective CVA and FVA and capital costs, the legacy trades were done at a loss. Hence, it's important to not just regard XVA as a basic function of regulatory pricing, but also as a best practice in the new market structure of pricing trades.

It's now becoming a norm to price in CVA but not pricing or accounting for cost of funding, due to aspects such as OIS discounting, unsecured funding costs, inclusive of LCR/NSFR costs, as part of XVA valuation will have larger regulatory and economic capital costs. That's where we look at incorporating concepts such as FVA, ColVA, as well as, more recently, KVA and MVA for BCBS-IOSCO and SIMM margining. So, in principle, if you are not pricing these components now, you could have a significant disadvantage in the long run.

Many banks are reluctant to price in XVAs because they fear they will lose a competitive advantage versus other institutions that are not charging for XVA. Realistically, when you are looking at the economic aspect of a trade, you still should be pricing in the respective VAs. Whether you intend to price in and charge the client is a different question, but transparency certainly should be there.

Kancharla: It is important to recognize that regulatory pressure is not the immediate driver for a lot of the XVA activity we see. It's more about the costs that certain regulations or market structure changes have created. So instead of looking at it from a "being compliant" point of view, institutions should look at it from a cost of doing business point of view. I think that's the main rationale for undertaking XVA. Now, an XVA project can be a costly undertaking, so in the long run it must be beneficial to the bank from an ROI perspective.

What are your firm's main uses of XVA?*



**Results based on live polling conducted during the Numerix webinar discussion The 'State of the State' of XVA, Front-Office Risk Management, June 2018*

CVA has been in practice for years now, but there are still fundamental questions around the best practices in managing it. Why is CVA still a significant issue for banks?

Kancharla: Certain segments of the derivatives market are at the gold standard in terms of managing CVA, such as the bank to corporate/buy side market in the U.S. and Europe, and in some other countries as well, but it is not a universal truth. There are still many multilateral development banks and corporates that are just not able to post collateral and therefore the CVA charges can be significant.

In fact, what we are seeing are intermediaries that are stepping in and saying, “we’ll tackle that collateral complexity for you.” Also, there is still some diversity in the market in terms of whether you post collateral and the types of collateral that are being posted. The other issue, and one that exists across the board, is data. I think that while we have advances in terms of methodology, data still remains a challenge, even for the most basic CVA, and thus this creates some complexity in managing CVA calculations.

Based on our conversations with industry participants, we have identified what we believe are the top five challenges in managing XVA costs: data challenges and technology risks; project costs; stakeholder management; P&L impact; and hedging and managing costs.

THE XVA BALANCING ACT: THE TOP 5 CHALLENGES IN MANAGING XVA COSTS



What do you view as the single most crucial XVA challenge financial institutions face today?

Kancharla: I would say they are all very relevant and important. In general, what I would advise is starting your XVA program in a focused manner and starting small as opposed to shooting for the moon immediately and expecting to be able to manage every XVA on day one. I think that would be an extremely risky approach, and, quite frankly, completely unfeasible. I’ve seen a lot of success with institutions who focused first on the XVAs most material to their business.

The other point to really stress is the importance of working with and communicating with all the stakeholders in the operation and ensuring they get on board with the project. This means you have to justify all the costs that will be involved, clearly translate all the XVA jargon and the mathematics behind XVAs and how the XVA program will enable better management of P&L and, ultimately, more profit rather than loss.

Is it possible to optimize all XVA costs?

McClelland: Regarding optimization, of whether it is possible to optimize all XVA costs, the industry is still a ways off from that. Basically, what we are asking is whether the XVA costs of a transaction can be reduced in the future—that is, if we believe we can find optimization possibilities in the credit risk, funding and collateralized spaces. It is actually quite a complicated notion. There are certain things that can be done, such as restructuring the

hedging portfolio with the bank counterparty so as to reduce overall XVAs across time. If we reflect those lower costs in pricing, then we become more competitive, but, again, it would be a very challenging approach.

It's insoluble today purely because of the fact that computing and recomputing XVAs across an entire portfolio is extremely extensive. You're probably better off in the short term trying to determine a heuristic or other methods and metrics to get lower XVAs and improve the bottom line.

Is hedging XVA costs necessary, or even possible?

Sehgal: In addition to mitigating risk, two reasons to hedge are to reduce regulatory costs in the case of CVA capital and the other is to optimize the portfolio. If the value or gain from hedging is for regulatory capital relief or keeping capital costs down, then certainly go ahead as in the case of CVA and CVA capital costs. But oftentimes the majority of a portfolio will hold illiquid instruments, and if you are at a jurisdiction where no CDS market exists, the question of hedging becomes moot from a regulatory capital cost standpoint. You can perform a generalized hedge against an overall portfolio to dampen volatility only to realize that you are actually spending a substantial amount of money by having a huge carry cost on that hedge and getting zero capital relief on it.

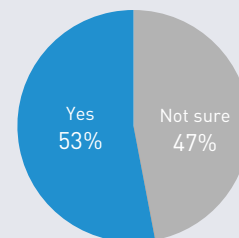
I think one must be very careful in terms of what you're going to be doing in terms of hedging—which VAs are you going to hedge out? Is it going to be the credit risk aspect, the funding aspect, or the other VAs? Hedging does work, but ultimately it's a question of what you are hedging, the actual cost of hedging and actual benefits. If the principal function of an XVA, outside of pricing, is to preserve and protect revenue and optimize on capital and funding, then taking a prudential approach to hedging is necessary. It all boils down to whether it is worth the value of hedging, and it certainly is if you can get the capital costs down.

Kancharla: I think it is important to emphasize that hedging can be difficult and that's reflective of several issues that can be related to data challenges, computational challenges, or liquidity. On the credit side, CVA, it is more than likely that you are not going to be able to hedge the risks with precision because the right hedging vehicles just aren't there. But rates and FX factors also drive XVA P&L, and on these components I believe you can absolutely hedge.

Which component of XVA typically dominates?

McClelland: It's really a matter of the institution and the segment in which it sits. For example, we have a number of highly trading-oriented institutions that just don't sit on much counterparty credit risk because they are essentially sitting between banks, and in those situations trades and portfolios are strongly collateralized. For those types of institutions, I would imagine that CVA is not the most critical of the XVAs. For them, it is much more a matter of pricing in the funding of the initial margin and the cost of transforming collateral. Even if there are highly standardized CSAs, there will just be situations in which a particular type of collateral makes sense for a particular type of institution, depending on the trade and so on. In those situations, cost of collateral transformation is highly relevant. Conversely, we also have regional banks with large corporate client bases where collateralization and clearing are less pervasive. In those situations, CVA remains critical.

If your firm does not use XVA for Risk Adjusted pricing, and if you don't have an XVA desk, will you be setting one up in the future?*



**Results based on live polling conducted during the Numerix webinar discussion [The 'State of the State' of XVA Front-Office Risk Management, June 2018](#)*

So again, it really depends upon the institution. You could say that KVA is probably relevant for everybody. KVA is a new XVA that represents an effort on the part of banks to use the kinds of methodologies and machinery that we have for XVA to handle the capital part, which is KVA. How much capital is that tying up? What's my cost of capital? And that must be reflected in prices to make sure that on a post-capital basis, we're profitable. So KVA is relevant for everybody.

I will add that an eye should be kept on MVA. For banks, MVA is not a key focus right now and has not yet reached a mature state, but it is becoming more relevant and we are hearing more and more about it from clients. MVA will pose a big challenge for market participants and will require a large amount of attention.

In terms of an institution looking to set up an XVA desk, what are the top line issues it needs to consider as it goes through the process?

Sehgal: There are various complexities and factors to setting up an XVA desk, and I will narrow it down to a core four. One is incorporating pricing and transparency, which is a very significant stipulation to incorporate, not just from a regulatory capital point of view, but from a market participant perspective as well.

Another aspect is identifying the mandate of that particular desk and how responsibilities will be allocated. What is the desk going to do and who is going to do it? Also, a lot of institutions are trying to figure out where the desk should sit—should it be a central desk, or should it be diversified out by function. Best practice typically is as a central desk.

The third aspect to look at is how to actually build and incorporate the desk and does the institution have the right people and skills to do it. For example, for a smaller institution, it may not have the skill set and obviously it won't have the budget to build it from scratch. For those institutions, there are numerous options today, such as hiring third-party technology vendors to come in and incorporate all the respective and various systems that are needed to run a successful XVA desk.

Lastly, another very important consideration with setting up an XVA desk is the corresponding P&L hit, and which bank function will take the impact of that hit. XVA can be a very political topic for banks, which is particularly true when it comes to the function of XVA vis-a-vis other bank functions—front office, risk management, treasury and finance—and how to deal with the P&L impact. So, the fourth aspect is that senior management will have to have serious discussions, not just around the functionality of that desk, but whether it is a profit center or a hedge center.

I think all four requisites are important to look at when setting up a desk.

To hear the full roundtable discussion, please access this Numerix on-demand webinar: [The 'State of the State' of XVA Front-Office Risk Management](#).

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