"Regulatory Arbitrage in Derivatives Reform"

Remarks to

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By

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Thank you to RISK for asking me to share with the risk management community some thoughts on the topic of "Regulatory Arbitrage in Derivatives Reform." If you came to this session hoping for a roadmap on how to run rings around the rules that are still being written, I am afraid I will disappoint you. Because I am going to spend my time focusing on what we know and what we don't know

about regulatory arbitrage...who does it, whether you can see it, and I will ask the question how you can manage your business so that unanticipated regulatory arbitrage does not leave you holding risk you had not measured in the past.

As we meet in Frankfurt, U.S. Treasury Secretary Geithner stops in Europe on his way home from the Strategic and Economic Dialogue with China. He is here of course to discuss with selected European leaders the continuing turmoil in sovereign debt markets. We can reasonably expect that the topic of financial regulation reform will come up in one or two conversations. As Europe, America, China and others prospered during the good times, we are all now linked during these difficult and uncertain economic times. I personally hope for cooperation among the policymakers in different countries, because unilateral action now will generate impediments to economic growth.

What does this have to do with risk management? Well I think it provides a perfect backdrop to

consider the limits of VAR, the importance of scenario analysis generally, and the importance of assessing the interests that all participants, including sovereigns, bring to the markets. I will focus today on three main themes, none of which suggest how to undertake regulatory arbitrage:

- Quantitative Data: BIS data do not necessarily support the proposition that derivatives are used predominantly for regulatory arbitrage.
- Historical Data: Quantitative and historical data make clear that financial firms are not the only entities capable of engaging in regulatory arbitrage.
- Back to the Future: Trends underway within the risk community that focus on scenario analysis provide the right tools to take us past VAR. Today's risk environment requires an increased ability to interpret a new set of non-quantifiable and volatile signals from the political spheres. Think of it as finding ways to extend the rigor you apply

to your data and modeling frameworks to the broader, messier context of politics in which decisions are taken with imperfect information and different priorities than might be assumed with an economic model.

For as long as there have been sovereigns that require funding and private pools of capital, they have played tug-of-war. History is replete with booms and busts with both sovereigns and markets taking turns as the agents creating the conditions for a crash. Risk management, regulation and legislation cannot eliminate volatility from markets. However, if risk management does not expand its skill sets and tool boxes to address the role that sovereigns now play as asset managers, market participants, and crisis management agents, your risk assessments will underestimate the risk profile because existing models cannot quantify the kinds of decisions sovereigns take.

Being smarter about understanding the full range of risks in markets today requires an under-

standing of the political forces that will define risk intermediation going forward. It requires an understanding of the incentives for regulatory arbitrage at the sovereign level. Because even if directional normative consistency at the global level emerges from the G20 process, prospects for divergent outcomes will remain in the implementation.

Basel 1—2—3: Regulatory Capital and Regulatory Arbitrage

A long long time ago, in the 1970s, the global banking system melted. Twice. First, the FX market melted due to payments interruptions by a small German bank. Second, Latin American sovereigns defaulted on their debt. Bankers had believed sovereigns would not default on their obligations, but they were wrong. The banking systems in the US, Japan and parts of Europe experienced systemic shocks. Continental Illinois bank failed. The IMF and the Paris Club ran the restructurings. Regulators and banks concluded that the banking system was vulnerable because:

(i) bank loans were illiquid;

(ii) banks were more interconnected than sovereigns expected;

(iii) an uneven playing field in national regulatory capital standards existed; and

(iv) regulatory capital standards were insensitive to risk.

The Basel Committee was created. Innovative "debt-for-equity" swaps were created to cleanse bank balance sheets. Banks began applying swaps technology to other exposures. And regulators crafted the first risk-based regulatory capital requirements.

Those requirements assumed that sovereigns would pay their debts (0% risk weight). However, the new framework did differentiate between risk: mortgages attracted a 50% risk weight; commercial loans attracted a 100% risk weight; and short-term maturities received only a 20% risk weight compared with assets held for longer terms, such as 30-

year mortgages. These original risk weights are a road-map for the kind of sovereign regulatory arbitrage I believe is emerging: individual countries lobbied each other for standards that suited their particular financial systems and policy priorities.

The framework went live amid a mild recession (1991-92) and a collapse in the US savings & loan sector. Bank trading increased as financial engineering trends converged with vast increases in computing and communications technology. The capital framework was extended to incorporate market risk and swaps took off. Then we had another financial crisis, in 1997-98. The great and the good concluded that the world would have been safer if credit risk could also be traded. Among other things, the credit risk capital framework did not reflect regulatory arbitrage underway via U.S. securitization markets and a very uneven playing field was emerging again.

Many of us (myself included) spent years trying to craft a regulatory capital framework to address a

world where credit was traded. This was not an altruistic endeavor. The idea was to price risk more accurately so the regulatory framework would be less at risk and so banks would have an incentive to take less risk. Of course, some wanted to decrease their regulatory capital cushions. But the Basel Committee was very clear that the original (and arbitrary) calibration would set the floor ***for the system as a whole.*** Parameters and assumptions were set at what were then viewed as very conservative levels in part to address procyclicality. The idea was that banks with riskier portfolios would attract higher capital requirements and banks with lower risk profiles would be rewarded for their conservatism.

It didn't work out that way, of course. Financial regulation reform did not eliminate market volatility and the framework did not operate as intended. Today's policymakers are concluding that: banks are vulnerable to risks and import volatility into the financial system because they trade too much and

they are too interconnected. Moreover, they are prone to irrational behavior and should be made to pay for the pain they inflict on society. Maybe they should have less liquid assets and more liquid liabilities. And we are back to the 1970's, where we started when the Basel Committee was created. We just use more sophisticated mathematical constructs to identify, measure and manage liquidity risk and leverage.

So when we talk about the perimeter of regulation and the role of credit rating agencies, the measurement of liquidity risk or systemic risk, it is important to remember that financial markets and sovereign regulators have been engaged in this cat-and mouse arbitrage game for a long time. So far, neither market mechanisms nor market restrictions (e.g., the Gold Standard) managed to eliminate financial crises. Maybe discussions about regulatory arbitrage must begin with data and facts.

The Quantitative Facts

Accepted political wisdom today holds that derivatives are the source of regulatory arbitrage. Arbitrage of course exists. But consider these facts:

- OTC derivatives: BIS data shows that gross market values for OTC positions declined 15%during the second half of 2009, following a 22% decline during the first half of the year. That is a total of a 37% decline for the year…hardly an indicator of speculation; it is more an indicator of distrust.
- CDS: One subset of the CDS market did experience an uptick during the second half of 2009: sovereign CDS activity increased 10% from the previous period. But overall, maturity structures in CDS continued to decline.
- The Big Picture: The long view shows that derivatives activities across all instrument classes rose dramatically throughout the early phases of the financial crisis. This is what one would expect if the instruments were used for hedging. If they were used for regulatory arbitrage, you would

seek significant spikes of activity **prior** to the crisis. As these charts show, whether in aggregate or by individual asset class, the majority of real growth in gross market values occurred in response to the crisis. One interpretation thus is that financial institutions and other market participants were desperately trying to hedge their risk rather than speculate. The dividing line between the two activities is admittedly fuzzy as market momentum builds. However, in the aggregate, these data could easily be interpreted as hedging gone wrong. There is a big difference between hedging and speculation.

- Fannie Mae and Freddie Mac: In 2008, when the U.S. Congress provided conservatorship authority to the U.S. Treasury Department regarding Fannie Mae and Freddie Mac, the idea was to "limit" U.S. government support for the companies to a then-unprecedented amount of $200bn each. On Christmas Eve 2009, the U.S. Treasury Department announced it would remove all caps that

would limit support for the mortgage giants. At the time, federal support stood at $60bn for Fannie Mae and $51bn for Freddie Mac according to the Wall Street Journal. While capital markets were transfixed by the Greek drama at the end of the first quarter of 2010, Fannie Mae requested another $8.4bn after reporting a first quarter loss of $11.5bn and Freddie Mac requested an additional $10.6bn in taxpayer support. Note that the support package for only one of these entities already exceeds the full amount of cash resources pledged by eurozone sovereigns to cover the activities of the new stabilization mechanism in Greece.

- Municipalities: According to last month's RISK magazine, hundreds of municipalities throughout at least Italy, Latvia and Norway and their banks undertook swaps transactions that enabled the municipalities to borrow funds without the activity counting towards the entity's indebtedness on official accounts. Not a few municipalities in the

United States also engaged in this kind of activity. And then there is the complicated story of Greece.

At some point on the tail of the behavioral distribution, regulatory arbitrage can start looking like fraud. An active political debate is underway, as are serious law enforcement investigations, concerning these topics. I will not address them today except to note that it is of course important to identify and penalize law breakers.

Today I want to focus on the law-abiding bankers, firms, and risk managers who got it wrong… who thought they were hedging and inadvertently risked shareholder capital. The models failed you, or your use of the models was misplaced, or both. The risk management profession will not get very far if we do not focus on how to improve the process of making reasoned judgments about risk informed – but not determined – by risk models. In a sense, arguments about fraud let us off the hook way too easily.

Historical Data — Another Perspective

In risk management, data sets provide the basic foundation for solid modeling. Much time and resources are devoted to cleansing data sets. Historical data sets are about to become more important as financial regulators, the IMF, the BIS and policy-makers worldwide demand expanded access to a broader range of data streams so that the official sector can also seek to identify systemic risks. As the first part of this talk demonstrates, I believe that rigorous thinking about data patterns can be helpful to risk managers and corporate strategists thinking about how best to minimize risk and deploy scarce capital to its most efficient use.

My suggestion is that quantitative data is a necessary but not sufficient condition for assessing the risks and regulatory arbitrage situations. Lets be honest: financial firms are not the only arbitrageurs of the regulatory system. If you make decisions based on the outputs of quantitative models, without considering the broader political dynamics, you will

miss some major risk factors and the prospect for unanticipated outcomes (otherwise known as risk) will increase. Understanding how sovereign actors operate in the financial arena and affect financial market actions can provide perspective on model limitations because models estimate likely outcomes assuming that markets are composed of only private sector actors operating independently of sovereign political priorities.

Lets return to Fannie Mae and Freddie Mac. Subsidizing the re-packaging of illiquid mortgage loans of varying quality into the capital markets with an implicit government guarantee certainly had societal benefits. But it also fueled a feeding frenzy within the U.S. mortgage market that permitted fraud to thrive on a diet of global imbalances that included not just Chinese purchases of Fannie Mae and Freddie Mac debt, but also European bank purchases of US MMMF assets to fund their dollar-based lending to corporates in Europe. The regulatory capital framework played its part first by favor-

ing mortgage lending (a 50% risk weight). Basel 2 was not effective in part because not all the actors were subject to its requirements.

The public policy objectives supporting their role in mortgage finance in retrospect introduced distortions into pricing and market behavior that traditional models based on pure profit motives failed to identify adequately. Fannie Mae and Freddie Mac continue operating today without reform, and the losses continue to mount.

Being in Europe, many would probably be satisfied to stop here. But there are plenty of examples in the neighborhood. Take two in particular:

- State-owned banks and sovereign wealth funds craft investment strategies based on more than just a straight-forward assessment of risk profiles.
- In response to the current eurozone sovereign debt crisis, major European governments have prohibited banks from selling

> eurozone sovereign debt. They have also suspended the requirement that those banks mark to market sovereign bond holdings when calculating regulatory capital.

How do you adjust your risk models to take into account these sometimes sudden shifts in political priorities that directly impact risk profiles?How do your risk models adjust for the political risk associated with reform of these institutions even as losses continue to mount? How do you track developments to ensure that your assumptions and parameters are realistic in light of policy trends? Is it a random walk through the newspaper and Bloomberg or do you have a more rigorous process for incorporating in a timely basis global policy trends into your strategic decisionmaking?

Regulatory arbitrage when practiced by sovereigns also occurs in the process of crafting regulatory standards. Rigorous assessments of political risk are particularly important now as policymakers

re-shape the framework in which risk is intermediated. How do your assessments of exposure to individual counterparties (including sovereign counterparties) shift when governments bargain with each other in favor of their local systems? Again, some examples make the point clear:

- Exposures to Banks and Hedge Funds: The US and the EU are embroiled in an increasingly tense debate on the structure of regulation for hedge funds and banks. The US is implementing many parts of the Volker Rule that would require banks to restructure their proprietary and derivatives trading activities. The EU cannot follow suit since universal banks in Continental Europe provide the majority of lending to corporates in Europe; they cannot be broken up without serious societal and economic dislocations. At the same time, the EU is about to impose more stringent regulatory requirements on hedge funds, which play a relatively small role in financing economic activity here. These structural differences drive

sovereign efforts to arbitrage rule-making processes for maximum advantage. How are you adjusting your scenario analysis and/or your parameter settings to incorporate these changes to the counterparty landscape?

- Sovereign Debt: The topic du jour. While tempting to address the eurozone dilemma, I raise a more basic point. Consider rising debt issuance by sovereigns looking to fund fiscal stimulus and cover pre-existing labor market and demographic trends. A careful look at debt issuance needs goes a long way towards explaining European positions on credit rating agencies and their efforts to seek insulation from market forces, as well as G20 priorities to assess a tax on the financial system to cover systemic risk. How do your models adjust for rising debt levels? How rigorous are you in incorporating assessments of political risk into your parameterization and strategic decision-making when assessing the potential tax liability that could be assessed on your firm or portfolio?

Which assumptions are realistic?

- Corporates: Which of your corporate counterparties are most exposed politically? Which are most exposed to shifts in exchange rates? How will political efforts to protect or promote certain industries (green technologies are the most popular of course) affect the risk profiles of your corporate clients and their banks?

My point is simple: all market actors, including sovereigns, seek to obtain the maximum advantage from any situation. So an in-depth assessment of arbitrage situations in any market requires a sophisticated analysis of the needs and interests of all parties in the market. An assessment these days that fails to consider the needs of sovereign entities will underestimate the risks and create a new risk: that market participants may make decisions without taking sufficiently into account those factors not present in the classical econometric model. So even if policymakers manage to wring all arbitrage out of the de-

rivatives business by prohibiting position-taking, market-making, trading for one's own account (all ideas under consideration in the U.S. Senate), speculation, and naked CDS contracts (as some European politicians have suggested) the financial system will still present plenty of arbitrage opportunities for sovereigns as well as private sector participants.

Some of my friends in the official sector may now be quite concerned by the direction of this speech. So, I need to be really clear about the definition of "arbitrage." Mirriam-Webster defines arbitrage as follows:

> Main Entry: **1ar·bi·trage**
>
> Pronunciation: \är-bə-träzh\
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> Function: *noun*
>
> Etymology: French, from Middle French, arbitration, from Old French, from *arbitrer* to render judgment, from Latin *arbitrari,* from *arbitr-, arbiter*

Date: 1875

1 : the nearly simultaneous purchase and sale of securities or foreign exchange in different markets in order to profit from price discrepancies

2 : the purchase of the stock of a takeover target especially with a view to selling it profitably to the raider

The entire context, including its origins, shows that arbitrage is all about making judgments….which is a function our elected leaders and policymakers are elected and paid by us to perform. They have every right and obligation to arbitrage policymaking conditions for the benefit of their taxpaying constituents just as you have every right and obligation to ensure that shareholder value is not eroded out of carelessness, stupidity, and fraud. The Economist adds a gloss to this by defining "regulatory arbitrage" in the following terms:

"Exploiting loopholes in Regulation and

> perhaps making the regulation useless in the process. This is often done by international investors that use derivatives to find ways around a country's financial regulations."

Viewed in this light, it seems clear that sovereigns can undertake the same behavior, by finding or creating loopholes to existing rules in order to address an (often urgent) need. Prior to the financial crisis, the level of sovereign engagement in financial markets beyond rulemaking and enforcement actions were de minimus. This is no longer the case. Therefore, risk assessments concerning the possibility for unanticipated adverse actions in markets must address the potential for all participants to seek to evade or make meaningless particular restrictions.

A Multivariate Analysis

A comprehensive risk analysis requires an assessment of who the players are, what their interests

might be, and how they have behaved in the past (historical data). Therefore, post-crisis risk analysis must include more rigorous, multivariate analysis of how sovereigns engage in key markets, starting with the Group of Twenty and its satellite groups before diving into individual sovereign names.

Their overriding interests are easy to discern: for the foreseeable future, they will seek to gain control over debt issuance and minimize instability not just in financial markets or even sovereign debt markets but also in market squares where angry citizens gather to vent their frustration. It is a large task, but efficient allocation of resources is not necessarily a high priority right now relative to these larger tasks. In fact, many are willing to sacrifice efficiency in the interest of stability.

The Bank of England's Andy Haldane recently in a speech articulated best the challenges policymakers believe they face as follows:

"The narrowest fiscal interpretation of the

cost of crisis would be given by the wealth transfer from the government to the banks as a result of the bailout…in the US, this is currently estimated to be around $100 billion, or less than 1% of US GDP. For US taxpayers, these losses are (almost exactly) a $100 billion question. In the UK, the direct cost may be less than £20 billion, or little more than 1% of GDP…. But these direct fiscal costs are almost certainly an underestimate of the damage to the wider economy which has resulted from the crisis – the true social costs of crisis….In the UK, the equivalent output loss is around 10%. In money terms, that translates into output losses of $4 trillion and £140 billion respectively…If GDP losses are permanent, the present value cost of crisis will exceed significantly today's cost…(and could generate) an output loss equivalent to between $60 trillion and $200 trillion for the world economy and between

£1.8 trillion and £7.4 trillion for the UK… It is clear that banks would not have deep enough pockets to foot this bill. Assuming that a crisis occurs every 20 years, the systemic levy needed to recoup these crisis costs would be in excess of $1.5 trillion per year. The total market capitalisation of the largest global banks is currently only around $1.2 trillion. Fully internalising the output costs of financial crises would risk putting banks on the same trajectory as the dinosaurs, with the levy playing the role of the meteorite."

These unpleasant economic facts will constrain all regulatory policy choices in the G20 and beyond. If your scenario analysis is not considering these kinds of situations, then you need to seriously consider upgrading your analytical capabilities beyond existing data sets and correlation engines.

Back to the future

Financial engineering and risk management express uncertainty with the very precise language of math, and it is impossible to talk about derivatives without talking about the mathematical tools that provide a useful language for talking about risk. So let's consider where the discipline started.

In the early 1990s, accepted wisdom held that VAR needed to be supplemented with serious scenario analysis in order to provide a window into the tail events that could wreak havoc with the neatly-ordered universe provided by VAR-based models. Concerns existed that reliance on high VAR confidence intervals would generate false confidence in the accuracy of the model far out into the tail. The failure of Bankers Trust (which used a 99.975% confidence interval) and the success of JPMorgan (which used a 95% confidence interval until Basel required 99%) seemed to prove the point. The CEO of JP Morgan at the time (Dennis Weatherstone) publicly stated that he did not pay risk managers to generate the 95%; he paid them to generate the

other 5% that the model could not deliver.

I believe we lost that common sense thread in thinking about risk management. As credit began to be traded and the Basel Committee agreed to use complex models to set regulatory capital requirements, the modeling systems used to generate risk estimates were mistakenly viewed as mainstream. Scenario analysis seemed too fuzzy compared with the very specific national discretions and multiple parameters settings and the intensive drive for data. The thinking was that hard-wiring assumptions and parameters would create a level playing field…at least until regulators started insisting on national discretions to reflect differences in local markets.

The end result is that Basel 2 is hard to support. Its complexity undermines confidence in the framework among those that most need to understand it now: corporate borrowers and politicians. If borrowers and politicians do not understand how the capital framework drives lending choices when credit is traded, abrupt shifts in the market will gen-

erate similarly abrupt shifts in credit behavior….and fear. Moreover, the framework's opacity and its conceptual extensions to cover liquidity risk suggests that greater opportunities exist for arbitrage if one is equipped with a sufficiently powerful computer and feeds that computer a serious set of data.

There another blind spot. Risk quantification techniques are now highly evolved. We now have a wealth of data on tail events that make modeling more robust. Financial policymakers from the BIS, the IMF, and other global expert groups are flirting with how to use market mechanisms (CDS spreads; credit risk models) to measure systemic risk and potentially assess taxes or regulatory requirements against that risk even as political rhetoric rails against quantitative finance. Ironic, I know.

How does one interpret these developments? On way to begin is to consider carefully a number of very important implications from today's political debates:

- If wide-spread fraud in the markets existed at the dealer level, previous data sets and potentially some modeling systems might no longer provide valid risk estimates because the data sets might be corrupted. This is more than just an operational risk assessment, given that the political environment in which fraud cases evolve is very fluid.
- As OTC derivatives (not just CDS) become more standardized and are traded on exchanges, they will behave differently; so market signals concerning credit quality will have to be read differently. In addition, exchange trading will not necessarily decrease financial market volatility. The feedback loops between listed options and cash equity markets in 1987 and then again during this month's flash crash (and a few other less wild rides in between) suggests that pre- and post-trade transparency do not eliminate fear-based trading, because humans program the computers that execute the trades. How closely are you tracking the process by which policymakers are defining the

boundaries for risk exposure in this context not from a compliance perspective but from a strategic risk management perspective?

- As sovereign borrowers increasingly dominate debt markets, how does one evaluate relative default probabilities of corporate debt in high issuance countries? Is the external rating more important than the sovereign rating from the Home country or not? How does one adjust parameters and assumptions based on market signals when central banks are major asset purchasers? How do you craft a model that can quantify the impact of the public policy interest in maintaining financial stability? How does the possible creation of government-sponsored rating agencies in Europe for sovereign debt alter perceptions of risk?
- If you are a corporate treasurer, how do you evaluate the counterparty and concentration risks associated with doing business with your banks? How do you interpret the political signals about the direction of banking regulation to make good

decisions today on how to manage and invest the company's cash responsibly and time your own debt issuance so that the company can thrive despite the volatility around it?

These are a few of the many questions that cannot be answered solely by data-driven VAR models. While financial modeling systems provide a framework for assessing risks, they are a necessary but not sufficient condition for making reasoned judgments about risk profiles going forward. To accomplish this task, scenario analysis can play in important role as part of the process of making informed risk and trading decisions.

Scenario analysis can be mistakenly viewed as a dart board, constrained only by imaginations. But concrete ways exist to identify policy trends and incorporate them into risk analysis processes. Today's markets are now dominated by extreme policy volatility where outcomes are both unclear and driven by conflicting priorities. It seems clear that financial firms' tool kits for hedging will be con-

strained by regulatory reform and legislative requirements, even though many of the details remain unclear. Risk management systems will have to work harder to identify, price, and manage risks that might otherwise create crippling regulatory capital and tax burdens. These are risks that are difficult to approximate using quantitative tools.

The fact is that sovereign political priorities will provide some of the most powerful sources of market volatility for the foreseeable future. They are major market players in their own right, and crisis management mechanisms have left them as major owners of significant financial institutions from Fortis to Fannie Mae. Their priorities in financial markets will be driven simultaneously by the need to fund budget needs reliably and by the political need to address perceived abuses and gaps in the financial system. They are now a large part of the financial system as owners, regulatory regime changers and asset managers in part because risk management failed to catch some of the more egregious

mistakes internally.

We can attach all sorts of political labels to these debates, and most of them have appeared in the media over the last year, with protectionism and mercantilism probably the most prevalent. If you want to change the system, then get involved in politics or debate the issues over drinks. But your shareholders (and not a few taxpayers) require more from this profession; they require a dispassionate assessment of the risks.

If you do not choose to enter political life and choose to stay in risk management, then you must take very seriously the responsibility of figuring out how to make risk models and decisions more reflective of modern realities which include more government engagement in market mechanisms than most of us ever thought possible. This is not about crafting regulatory arbitrage opportunities but about identifying intelligently the risks your firm faces so that you can get ahead of them before shareholders or the public fisc are asked to bear a large loss.

A rigorous, multivariate analysis of regulatory policy cues can provide structure to scenario analysis and early warning signals about directionality. Such an analysis requires an in-depth understanding of the priorities that the main actors:

- heads of government;
- finance ministers in various configurations at the global and regional level;
- financial market and regulatory policy experts at the BIS and its various

satellite groups;

- the IMF;
- sovereign borrowers; and,
- yes, private sector financial market participants.

It converts classic political science interest analysis into a guide for making decisions about risk profiles, trading strategies, and IT architecture spend when imperfect quantitative information exists.

Those who understand how different institutional actors operate (independently and on a correlated basis) have a legitimate informational advantage when it comes to internal strategic decision-making. We are doing it now at BCM International Regulatory Analytics for our clients.

A few recent examples illustrate the point:

- The broad thrust of the Basel Committee package at year-end 2009 was not a surprise to informed observers. Policymakers in the G20 and Basel had been giving hints for months about their interest in the trading book, liquidity risk profiles, and counterparty credit risk.

- The official sector's interest in quantifying systemic risk and finding a way to charge banks for it (via taxes or regulatory capital charges or both) existed before the crisis. Both the dynamic provisioning and the through-the-cycle ratings debates began in 2002; economic theory supporting most

tax proposals have been well-known for decades. But now they both have political momentum. The details for how it could be done are available for anyone to see and model. How many of you are familiar with the IMF's flirtation with CreditRisk+ to implement a Pigouvian tax on the financial system?

- As noted, the US and the EU seem to be on a collision course regarding the regulatory perimeter. Regardless of the structural form, two conclusions seem clear. First, political and regulatory frictions around implementation will increase heading into 2012. Second, regardless of the corporate form, the regulatory capital requirements under consideration today together with an expanded regulatory perimeter to cover "systemically significant" firms, markets and instruments means bank trading activities will have to shrink ***regardless of corporate form*** because they will be more expensive. Corporates and banks should model now

their exposure to increased costs and the scenarios under which access to capital could become constrained.

- Clear policy signals from the IMF, the BIS, and many national policymakers suggest a growing bias towards ring-fencing via separately capitalized subsidiaries as well as a strong consensus in favor of extending the regulatory perimeter to include "systemically significant" firms regardless of their charter. Chancellor Merkel reiterated her commitment to ensure this G20 promise is kept just last week.

There is more consensus here than political rhetoric and headlines might suggest. Understanding the contours of that consensus will facilitate strategic planning and risk containment strategies. Making decisions about risk profile, corporate structure, and treasury management based on imperfect information can be very uncomfortable. The investment in

this kind of multivariate interest analysis can help ground your analysis of VAR results or your assessment of strategic options in clear facts. It won't give you all the answers, but then again neither does VAR.