

Brand new line of Credit

"Success is a science; if you have the conditions, you get the result"
— Oscar Wilde

As we approach the middle of the first decade of the 21st century, can we dare to guess how history will have us remember the '00s? For the 1980s, it was: Wall Street, Mike Milken and Henry Kravis, junk bonds, LBOs. The 1990s? Forrest Gump, Bill Gates and Warren Buffet, Enron, Netscape...IPOs. And the 2000s (so far)? How about: The Matrix, Eliot Spitzer and [insert favourite corporate villain here], Google and Credit (!)...?

Credit? What's so new new about credit? After all it is probably the oldest of all financial markets. Two fundamental developments (probably correlated, more on that later) are bringing 'credit' into the limelight. First is its increasing ubiquity: across the spectrum –from consumers to corporations, from micro-payments to multi-billion euro financings: credit is inseparable from the functioning of the world's economy. It is debateable as to whether it is the fuel or the lubricant (the truth is probably some combination of the two), but without passing judgement as to whether or not the rise and rise of credit is leading the world down the road to perdition, its importance is certainly not in doubt. Secondly are the revolutionary advances being made in the science of credit, leading directly to an explosion in the trading and trade-ability of credit as theory is quickly put into practice by the (financial) engineers of our time.

Let's take a step back for a moment and consider the conventional or classical view of the financial world. The prism through which most observers view markets defines a certain number of 'high level' asset classes. These are familiar even to a wider (non-financial) audience and typically consist of equities, fixed income and cash. For a slightly broader definition (or for the more adventurous), commodities, foreign exchange and property are sometimes included. Credit is nowhere to be seen. For the general public at least, credit is something to buy a car with, not an asset class to choose from in their 401k plan. Indeed credit has been historically seen as just a sub-set of the fixed income asset class, and outside of North America until a few years ago, not much more than a curiosity at that: the domain of banks not financial markets.

The Tyranny of the Blue Line

It would seem that to be considered a true stand-alone asset class one needs a headline value – some sort of shibboleth - that allows the world to refer to the market in that asset through one conveniently concise expression. Think equities you have the DJ Industrials, S&P500, DJ Eurostoxx...think interest rates you have the yield on the 10 year Treasury Note, the 10 Year Bund...think cash you have Fed Funds, Libor...commodities – ounce of gold, barrel of Brent...for credit? Nothing. Or nothing certainly that could or would capture the imagination of the man-in-the-street...although the jury is still out, the new DJ iBoxx / iTraxx credit index families could end up playing this role.

So is it appropriate that credit be considered primarily as sub-set of a broadly defined fixed income market? Not really. Why does it matter how credit is described or classified?

It matters because the frame of reference through which actors in the market view their positions fundamentally affects their ability to optimize their course of action and maximize their utility. By considering credit risk as a unique risk set both issuers and investors have much to gain. When setting a frame of reference however, one of the main problems encountered is that, by defining groups of assets in discrete classes, by definition decisions need to be made as to where to draw the boundaries. But do such discrete borders exist in reality? The obvious answer is no. Clearly a sub-investment

grade bond has more in common with the equity of that issuer than it does with a government bond (which is not to say it has no relationship with the latter.) Or consider a different dimension: the relationship of a loan and a bond from the same issuer. Should these fall under the same taxonomic umbrella? Indeed which dimension is the more relevant? The fact is that most of the time, the conventional definitions hold, but also as so often is the case, the most interesting areas are at the edges. Exactly where classical definitions lose their effectiveness. Where everything objectively is a hybrid.

Bringing good things to life

Ok, so the credit market is all grown up and should be taken seriously as an asset class in its own right, lying somewhere between equities and interest rate markets...so what? Just semantics. Nothing really changes, credit is just a bigger and perhaps more liquid, more global market than it was previously. Right?

Wrong. The ability to unlock the secrets of credit, to deconstruct it, to identify, measure and trade its fundamental constituents is a transformational event. The fact that it is a bigger, more liquid, global and diverse market while interesting and relevant in its own right, has far reaching and non-linear ramifications. Not only in terms of credit itself but also in terms of how it affects our understanding of other markets and the relationships between them. The discovery of the fundamental constituents of credit is bringing us one step closer to the financial equivalent of Einstein's elusive 'unified field theory' – one set of fundamental building blocks and forces that can describe the (in our case, financial) universe. Of course, the theoretical groundwork for this was laid many years ago. The Capital Asset Pricing Model as described in the late 50's and 60's, Black and Scholes' work on option pricing and Merton's Asset Value Model in the 70's are obvious pillars. The derivative models and frameworks developed for other assets (equities, interest rates and fx in particular) have and continue to provide an extremely valuable blueprint for the analogous development in the credit markets. What is new is the ability to precisely identify, segregate, price and trade ever more fundamental constituents of the credit market. Think of it as moving from theoretically postulating as to the existence of electrons all the way through to Thomas Edison commercializing the electric lightbulb. Take the analogy one step further and think of how the existence of electric lighting and the necessary electrical grid profoundly transformed the world in unexpected ways. Not to mention transistors!

Particle Physics for Credit Traders

So the credit market develops derivatives and derivatives-of-derivatives markets, just like other major financial markets. Nice, but still, where's the 'eureka' moment?

It is in the ability to henceforth weave together - in an empirical framework – instruments and markets that heretofore were only intuitively connected at best. Equities and credit. Loans and bonds. Insurance and credit. So what are the quarks of this brave new financial world? Volatility and correlation perhaps? Or is correlation a meson? Leaving that metaphor behind (and none too soon, given its all too geeky connotations, and the enormous limits on my knowledge of particle physics), I hope that the point is clear: the ability of the scientists and engineers to understand the fundamental building blocks will give rise to fundamentally new and



more robust applications. (Those looking here for a continuation of the nuclear metaphor with reference to weapons of mass destruction will be disappointed, despite my apocryphal nuclear physics lesson above.)

Times like these

So we understand and can unlock credit. So we can trade equity volatility versus credit spread volatility and adjust for the correlation in interest rate volatility and embedded fx risk in the balance sheet. Terrific. How is that going to help me raise funds more efficiently? How is that going to help me beat my investment benchmark? Or make my pension plan solvent?

Of course the mere existence of this new credit paradigm will not per se change anything. What it does mean is that the door is open for issuers and investors alike to fundamentally revisit their received wisdom as to how, when and why to participate in the market. In the simplest terms it gives the ability to isolate credit risk from other risks.

Just as issuers have been using interest rate (and basis) swaps for years to transform the risks of issuing fixed rate bonds into floating rate liabilities, they can now use credit swaps and options to disaggregate liquidity decisions from pricing decisions and / or monetize spread volatility to mitigate credit costs. More profoundly, they can now start to look at their cost of capital on a much more holistic basis, arbitraging between equity, interest rate, credit (bond, loan and default) and foreign exchange markets to optimize their funding mix and balance sheet structure. Furthermore, they can potentially monetize intrinsic financial assets that were previously hidden, unquantifiable or dead. Additionally, this can all be done in the context of their business risk (exchange rate) or competitive environment (pricing, correlation relative to peer group or broader market.)

Investors too will increasingly look to segregate credit - allocate risk budgets, trade and manage credit - on a stand-alone basis. One concrete manifestation of this is the growing demand for FRNs. While the proximate driver of the material increase in demand for (corporate) FRN issuance this year has been investors' concern over rising interest rates, it would be a mistake to ignore the underlying structural shift which is increasing the demand for pure credit (ie shorn of interest rate risk.) Historically, non-bank credit investors have overwhelmingly focussed on fixed rate bond issues, whereby a large portion of the return is in fact generated not by credit risk, but by interest rate risk. So long as credit was considered in terms of asset allocation as yield-enhanced interest rate risk, this approach could be understood, especially in the context of a buy-and-hold-to maturity approach in investment grade credit. However the limitations of this approach are easy to spot - in terms of allocating a risk budget, either the manager needs to adjust for the 'stacking' of interest rate risk, or accept that the 'true' allocation to credit is somewhat smaller than the notional amount. Very quickly measuring risk becomes complex as one also needs to account for the correlation between rates and credit and the sensitivity to changing credit quality of this relationship. Ironically as most credit benchmarks include mainly or exclusively fixed rate securities, many investors' returns are measured versus these benchmarks and are as such constrained to invest in fixed rate securities even in the context of an ostensibly pure credit mandate. As a result there is significant inertia in the structure of the market


Unlocking the true potential of credit markets?



and so it may be some time before we see the balance of credit issuance shift fundamentally and permanently in favour of FRNs. The wheels however have been set in motion.

Unlocking the Tar Sands

If the 2000s are going to be known as the decade of credit, it will not however be a direct result of the breakthroughs in our understanding and ability to manage and manipulate the fundamental building blocks of credit. This alone would be nothing more than an intellectual curiosity. What may lead us to remember the 2000s as the decade where credit truly came of age is the pervasiveness of credit in our economies. Perhaps, as some commentators opine, we are in the midst of an enormous credit bubble that is destined to end in tears. Indeed, without the advances described above, this thesis would be difficult to dismiss. However another view would be to say the ability to deconstruct and transact credit risk has unlocked vast potential reserves of financial capacity and marked a secular shift in the amount and type of credit available in our economies. One could liken this to being able to exploit economically for the first time the Tar Sands and in doing so irrevocably transform the shape and economics of world petroleum markets. The ability to isolate, transform, refine, repackage and distribute credit risk allows both borrowers and lenders to optimize their latent capacity as risk can be tailored and managed to line up to their intrinsic interests. This is not to suggest that the swings and roundabouts (including bubbles) of financial markets have been abolished in the case of credit, but that there has been a significant and fundamental underlying shift.

Now, any predictions for the '10s? How about the disintermediation of (all) markets as the semantic web takes over and peer-to-peer auctions/trading/betting become the rule? Hmmm, how much did you say Google was worth? 

The Athabasca Tar Sands is a large area of Tar sands located mainly in north-eastern Alberta and, to a much lesser degree Saskatchewan. It is estimated that the Athabasca Tar Sands contain approximately one third of the world's total oil deposits, with another third in the Venezuelan Orinoco tar sands deposit. The remaining third of the world's oil is in the form of conventional oil, much of it in Saudi Arabia and other Middle-Eastern countries.

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