Course Outline

Topics in Credit Risk

Winter 2012

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Aims and Objectives

Fuelled in part by burgeoning growth in the credit derivatives market in the late 90’s, the market in credit expanded dramatically for 10 years till 2Q 2007. These increased activity levels led to a much greater research focus on credit and one of the features of this work has been the high degree of complementarity between the research carried out by academics and by practitioners, for example, the investment banks and rating agencies.

The credit derivatives market was at the heart of the ongoing global financial and economic crisis, having contributed substantially to it by affecting lender incentives once loans were securitized, allowing banks to “game” regulatory capital requirements, and creating opacity due to their over-the-counter (rather than centralized or exchange-based) trading infrastructure. While the market for credit derivatives suffers at the current moment, a part of its underlying rationale in terms of risk transfer from banking sector to the rest of the economy remains robust. Securitization markets are nevertheless somewhat moribund. This market will perhaps never be as large as it was in 2Q 2007, but it will certainly continue to play a major role in the financial intermediation sector going forward, once the crisis abates. Indeed, as the sovereign credit risk in Western economies takes on its own role in aggravating health of the global economy, sovereign credit derivatives have again been at somewhat of a centre-stage as a barometer of sovereign health.

The objective of the course is to provide an introduction as well as an in-depth understanding of these issues in credit risk, how the plumbing of credit markets comes together, introduction to various credit derivatives, and briefly on the key risk-drivers of credit related instruments. The objective is to provide a balance between developing a sound conceptual framework, on the one hand, and market understanding and insight, especially with respect to effects seen in turbulent times that are often so important in markets from a practitioner’s standpoint, on the other. We regard both as essential to the informed practitioner and academic.

We will also understand the new financial sector reforms – most notably the Dodd-Frank Act – and their direct or indirect impact on credit derivatives and on credit markets in general, going forward. Finally, given the emerging risks in sovereign credit risk area, especially in the Eurozone, we will cover sovereign credit risk and derivatives as well.

Topics Covered

- Historical default experience
- Historical recovery experience
- Introduction to single-name credit derivatives (corporate, sovereign, municipality, …)
- Sovereign Credit Risk
- Backdrop of causes of the credit crisis and the role played by counterparty risk and credit derivatives in the crisis
- Basket default products: index tranches and CDOs
- Shadow banking: Money markets, Repo Markets, Government-Sponsored Enterprises
Format and Teaching Methods
The classes will include discussions around empirical facts about credit and possibly a guest speaker on market developments.

The class timings will be 6-9pm on 1/17, 1/19, 9-4pm on 1/22, 6-9pm on 1/24, 1/26.

Reading Materials
The primary reading material will be my lecture slides.
In addition, the required books for the course are as follows: The first book (ACRW) has content on the proposed reforms of the financial sector and (ANRW) on the housing finance debacle in the United States and its possible reform.

Acharya, Viral V., Thomas Cooley, Matthew Richardson and Ingo Walter, editors Regulating Wall Street: The Dodd-Frank Act and the New Architecture of Global Finance, New York University Stern School of Business and John Wiley & Sons, November 2010 [ACRW].


Additional recommended materials (especially, Prologue of AR, and early chapters of Chacko et al. for a primer on credit derivatives – I will distribute relevant material in hard copies):


Chacko, Sjoman, Motohashi and Dessain (2006): Credit Derivatives – A Primer on Credit Risk, Modeling, and Instruments. [Chacko et. Al]

Assessment
The grade for the course will be based on a take-home final exam after the last session of the course. This will determine 80% of your grade. There will also be 20% credit for class participation and bringing to the classroom discussion relevant themes from ongoing credit risk issues at time of the course.
# Summary Outline (Dates and times)

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
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<tr>
<td>1 (1/17/2012)</td>
<td>Overview of credit market and trends: Historical default experience, corporate finance issues (liquidity, strategic, technical defaults) Historical recovery or loss-given-default experience</td>
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<tr>
<td>2 (1/19/2012)</td>
<td>Introduction to single-name credit derivatives Relationship between CDS fee and bond spreads</td>
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<td>3 (1/22/2012)</td>
<td>Sovereign Credit Risk</td>
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<td>4 (1/22/2012)</td>
<td>Counterparty risk issues in CDS markets and Dodd-Frank Act Introduction to Correlation Products</td>
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<td>5 (1/24/2012)</td>
<td>Introduction to Correlation Products (cont’d) Role Played by Correlation Products in the Crisis of 2007-09</td>
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<td>6 (1/26/2012)</td>
<td>Shadow banking and its reform: Repo Markets and Money-market funds Government-sponsored enterprises (Fannie Mae, Freddie Mac) and Housing Finance reform</td>
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<td>Final Exam (take-home)</td>
<td><strong>Final exam (based on all material covered in the course)</strong></td>
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