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Assessing Credit Risk

Today, we have the luxury of being in a world of seemingly endless choice. Investors are able to pick from a universe of investments that suit even the most niche needs and structured products are no different. This is particularly pertinent when we think about how an investor matches their product selection with their credit risk tolerance.

In general, the securities for retail structured products are issued by investment banks and packaged into plans by product providers. The investor is exposed to the strength of the issuing bank and their ability to pay the investor what is owed under the terms of the Plan.

Measuring this risk can be undertaken through a variety of methods and this depends on what you want to know. The key takeaway is that investors have access to a wealth of data on the subject and people assign different levels of importance to the information available.

The following are frequently-used data sources that the Meteor Research team use in-house to help evaluate the credit quality of issuers:

- Credit Rating Agencies
- Bloomberg Default Risk
- Balance Sheets
- Market Implied Default Risk Indicators

Credit Rating Agencies

These are well known sources of information to financial advisers with the most well known being Standard & Poor's, Moody's & Fitch. They each use a 21 credit quality step rating scale but utilise different labels for each step. The actual technique used to evaluate institutions involves looking at a broad range of factors that include qualitative as well as quantitative measures. Some might deem the judgement of qualitative elements to be subjective. In addition, the agencies are paid by the rated institutions themselves which is a major agency problem in itself. Any breach of independence would be a detrimental mark to their reputation however, and so stands as a deterrent to such behaviour. Another issue is that institutions are not observed constantly which means that ratings can become outdated and the informational content of said ratings will decrease with time.

MS US \$ ↑ 41.56 -0.39		N41.56 / 41.57N	11x12
At 17:09 d	Vol 2,616,809	0 41.90N	H 42.15N L 41.55D Val 109.591M
MS US Equity		1) Company Tree Rating	92) Alert
Morgan Stanley		Page 1/2 Credit Rating Profile	
1) Bloomberg Default Risk DRSK »		Fitch	
Moody's		16) Outlook	STABLE
2) Outlook	STABLE	17) LT Issuer Default Rating	A
3) Issuer Rating	A3	18) Senior Unsecured Debt	A
4) Long Term Rating	A3	19) Subordinated Debt	A-
5) Senior Unsecured Debt	A3	20) Preferred Stock	BB+
6) Subordinated Debt	Baa2	21) Short Term	F1
7) JR Subordinated Debt	WR	22) ST Issuer Default Rating	F1
8) Preferred Stock	Ba1 (hyb)	23) Individual Rating	WD
9) Short Term	P-2	24) Support Rating	5
		25) Viability	a
10) Standard & Poor's		DBRS	
11) Outlook	SP STABLE	26) Outlook	STABLE
12) LT Foreign Issuer Credit	BBB+	27) Senior Unsecured Debt	AH
13) LT Local Issuer Credit	BBB+	28) Subordinated Debt	A
14) ST Foreign Issuer Credit	A-2	29) Preferred	BBBH
15) ST Local Issuer Credit	A-2	30) Short Term	R-1M
		31) LT Issuer Rating	AH

Australia 61 2 9777 8600 Brazil 1 5511 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2017 Bloomberg Finance L.P.
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Bloomberg Default Risk

Bloomberg, a major provider of financial software, data and information use a fully quantitative approach to credit risk evaluation. They also utilise a 21 step rating scale but harmonise the main credit rating agencies by taking an average of the probability of default matrices. Their approach strictly avoids qualitative indicators by looking exclusively at balance sheets, stock prices, credit default swap rates etc. Because they are not paid by the rated institutions, they also avoid any agency issues that may arise.



Balance Sheets

Credit analysts rely heavily on company balance sheets and ratio analysis to determine the credit quality of an institution. Information such as the amount of debt compared to equity a company holds, how profitable the company is, how well they can cover their liabilities and the amount of Tier 1 Capital they hold are typical numbers that analysts would be looking out for. The amount of detail and the ratios that can be calculated is only limited by the amount of information the company provides. Many quantitative measures have their calculations grounded by these published company accounts.

At 16:35 d Vol 3,871,626 O 46.55P H 46.55P L 45.54P Val 177.512M

FP Equity % Actions % Output % Settings **Financial Analy**

Societe Generale SA Periodicity **Annuals** Currency **EU**

Adj Highlights	FY 2013	FY 2014	FY 2015	FY 2016	Current/LTM	FY 2017 Est	FY 2018
Billions of EUR	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2016	12/31/2017	12/31/2017
Market Capitalization	33,721.8	27,472.9	33,916.6	37,370.8	37,045.8		
Book Value of Equity	50,877.0	55,229.0	59,037.0	61,953.0	61,953.0		
Total Deposits	314,148.0	327,764.0	360,178.0	397,357.0	397,357.0		
Total Loans	375,892.0	385,125.0	419,230.0	439,782.0	439,782.0		
Total Assets	1,214,193.0	1,308,138.0	1,334,391.0	1,382,241.0	1,382,241.0		
Net Revenue, Adj	26,257.0	26,353.0	29,194.0	28,662.0	25,298.0	25,160.2	25,75
Growth %, YoY	-2.4	0.4	10.8	1.8	-1.3	-12.2	
Profit Before Prov, Adj	8,104.0	7,778.0	10,113.0	8,411.0	8,875.0		
Margin %	30.9	29.5	34.6	29.3	35.1		
Operating Income, Adj	4,054.0	4,811.0	7,048.0	6,320.0	7,087.0	5,946.6	6,45
Margin %	15.4	18.3	24.1	22.1	28.0	23.6	2
Net Income, Adj	2,884.0	2,949.0	4,621.0	3,311.0	4,264.8	3,526.9	3,88
Margin %	11.0	11.2	15.8	11.6	16.9	14.0	1
PS, Adj	3.76	3.77	5.83	4.15	5.33	4.43	4
Growth %, YoY	31.1	0.3	54.5	-28.9	13.1	6.9	
Tier 1 Common Eqty %	10.00	10.10	10.91	11.50	11.50		
Tier 1 Capital Ratio %	11.80	12.60	13.50	14.50	14.50		
Total Capital Ratio %	13.40	14.30	16.30	17.90	17.90		

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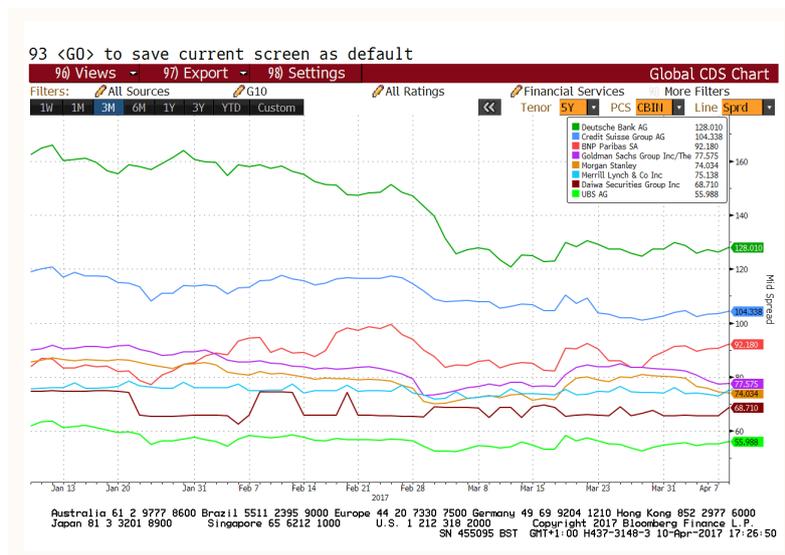
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Market Implied Default Risk Indicators

Financial market practitioners, especially bond traders, look closely at the market price of financial instruments to help determine their investment decisions. Prices that vary based on credit quality are of particular use. Credit default swaps (CDS) are perhaps some of the most useful instruments as these contracts are designed to transfer the credit exposure of bonds to a CDS contract seller. The buyer of the CDS pays a premium to the seller over time. In return, the seller is committed to paying the buyer the value of the bond should the issuer of the bond fail.

In effect, CDS contracts are an insurance against non-payment by an issuing financial institution and as with all insurance contracts, the higher the insurance premium, the higher the implied risk of the insured event happening. Analysing the level of CDS rates therefore is a productive approach to comparing default risk levels between structured product counterparties.



What measure should I use?

With so many options for assessing credit risk, the dilemma then becomes which to use. In reality, there is no right answer and reliance on one particular measure however, might be dangerous. When the financial crisis hit, for example, Standard & Poor's still had Lehman Brothers' Issuer Credit Rating at "A", one of the highest ratings that can be afforded to an issuing entity. When the firm collapsed, however, this "A" rating meant very little and clearly did not foresee the demise of the investment bank.

Quantitative measures and market implied indicators are perhaps the most fast reacting gauge but sensitivity is also an issue when the point of interest might actually be longer term prospects. Balance sheets contain a wealth of information but are often unwieldy and unless you have the expertise to decipher the important elements, their use is limited.

At Meteor, we try to make the process as simple as possible. We produce a range of analytics designed to make life easier. These include weekly CDS and ratings updates, a Quarterly Investment Banking Report, credit analytics to supplement the research for all our products and Counterparty Focus cheat-sheets for all the issuers we use.

To find out more about assessing credit risk contact your Meteor Business Development Manager, or alternatively contact us at research@meteoram.com.