

A Credit Default Swap (CDS)

- You own a \$1 million corporation bond issued by the firm known as “Mr. Risky”.
- If there is a possibility that Mr. Risky may default on repayments, you may buy a CDS from (for example) a hedge fund. The CDS is worth \$1 million.
- You pay interest on this credit default swap of say 2%. This could involve payments of \$20,000 a year for the lifetime of the contract.
- If Mr. Risky does not default, the hedge fund gains the interest and pays nothing out.
- If Mr. Risky does default, then the hedge fund has to pay compensation to you of \$1 million which is the value of the credit default swap.

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To get a sense of the values involved, as a rule of thumb a basis point on a credit-default swap protecting 10 million euros (\$US13.7 million) of debt from default for five years is equivalent to 1,000 euros a year. Swaps pay the buyer face value in exchange for the underlying securities or the cash equivalent should a borrower fail to adhere to its debt agreements. However, on a particular bond, only a fraction of the face value may actually be “insured”. See below for the Greek government debt.

Clearly, the higher the perceived risk of default, the higher the interest charged.

As of September 12, 2011, swaps on Greek government debt had risen by 701 basis points to a record 3,727 basis points, signaling a 94 percent probability of default, according to CMA (a company that compiles bond information.) It now costs \$5.7 million **upfront** and \$100,000 annually to insure \$10 million of Greek debt for five years, up from \$5.5 million in advance Sept. 9.

Credit-default swaps on [Portugal](#), Greece, [Italy](#) and France surged to records Portugal jumped 79 basis points to 1,213, Italy rose 40 basis points to 503 and [France](#) was up 11 at 189.

Swaps on Societe Generale were 53 basis points higher at 443, Credit Agricole increased 41 to 331 and BNP Paribas rose 31 basis points to 306, according to CMA.

<http://www.businessweek.com/news/2011-05-31/greek-bonds-require-immense-risk-premium-commerzbank-says.html>

Forwards and Forex swaps

- **Currency Swap:** The simultaneous purchase and sale of one currency for another: one is spot the other forward and is like a forward contract. Does not involve the interest but only the principle.

- **Interest Rate Swap:** Exchange of interest on a bond in \$ for the interest on a bond in (say) € The bonds may be either fixed or variable rates. The assumption is that each company can borrow at a better rate in its home market than it can in the foreign market.
 - Suppose a Canadian company wants to borrow British Pounds. Suppose there is also a British firm that wants to borrow Canadian dollars. Both can reduce their exposure to exchange rate fluctuations by engaging in a swap.
 - Each firm borrows in its home market. The firms then swap cash flows. Each company's finance cost is in their own domestic currency.
 - Each country can borrow in their own domestic currencies and then may swap the principle they have borrowed with the other firm.

Below are listed some of the values of different kinds of contracts outstanding in the last few years

The BIS provides a listing of the value of various derivative contracts outstanding:
<http://www.bis.org/statistics/otcder/dt1920a.pdf>

Table 19: Amounts outstanding of over-the-counter (OTC) derivatives By risk category and instrument In billions of US dollars

Risk Category / Instrument	Notional amounts outstanding					Gross market values				
	Dec 2008	Jun 2009	Dec 2009	Jun 2010	Dec 2010	Dec 2008	Jun 2009	Dec 2009	Jun 2010	Dec 2010
Total contracts	598,147	594,553	603,900	582,655	601,048	35,281	25,298	21,542	24,673	21,148
Foreign exchange contracts	50,042	48,732	49,181	53,125	57,798	4,084	2,470	2,070	2,524	2,482
Forwards and forex swaps	24,494	23,105	23,129	25,625	28,434	1,830	870	683	925	886
Currency swaps	14,941	15,072	16,509	16,347	19,271	1,633	1,211	1,043	1,187	1,235
Options	10,608	10,555	9,543	11,153	10,092	621	389	344	411	362
Interest rate contracts	432,657	437,228	449,875	451,831	465,260	20,087	15,478	14,020	17,533	14,608
Forward rate agreements	41,561	46,812	51,779	56,242	51,587	165	130	80	81	206
Interest rate swaps	341,128	341,903	349,288	347,508	364,378	18,158	13,934	12,576	15,951	13,001
Options	49,968	48,513	48,808	48,081	49,295	1,764	1,414	1,364	1,501	1,401
Equity-linked contracts	6,471	6,584	5,937	6,260	5,635	1,112	879	708	706	648
Forwards and swaps	1,627	1,678	1,652	1,754	1,828	335	225	176	189	167
Options	4,844	4,906	4,285	4,506	3,807	777	654	532	518	480
Commodity contracts	4,427	3,619	2,944	2,852	2,922	955	682	545	457	526
Gold	395	425	423	417	396	65	43	48	44	47
Other commodities	4,032	3,194	2,521	2,434	2,525	890	638	497	413	479
Forwards and swaps	2,471	1,715	1,675	1,551	1,781					
Options	1,561	1,479	846	883	744					
Credit default swaps	41,883	36,098	32,693	30,261	29,898	5,116	2,973	1,801	1,666	1,351
Single-name instruments	25,740	24,165	21,917	18,494	18,145	3,263	1,950	1,243	993	884
Multi-name instruments of which index products	16,143 ...	11,933 ...	10,776 ...	11,767 ...	11,753 ...	1,854	1,023	559	673	467
				7,500	7,476					
Unallocated	62,667	62,291	63,270	38,327	39,536	3,927	2,816	2,398	1,788	1,532
Memorandum Item:										
Gross Credit Exposure						5,005	3,744	3,521	3,578	3,342