Creating a CBO

Assets

Liabilities

Assignment: create a $100 million CDO that contains the following, equally weighted:

2 investment grade bonds

1 high yield bond

1 emerging market bond

The CDO should be funded with several tranches of asset-backed securities. It should have a final maturity of about 5-8 years, and be dollar-denominated

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Bonds

GLOBAL INVESTMENT GRADE

May 6	Red date	Coupon	S&P* Rating	Moody's Rating	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs Govts
■ US $									
Hewlett-Pckdr	06/05	7.15	A-	A3	100.3700	3.24	-0.01	-0.32	+0.60
Unilever	11/05	6.88	A+	A1	101.6200	3.40	-	-0.03	+0.26
Ford Motor Cr	02/06	6.88	BB+	A3	100.8000	5.72	-	+0.09	+2.50
Walt Disney	03/06	6.75	BBB+	Baa1	102.5600	3.79	-0.05	-0.14	+0.65
Morgan Stanley	04/06	6.10	A+	Aa3	102.0500	3.83	+0.12	-0.16	+0.64
Amer Elec Pwr	05/06	6.13	BBB	Baa3	102.1840	3.90	+0.16	-0.03	+0.20
FHLMC	07/06	5.50	AAA	Aaa	101.9800	3.77	+0.15	-0.04	+0.56
Canada	11/08	5.25	AAA	Aaa	103.9940	4.01	+0.14	-0.19	+0.22
Wal Mart	08/09	6.88	AAA	Aa2	109.6800	4.35	+0.01	-0.17	+0.54
Du Pont	10/09	6.88	AA-	Aa3	110.1000	4.34	-0.02	-0.13	+0.54
Phillips Petr	05/10	8.75	A-	A3	119.2600	4.44	-0.04	+0.16	+0.64
Unilever	11/10	7.13	A+	A1	113.0500	4.41	+0.05	-0.24	+0.46
Bank America	01/11	7.40	A	Aa3	114.6800	4.44	+0.05	-0.28	+0.48
JP Morgan	02/11	6.75	A	A2	110.9400	4.56	+0.06	-0.27	+0.59
France Telecom	03/11	8.25	BBB	Baa3	114.9300	5.23	+0.25	+0.31	+1.28
FNMA	03/31	6.75	AAA	Aaa	124.1450	5.06	-	-0.16	+0.42
Goldman Sachs	11/14	5.50	A+	Aa3	101.7500	5.26	+0.10	-0.05	+0.99
Italy	09/23	6.88	AA	Aa2	120.7100	5.12	+0.05	-0.18	+0.48
Pacific Bell	03/26	7.13	A+	A1	113.3480	5.99	+0.05	-0.08	+1.35
Deutsche Tel	07/13	5.25	BBB+	Baa2	100.6700	5.15	+0.06	-0.08	+0.89
Daimler Chrysler	01/31	8.50	BBB	A3	112.7100	7.39	-0.02	+0.58	+2.80
FHLMC	03/31	6.75	AAA	Aaa	124.1450	5.06	-	-0.16	+0.42
GE Capital	03/32	6.75	AAA	Aaa	118.1700	5.45	-	-0.17	+0.87
Gen Motors	11/31	8.00	BB	Baa1	82.0400	9.93	+0.02	+0.44	+5.29

Sources: ft.com,

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More Bonds

HIGH YIELD & EMERGING MARKET BONDS

May 6	Red date	Coupon	S&P* Rating	Moody's Rating	Bid price	Bid yield	Day's chge yield	Mth's chge yield	Spread vs US
■ HIGH YIELD US$									
TNK-BP	11/07	11.00	BB-	n/a	111.3700	6.01	-0.15	-0.07	+2.21
Gazprombk	10/08	7.25	n/a	Ba2	104.0600	5.94	-0.02	-0.36	+2.15
Gazprom	03/13	9.63	B+	n/a	119.7500	6.37	-0.15	-0.54	+2.11
Kazkommertsbk	04/13	8.50	BB-	n/a	104.0300	7.81	-0.04	-0.40	+3.65
■ HIGH YIELD €									
Gaz Capital	09/10	7.80	BB-	n/a	114.6200	4.66	+0.03	-0.42	+1.71
Fiat Fin	05/11	6.75	n/a	Ba3	89.1400	9.17	+0.94	+1.18	+6.22
■ EMERGING US$									
Argentina FRB	03/05	2.00	D	Ca	29.5000	-	-	-	-
Brazil C	04/14	8.00	B+	B2	101.1880	7.68	-	-0.41	-
Mexico	05/26	11.50	BBB-	Baa2	153.6250	6.71	+0.01	-0.23	+2.06
Peru Disc	03/27	2.56	BB	Ba3	84.7500	-	-	-	-
S Korea	04/08	8.88	A-	A3	112.3130	4.35	+0.06	-0.06	+0.55
Philippines	03/10	9.88	BB	Ba1	109.3750	7.53	+0.09	+0.12	+3.56
China	05/11	6.80	BBB	A2	111.2600	4.62	+0.09	-0.28	+0.62
Turkey	06/10	11.75	B+	B1	121.0000	6.80	+0.01	-	+2.83
Bulgaria IAB	07/11	2.75	BB+	Ba2	99.9380	5.02	-0.02	-0.26	-
Russia	03/30	5.00	BB	Baa3	107.0000	6.09	-	-0.31	+1.45
S Africa	05/09	9.13	BBB	Baa2	115.3130	4.89	+0.07	-0.30	+0.93
Qatar	06/30	9.75	n/a	A3	147.5000	6.05	+0.03	-0.18	+1.40

Sources: ft.com,

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Determining Credit Enhancement

Default Probability Matrix
(%)

WAR*	B-	B	B+	BB-	BB	BB+	BBB-	BBB	BBB+	A-	A	A+	AA-	AA	AA+	AAA
AAA	0.00	0.00	0.00	0.00	0.00	0.20	0.35	0.50	0.60	0.70	0.80	0.85	0.95	1.00	1.05	1.30
AA+	0.00	0.00	0.10	0.30	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.25	1.30	1.50	2.00
AA	0.00	0.00	0.20	0.40	0.60	0.70	0.80	0.90	1.00	1.10	1.20	1.30	1.35	1.40	1.75	2.30
AA-	0.00	0.00	0.25	0.45	0.65	0.75	0.90	1.00	1.10	1.20	1.30	1.40	1.75	2.25	2.50	3.30
A+	0.00	0.20	0.30	0.50	0.70	0.90	1.00	1.10	1.20	1.30	1.40	1.80	2.50	3.00	3.50	4.00
A	0.30	0.75	0.84	0.93	1.03	1.12	1.21	1.30	1.39	1.48	1.60	2.60	4.10	4.30	4.50	5.00
A-	0.60	1.00	1.25	1.50	1.75	2.00	2.50	2.75	3.25	4.00	4.50	5.00	5.50	6.00	6.50	7.50
BBB+	1.50	2.00	2.25	2.50	2.75	3.00	3.25	3.75	4.25	6.00	6.50	7.00	8.00	8.50	9.00	10.00
BBB	3.00	4.00	4.17	4.34	4.50	4.66	4.82	5.00	6.00	9.50	10.00	10.50	11.25	12.00	12.75	14.00
BBB-	4.00	5.00	5.25	5.50	5.75	6.00	6.50	7.50	8.00	10.00	11.00	12.00	13.50	15.00	17.00	20.00
BB+	9.00	10.75	11.50	12.50	13.50	14.50	16.00	17.00	18.00	21.00	22.25	23.50	25.75	27.75	30.75	37.00
BB	11.00	16.00	16.80	17.70	18.70	19.60	20.60	21.50	22.40	25.90	27.00	28.10	31.50	32.50	33.50	43.50
BB-	14.00	17.75	18.25	19.00	20.00	21.00	22.50	23.50	27.00	29.00	31.50	33.00	35.50	37.50	40.00	46.50
B+	17.00	22.00	22.75	23.75	25.00	26.25	28.00	29.50	31.00	33.75	35.20	37.00	40.00	42.00	44.00	50.00
B	20.00	25.00	26.00	27.40	28.40	29.40	30.60	31.80	33.00	36.00	38.60	41.20	44.20	45.40	46.60	52.20
B-	24.00	27.00	28.00	29.25	30.50	32.25	35.50	38.00	40.00	43.00	45.00	47.00	51.00	53.00	55.00	65.00
CCC+	27.00	30.00	32.00	36.00	37.00	38.00	40.00	42.00	44.00	50.00	55.00	60.00	67.00	73.00	79.00	90.00
CCC	32.00	35.00	37.00	41.00	42.00	43.00	45.00	47.00	49.00	55.00	60.00	65.00	72.00	78.00	84.00	100.00

*Weighted average rating of collateral.

Rating Criteria for European Arbitrage Collateralised Debt Obligations

This table helps to determine how much rated debt can be issued against the market value of an asset.

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Government Bonds

BENCHMARK GOVERNMENT BONDS

May 6	Red Date	Coupon	Bid Price	Bid Yield	Day chg yield	Wk chg yield	Month chg yld	Year chg yld
Australia	10/07	10.00	110.9220	5.16	-0.03	-0.10	-0.32	-0.18
	04/15	6.25	107.4160	5.28	-0.03	-0.07	-0.33	-0.68
Austria	10/07	5.50	107.2800	2.39	+0.06	+0.02	-0.14	-0.38
	07/15	3.50	99.7600	3.53	+0.06	+0.04	-0.02	-0.88
Belgium	03/07	6.25	107.2300	2.27	+0.07	+0.02	-0.13	-0.18
	09/15	3.75	101.7000	3.55	+0.06	+0.04	-0.11	-0.89
Canada	06/07	3.00	99.6170	3.19	+0.15	+0.12	+0.02	+0.23
	06/14	5.00	105.6750	4.24	+0.10	+0.10	-0.04	-0.57
Denmark	11/06	3.00	101.1600	2.21	+0.08	+0.05	-0.11	-0.53
	11/15	4.00	104.3400	3.50	+0.05	+0.05	-0.17	-0.98
Finland	07/07	5.00	105.5800	2.31	+0.07	+0.03	-0.14	-0.42
	07/15	4.25	106.8200	3.44	+0.07	+0.04	-0.12	-1.01
France	01/07	3.75	102.5000	2.21	+0.03	+0.01	-0.16	-0.38
	01/10	3.00	100.8600	2.80	+0.08	+0.04	-0.13	-0.73
	04/15	3.50	100.0600	3.49	+0.06	+0.04	-0.11	-0.88
	04/35	4.75	112.2500	4.04	+0.05	+0.05	-0.13	-0.97
Germany	03/07	2.50	100.4300	2.26	+0.04	+0.02	-0.14	-0.34
	04/10	3.25	101.8800	2.83	+0.07	+0.04	-0.14	-0.74
	01/15	3.75	102.4800	3.44	+0.06	+0.04	-0.13	-0.87
	01/37	4.00	99.8400	4.01	+0.04	+0.05	-0.13	-0.99
Greece	06/08	2.90	100.8260	2.61	+0.06	+0.03	-0.13	-0.52
	07/15	3.70	99.8790	3.71	+0.07	+0.04	-0.08	-0.82
Ireland	04/09	3.25	102.1200	2.68	+0.08	+0.04	-0.13	-0.50
	04/13	5.00	112.0500	3.25	+0.06	+0.04	-0.13	-1.02
Italy	01/07	2.75	100.7900	2.28	+0.06	+0.02	-0.09	-0.28
	01/10	3.00	100.6800	2.86	+0.06	+0.03	-0.12	-0.66
	02/15	4.25	105.4900	3.61	+0.07	+0.04	-0.09	-0.92
	08/34	5.00	113.0000	4.27	+0.05	+0.06	-0.10	-0.98
Japan	06/07	2.50	105.1510	0.06	-	-0.01	-0.05	-0.08
	06/10	1.80	106.7990	0.44	-0.01	-0.02	-0.13	-0.16
	03/15	1.30	100.7480	1.22	-0.02	-0.03	-0.15	-0.25
	03/25	1.90	99.8560	1.91	+0.01	-	-0.08	-0.15
Netherlands	07/06	3.00	101.0000	2.13	+0.03	-	-0.14	-0.64
	07/14	3.75	102.5500	3.42	+0.07	+0.05	-0.12	-0.99
New Zealand	11/06	8.00	102.4700	6.27	-0.01	+0.06	-0.15	+0.50
	04/13	6.50	103.9100	5.88	-0.01	-	-0.30	-0.34
Norway	05/09	5.50	108.8400	3.12	+0.02	-0.04	-0.11	-0.98
	05/15	5.00	109.7500	3.81	-	-	-0.13	-1.00
Portugal	07/06	3.00	100.9790	2.15	+0.03	-0.01	-0.14	-0.65
	06/14	4.38	107.0900	3.45	+0.06	+0.04	-0.11	-1.00
Spain	10/06	4.80	103.7600	2.17	+0.05	-0.01	-0.15	-0.41
	01/15	4.40	107.5100	3.47	+0.06	+0.04	-0.12	-0.90
Sweden	08/07	8.00	112.4740	2.27	+0.04	+0.02	-0.26	-0.71
	06/15	4.50	108.4330	3.51	+0.06	+0.12	-0.20	-1.21
Switzerland	06/07	4.50	107.3050	0.94	-0.06	-0.08	-0.19	-0.20
	06/15	3.75	114.6900	2.12	+0.04	+0.03	-0.14	-0.63
UK	12/05	8.50	102.2100	4.58	+0.01	+0.01	+0.02	+0.19
	12/09	5.75	104.9400	4.54	+0.05	+0.03	-0.10	-0.48
	09/15	4.75	101.2700	4.59	+0.07	+0.06	-0.10	-0.52
	09/36	4.25	95.3500	4.53	+0.07	+0.10	-0.08	-0.41
US	04/07	3.63	99.8125	3.72	+0.16	+0.08	-0.04	+1.11
	04/10	4.00	100.1563	3.96	+0.15	+0.08	-0.20	+0.02
	02/15	4.00	97.8281	4.27	+0.11	+0.08	-0.22	-0.50
	02/31	5.38	110.9219	4.64	+0.05	+0.13	-0.13	-0.82

London latest. New York close.
Yields: Local market standard. Annualised yield basis. Yields shown for Italy exclude withholding tax at 12.5 per cent payable by non-residents.

Source: Reuters.

Sources: ft.com,

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Spreads

Reuters Corporate Spreads for Financials

Spreads compiled using : Reuters Evaluators ▾ [Refresh] Download spread file

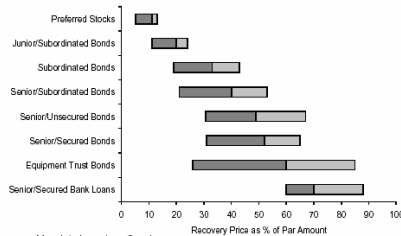| Rating	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	30 yr
Aaa/AAA	13	17	20	37	59	77	93
Aa1/AA+	35	36	39	57	77	90	108
Aa2/AA	37	39	41	64	80	93	116
Aa3/AA-	39	45	47	74	86	96	118
A1/A+	47	74	77	90	96	116	134
A2/A	62	79	81	91	98	118	135
A3/A-	67	81	85	96	106	125	140
Baa1/BBB+	82	100	101	117	134	155	176
Baa2/BBB	87	104	109	129	142	165	181
Baa3/BBB-	92	105	110	137	156	180	192
Ba1/BB+	155	175	185	215	235	255	305
Ba2/BB	165	185	195	225	245	265	315
Ba3/BB-	175	195	205	235	255	275	325
B1/B+	270	290	300	325	360	385	435
B2/B	280	300	310	335	370	395	445
B3/B-	290	310	320	355	380	405	455
Caa/CCC	345	355	365	430	480	535	575

Sources: bondsonline.com,

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Default Probabilities and Recovery Rates: Data

Figure 6. Moody's Historical Recovery Rate Distributions, 1970-1999, for Different Levels of Subordination. Each Bar Starts at the 1st Quartile Then Changes Color at the Average and Ends at the 3rd Quartile.

Source : Moody's Investors Services.

Figure 7. Moody's Cumulative Default Probabilities by Letter Rating from 1-10 years, 1970-2000.

Rating	1	2	3	4	5	6	7	8	9	10
Aaa	0.00	0.00	0.00	0.04	0.12	0.21	0.31	0.42	0.54	0.67
Aa	0.02	0.04	0.08	0.20	0.31	0.43	0.55	0.67	0.76	0.83
A	0.01	0.05	0.18	0.31	0.45	0.61	0.78	0.96	1.18	1.43
Baa	0.14	0.44	0.83	1.34	1.82	2.33	2.86	3.39	3.97	4.56
Ba	1.27	3.57	6.11	8.65	11.23	13.50	15.32	17.21	19.00	20.76
B	6.16	12.90	18.76	23.50	27.92	31.89	35.55	38.69	41.51	44.57

Source: Moodys

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