An Introduction to Analysing Credit Risk

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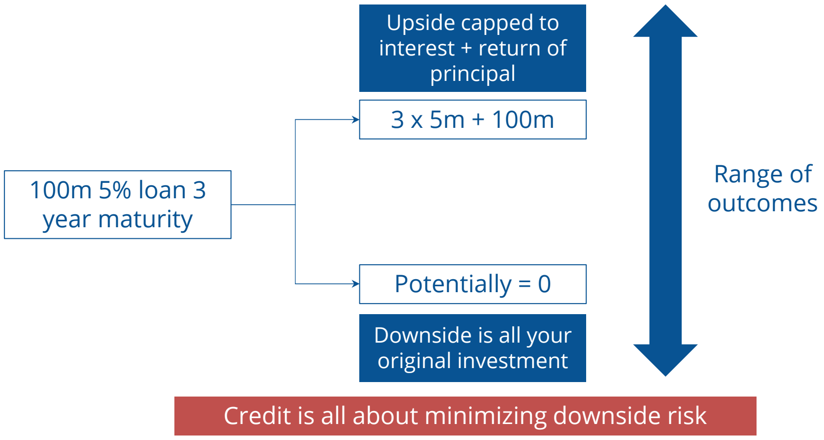
- Understanding the credit perspective
- Credit ratings
- Business risk
- Financial risk
- Credit comparables in investment banking

Credit Perspective



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Credit Ratings - Matrix

Moody's		S&P		Fitch		
Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	
Aaa	P-1	AAA	A-1+	AAA	F1+	Extremely strong capacity to meet commitments
Aa1		AA+		AA+		Very strong capacity to meet financial commitments
Aa2		AA		AA		
Aa3		AA−		AA−		
A1		A+	A-1	A+	F1	Strong capacity to meet financial commitments, somewhat susceptible to adverse economic conditions and changes in circumstances
A2		A		A		
A3	P-2	A−	A-2	A−	F2	
Baa1		BBB+		BBB+		Adequate capacity to meet financial commitments, but more subject to adverse economic conditions
Baa2	P-3	BBB		BBB	F3	
Baa3		BBB−	A-3	BBB−		
Ba1	Not Prime	BB+	B	BB+	B	Less vulnerable in the near-term but faces major ongoing uncertainties to adverse business, financial and economic conditions
Ba2		BB		BB		
Ba3		BB−		BB−		
B1		B+		B+		More vulnerable to adverse business, financial and economic conditions but currently has the capacity to meet financial commitments
B2		B		B		
B3		B−		B−		
Caa1		CCC+	C	CCC+	C	Currently vulnerable and dependent on favourable business, financial and economic conditions to meet financial commitments
Caa2		CCC		CCC		
Caa3		CCC−		CCC−		
Ca		CC		CC		Currently highly vulnerable
		C		C		Bankruptcy petition is filed - payments continue
C		RD	D	DDD	D	Payment default on financial commitments

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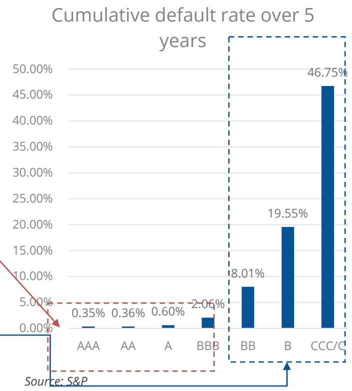
Credit Ratings

S&P
AAA
AA+
AA
AA–
A+
A
A–
BBB+
BBB
BBB–
BB+
BB
BB–
B+
B
B–
CCC+
CCC
CCC–
CC
C
RD

Investment grade – high probability you will get interest and principal – on time

Speculative – high risk you will not get interest and principal on time



Traditionally speculative bonds were mostly 'fallen angels' that used to be investment grade

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Credit Ratings – How Do We Come Up With Them?

Business risk

- Country risk
- Industry dynamics
- Company position
- Profitability / peer group analysis

Financial risk

- Accounting
- Financial policy and governance
- Cash flow adequacy
- Capital structure
- Liquidity

The issuer rating is the umbrella rating – usually this is the highest rating

Issuer rating

Each debt issue can be separately rated. They are often 'notched' down from the issuer rating

Senior debt

Debt rank 1 — Issue rating

Debt rank 2 — Issue rating

Debt rank 3 — Issue rating

Debt rank 4 — Issue rating

Subordinated debt

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Business Risk – From Operating Country

Australia	AAA
USA	AA+
France	AA
Japan	AA-
Ireland	A+
Slovakia	A
Malaysia	A-
Thailand	BBB+
Spain	BBB
India	BBB-
Indonesia	BB+
Paraguay	BB
Bangladesh	BB-
Sri Lanka	B+
Barbados	B
Egypt	B-
Greece	CCC
Ukraine	CC
Argentina	SD

Source: S&P

If the company's operations are mainly located in one country the sovereign will normally be the ceiling rating

Sovereign ratings will impact the country's corporate ratings

Business Risk – Industry Dynamics

US Industry	Average of Total Debt / LTM EBITDA	Average Rating
Systems Software	1.4	AA+
Integrated Oil and Gas	0.8	AA
Life and Health Insurance	4.7	AA-
Household Products	1.6	A+
Aerospace and Defense	1.4	A
Diversified Chemicals	2.0	A-
Hotels, and Cruise Lines	2.8	BBB+
Auto Parts and Equipment	1.8	BBB
Food Distributors	4.6	BBB-
AutoManufacturers	5.8	BB+
Comp. and elec. Retail	0.8	BB
Airlines	1.9	BB-
Healthcare Facilities	5.9	B+

- Competition
- Technological change
- Regulatory change
- Substitution risk
- Cyclicality
- Barriers to entry

Source: S&P

Business Risk – Company Position / Peer Group Analysis

Company Name	Credit rating	Total Debt/EBITDA [LTM]	EBITDA Margin % [LTM]	Est. 2 Year Growth Rate %	Revenue LTM
Wal-Mart Stores Inc.	AA	1.41	7.39	1.84	315,950.2
Costco	A+	1.29	4.02	6.13	75,073.7
Target Corp.	A	1.83	9.58	2.53	48,265.7
The Kroger Co.	BBB	2.26	4.76	3.92	72,199.7
Flowers Foods, Inc.	BBB-	1.66	11.4	1.38	2,465.9
Whole Foods Market, Inc.	BBB-	0.045	9.31	10.1	10,212.7
Ingles Markets, Inc.	BB-	3.87	6.27	1.21	2,568.4
Smart & Final Stores, Inc.	B+	3.74	4.35	11.3	2,426.5
SUPERVALU Inc.	B+	3.51	4.36	2.16	11,534.0
The Pantry, Inc.	B+	3.57	3.93	-	4,260.7
Safeway Inc.	B	1.97	4.2	-	23,634.6
Tops Holding Corp.	B	6.09	5.26	-	1,656.4
Fairway Group Holdings.	B-	18.1	1.78	3.16	535.8

- Diversity
- Price setter
- Product quality
- Execution
- Management quality
- Market share
- Shareholder pressures

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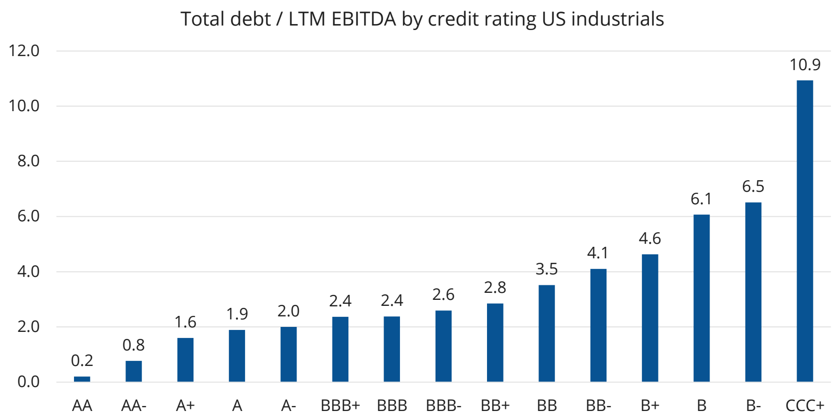
Leverage Averages for US Industrial Companies by Rating



Source: S&P

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Financial Risk – Accounting, Policy and Governance

Accounting adjustments
- Non-recurring items
- Hedging
- Capitalized interest
- LIFO FIFO
- Operating leases
- Pensions / OPEBs
- Provisions
- Preference shares
- Convertible securities
- Fair value debt
- Securitization
- Required / restricted cash

Financial policy
- Target leverage
- Risk profile
- Sponsor ownership?
- Shareholder drivers
- Financial discipline
- Event risk

Governance
- Strategy
- Execution of strategy
- Risk management
- Financial standards
- Risk tolerances

Initial rating will be adjusted due to these factors (scored out of 4)
- Strong
- Satisfactory
- Fair
- Weak

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Financial Risk – Cash Flows Definitions

Generic cash flow statement	
Net income	100.0
+ D&A / noncash items	20.0
+ / - Changes in OWC	(30.0)
Operating cash flows	**90.0**
- Capex	(40.0)
+ / - Disposals and acquisitions	5.0
Investing cash flow	**(35.0)**
+ / - issuances & repayments of debt	20.0
- Dividends	(50.0)
- Share repurchases	(10.0)
Financing cash flows	**(40.0)**
Net cash flows	**15.0**

Credit cash flow statement (S&P)	
EBITDA	**165.0**
- Interest	(25.0)
- Tax	(20.0)
Funds from operations	**120.0**
+ / - Changes in OWC	(30.0)
Operating cash flows	**90.0**
- Capex	(40.0)
Free operating cash flow	**50.0**
- Dividends	(50.0)
Discretionary cash flow	**0.0**
+ / - Disposals and acquisitions	5.0
Pre financing cash flow	**5.0**
+ / - issuances & repayments of debt	20.0
- Share repurchases	(10.0)
- / + (Increase) / decrease in cash	(15.0)
Financing cash flow	**(5.0)**

Credit cash flow statement (Moody's)	
Operating cash flow	90.0
+ / - Changes in OWC reversal	30.0
Funds from operations	**120.0**
- Dividends	(50.0)
Retained cash flow	**70.0**
+ / - Changes in OWC	(30.0)
- Capex	(40.0)
Free cash flow	**0.0**

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Understanding Funds From Operations

Funds from operations (FFO) is a measure that estimates a company's inherent ability to generate recurring cash flow from its operations independent of working capital fluctuations. FFO estimates the cash flow available to the company before working capital, capital spending, and discretionary items such as dividends, acquisitions, etc.

Moody's FFO:
Cash flow from operations before changes in working capital and changes in other short-term and long-term operating assets and liabilities

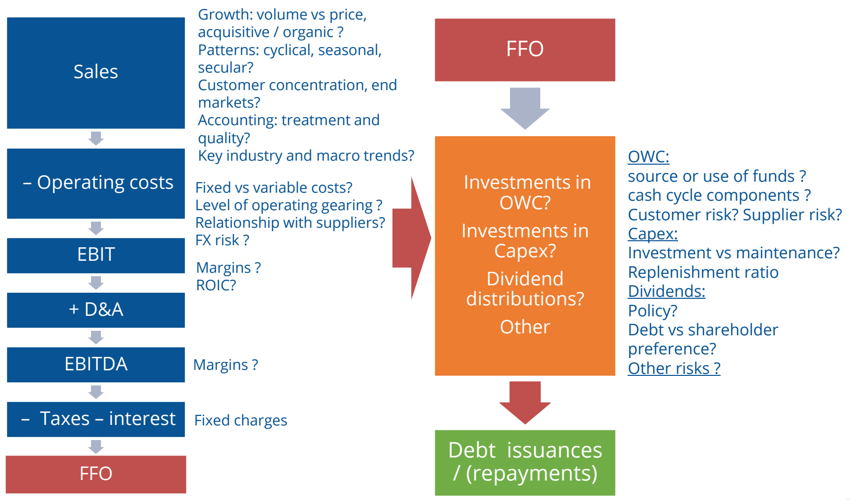
Calculated as:
Operating cash flow
+ Increase / - decrease in OWC (reversal)
= Funds from operations

S&P FFO:
EBITDA, less net interest expense minus current tax expense (plus or minus all applicable adjustments)

Calculated as:
EBITDA
- Taxes
- Interest expense

Moody's and S&P should give the same figure, but in reality the figure is very hard to reconcile using historical numbers

Understanding Funds From Operations



Financial Risk – Cash Flow Adequacy

Definitions (S&P)
- EBIT (includes interest income, equity income adjusted for non-recurring items)
- EBITDA (revenue – operating expenses + D&A + associate dividends – associate income)
- FFO (funds from operations) = EBITDA – net interest expense – current tax expense
- CFO (cash flow from operations)
- FOCF (Free operating cash flow) = CFO – capex
- DCF (discretionary cash flow) = FOCF – dividends
- Capital: (equity including NCI + long term deferred taxes + total debt)

Cash flow ratios
- Funds from operations (FFO)/debt
- Debt/EBITDA
- Cash flow from operations (CFO)/debt
- Free operating cash flow (FOCF)/debt
- Discretionary cash flow (DCF)/debt
- (FFO + interest)/cash interest (FFO cash interest cover)
- EBITDA/interest

Profitability ratios
- EBIT/revenues
- EBITDA/revenues
- EBIT/average capital (debt + equity + deferred taxes)

Profitability important for ability to refinance / raise equity

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Why Liquidity Matters

Liquidity is the most common cause of default. Lack of liquidity can cause defaults in otherwise healthy companies

Cash flow statement	
Funds from operations	**150.0**
+ / - Changes in OWC	(10.0)
Operating cash flows	**140.0**
- Capex	(40.0)
Free operating cash flow	**100.0**
Dividends	0.0
Discretionary cash flow	**100.0**
+ / - Disposals & acquisitions	0.0
Prefinancing cash flow	**100.0**

- The business is profitable and generates healthy cash flows
- But, how can a debt repayment of 500 be covered
  - Cash (if available)?
  - Asset sales (if available)?
  - Refinancing (if available) ?
  - Refinancing (if possible) ?

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Liquidity Ratios

Sources
- Cash and liquid investments
- Forecasted FFO, if positive
- Forecasted positive changes in OWC
- Asset sales (when predictable)
- Undrawn bank lines maturing > 12m
- Cash injections from govt. or S/H

Uses
- Forecasted negative FFO
- Expected capex
- Forecasted negative changes in OWC
- Debt maturities
- OPEB top-up needs
- Debt repay if 3 notch downgrade
- Contracted acquisitions
- Expected shareholder distributions under a stress scenario

Ratios

Exceptional	= sources / uses = 2x over next two years
Strong	= sources / uses = 1.5x over next year then 1x
Adequate	= sources / uses = 1.2x over next year
Less than adequate	= sources / uses <1.2 over next year
Weak	= sources / uses <1 over next year

Stress tests with declining EBITDA are also included

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Business and Financial Risk Combine to Generate a Rating

Business risk	Financial risk	1 (minimal)	2 (modest)	3 (intermediate)	4 (significant)	5 (aggressive)	6 (highly leveraged)
	1 (excellent)	AAA/AA+	AA	A+/A	A-	BBB	BBB-/BB+
	2 (strong)	AA/AA-	A+/A	A-/BBB+	BBB	BB+	BB
	3 (satisfactory)	A/A-	BBB+	BBB/BBB-	BBB-/BB+	BB	B+
	4 (fair)	BBB/BBB-	BBB-	BB+	BB	BB-	B
	5 (weak)	BB+	BB+	BB	BB-	B+	B/B-
	6 (vulnerable)	BB-	BB-	BB-/B+	B+	B	B-

Generally in investment banking (within one sector) analysts focus on financial risk ratios to estimate credit rating impact from acquisitions or financing

Drax & Debenhams tear sheets

http://www.reuters.com/article/2012/11/13/idUSWNA941120121113

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Complexities

- Adjustments for debt equivalents to **all** the income statement, balance sheet and cash flow statement numbers
- Notching for different debt issues
  (different formula for investment grade versus speculative)
- Notching for subsidiaries
- Generally the process is quite complex and analytical
- Difficult to replicate in investment banking so we rely more on credit comps

Credit Comparables

Credit comparables for packaged foods and meats industry

All figures in USD MM

Company	Gross debt	Net debt	Shareholders' Equity	Adjusted EBITDAR	Gross debt / Adj. LTM EBITDAR	Net debt / Adj. LTM EBITDAR	Gross debt / Gross debt + shareholders' equity	Credit rating	LTM EBIT margin
Kellogg Company	7,731.0	7,380.0	2,546.0	1,663.0	4.6x	4.4x	75.2%	BBB+	7.5%
General Mills, Inc.	13,776.0	12,991.8	5,441.2	3,448.4	4.0x	3.8x	71.7%	BBB+	10.3%
ConAgra Foods, Inc.	11,707.7	10,810.2	4,452.9	2,680.7	4.4x	4.0x	72.4%	BBB-	8.6%
Campbell Soup Company	4,919.0	4,689.0	1,585.0	1,524.0	3.2x	3.1x	75.6%	BBB+	13.6%
Kraft Foods Group, Inc.	15,464.8	14,286.8	4,517.0	1,141.0	13.6x	12.5x	77.4%	BBB	6.9%
The Hershey Company	2,731.9	2,326.7	1,266.1	1,655.6	1.7x	1.4x	68.3%	A	26.2%
Mondelez International, Inc.	27,479.1	25,577.1	24,546.0	5,395.0	5.1x	4.7x	52.8%	BBB	5.6%
Hormel Foods Corporation	846.2	(42.2)	3,840.6	1,203.5	0.7x	(0.0x)	18.1%	A	18.6%
Dean Foods Company	2,817.8	2,787.8	550.6	358.2	7.9x	7.8x	83.7%	BB-	2.2%
The J. M. Smucker Company	6,170.9	6,045.3	7,086.9	1,103.2	5.6x	5.5x	46.5%	BBB	4.1%
The WhiteWave Foods Company	1,830.0	1,760.4	1,078.8	407.8	4.5x	4.3x	62.9%	BB	6.7%
Mean					5.1x	4.7x	0.6x		10.3%
Median					4.4x	4.2x	0.7x		7.7%
High					13.6x	12.5x	0.8x		26.2%
Low					0.7x	(0.0x)	0.2x		2.2%


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