

# Capital Structure: What To Understand

(Welch, Chapter 16)

Ivo Welch

# Our Plan is Chaos

Confuse You!

- ▶ There are *so* many choices to consider!

Later, you will learn how to think about them.

- ▶ Further topics can include typical board compositions; staggered boards; institutional activism; fiduciary responsibility; board and ceo turnover, etc.

# Cash Flow Rights

What is a cash flow right?

What are the cash flow rights of debt?

What are the cash flow rights of equity??

# But Why Oblige Later At All?

Why do *any* owners and managers *ever* return *any* money to anyone providing funding, at all?

# Straight vs Convertible Debt

What is the difference between *straight debt* and *convertible debt*?

Is a convertible bond more like debt or more like equity?

# Secured vs Unsecured Debt

What is the difference between *secured* or *senior debt*; and *unsecured* or *subordinated debt*?

# Bond Features To Decide

Covenants. Seniority. Collateral.  
Convertibility. Puttability. Callability.  
Sinking Fund. Maturity. Duration. Coupon.  
Fixed-rate vs Floating-rate.

- ▶ Less so nowadays: Diffuse vs Concentrated.  
Financial vs Non-Financial.

# Bank Loan vs (Public) Bonds

How is/was a bank loan different from a bond?



# Non-Financial Liabilities

What is a non-financial liability (NFL) ?

# Are NFL and FD Different?

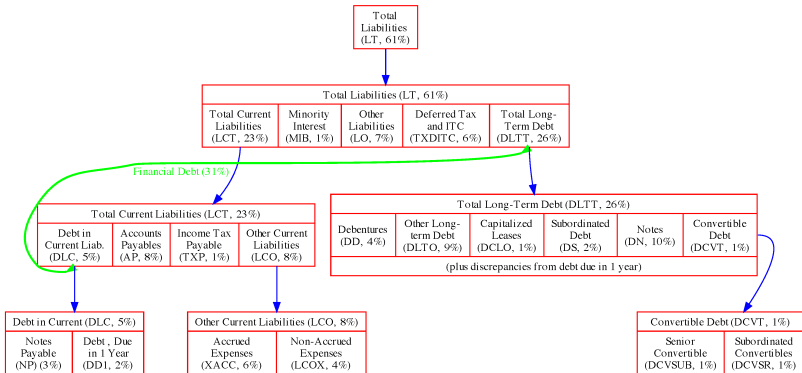
Does financial debt (FD) provide resources to help fund the firm?

Do non-financial liabilities (NFLs) provide resources to help fund the firm?

# Empirical Magnitudes

How big are NFLs usually compared to FD?

# Graph: Liab / Assets (Book Value)



**Figure 1: liabilities**

# Graph Footnotes

- ▶ The preceding were averages over all (non-tiny) firms on Compustat.
- ▶ Watch out: the denominator were **BV** of assets. Typically, the MV is 1.5 to 2.0 times the BV.
- ▶ For details, see Ivo Welch, *Two Common Problems in Capital Structure Research: The Financial-Debt-To-Asset Ratio and Issuing Activity Versus Leverage Changes*, IRF 11:1, 2011, p 1-17.

# Common vs Preferred Equity

What is the difference between *Common Equity* and *Preferred Equity*?

# Equity Features To Decide

- ▶ Warrants vs Options.
- ▶ Units.
- ▶ Class A and Class B shares.
- ▶ Public vs Private Placements.

## Assets — Current

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Period Ending	Dec 26, <b>2015</b>	Dec 27, 2014	De 28 201
▶ Cash And Cash Equiva- lents	15,308	2,561	5,67
▶ Short Term Invest-	10,005	11,493	14,41



# Assets

Period Ending	Dec 26, <b>2015</b>	Dec 27, 2014	De 28 201
<b>Total</b>	<b>40,356</b>	<b>27,730</b>	<b>32,00</b>
<b>Current Assets</b>			
<b>Long Term Investment</b>	7,851	9,120	7,69
Property Plant and Equipment	31,858	33,238	31,42
Goodwill	11,332	10,861	10,51
Intangible Assets	3,933	4,446	5,15

## Liabilities – Current

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Period Ending	Dec 26, <b>2015</b>	Dec 27, 2014	De 28 201
▶ Accounts Payable	10,845	12,210	11,19
▶ Short/Current Long Term Debt	2,634	1,596	28

# Liabilities

Period Ending	Dec 26, <b>2015</b>	Dec 27, 2014	De 28 201
<i>Total Current Liabilities</i>	<b>15,667</b>	<b>16,011</b>	<b>13,50</b>
<i>Long Term Debt</i>	20,036	12,059	13,16
Other Liabilities	2,841	3,278	2,97
Deferred LT Liability	2,539	3,775	4,39
Charges			
Minority Interest	▶	▶	▶

# Equity

Period Ending	Dec 26, <b>2015</b>	Dec 27, 2014	De 28 201
Redeemable Preferred Stock	▶	▶	▶
Preferred Stock	▶	▶	▶
Common Stock	23,411	21,781	21,53
Retained Earnings	37,614	33,418	35,47
Treasury	▶	▶	▶

# Pension Liabilities

## *Defined Benefit or Defined Contribution?*

- ▶ Defined-benefit pension liabilities are among the largest liabilities of older blue-chip firms, governments, and multi-national firms.
- ▶ US Social Security and Medicaid are defined benefit—and in trouble, too: The demographic transition will be killing them!
- ▶ In the US, most corps have moved away from *defined benefit* to *defined contribution* plans.

# A Nasty but Legal Business

Buy companies with overfunded defined-benefit pension plans, replace the pension liabilities with the low bidder, take out the difference, and resell the firm.

- ▶ “First Executive,” run by Fred Carr, did this in around 1985-1990 (with Drexel Junk Bonds).
- ▶ Predictably, many of these insurers (including FE) later on went bankrupt themselves.
- ▶ How could Fred Carr sleep at night?

# INTC Outstanding Bonds I

Issued	Nominal	Type	Maturity	Stated	Amount
Q4-2015	\$915	senior	Dec 2045	4.70%	\$908
Q4-2015	A\$800	senior	Dec 2019	3.25%	\$181
		senior	Dec 2022	4.00%	\$397
Q3-2015	\$1,000	senior	Aug 2045	4.90%	\$1,009
Q3-2015	\$7,000	senior	Jul 2022	2.45%	\$1,748
		senior	Jul 2022	3.10%	\$996
		senior	Jul 2022	3.70%	\$2,247

## INTC Outstanding Bonds II

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Issued	Nominal	Type	Maturity	Stated	Amount
2011	\$5,000	senior	Oct 2016	1.95%	\$1,49
		senior	Oct 2021	3.30%	\$1,99
		senior	Oct 2041	4.80%	\$1,49
2009	\$2,000	jnr conv	Aug 2039	3.25%	\$1,10
2005	\$1,600	jnr conv	Dec 2035	2.95%	\$975

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# INTC Bonds Net of Issuing Costs

- ▶ Total Outstanding Bonds : \$22,707
- ▶ Less Current Part of Long-Term Debt: -\$2,602
- ▶ Less Issuing Costs: -\$69
- ▶ Debt Net of Issuing Costs: \$20,036

# INTC Debt-Due Term Structure

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Year	2016	2017	2018	2019	2020	2021
Amount	\$1,500	\$3,000	\$0	\$181	\$1,750	\$17,8

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# More INTC Capital Structure

We omitted discussion of more complexity of

- ▶ used and unused credit lines,
- ▶ total interest payments,
- ▶ hedging out certain liabilities,
- ▶ the prevailing interest rates at the time (to understand capital structure *changes*. the prevailing yield curve and credit spreads).

...and Intel has a “vanilla” capital structure.

# Measuring Leverage and Precariousness

What are reasonable measures of firms' leverage / precariousness / debt burden?

# Possible Debt Measures

Financial Debt / Total Assets

Financial Debt / Financial Capital

Total Liabilities / Total Assets

(in book values or in market values?)

# Reliability of Book Values

How reliable are the book value of debt?

How reliable are the book value of equity?

# Market Value of Assets

How do you calculate the MV of total assets?

- ▶ The financials only list the BV of assets!

# Debt Ratio Determinants

What is the biggest determinant of year-to-year changes in most firms' debt ratios?