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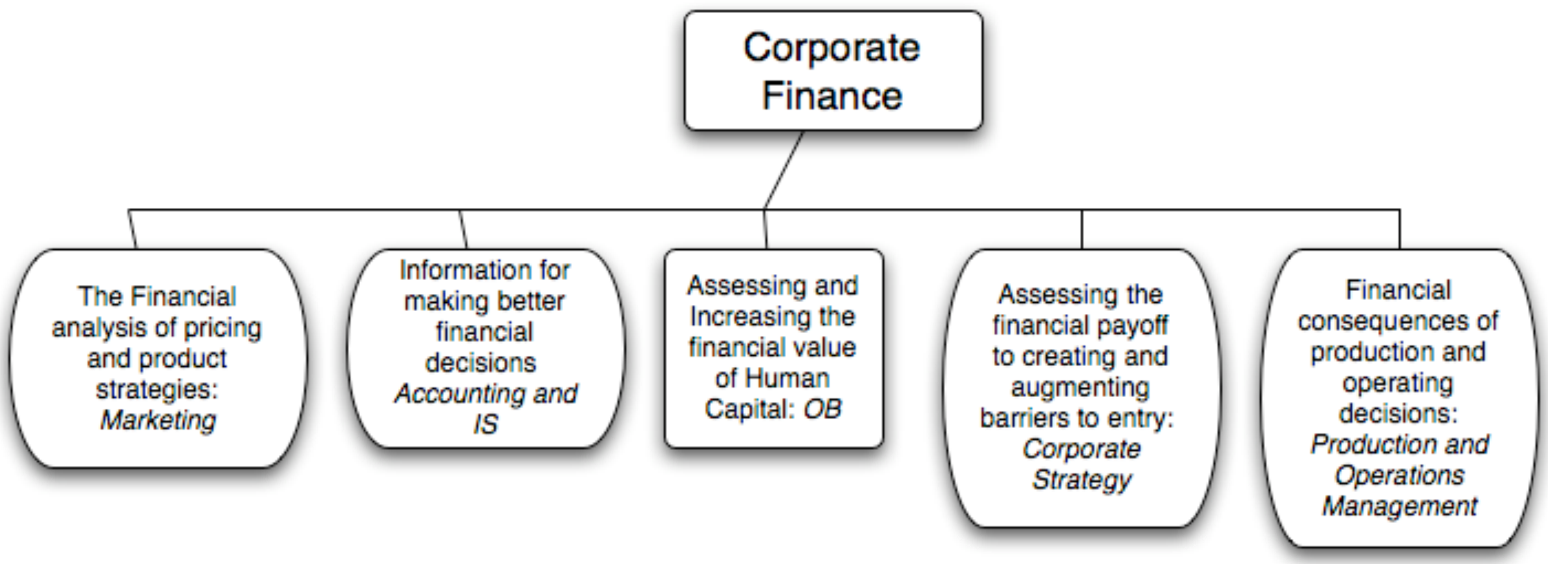
DON'T SWEAT THE SMALL STUFF: A BIG PICTURE PERSPECTIVE ON FINANCE

Aswath Damodaran

Lesson 1: Every business decision is ultimately a financial one

- Every decision that a business makes has financial implications, and any decision which affects the finances of a business is a corporate finance decision.
- Defined broadly, everything that a business does fits under the rubric of corporate finance.



So, watch out for these justifications

- The "Expert" Cop out: For many firms, the easiest way to explain the unexplainable is to pass the buck and get a consultant/expert to sign off on an action.
- Weapons of distraction: Managers/investors/analysts seem to find ways of over riding the numbers with buzz words. Here are some to watch out for:
  - "Gut feeling" or "Intuition": Older, more experienced managers often claim to have a gut feeling about decisions. Psychological studies of gut feeling find that they are almost never based upon good data, are often completely wrong and get worse as managers get smarter/ more experienced.
  - "Strategic": The word "strategic" almost always goes to describe actions that cannot be justified based upon the numbers…

The scariest page in your annual report

/ STRATEGIC ACQUISITIONS [1]

Thanks to its recent acquisitions with a global or regional vocation, L'Oréal is nourishing its brand portfolio, stepping up its presence in the main distribution channels and covering the whole range of beauty territories.

UNITED STATES

URBAN DECAY

MODERN AND IRREVERENT

An American brand that specialises in accessible make-up in the selective segment, Urban Decay is strengthening the positions of L'Oréal Luxe in the dynamic distribution channels of "assisted self-service"[2] and e-commerce. A brand that fulfils the expectations of young women searching for inspiring ideas and creative colours.

COLOMBIA

VOGUE

A LOCAL MAKE-UP LEADER IN THE MASS-MARKET [3]

Vogue is an important acquisition for L'Oréal Colombia, consolidating its presence in this highly competitive market. The brand also offers development opportunities outside its country of origin, particularly in Central America, Ecuador and Peru.

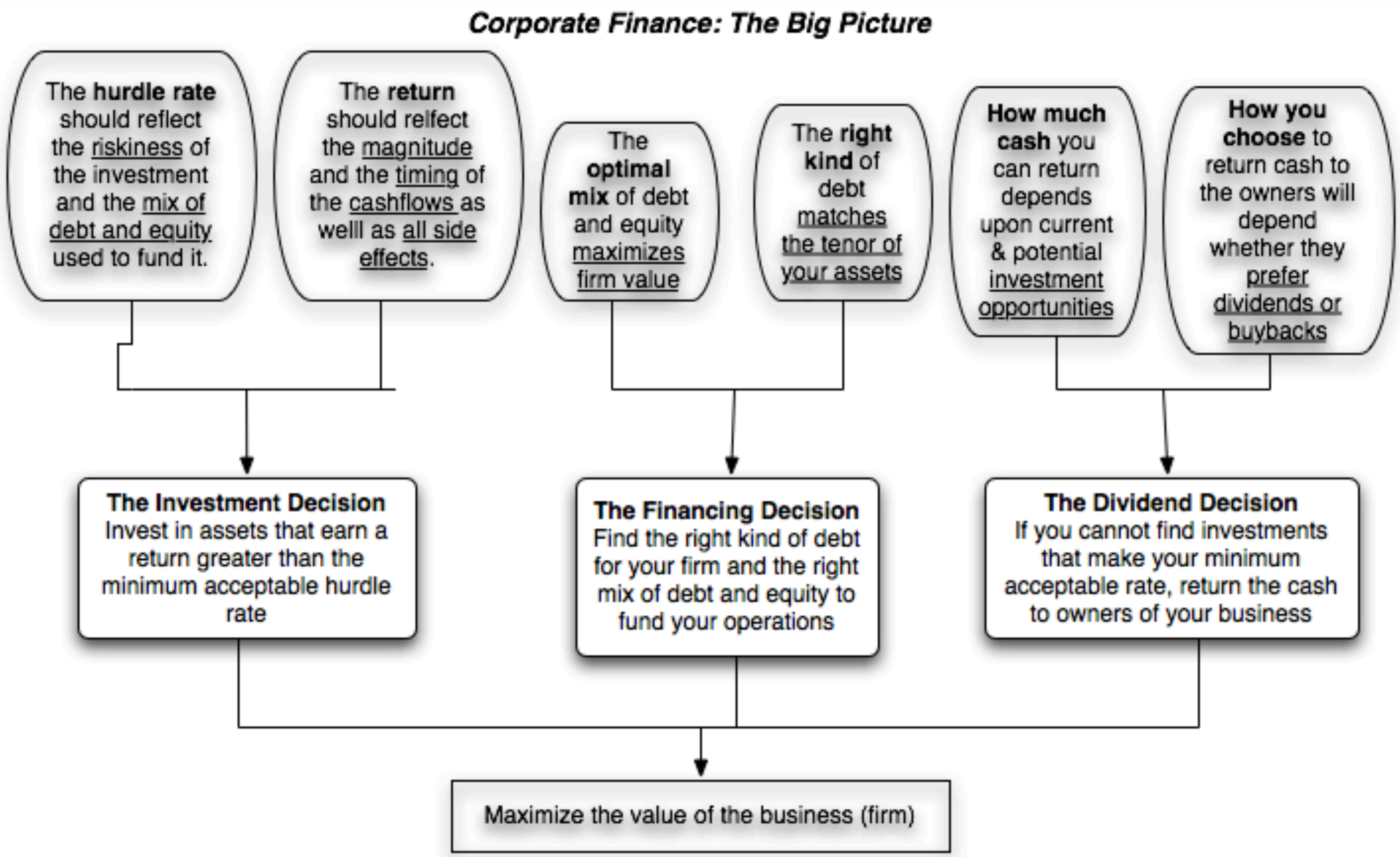
Lesson 2: Have a destination before you leave: Have a dominant objective that is measurable…

- <u>If you don’t have an objective</u>, your decision making process has no rudder. Each manager will then create his or her own vision of where the business is going, and make decisions based on that vision.
- <u>If you have multiple objectives</u>, you will still have to make choices. If you are not clear about which objective should dominate, managers again will pick their own dominant objectives, leading to them working at cross purposes.
- <u>If you have a fuzzy objective</u>, you are giving no guidance on both how decisions should be made and no accountability for decisions, once made.

What is L'Oreal's objective in business?

- The Beauty Mission? *Giving everyone access to beauty by offering products in harmony with their needs, culture and expectations in their infinite diversity.*
- The Innovation Mission? *The exploration of new scientific and technological territories….*
- The Global Mission? *Based on its international positions and its power of innovation, the Group's ambition is to conquer a billion new consumers by 2020*
- The Social Mission? *As a company which seeks to be exemplary, and sets itself demanding standards in order to limit its footprint on the planet.*

Here is my choice…



Lesson 3: In any business, you are juggling conflicting interests..

Consultants

Inside stockholders
Want to maximize value while retaining control

Outside stockholders
Want to maximize their returns (stock price plus dividends).

Auditors

Lenders
Bankers/Bondholders want to minimize credit risk and ensure that interest/principal get paid.

Board of Directors
Want to preserve personal connections with the managers and personal perks.

Managers
Want to maximize their compensation and increase personal marketability.

Society
Wants companies to add to economic pie without creating social costs.

Regulators
Want to ensure that you follow the rules and do not create problems for them.

Employees
Want to minimize job risk and maximize wages/ benefits.

Customers
Want the best possible product/service at the lowest price

Government

With the board of directors as a good example of the conflict of interest…

- In theory, the board of directors should work to protect the best interests of stockholders, monitoring top management to ensure that they do their fiduciary duty.
- In practice, boards are not effective because:
  - They are rubber stamps for CEOs: In many companies, the directors who sit on the board are picked by the CEO and inside stockholders. While outside stockholders get to nominally vote on these directors, they are not given any real say in the process.
  - Directors are ill equipped to play the role of monitors: Directors often lack the expertise to question top managers, lack the information to raise questions and the time to follow through.
  - Directors are generally not large stockholders nor do they represent them: In most companies, directors own only token stakes in the company.

The L'Oreal Board: Be the judge!

A diverse Board of Directors(1) striving to offer beauty for all

(1) Board members as of 31/12/2013.

1. JEAN-PAUL AGON
Chairman and CEO since March 18th, 2011
(term of office renewed in 2010).

2. JEAN-PIERRE MEYERS
Vice-Chairman of the Board
(term of office renewed in 2012).

3. PETER BRABECK-LETMATHE
Vice-Chairman of the Board
(term of office renewed in 2013).

4. FRANÇOISE BETTENCOURT MEYERS
(term of office renewed in 2013).

5. PAUL BULCKE
(since April 17th, 2012).

6. CHARLES-HENRI FILIPPI
(term of office renewed in 2011).

7. XAVIER FONTANET
(term of office renewed in 2010).

8. BERNARD KASRIEL
(term of office renewed in 2012).

9. CHRISTIANE KUEHNE
(since April 17th, 2012).

10. MARC LADREIT DE LACHARRIÈRE
(term of office renewed in 2010).

11. JEAN-VICTOR MEYERS
(since 2012).

12. VIRGINIE MORGON
(since April 26th, 2013).

13. ANNETTE ROUX
(term of office renewed in 2011).

14. LOUIS SCHWEITZER
(term of office renewed in 2013).

Lesson 4: Understand the essence of risk

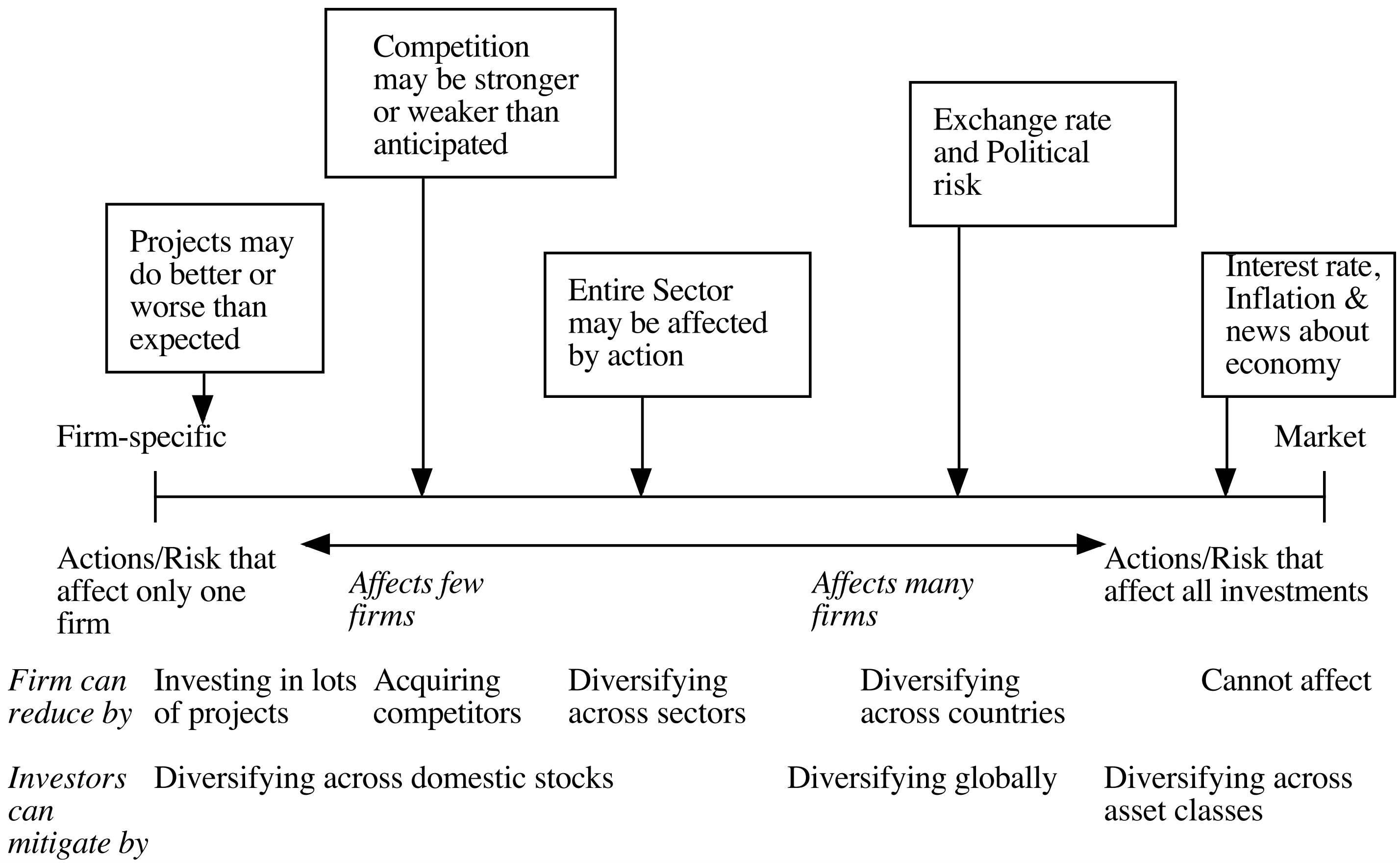
- Risk, in traditional terms, is viewed as a 'negative'. Webster's dictionary, for instance, defines risk as "exposing to danger or hazard". The Chinese symbols for risk, reproduced below, give a much better description of risk:

危機

- The first symbol is the symbol for "danger", while the second is the symbol for "opportunity", making risk a mix of danger and opportunity. You cannot have one, without the other.

Risk can come from many places…

Figure 3.5: A Break Down of Risk



And not all risk is made equal…

- If you are a sole owner of a business, <u>you are exposed to all of the risks in a business</u>. Thus, your hurdle rate should reflect those risks.
- If you are a publicly traded company, the game changes. As a manager, you have look at risk through the eyes of the marginal investor in your company. There are two criteria that go into being a marginal investor:
  - You need to own enough stock to make a difference. In other words, you have to be a large stockholder.
  - You have to trade that stock. Thus, a founder who owns a lot of stock but does not trade is not the marginal investor.
- If that marginal investor is a mutual fund or institutional investor, the only risk they see in an investment is the risk that it adds to a diversified portfolio. Consequently, the only risk you as a manager should build into your hurdle rate is the risk that cannot be diversified away.

Know your marginal investor..

OR FP € ↑ 130.00 +2.15 P129.95 /130.00P 178 x 89
At 11:36 d Vol 958,451 O 127.65P H 130.25P L 127.45P Val 123.93M

OR FP Equity 25) Settings Holders: Current
L'Oreal SA ISIN FR0000120321

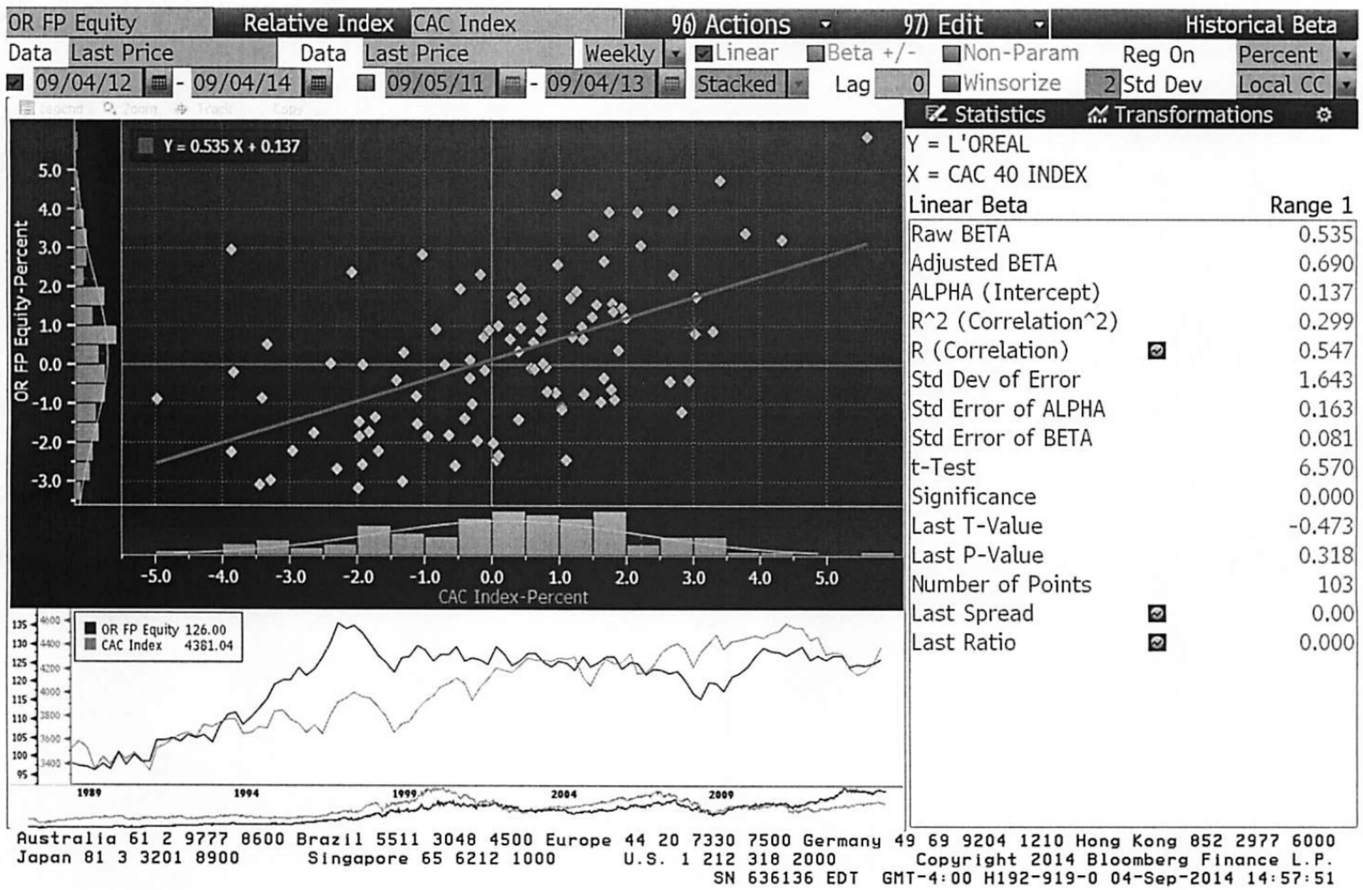
1) Current 2) Historical 3) Matrix 4) Ownership 5) Transactions 6) Options

Search Name -- 21) Save 22) Delete 3) Saved Search 24) Refine Search
Text Search Holder Group All Holders Allocate Multi-Managed 20) Export

	Holder Name	Portfolio Name	Source	Opt	Amt Held	% Out	Latest Chg	File Dt
			All Sources	All				
1.	BETTENCOURT FAMILY	n/a	Research		185,704,089	33.25	0	07/08/14
2.	NESTLE SA	n/a	Research		129,881,021	23.25	0	07/08/14
3.	NORGES BANK INVESTMENT M	NORGES BANK IM GOVER	MF-NOR		8,906,026	1.59	0	12/31/13
4.	L'OREAL SA	n/a	Co File		6,107,857	1.09	0	12/31/13
5.	VANGUARD GROUP INC	Multiple Portfolios	MF-AGG		5,585,899	1.00	-1,382	07/31/14
6.	BLACKROCK	n/a	ULT-AGG		4,550,787	0.81	-1,267,092	09/03/14
7.	HARBOR CAPITAL ADVISORS I	HARBOR INTERNATIONA	MF-USA		4,446,174	0.80	0	06/30/14
8.	CREDIT AGRICOLE SA	Multiple Portfolios	MF-AGG	Y	3,073,496	0.55	-483,676	07/31/14
9.	NATIXIS SA	n/a	ULT-AGG		1,850,856	0.33	-374,060	04/30/14
10.	FIDELITY MANAGEMENT & RES	Multiple Portfolios	MF-AGG		1,726,200	0.31	-48,946	07/31/14
11.	BANK OF NEW YORK MELLON	Multiple Portfolios	MF-AGG		1,583,554	0.28	-26,636	09/03/14
12.	ALLIANZ SE	n/a	ULT-AGG		1,462,780	0.26	4,475	06/30/14
13.	FIL LIMITED	n/a	ULT-AGG		1,460,706	0.26	800,432	04/30/14
14.	THREADNEEDLE ASSET MANAG	Multiple Portfolios	MF-AGG		1,416,261	0.25	-13,806	05/31/14
15.	CAPITAL GROUP COMPANIES	n/a	ULT-AGG		1,414,299	0.25	44,299	07/31/14
16.	COMGEST S A	Multiple Portfolios	MF-AGG		1,301,867	0.23	26,329	08/31/14
17.	DEUTSCHE BANK AG	n/a	ULT-AGG		1,165,584	0.21	-18,280	09/04/14
18.	MASSACHUSETTS FINANCIAL	Multiple Portfolios	MF-AGG		969,370	0.17	14,311	06/30/14
19.	LBPAM	Multiple Portfolios	MF-AGG		964,387	0.17	-38,030	06/30/14

% Out 69.38 Short Interest % Out n/a Zoom 100%

Your risk is not a statistical number or a greek alphabet..



But comes from your choices as a business..

Beta of Equity

Beta of Firm

Nature of product or service offered by company:
Other things remaining equal, the more discretionary the product or service, the higher the beta.

Implications
1. Cyclical companies should have higher betas than non-cyclical companies.
2. Luxury goods firms should have higher betas than basic goods.
3. High priced goods/service firms should have higher betas than low prices goods/services firms.
4. Growth firms should have higher betas.

Operating Leverage (Fixed Costs as percent of total costs):
Other things remaining equal the greater the proportion of the costs that are fixed, the higher the beta of the company.

Implications
1. Firms with high infrastructure needs and rigid cost structures shoudl have higher betas than firms with flexible cost structures.
2. Smaller firms should have higher betas than larger firms.
3. Young firms should have

Financial Leverage

Financial Leverage:
Other things remaining equal, the greater the proportion of capital that a firm raises from debt,the higher its equity beta will be

Implciations
Highly levered firms should have highe betas than firms with less debt.

Let's do an intuitive check on L'Oreal

- In your annual report, you break yourself down into six businesses:
   a. Consumer Products (growth = 5.8%)
   b. L'Oreal Luxe (growth = 6.8%)
   c. Professional Products
   d. Active Cosmetics
   e. The Body Shop
   f. Galderma

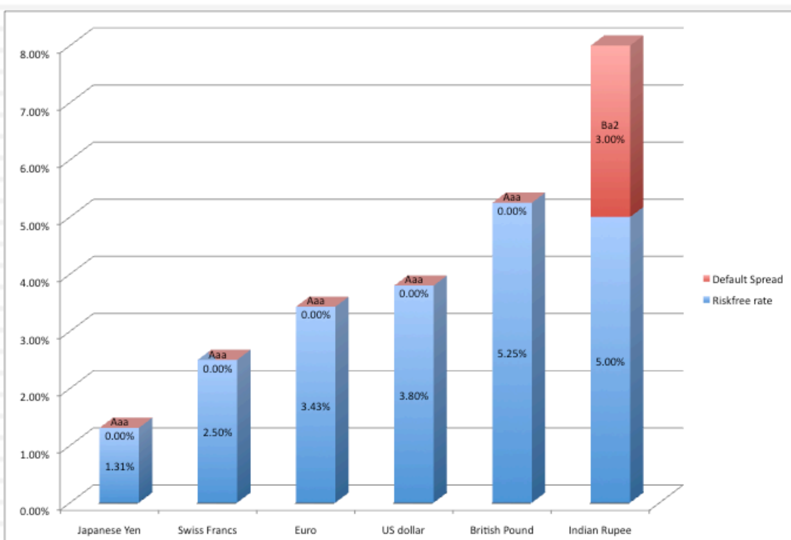
   Do you see them all as equally risky businesses? If not, how would you rank them (from most to least risky)?

Lesson 5: Know your "hurdle" rate

- Since financial resources are finite, there is a "hurdle rate" that projects have to cross before being deemed acceptable. A simple representation of the hurdle rate is as follows:

Hurdle rate = Riskless Rate + Risk Premium

In what currency are you estimating your hurdle rate?



How risky is the business that you are investing in?
Higher risk investments should have higher risk premiums than lower risk investments

How risky are the countries that you are investing in?
You should demand a higher risk premium for operating in riskier countries that safer countries

How are you financing this investment?
The hurdle rate is a function of your mix of debt & equity and how much it costs you to raise debt

ERP : Jan 2014

Andorra	6.80%	1.80%
Austria	5.00%	0.00%
Belgium	5.90%	0.90%
Cyprus	20.00%	15.00%
Denmark	5.00%	0.00%
Finland	5.00%	0.00%
France	5.60%	0.60%
Germany	5.00%	0.00%
Greece	20.00%	15.00%
Iceland	8.30%	3.30%
Ireland	8.75%	3.75%
Italy	7.85%	2.85%
Liechtenstein	5.00%	0.00%
Luxembourg	5.00%	0.00%
Malta	6.80%	1.80%
Netherlands	5.00%	0.00%
Norway	5.00%	0.00%
Portugal	10.40%	5.40%
Spain	8.30%	3.30%
Sweden	5.00%	0.00%
Switzerland	5.00%	0.00%
Turkey	8.30%	3.30%
United Kingdom	5.60%	0.60%
Western Europe	**6.29%**	**1.29%**

Canada	5.00%	0.00%
United States of America	5.00%	0.00%
North America	**5.00%**	**0.00%**

Argentina	14.75%	9.75%
Belize	18.50%	13.50%
Bolivia	10.40%	5.40%
Brazil	7.85%	2.85%
Chile	5.90%	0.90%
Colombia	8.30%	3.30%
Costa Rica	8.30%	3.30%
Ecuador	16.25%	11.25%
El Salvador	10.40%	5.40%
Guatemala	8.75%	3.75%
Honduras	13.25%	8.25%
Mexico	7.40%	2.40%
Nicaragua	14.75%	9.75%
Panama	7.85%	2.85%
Paraguay	10.40%	5.40%
Peru	7.85%	2.85%
Suriname	10.40%	5.40%
Uruguay	8.30%	3.30%
Venezuela	16.25%	11.25%
Latin America	**8.62%**	**3.62%**

Angola	10.40%	5.40%
Benin	13.25%	8.25%
Botswana	6.28%	1.28%
Burkina Faso	13.25%	8.25%
Cameroon	13.25%	8.25%
Cape Verde	13.25%	8.25%
DR Congo	14.75%	9.75%
Egypt	16.25%	11.25%
Gabon	10.40%	5.40%
Ghana	11.75%	6.75%
Kenya	11.75%	6.75%
Morocco	8.75%	3.75%
Mozambique	11.75%	6.75%
Namibia	8.30%	3.30%
Nigeria	10.40%	5.40%
Rep Congo	10.40%	5.40%
Rwanda	13.25%	8.25%
Senegal	11.75%	6.75%
South Africa	7.40%	2.40%
Tunisia	10.40%	5.40%
Uganda	11.75%	6.75%
Zambia	11.75%	6.75%
Africa	**10.04%**	**5.04%**

Albania	11.75%	6.75%
Armenia	9.50%	4.50%
Azerbaijan	8.30%	3.30%
Belarus	14.75%	9.75%
Bosnia and Herzegovina	14.75%	9.75%
Bulgaria	7.85%	2.85%
Croatia	8.75%	3.75%
Czech Republic	6.05%	1.05%
Estonia	6.05%	1.05%
Georgia	10.40%	5.40%
Hungary	8.75%	3.75%
Kazakhstan	7.85%	2.85%
Latvia	7.85%	2.85%
Lithuania	7.40%	2.40%
Macedonia	10.40%	5.40%
Moldova	14.75%	9.75%
Montenegro	10.40%	5.40%
Poland	6.28%	1.28%
Romania	8.30%	3.30%
Russia	7.40%	2.40%
Serbia	11.75%	6.75%
Slovakia	6.28%	1.28%
Slovenia	8.75%	3.75%
Ukraine	16.25%	11.25%
E. Europe & Russia	**7.96%**	**2.96%**

Abu Dhabi	5.75%	0.75%
Bahrain	7.85%	2.85%
Israel	6.05%	1.05%
Jordan	11.75%	6.75%
Kuwait	5.75%	0.75%
Lebanon	11.75%	6.75%
Oman	6.05%	1.05%
Qatar	5.75%	0.75%
Saudi Arabia	5.90%	0.90%
United Arab Emirates	5.75%	0.75%
Middle East	**6.14%**	**1.14%**

Bangladesh	10.40%	5.40%
Cambodia	13.25%	8.25%
China	5.90%	0.90%
Fiji	11.75%	6.75%
Hong Kong	5.60%	0.60%
India	8.30%	3.30%
Indonesia	8.30%	3.30%
Japan	5.90%	0.90%
Korea	5.90%	0.90%
Macao	5.90%	0.90%
Malaysia	6.80%	1.80%
Mauritius	7.40%	2.40%
Mongolia	11.75%	6.75%
Pakistan	16.25%	11.25%
Papua New Guinea	11.75%	6.75%
Philippines	8.30%	3.30%
Singapore	5.00%	0.00%
Sri Lanka	11.75%	6.75%
Taiwan	5.90%	0.90%
Thailand	7.40%	2.40%
Vietnam	13.25%	8.25%
Asia	**6.51%**	**1.51%**

Australia	5.00%	0.00%
Cook Islands	11.75%	6.75%
New Zealand	5.00%	0.00%
Australia & New Zealand	**5.00%**	**0.00%**

Black #: Total ERP
Red #: Country risk premium
AVG: GDP weighted average

One hurdle rate will generally not work across the company

- If you are a single business company, but you are a multinational, your hurdle rate will vary, depending on where you are investing. For instance, if we view L'Oreal as being just in the cosmetics business, which has a beta of 0.97 (adjusted up to 0.99, reflecting L'Oreal's debt), the cost of equity (even in US$ terms) will vary depending on where the investment is going to be made:

Region	*% of Loreal Revenues*	*Risk free Rate*	*Regional ERP*	*Beta for cosmetics*	*Cost of equity*
Africa	1.2	2.50%	10.04%	0.99	12.44%
Asia-Pacific	20.6	2.50%	6.51%	0.99	8.94%
Central and South America	8.9	2.50%	8.62%	0.99	11.04%
Eastern Europe	7.9	2.50%	7.96%	0.99	10.38%
Middle East	1.2	2.50%	6.14%	0.99	8.58%
North America	25.1	2.50%	5.00%	0.99	7.45%
Western Europe	35.1	2.50%	6.29%	0.99	8.73%
L"Oreal		**2.50%**	**6.40%**	**0.99**	**8.84%**

A Multi-business Company: Disney & a Question for L'Oreal

	Cost of equity	Cost of debt	Marginal tax rate	After-tax cost of debt	Debt ratio	Cost of capital
Media Networks	9.07%	3.75%	36.10%	2.40%	9.12%	8.46%
Parks & Resorts	7.09%	3.75%	36.10%	2.40%	10.24%	6.61%
Studio Entertainment	9.92%	3.75%	36.10%	2.40%	17.16%	8.63%
Consumer Products	9.55%	3.75%	36.10%	2.40%	53.94%	5.69%
Interactive	11.65%	3.75%	36.10%	2.40%	29.11%	8.96%
Disney Operations	8.52%	3.75%	36.10%	2.40%	11.58%	7.81%

Earlier, we looked at L'Oreal's multiple business lines. Do you think that you should be giving them different costs of equity and capital and demanding higher returns in some than others?

Lesson 6: Your investments need to earn returns that beat the hurdle rate…

- Your hurdle rate is both a cost of financing your business and an opportunity cost, i.e,, a return you can make elsewhere if you invest in a project of equivalent risk. If that is the case, you should only take investments that generate returns that earn more than the hurdle rate.
- To measure returns, though, here are three simple propositions to follow:
  1. Look at the cash flows that you will make on the investment, rather than earnings. You cannot spend earnings.
  2. Look at incremental cash flows that come out because of the investment. Be wary of allocated costs (that will be there whether you take the investment or not) and ignore sunk costs (costs that you have already incurred).
  3. Time weight the cash flows, with cash flows occurring earlier being valued more than cash flows later.

Here is a short cut that you can use to assess the quality of your existing investments…

Adjust EBIT for
a. Extraordinary or one-time expenses or income
b. Operating leases and R&D
c. Cyclicality in earnings (Normalize)
d. Acquisition Debris (Goodwill amortization etc.)

Use a marginal tax rate to be safe. A high ROC created by paying low effective taxes is not sustainable

$$ROC = \frac{\text{EBIT (1- tax rate)}}{\text{Book Value of Equity + Book value of debt - Cash}}$$

Adjust book equity for
1. Capitalized R&D
2. Acquisition Debris (Goodwill)

Adjust book value of debt for
a. Capitalized operating leases

Use end of prior year numbers or average over the year but be consistent in your application

Your best businesses, your worst ones and where you stand as a company..

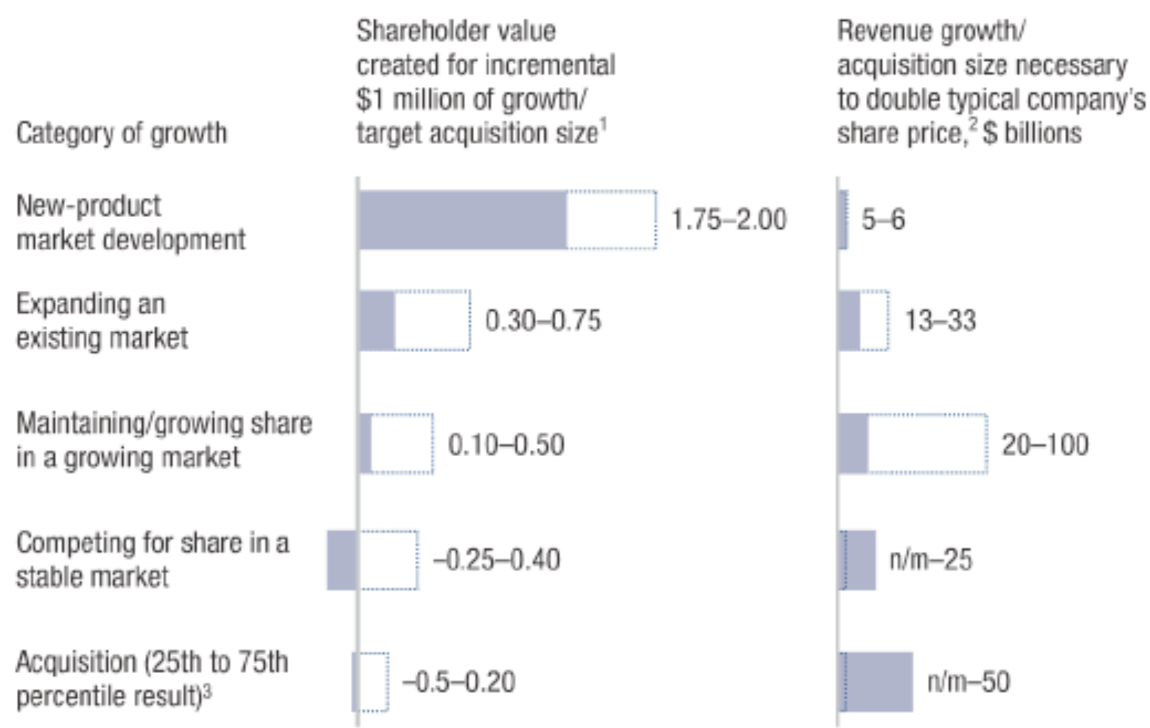
Business	*Revenues*	*Operating Income*	*Operating Assets*	*Invested Capital*	*Tax Rate*	*Operating Margin*	*ROIC*	*Cost of capital*	*Excess Return*
Professional Products	2,984 €	610 €	3,014 €	4,028 €	26.41%	15.04%	11.15%	8.65%	2.50%
Consumer Products	10,873 €	2,167 €	6,449 €	8,618 €	26.41%	14.67%	18.50%	8.65%	9.85%
L'Oreal Lux	5,865 €	1,174 €	4,383 €	5,857 €	26.41%	14.73%	14.75%	8.65%	6.10%
Active Cosmetics	1,602 €	340 €	833 €	1,113 €	26.41%	15.62%	22.48%	8.65%	13.83%
Cosmetics	*21,324 €*	*4,291 €*	*14,679 €*	*19,616 €*	*26.41%*	*14.81%*	*16.10%*	*8.65%*	*7.45%*
The Body Shop	*836 €*	*72 €*	*1,197 €*	*1,600 €*	*26.41%*	*6.34%*	*3.31%*	*8.65%*	*-5.34%*
Dermatology	*826 €*	*117 €*	*1,159 €*	*1,549 €*	*26.41%*	*10.42%*	*5.56%*	*8.65%*	*-3.09%*
Overall Company	**22,977 €**	**3,875 €**	**17,634 €**	**23,565 €**	**26.41%**	**12.41%**	**12.10%**	**8.65%**	**3.45%**

Lesson 7: Acquisitions are just big investments and have to meet the same standards..

- An acquisition is just a large-scale project. All of the rules that apply to individual investments apply to acquisitions, as well. For an acquisition to create value, it has to
  - Generate a higher return on capital, after allowing for synergy and control factors, than the cost of capital.
  - Put another way, an acquisition will create value only if the present value of the cash flows on the acquired firm, inclusive of synergy and control benefits, exceeds the cost of the acquisitons
- A divestiture is the reverse of an acquisition, with a cash inflow now (from divesting the assets) followed by cash outflows (i.e., cash flows foregone on the divested asset) in the future. If the present value of the future cash outflows is less than the cash inflow today, the divestiture will increase value.
- A fair-price acquisition or divestiture is value neutral.

And of all the ways to create growth, acquisitions rank worst…

Modes of organic growth vary in value creation intensity—consumer goods industry



Lesson 8: You have only two ways of raising funding for a business…

Figure 7.1: Debt versus Equity

Fixed Claim
Tax Deductible
High Priority in Financial Trouble
Fixed Maturity
No Management Control

Residual Claim
Not Tax Deductible
Lowest Priority in Financial Trouble
Infinite
Management Control

Debt
Bank Debt
Commercial Paper
Corporate Bonds

Hybrid Securities
Convertible Debt
Preferred Stock
Option-linked Bonds

Equity
Owner's Equity
Venture Capital
Common Stock
Warrants

And here is the trade off….

Advantages of Debt	*Disadvantages of debt*
1. Tax Benefit: Interest expenses on debt are tax deductible but cash flows to equity are generally not. *Implication: The higher the marginal tax rate, the greater the benefits of debt.*	**1. Expected Bankruptcy Cost**: The expected cost of going bankrupt is a product of the probability of going bankrupt and the cost of going bankrupt. The latter includes both direct and indirect costs. The probability of going bankrupt will be higher in businesses with more volatile earnings and the cost of bankruptcy will also vary across businesses. *Implication:* *1. Firms with more stable earnings should borrow more, for any given level of earnings.* *2. Firms with lower bankruptcy costs should borrow more, for any given level of earnings.*
2. Added Discipline: Borrowing money may force managers to think about the consequences of the investment decisions a little more carefully and reduce bad investments. *Implication: As the separation between managers and stockholders increases, the benefits to using debt will go up.*	**2. Agency Costs**: Actions that benefit equity investors may hurt lenders. The greater the potential for this conflict of interest, the greater the cost borne by the borrower (as higher interest rates or more covenants). *Implication: Firms where lenders can monitor/ control how their money is being used should be able to borrow more than firms where this is difficult to do.*
	3. Loss of flexibility: Using up available debt capacity today will mean that you cannot draw on it in the future. This loss of flexibility can be disastrous if funds are needed and access to capital is shut off. *Implication:* 1. *Firms that can forecast future funding needs better should be able to borrow more.* 2. *Firms with better access to capital markets should be more willing to borrow more today.*

Lesson 9: There is a "right" mix of debt and equity for your business…

Bankruptcy costs are built into both the cost of equity the pre-tax cost of debt

Tax benefit is here

Cost of capital = Cost of Equity (Equity/ (Debt + Equity)) + Pre-tax cost of debt (1- tax rate) (Debt/ (Debt + Equity)

As you borrow more, he equity in the firm will become more risky as financial leverage magnifies business risk. The cost of equity will increase

As you borrow more, your default risk as a firm will increase pushing up your cost of debt.

At some level of borrowing, your tax benefits may be put at risk, leading to a lower tax rate.

Be wary of companies that are too aggressive… and too conservative… in their use of debt…

- If you use too little debt (you are too conservative), you are missing the tax benefits from using debt that would have lowered your cost of capital and increased your value as a business.
  - *Prime candidates: Mature companies that have large, stable cash flows, face high tax rates and use little or no debt to capitalize themselves.*
  - *Fixes: At the minimum, borrow more when funding new projects and pay more dividends. More radically, borrow money and recapitalize.*
- If you use too much debt, your tax benefits may be overwhelmed by the cost of distress and default. Consequently, you have a higher cost of capital and lower value as a business, because you have chosen to borrow too much.
  - *Prime candidates: Companies in risky businesses that have other fixed commitments to meet and low or volatile income, while borrowing large amounts.*
  - *Fixes At the minimum, cut back or stop paying dividends and utilize retained earnings to fund investments. More radically, raise new equity and retire debt.*

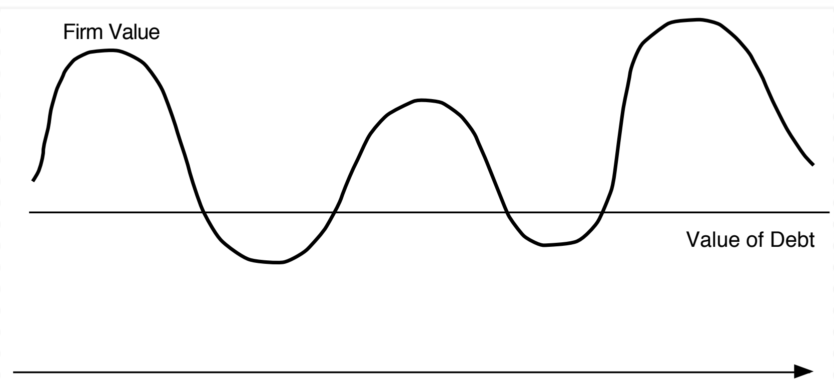
L'Oreal: Current versus Optimal

Debt Ratio	Beta	Cost of Equity	Bond Rating	Interest rate on debt	Tax Rate	Cost of Debt (after-tax)	WACC	Enterprise Value
0%	0.9701	8.71%	Aaa/AAA	2.90%	33.33%	1.93%	8.71%	$62,158
3%	0.99	8.84%	Aaa/AAA	2.90%	33.33%	1.93%	8,63%	$62,954
10%	1.0420	9.17%	Aaa/AAA	2.90%	33.33%	1.93%	8.45%	$64,913
20%	1.1318	9.74%	Aaa/AAA	2.90%	33.33%	1.93%	8.18%	$67,925
30%	1.2473	10.48%	A1/A+	3.35%	33.33%	2.23%	8.01%	$70,066
40%	1.4013	11.47%	A3/A-	3.80%	33.33%	2.53%	7.89%	$71,541
50%	1.6169	12.85%	Caa/CCC	11.25%	33.33%	7.50%	10.17%	$50,288
60%	1.9804	15.17%	Caa/CCC	11.25%	30.58%	7.81%	10.76%	$46,747
70%	2.6776	19.64%	Ca2/CC	12.00%	24.57%	9.05%	12.23%	$39,676
80%	4.0805	28.62%	C2/C	13.00%	19.85%	10.42%	14.06%	$33,387
90%	8.1610	54.73%	C2/C	13.00%	17.64%	10.71%	15.11%	$30,607

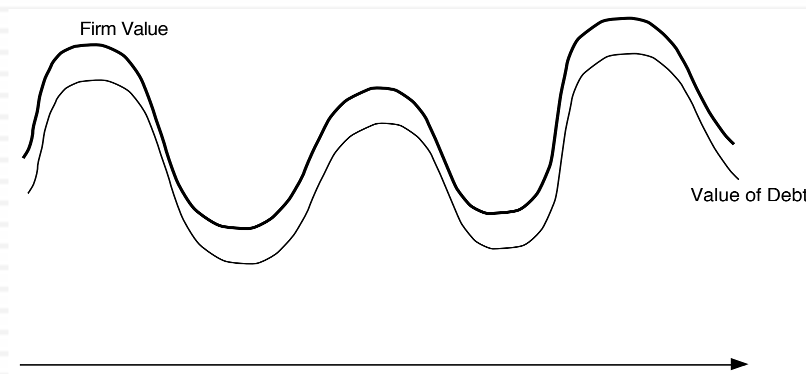
Lesson 10: The "right" debt for your firm depends on your firm

- The objective in designing debt is to make the cash flows on debt match up as closely as possible with the cash flows that the firm makes on its assets.
- By doing so, we reduce our risk of default, increase debt capacity and increase firm value.

Unmatched Debt

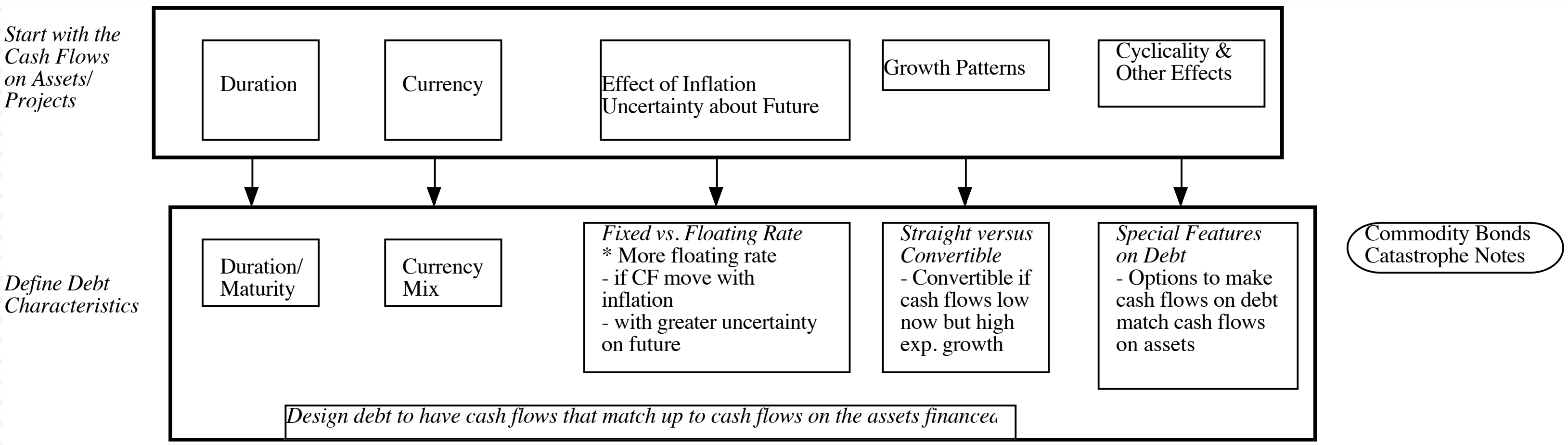


Matched Debt

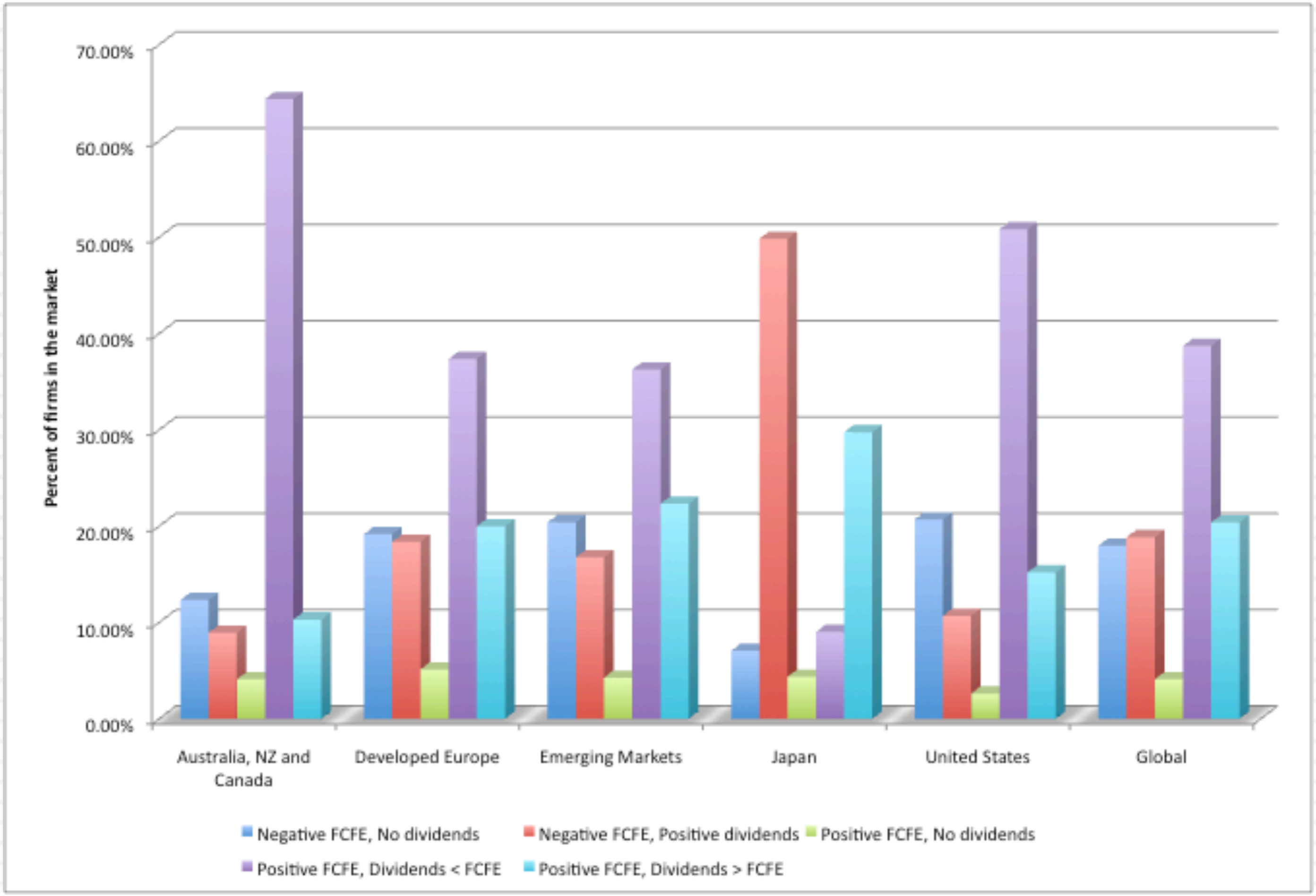


The perfect debt for you is….

- The perfect financing instrument will
  - Have all of the tax advantages of debt
  - While preserving the flexibility offered by equity

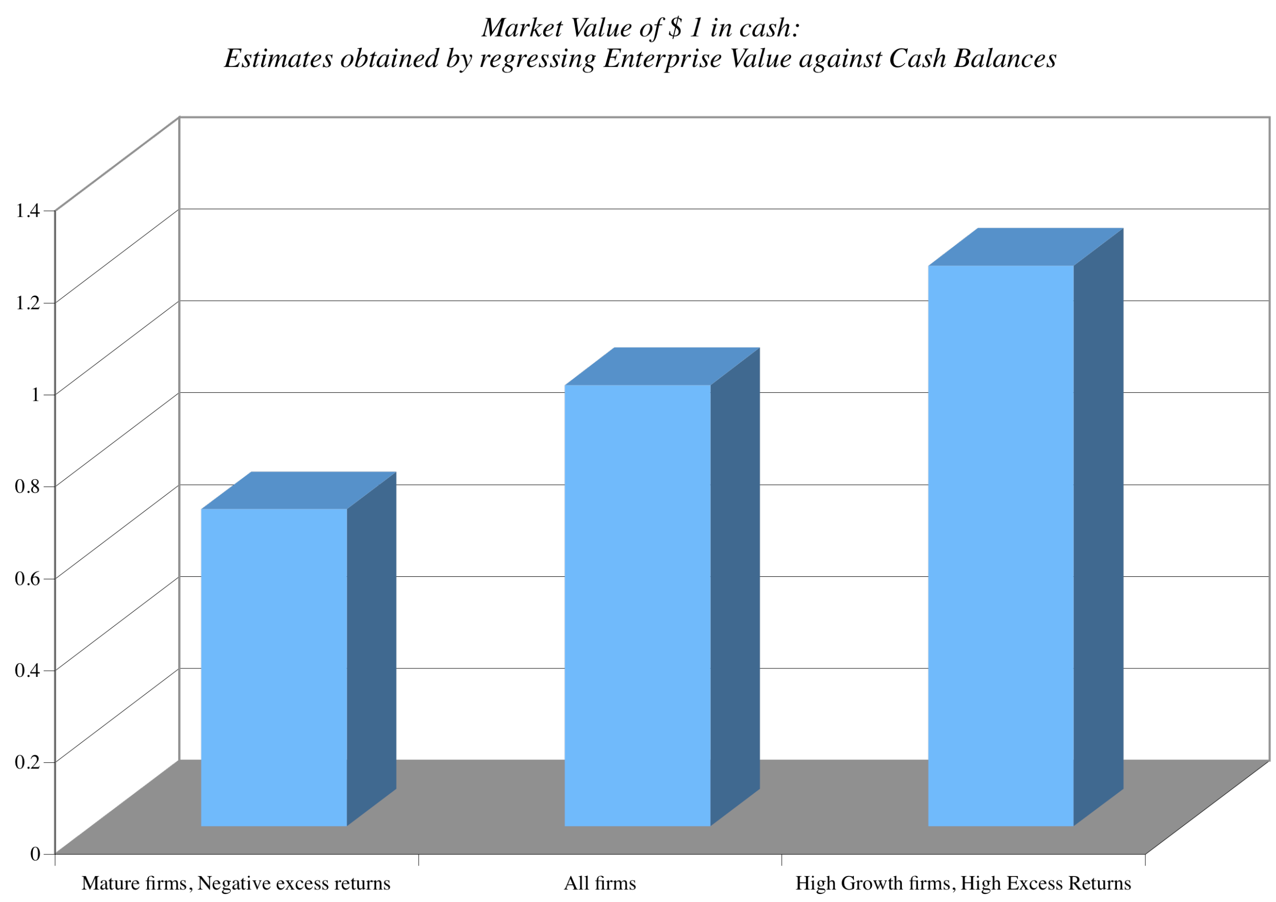


Lesson 11: Cash is not accumulated by accident, & cash does not belong to the company

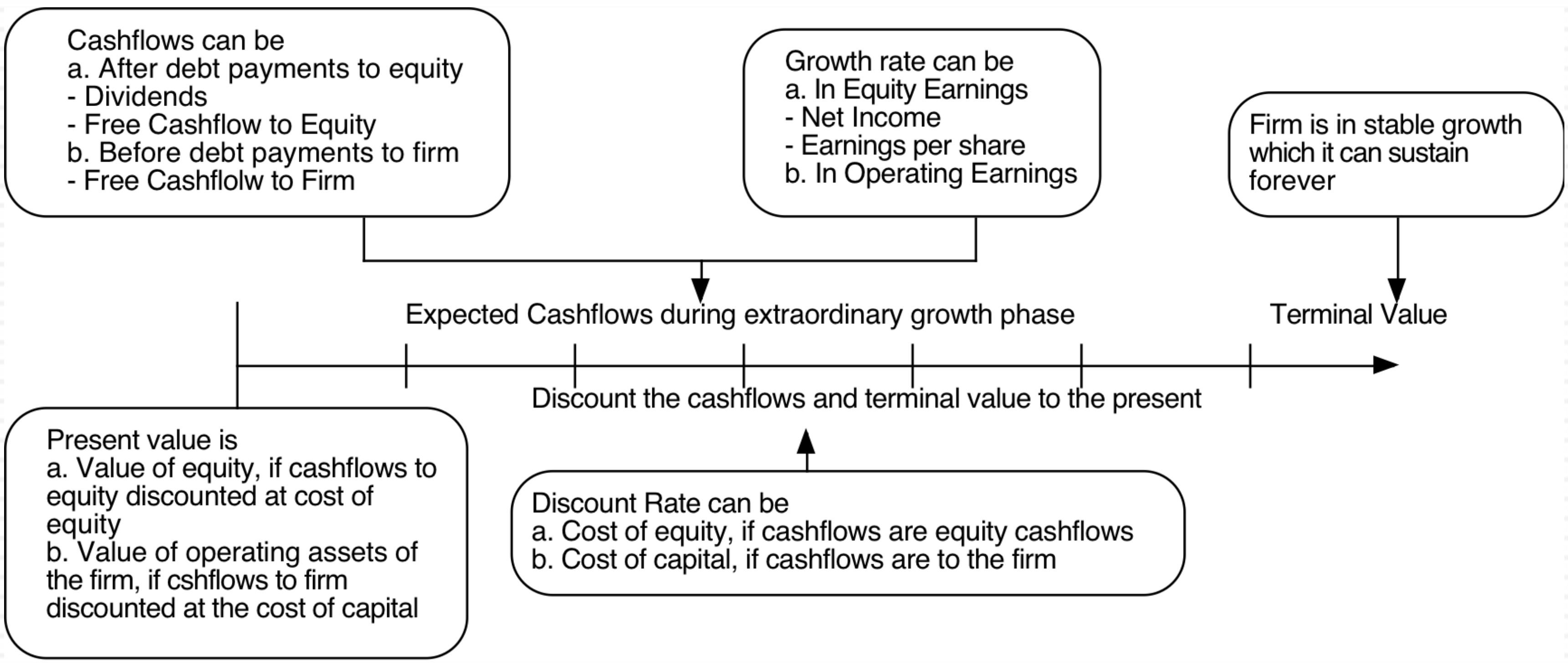


FCFE = Potential Dividends = Cash left over after all operating expenses, taxes, reinvestment and debt payments have been made.

Not all cash balances are created equal…



Lesson 12: The value of your business is a function of these variables…



L'Oreal: September 2014

	L"Oreal	Industry
Revenues	$ 22,977	
Operating income	$ 3,875	
Revenue growth	2.29%	4.78%
Pre-tax operating margin	18.25%	10.51%
Sales to capital ratio	1.12	2.57
Return on invested capital	14.74%	17.09%

Revenue Growth
5%/ year for next 5 years, scaling down to 2.5% in year 10

Operating Margin
Stays at 18.25%

Sales/ Capital ratio
of 1.50

Stable Growth
g = 2.5%; Beta = 1.00
Cost of capital = 8.00%
Tax rate = 26.41%
ROC= 10%;
Reinvestment Rate=g/ROC
=2.5%/ 10%= 25%

Terminal Value$_{10}$= 3,596/(..08-.025) = $65,389

EBIT (1-t) = $4,795
- Reinvestment = $1,199
= FCFF = $3,596

$ Cashflows

	1	2	3	4	5	6	7	8	9	10
EBIT(1-t)	$ 3,240.98	$ 3,403.03	$ 3,573.18	$ 3,751.84	$ 3,939.43	$ 4,116.71	$ 4,281.38	$ 4,431.22	$ 4,564.16	$ 4,678.26
- Reinvestment	$ 765.90	$ 804.20	$ 844.40	$ 886.62	$ 930.96	$ 879.75	$ 817.19	$ 743.65	$ 659.72	$ 566.26
FCFF	$ 2,475.08	$ 2,598.84	$ 2,728.78	$ 2,865.22	$ 3,008.48	$ 3,236.95	$ 3,464.18	$ 3,687.58	$ 3,904.44	$ 4,112.00

Op. Assets $49,219
+ Cash: 2,607
- Debt 1,905
+ Cross holds 11,852
=Equity $61,773
- Options 644
Value/Share $100.81

Cost of capital = 8.84% (.8703) + 1.98% (.0297) = 8.65%

Growth declines to 2.5% and cost of capital moves to stable period level.

Cost of Equity
8.84%

Cost of Debt
(2.50%+0.80%)(1-.3333) = 2.20%

Weights
E = 87.02% D = 2.97%

On September 2, 2014
L"Oreal Price = $104.90/share

Riskfree Rate:
Riskfree Rate= 2.50%

+

Beta
0.99

X

Equity Risk Premium
6.40%

Unlevered Beta for Sectors: 0.97

Firm's D/E Ratio: 3.91%

Africa	1.2	10.04%
Asia-Pacific	20.6	6.51%
Latin America	8.9	8.62%
Eastern Europe	7.9	7.96%
Middle East	1.2	6.14%
North America	25.1	5.00%
Western Europe	35.1	6.29%
L"Oreal		**6.40%**

And here is how you can change your value