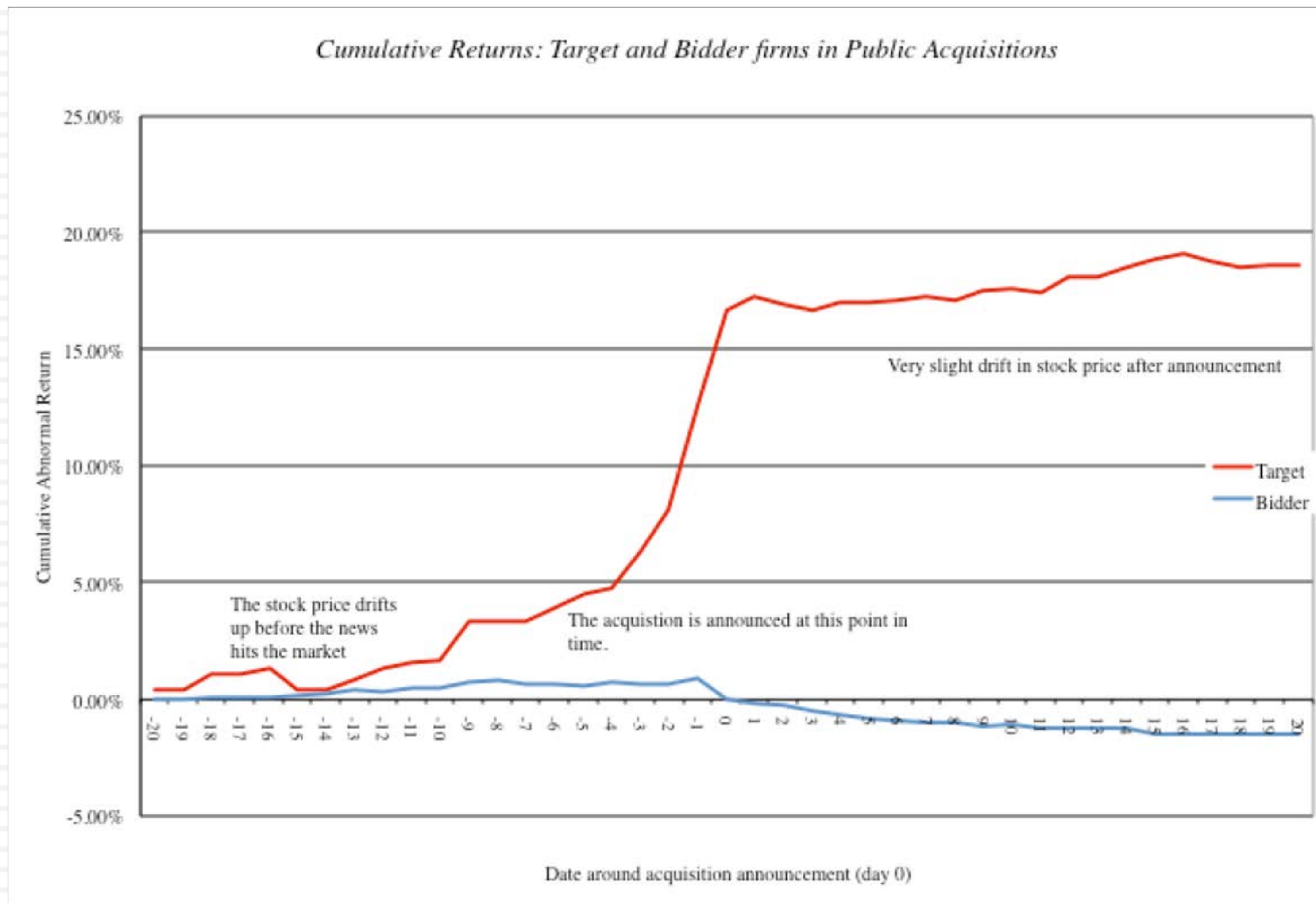
Acquirers Anonymous: Seven Steps to Business Sobriety…

Aswath Damodaran

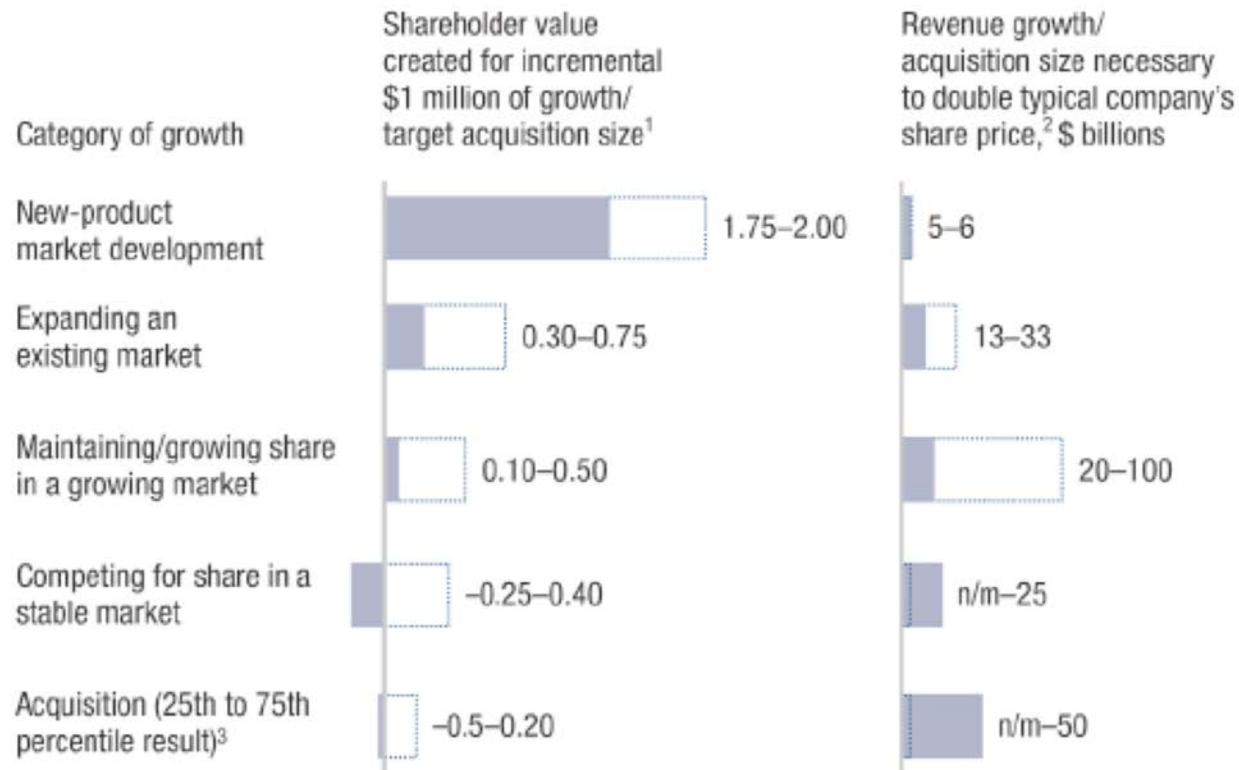
Acquisitions are great for target companies but not always for acquiring company stockholders…



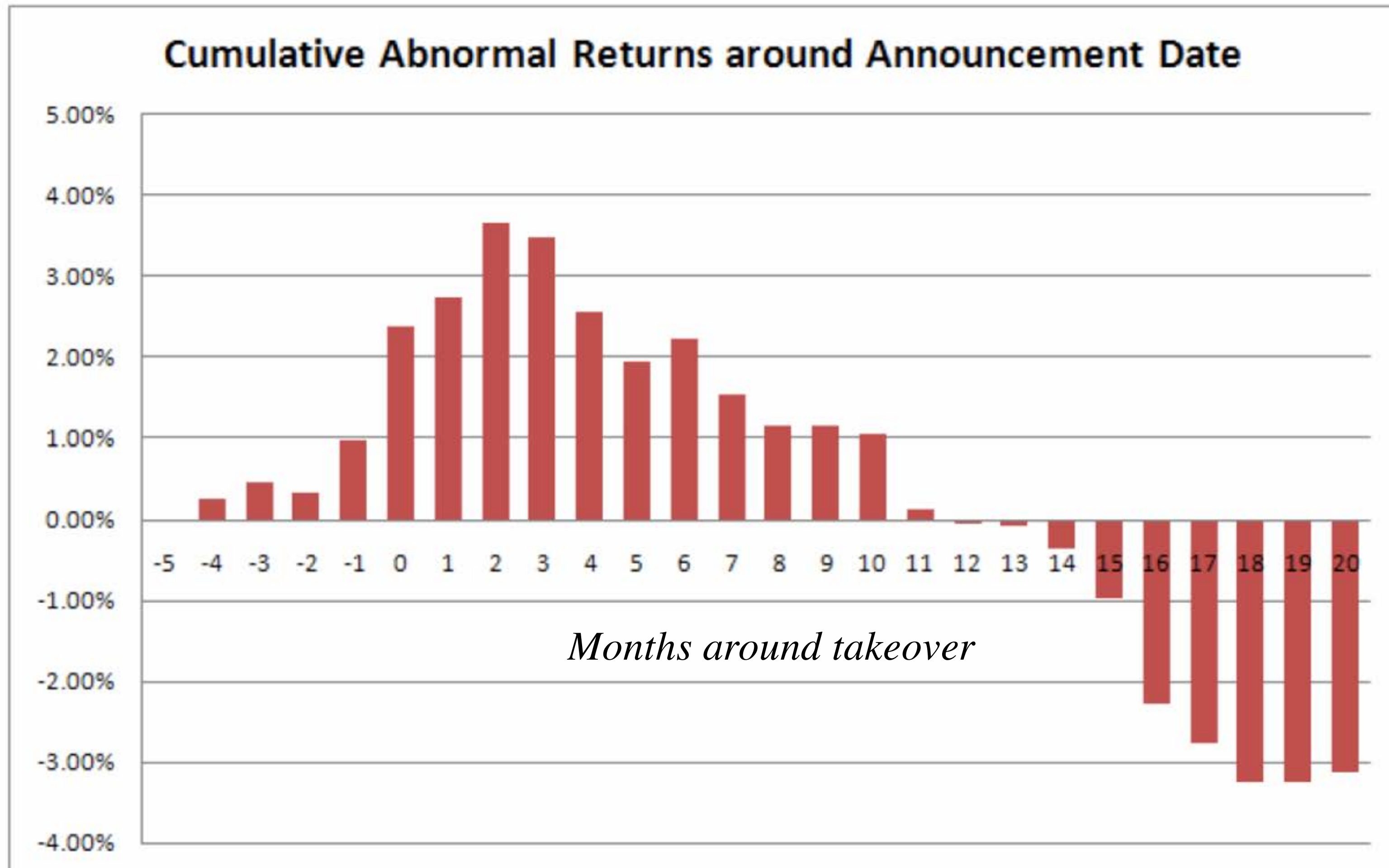
And the long-term follow up is not positive either..

- Managers often argue that the market is unable to see the long term benefits of mergers that they can see at the time of the deal. If they are right, mergers should create long term benefits to acquiring firms.
- The evidence does not support this hypothesis:
  1. McKinsey and Co. has examined acquisition programs at companies on whether acquirers earn more than the cost of capital and whether they outperform their peers and find most wanting.
  2. Synergy is elusive. KPMG in a study of global acquisitions concludes that most mergers (>80%) fail - the merged companies do worse than their peer group.
  3. A large number of acquisitions that are reversed within fairly short time periods. About 20% of the acquisitions made between 1982 and 1986 were divested by 1988. In studies that have tracked acquisitions for longer time periods (ten years or more) the divestiture rate of acquisitions rises to almost 50%.

Payoff on Growth Strategies



The disease is spreading… Indian firms acquiring US targets – 1999 - 2005



Growing through acquisitions seems to be a “loser’s game”

- Firms that grow through acquisitions have generally had far more trouble creating value than firms that grow through internal investments.
- In general, acquiring firms tend to
  - Pay too much for target firms
  - Over estimate the value of “synergy” and “control”
  - Have a difficult time delivering the promised benefits
- Worse still, there seems to be very little learning built into the process. The same mistakes are made over and over again, often by the same firms with the same advisors.
- **Conclusion: There is something structurally wrong with the process for acquisitions which is feeding into the mistakes.**

Acquisition Sins

The seven sins in acquisitions…

1. Risk Transference: Attributing acquiring company risk characteristics to the target firm.
2. Debt subsidies: Subsiding target firm stockholders for the strengths of the acquiring firm.
3. Auto-pilot Control: The "20% control premium" and other myths…
4. Elusive Synergy: Misidentifying and mis-valuing synergy.
5. Its all relative: Transaction multiples, exit multiples…
6. Verdict first, trial afterwards: Deal first, valuation to follow
7. Not my fault: Holding no one responsible for delivering results.

Your Testing Sheet

Test	Passed/Failed	Rationalization
Risk transference		
Debt subsidies		
Control premium		
The value of synergy		
Comparables and Exit Multiples		
Bias		
A successful acquisition strategy		

Lets start with a target firm

- The target firm has the following income statement:

	Next Year
Revenues	$ 100.00
Operating Expenses (includes depreciation of $20 million)	$ 80.00
Pre-tax Operating Income	$ 20.00
Taxes	$ 8.00
After-tax Operating Income	$ 12.00

- Assume that this firm will generate this operating income forever (with no growth) and that the cost of equity for this firm is 20%. The firm has no debt outstanding. What is the value of this firm?

Test 1: Risk Transference…

- Assume that as an acquiring firm, you are in a much safer business and have a cost of equity of 10%. What is the value of the target firm to you?

a) $60 million
b) $90 million
c) $120 million
d) Other

Lesson 1: Don't transfer your risk characteristics to the target firm

- Let's start with a basic capital budgeting principle, which is often ignored: **The discount rate used for an investment should reflect the risk of the investment and not the risk characteristics of the investor who raised the funds.**
    - Risky businesses cannot become safe just because the buyer of these businesses is in a safe business.
    - The right cost of equity to use in valuation is the one that reflects the risk in equity in the target firm.

If you fail this test..

- Risky firms will look cheap to you: If you use your (acquirer's) cost of equity and capital in valuing a target firm, you will find that risky firms look under valued.
- You will pay too much for these risky firms: It follows then that you will pay a premium over what you should pay (even though it looks like a bargain relative to your assessed value.
- You will become a risky (and bad) firm: Over time, you (the acquiring firm) will become not just a much riskier firm, but one that has been built up through over investing in risky projects.

Test 2: Cheap debt?

- Assume as an acquirer that you have both excess debt capacity (because you have not chosen to borrow as much as you could have, given your assets) and access to cheap debt.
- You plan to borrow money at 4% (in after-tax terms) and that you plan to fund half the acquisition with debt. How much would you be willing to pay for the target firm?

Lesson 2: Render unto the target firm owners that which is theirs, not a penny more..

- As an acquiring firm, it is entirely possible that you can borrow much more than the target firm can on its own and at a much lower rate.
- If you build these characteristics into the valuation of the target firm, you are essentially transferring wealth from your firm's stockholder to the target firm's stockholders.
- When valuing a target firm, use a cost of capital that reflects the debt capacity and the cost of debt that would apply to the firm.

If you fail this test…

- You will subsidize target firms: If you use your (acquirer's) cost of debt and debt capacity to compute a cost of capital to value a target firm, you will be subsidizing the target firm shareholders for something (your debt capacity + low cost of debt) that they had no role in creating. That is investing malpractice.
- The subsidy gets worse, if you are not adjusting your cost of debt for the higher debt that you will have, post-acquisition, and the changed riskiness of the combined firm, after the deal.

Test 3: Control Premiums

- Assume that you are now told that it is conventional to pay a 20% premium for control in acquisitions.
- That premium is justified by pointing to historical studies that show that this is what acquirers pay for control, i.e., pay roughly a 20% premium over the market price.
  1. How much would you be willing to pay for the target firm?
  2. Assuming that you are paying a control premium, how would you justify it?

The Shaky Origins of the 20% Control Premium!

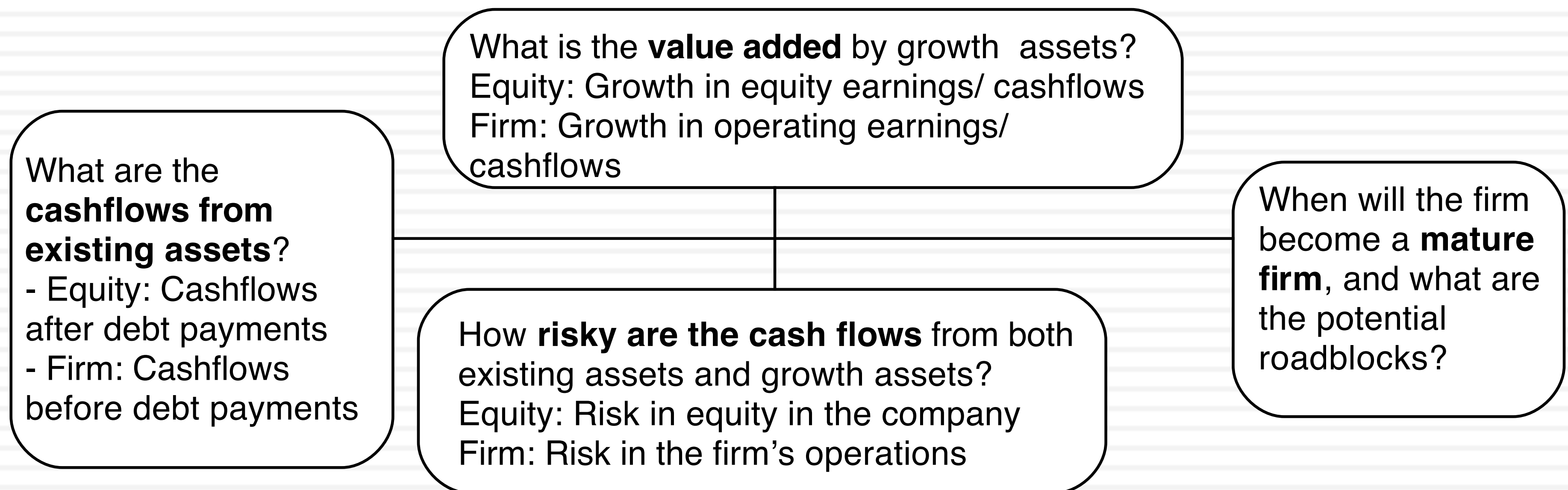
- Me-tooism is not great rationale: Just because everyone does it does not make it right.
- Price premium also covers other motives: Even if this is the right premium, on average, it is a premium for everything in a merger, not just control.
- And if it is on a publicly traded firm, it is a pricing premium: The premium is the premium over the market price, not intrinsic value.

The Expected Value of Control

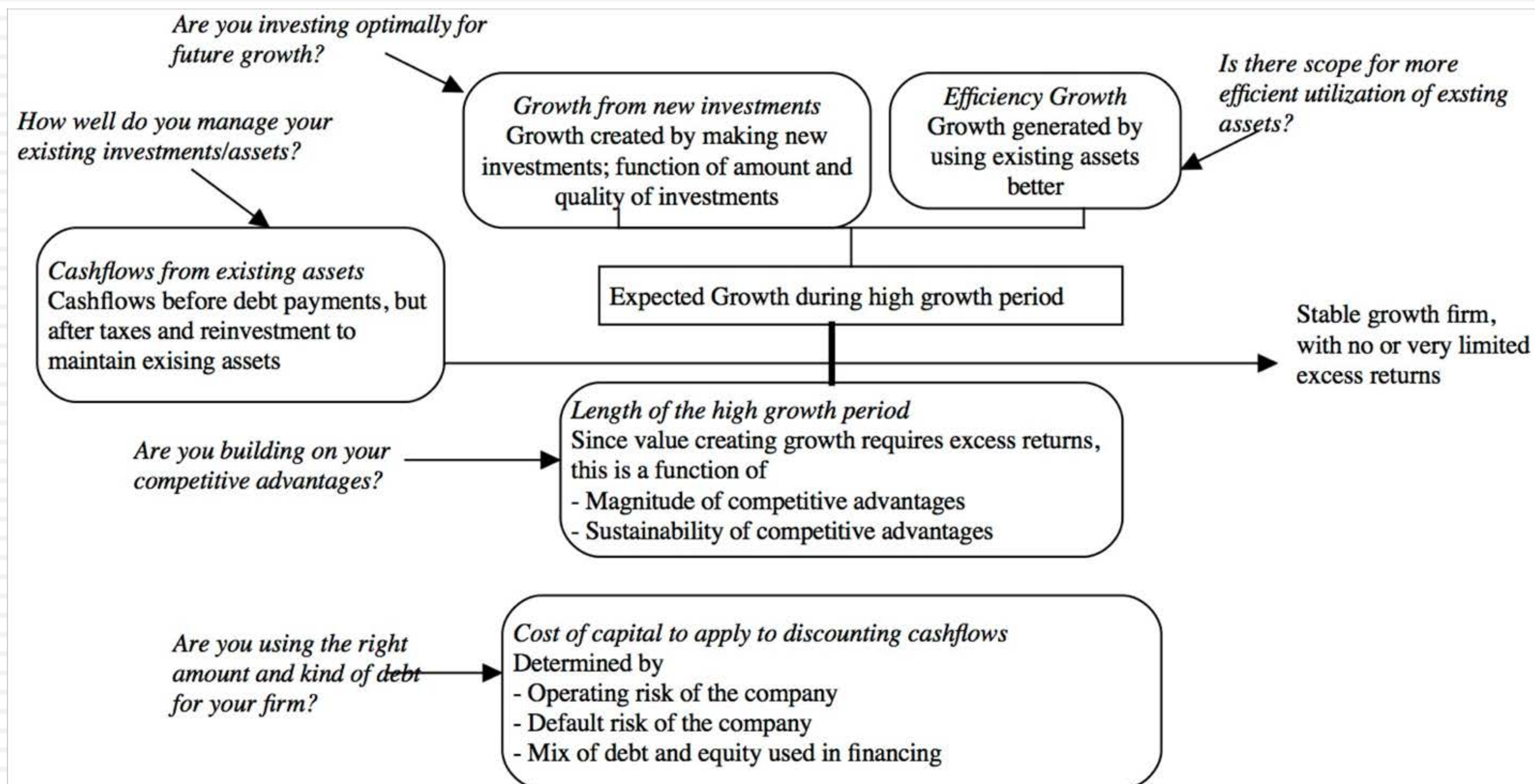
- The value of the control premium that will be paid to acquire a block of equity will depend upon two factors -
  - **Probability that control of firm will change**: This refers to the probability that incumbent management will be replaced. This can be either through acquisition or through existing stockholders exercising their muscle.
  - **Value of Gaining Control of the Company:** The value of gaining control of a company arises from two sources - the increase in value that can be wrought by changes in the way the company is managed and run, and the side benefits and perquisites of being in control

Value of Gaining Control = Present Value (Value of Company with change in control - Value of company without change in control)

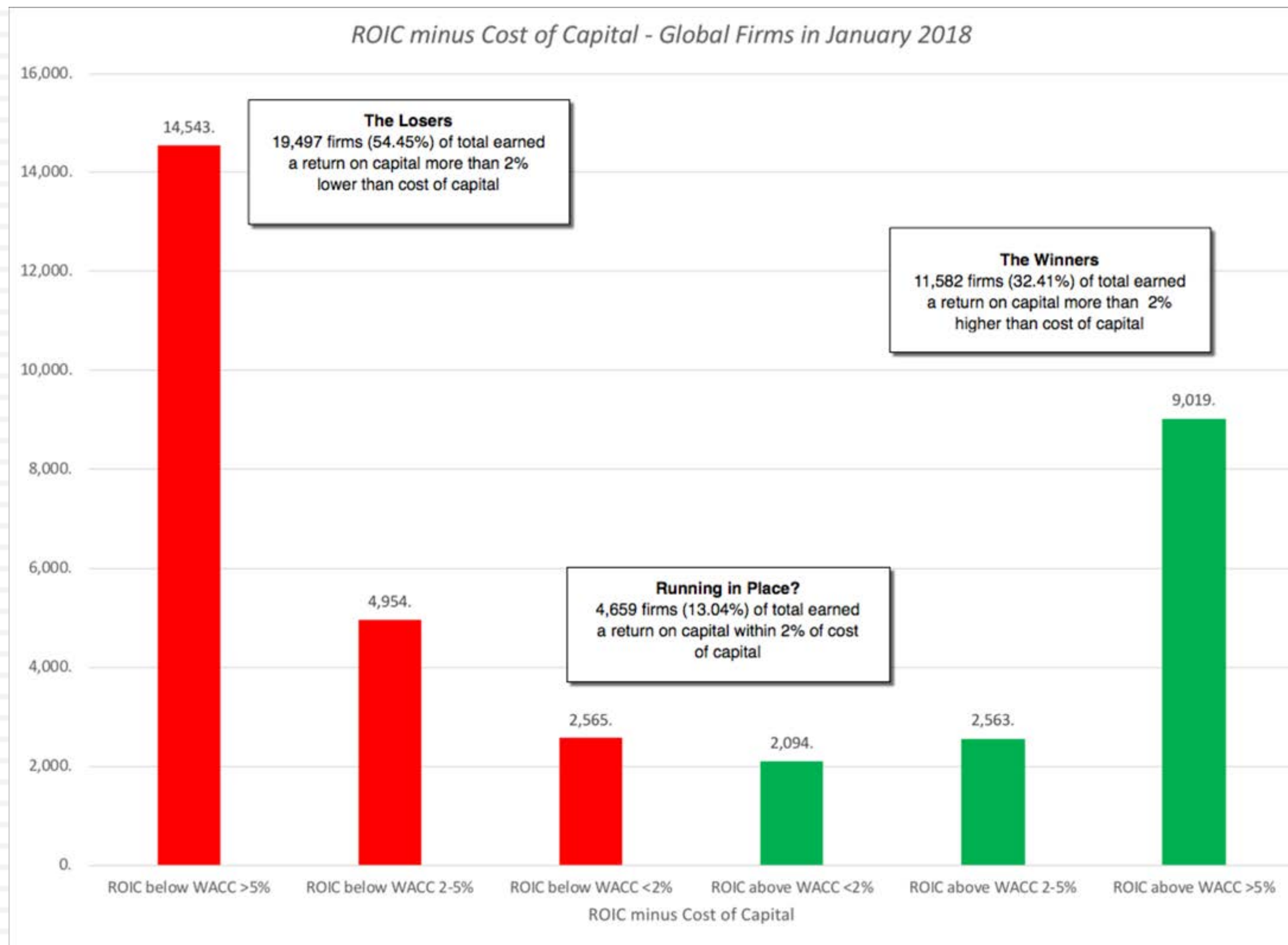
The Drivers of Value



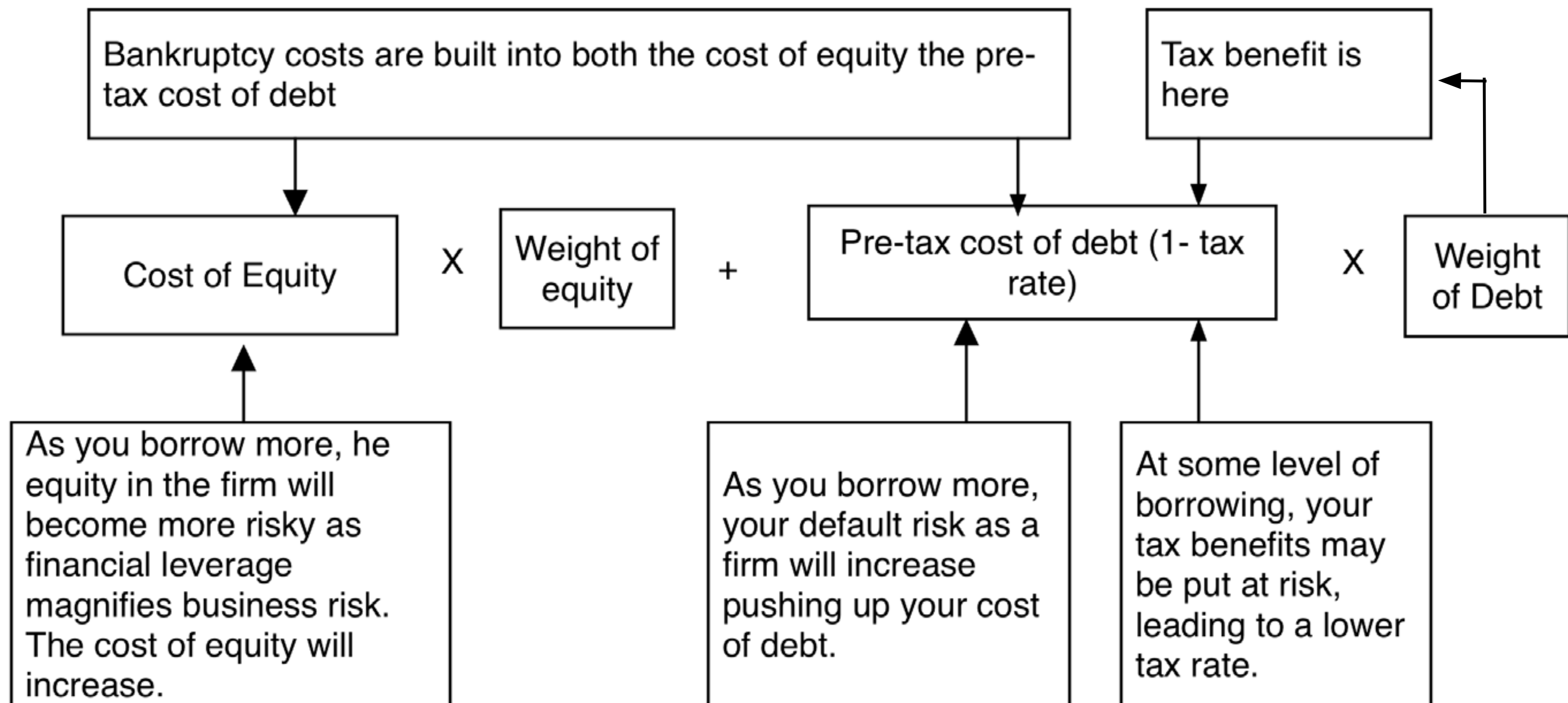
Value Enhancement 101



Myth 1: Higher growth = Higher Value



Myth 2: Borrowing money always lowers your cost of capital



The trade off: As you use more debt, you replace more expensive equity with cheaper debt but you also increase the costs of equity and debt. The net effect will determine whether the cost of capital will increase, decrease or be unchanged as debt ratio changes.

Myth 3: The cheapest debt is the most value enhancing…

Projects/assets	Debt Design
Duration of projects	If projects are long term (short term), debt should be long term (short term) as well.
Cash flow profile	If cash flows are even over time, straight debt is better. If cash flows are low in early years, but expected to grow over time, convertible debt fits.
Currency	Currency mix of debt should be reflective of currency mix of cashflows (especially inflows).
Pricing power	With pricing power, as inflation rises, cash flows will rise as well and floating rate debt makes sense. Without pricing power, as inflation rises, profits can be squeezed, cash flows can drop and fixed rate debt is a better fit.

Lesson 3: Control is not worth 20%.. It could be worth nothing or 100%

- The value of control is target-specific: The value of control will depend upon how well or badly managed the target firm is, and how easily the mismanagement can be fixed by a new management (presumably you).
- Without a plan, that value will not delivered: Control does not happen by accident. To enhance value, you need to know what (in the target firm) needs changing and what should be left alone and.
- And if you pay it all as a premium, why bother? If you pay the entire value of control as a premium, you are putting in the hard work and target shareholders are reaping the benefits.

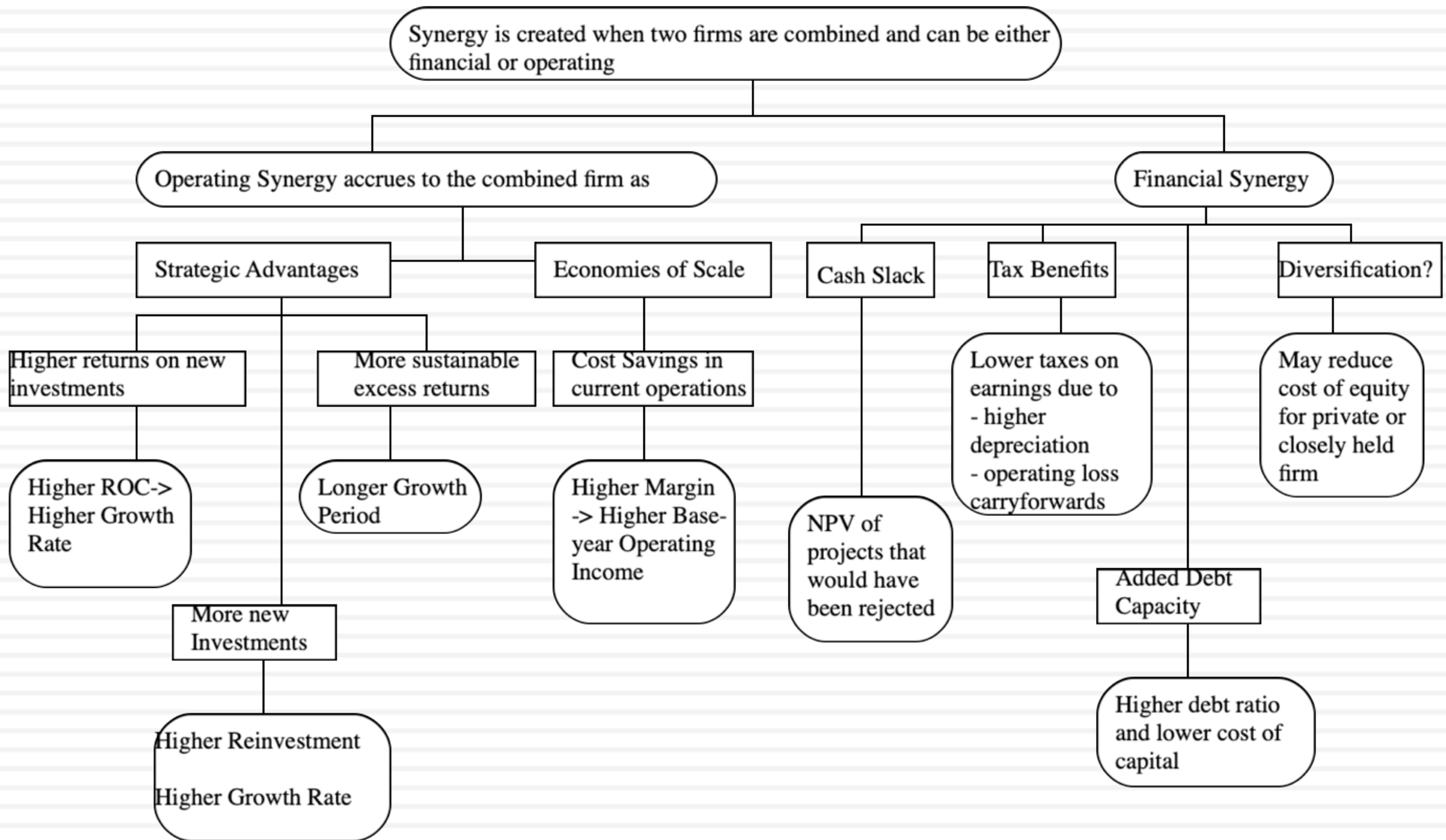
If you fail this test

- Pointless Premiums: If control is always worth 20%, you will find a way to pay a premium for any company, even if you have no good reason for doing acquisitions.
- Control ≠ Change: If you do not do your homework on what you plan to change after you acquire a firm you will either change nothing or use cookbook solutions (borrow money & buy back stock).
- Leave all value on table: If you do not value control explicitly, you will leave it all on the table or even pay more than it is worth to target shareholders.

Test 4: Synergy….

1. Assume that you are told that the combined firm will be less risky than the two individual firms and that it should have a lower cost of capital (and a higher value). Is this likely?
   a) Yes
   b) No
2. Assume now that you are told that there are potential growth and cost savings synergies in the acquisition. Would that constitute value added?
   a) Yes
   b) No
3. Should you pay this as a premium?
   a) Yes
   b) No

The Value of Synergy



Valuing Synergy

1. Step 1: The firms involved in the merger are valued independently, by discounting expected cash flows to each firm at the weighted average cost of capital for that firm.
2. Step 2: The value of the combined firm, with no synergy, is obtained by adding the values obtained for each firm in the first step.
3. Step 3: The effects of synergy are built into expected growth rates and cash flows, and the combined firm is re-valued with synergy.

Value of Synergy = Value of the combined firm, with synergy - Value of the combined firm, without synergy

Synergy 1.1: Why lower risk is an illusion..

- When we estimate the cost of equity for a publicly traded firm, we focus only on the risk that cannot be diversified away in that firm (which is the rationale for using beta or betas to estimate the cost of equity).
- When two firms merge, it is true that the combined firm may be less risky than the two firms individually, but the risk that is reduced is 'firm specified risk'.
- By definition, market risk is risk that cannot be diversified away and the beta of the combined firm will always be a weighted average of the betas of the two firms in the merger.
- When does it make sense to "merge" to reduce total risk?

Synergy 1.2: Higher growth and cost savings can create value

	P&G	Gillette	Piglet: No Synergy	Piglet: Synergy	
Free Cashflow to Equity	$5,864.74	$1,547.50	$7,412.24	$7,569.73	Annual operating expenses reduced by $250 million
Growth rate for first 5 years	12%	10%	11.58%	12.50%	Slighly higher growth rate
Growth rate after five years	4%	4%	4.00%	4.00%	
Beta	0.90	0.80	0.88	0.88	
Cost of Equity	7.90%	7.50%	7.81%	7.81%	Value of synergy
Value of Equity	$221,292	$59,878	$281,170	$298,355	**$17,185**

Synergy 1.3: Tax Benefits?

- Assume that you are Best Buy, the electronics retailer, and that you would like to enter the hardware component of the market. You have been approached by investment bankers for Zenith, which while still a recognized brand name, is on its last legs financially. The firm has net operating losses of $ 2 billion. If your tax rate is 36%, estimate the tax benefits from this acquisition.
- If Best Buy had only $500 million in taxable income, how would you compute the tax benefits?
- If the market value of Zenith is $800 million, would you pay this tax benefit as a premium on the market value?

Synergy 1.4: Paying that synergy as a premium on price is a mistake

- Premium on value versus price: If you have valued the acquiring and target companies and derived the value of synergy by valuing the combined firm, that synergy value is over intrinsic value, not price. You have to compute the premium over price, which can be much smaller (usually) or bigger (sometimes).
- Fair share? If you pay the entire synergy as a premium, you are effectively delivering the entire value to the target company stockholders and keeping none for yourself.

Lesson 4: Value synergy first and make sure you negotiate for your fair share.

1. You have to value synergy, before you decide how much to pay (not after): Synergy will be the buzzword that explains away the premium that you are paying.
2. To value synergy, you need specifics: Before you value synergy, you need to be specific about what synergies you see in a merger and where they will show up in a valuation.
3. Don't mistake control for synergy: If the benefits can be generated by just one of the two entities in the merger, it is not synergy.
4. Negotiate for your fair share: As the acquiring firm, you should negotiate for your share of the synergy, not pay it all off as a premium.

If you fail this test

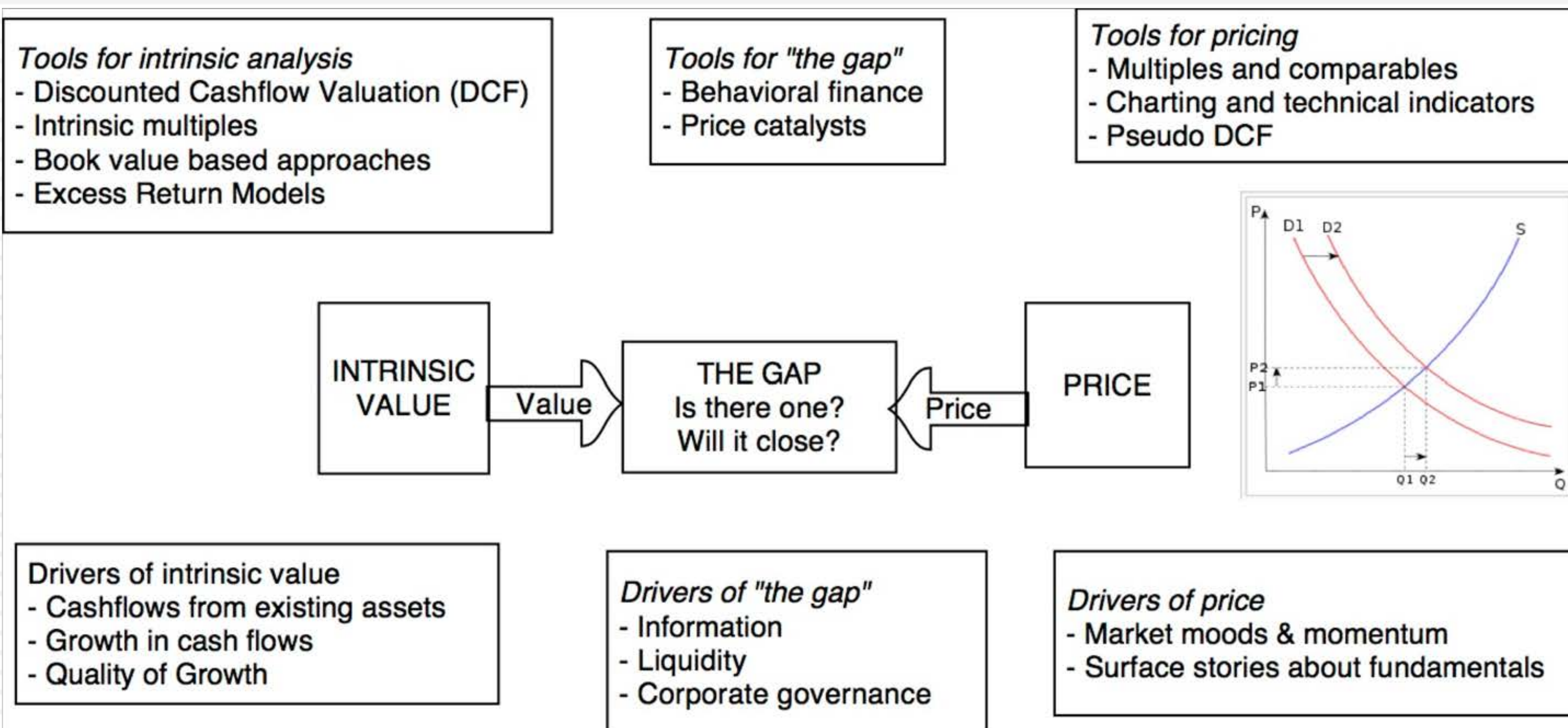
1. <u>Synergy will become a plug variable</u>: Synergy will be your explanation for the difference between what you paid and what you should have.
2. <u>No plan, no synergy</u>: If you are not explicit about the form synergy will take, you cannot plan for it and check to see whether it is being delivered. That may explain:
    1. Why synergy does not manifest itself in so many mergers, after the mergers.
    2. Why no one seems to lose their jobs, even after the worst mergers.

Test 5: Comparables and Exit Multiples

- Now assume that you are told that an analysis of other acquisitions reveals that acquirers have been willing to pay 5 times EBITDA.. Given that your target firm has EBITDA of $ 40 million, would you be willing to pay $ 200 million for the acquisition?

- What if I estimate the terminal value using an exit multiple of 5 times EBITDA?

Pricing ≠ Value



Four Steps to Good Pricing

- Check your multiple or consistency/uniformity
  - In use, the same multiple can be defined in different ways by different users. When comparing and using multiples, estimated by someone else, it is critical that we understand how the multiples have been estimated
- Look at all the data, not just the key statistics
  - Too many people who use a multiple have no idea what its cross sectional distribution is. If you do not know what the cross sectional distribution of a multiple is, it is difficult to look at a number and pass judgment on whether it is too high or low.
- Don't forget the fundamentals ultimately matter
  - It is critical that we understand the fundamentals that drive each multiple, and the nature of the relationship between the multiple and each variable.
- Don't define comparables based only on sector
  - Defining the comparable universe and controlling for differences is far more difficult in practice than it is in theory.

The Problems in Acquisition Pricing

- Biased samples: Basing what you pay on what other acquirers have paid is a recipe for disaster. After all, we know that acquirers, on average, pay too much for acquisitions. By matching their prices, we risk replicating their mistakes.
- Game Playing with Metrics: Allowing analysts (especially if they have an agenda) to pick the multiple that they will use is a recipe for backing into a bad deal.
- Myopic Multipliers: One of the most distracting games in acquisitions is working out EPS accretion and dilution, and arguing that accretive mergers are good (they are not) and dilutive mergers should be avoided (again not true).
- And pushing into the terminal value does not make the problem go away: Creating a front end of cash flows, when the terminal value is coming from a multiple, is not a discounted cash flow valuation.

Lesson 5: If you are going to price a target firm, do it right..

- Pick your game: If you are acquiring other companies not for the cash flows but because you think that you can sell them to someone else at a higher price, it is perfectly okay to play the pricing game. If you are acquiring a firm for its cash flows, you have to play the value game.
- Don't get distracted: If you are playing the pricing game, dispense with the DCF and do an honest pricing. If you are playing the value game, stop looking at what other people are paying.
- To do an honest pricing, you have to be unbiased in your choice of multiple and comparable firms, and control for differences between your firm & the peer group.

If you fail this test..

1. You will over price the target: By using a biased sample (of acquirers who are more likely to be over paying), you will end up over paying as well.
2. You will open the door to bias in your choice of multiples: Since you pick the multiple, you will find bias guiding your choices.
3. You will end up paying twice for synergy and control: Even if other acquirers are paying a "fair" price on their acquisitions, that fair price will already include a control premium and perhaps a synergy premium. Paying these premiums on top of your assessed price will be double paying.

Test 6: The CEO really wants to do this… Or your competitors are all in the game..

- Now assume that you know that the CEO of the acquiring firm really, really wants to do this acquisition and that the investment bankers on both sides have produced fairness opinions that indicate that the firm is worth $ 150 million. Would you be willing to go along?
  a) Yes
  b) No
- Now assume that you are told that your competitors are all doing acquisitions and that if you don't do them, you will be at a disadvantage? Would you be willing to go along?
  a) Yes
  b) No

CEO Egos and Overconfidence: The Dirty Secret in Mergers

- The Deal Rules: The premiums paid on acquisitions often have nothing to do with synergy, control or strategic considerations (though they may be provided as the reasons). They are just what you have to pay to get the deals done, because management really, really wants it done.
- The Ego Problem: They may just reflect the egos of the CEOs of the acquiring firms. There is evidence that "over confident" CEOs are more likely to make acquisitions and that they leave a trail across the firms that they run.

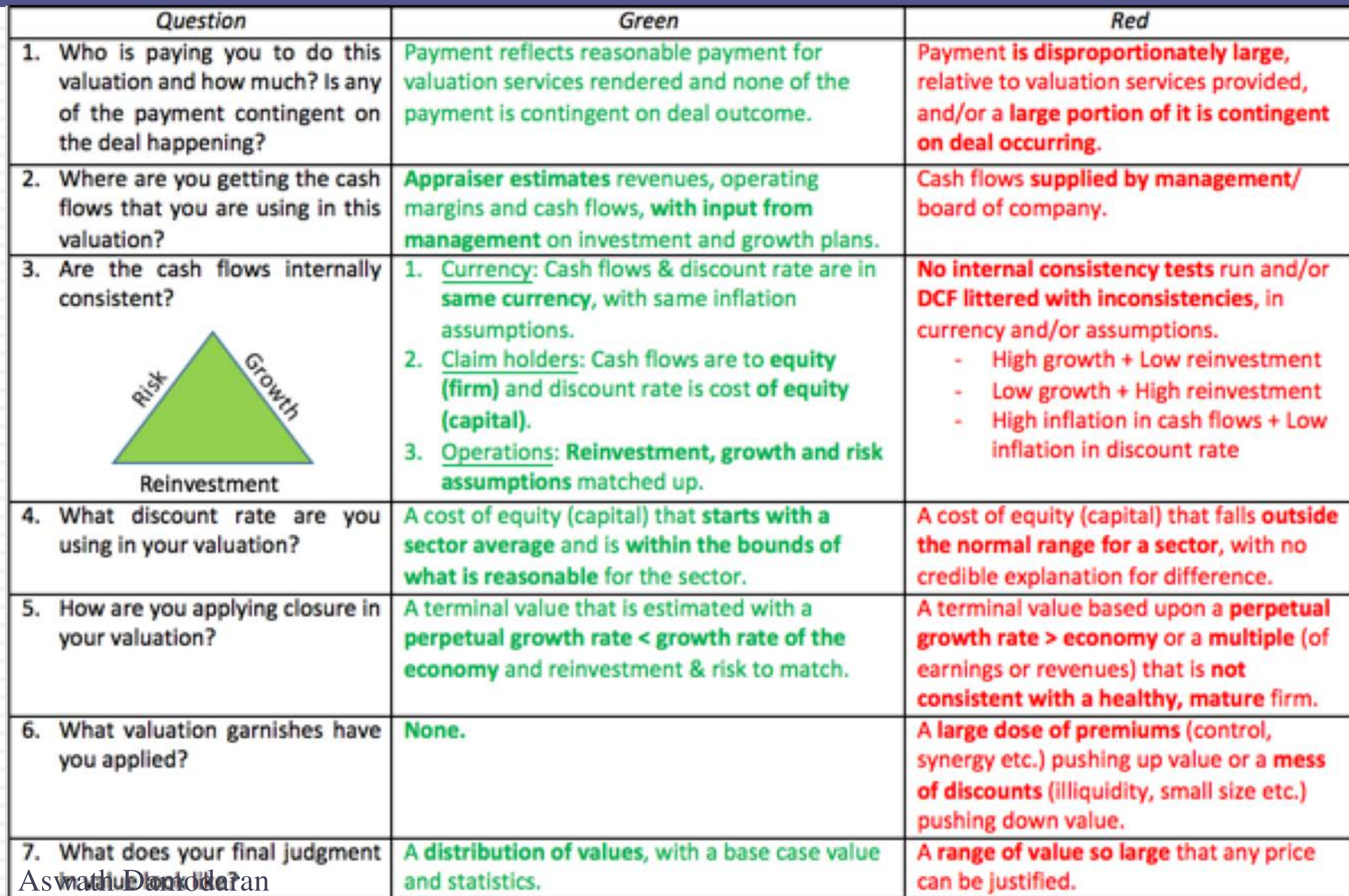
Defensive Mergers: Signs of a Deeper Rot?

- Me-tooism: Pre-emptive or defensive acquisitions, where you over pay, either because everyone else is overpaying or because you are afraid that you will be left behind if you don't acquire are dangerous.
- Weak businesses? If the only way you can stay competitive in a business is by making bad investments, it may be best to think about shrinking or even getting out of the business.
- There is no glory in survival, for the sake of survival. Corporate sustainability, as a corporate objective, is not just a joke, but an expensive one.

The Deal Process is broken..

1. Deal makers are deal analysts: If you were going to design a process that maximizes bias, you could not do much better than the current one, especially in a friendly merger.
2. Spending other People's Money: Managerial interests don't align with shareholder interests and they can advance them using shareholder money.
3. Boards of directors are managerial rubber stamps, mostly incapable or unwilling to check managerial egos.
4. The legal system is incapable of stopping bad acquisitions. Unwittingly, it has given acquiring firms a template to evade responsibility for bad mergers, with the expensive charade called "fairness opinions".

Fairness Opinions: A waste of time and money?

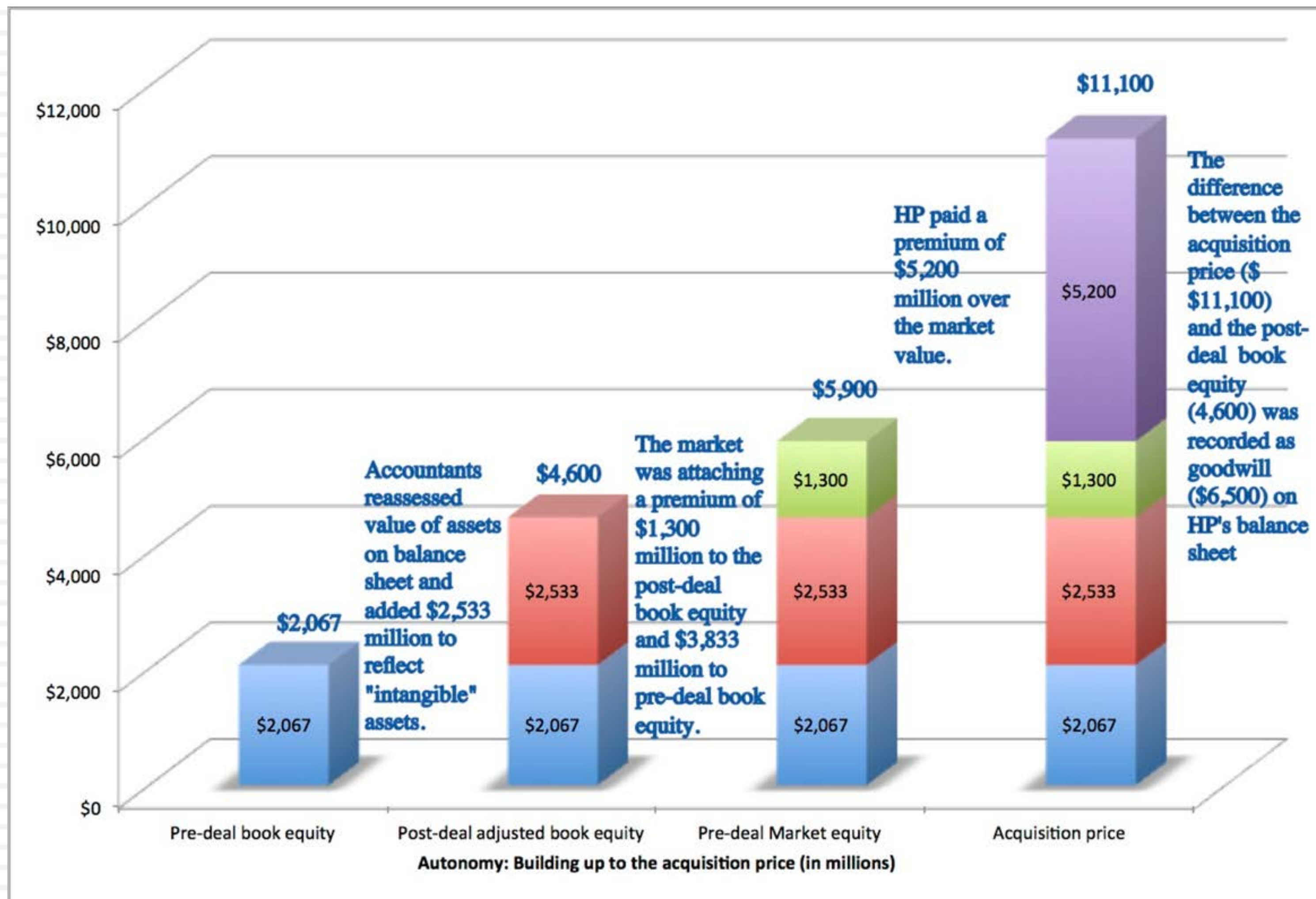


Question	Green	Red
1. Who is paying you to do this valuation and how much? Is any of the payment contingent on the deal happening?	Payment reflects reasonable payment for valuation services rendered and none of the payment is contingent on deal outcome.	Payment **is disproportionately large**, relative to valuation services provided, and/or a **large portion of it is contingent on deal occurring.**
2. Where are you getting the cash flows that you are using in this valuation?	**Appraiser estimates** revenues, operating margins and cash flows, **with input from management** on investment and growth plans.	Cash flows **supplied by management/** board of company.
3. Are the cash flows internally consistent? (Triangle: Risk, Growth, Reinvestment)	1. Currency: Cash flows & discount rate are in **same currency**, with same inflation assumptions. 2. Claim holders: Cash flows are to **equity (firm)** and discount rate is cost **of equity (capital).** 3. Operations: **Reinvestment, growth and risk assumptions** matched up.	**No internal consistency tests** run and/or **DCF littered with inconsistencies,** in currency and/or assumptions. - High growth + Low reinvestment - Low growth + High reinvestment - High inflation in cash flows + Low inflation in discount rate
4. What discount rate are you using in your valuation?	A cost of equity (capital) that **starts with a sector average** and is **within the bounds of what is reasonable** for the sector.	A cost of equity (capital) that falls **outside the normal range for a sector,** with no credible explanation for difference.
5. How are you applying closure in your valuation?	A terminal value that is estimated with a **perpetual growth rate < growth rate of the economy** and reinvestment & risk to match.	A terminal value based upon a **perpetual growth rate > economy** or a **multiple** (of earnings or revenues) that is **not consistent with a healthy, mature** firm.
6. What valuation garnishes have you applied?	**None.**	A **large dose of premiums** (control, synergy etc.) pushing up value or a **mess of discounts** (illiquidity, small size etc.) pushing down value.
7. What does your final judgment look like?	A **distribution of values,** with a base case value and statistics.	A **range of value so large** that any price can be justified.

Lesson 6: Egos and Conflicts of Interest are your biggest enemies

- Winning is not everything: If you define your objective in a bidding war as winning the auction at any cost, you will win. But beware the winner's curse!
- Bankers do what's in their best interests, not yours: If your rewards and compensation are contingent on the deal going through, you cannot be an honest advisor.
- It is easy to spend other people's money: In public companies, it is shareholder money that is being spent on acquisitions, often in the pursuit of managerial interests. Boards of directors need to do their jobs.

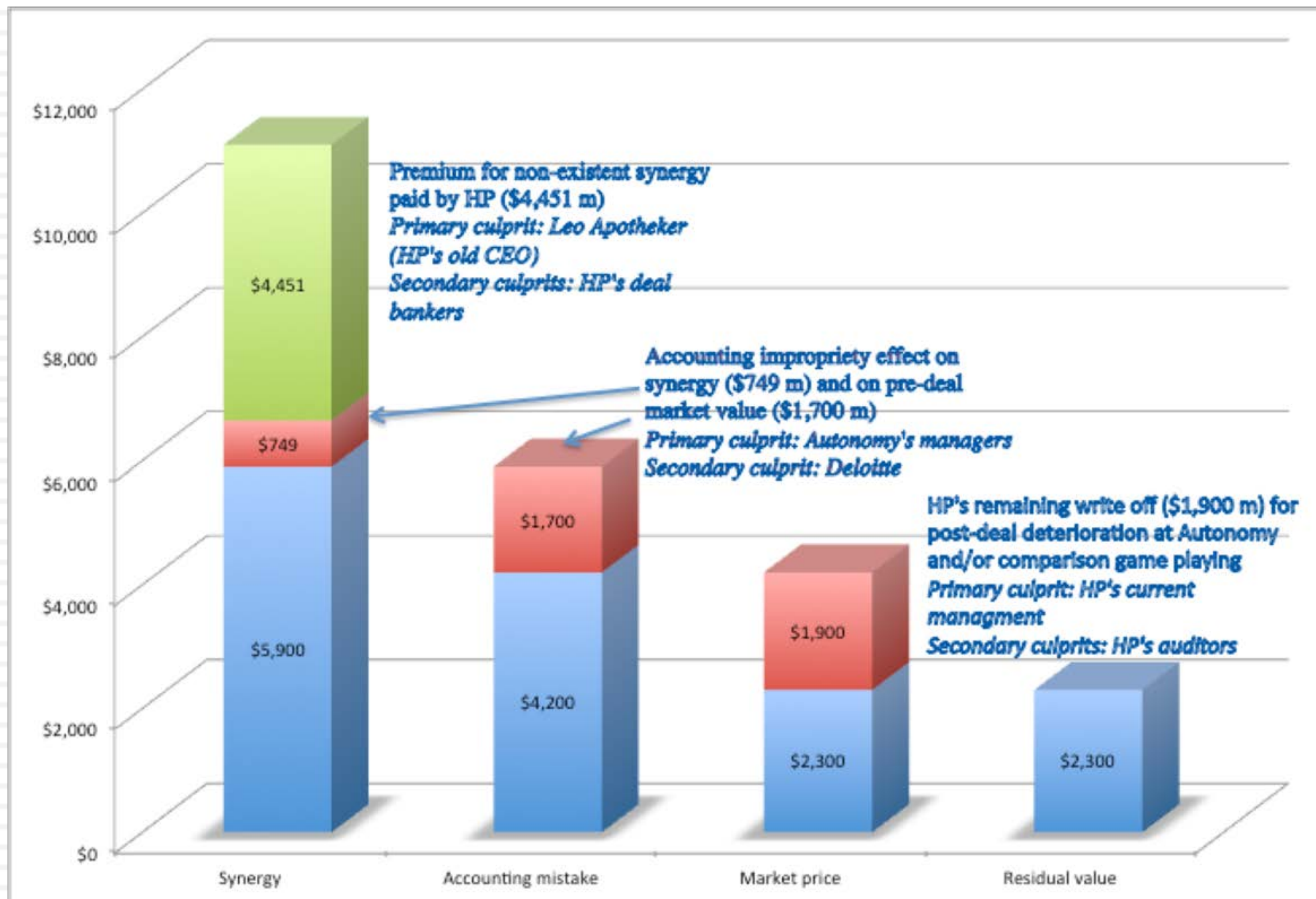
To illustrate: A bad deal is made, and justified by accountants & bankers



The CEO steps in… and digs a hole…

- Leo Apotheker was the CEO of HP at the time of the deal, brought in to replace Mark Hurd, the previous CEO who was forced to resign because of a "sex" scandal.
- In the face of almost universal feeling that HP had paid too much for Autonomy, Mr. Apotheker addressing a conference at the time of the deal: "We have a **pretty rigorous process inside H.P.** that we follow for **all our acquisitions**, which is a **D.C.F.-based model**," he said, in a reference to discounted cash flow, a standard valuation methodology. "And we try to take a **very conservative view**."
- Apotheker added, "Just to make sure everybody understands, Autonomy will be, on Day 1, **accretive to H.P**….. "**Just take it from us**. We did that analysis at **great length, in great detail**, and we feel that we paid a **very fair price** for Autonomy. And it will give a **great return to our shareholders**.

A year later… HP admits a mistake…and explains it…

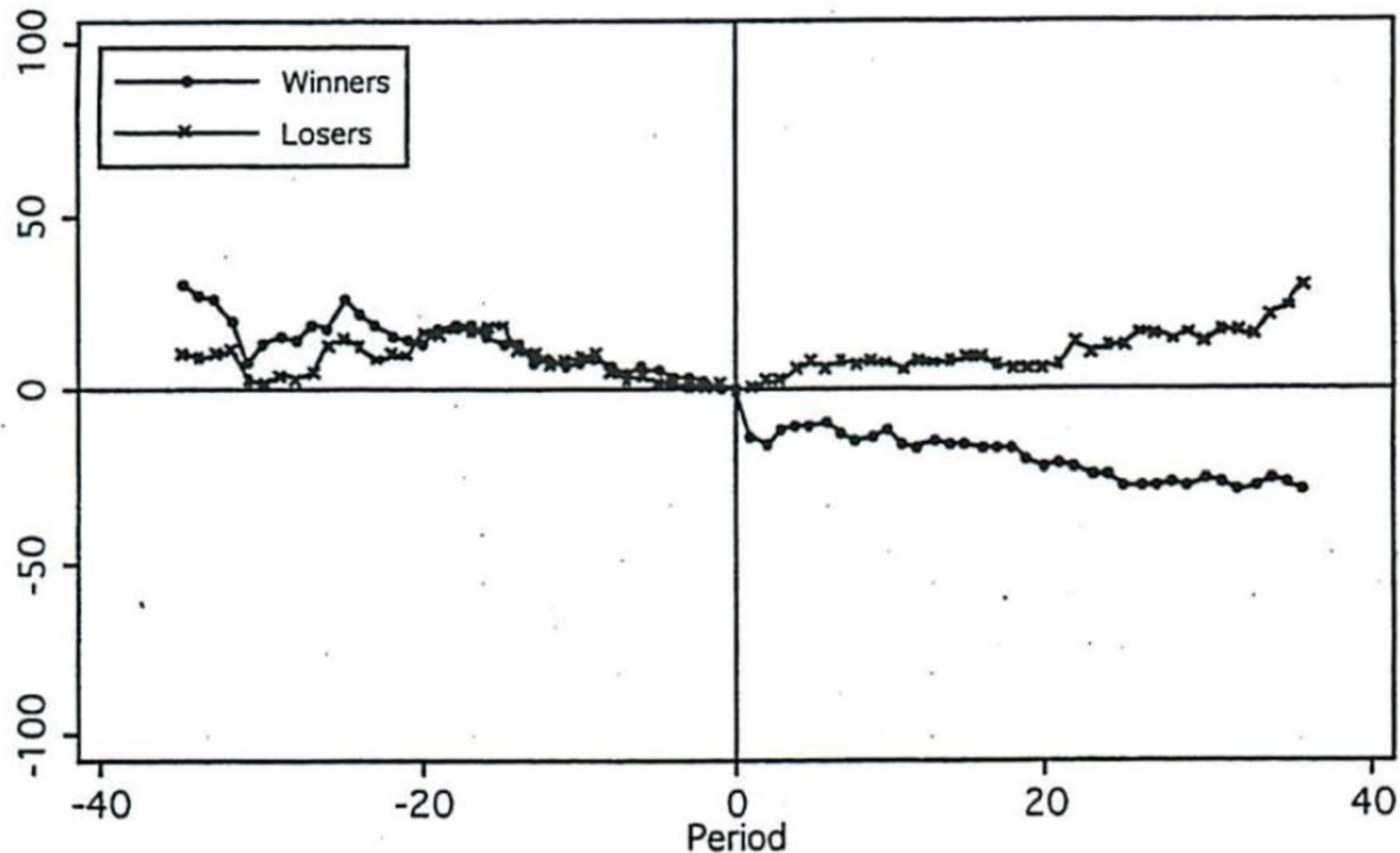


Test 7: Gauging the Odds

- The odds seem to be clearly weighted against success in acquisitions. If you were to create a strategy to grow, based upon acquisitions, which of the following offers your best chance of success?

This	Or this
Sole Bidder	Bidding War
Public target	Private target
Pay with cash	Pay with stock
Small target	Large target
Cost synergies	Growth synergies

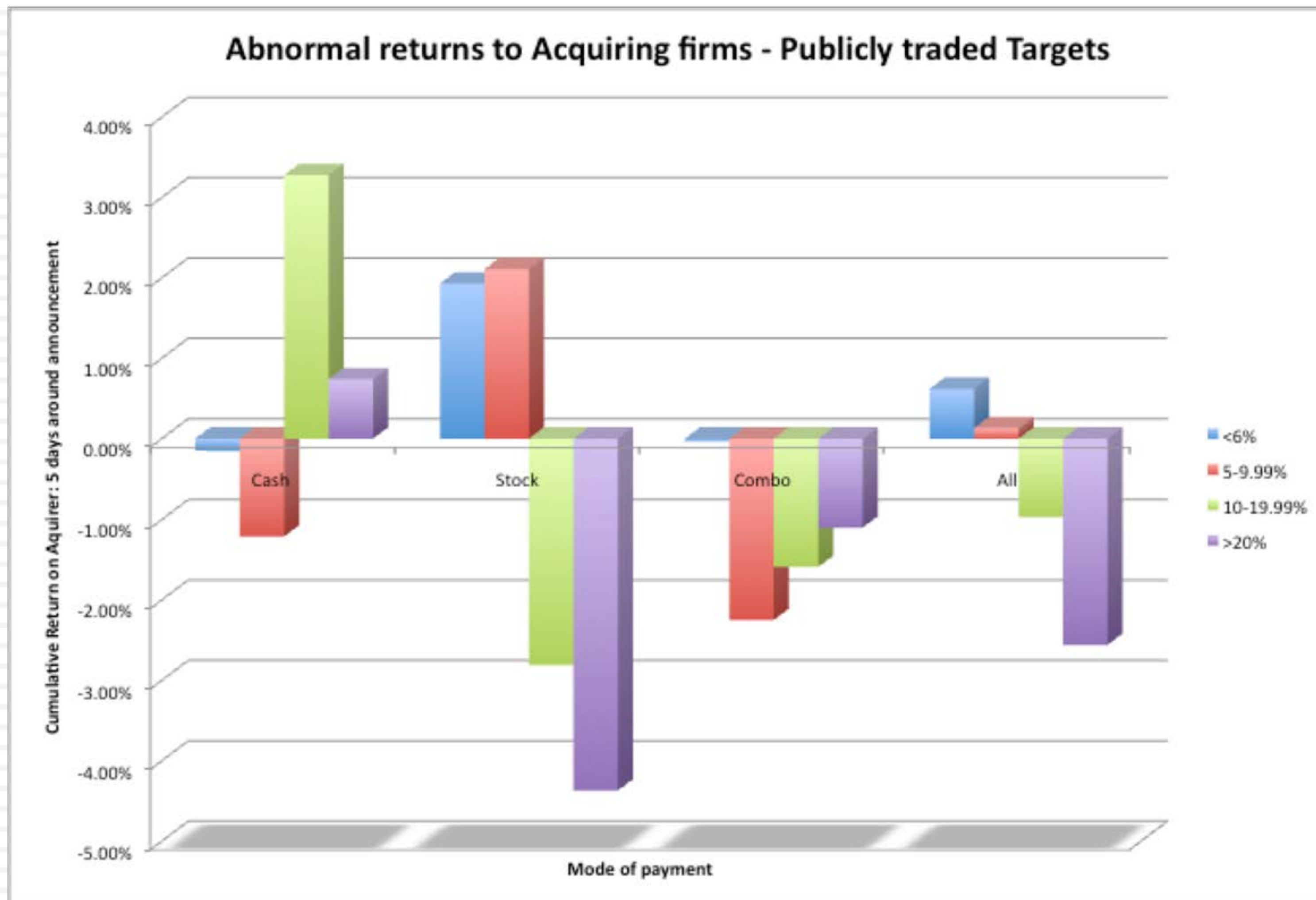
1. Better to lose a bidding war than to win one…



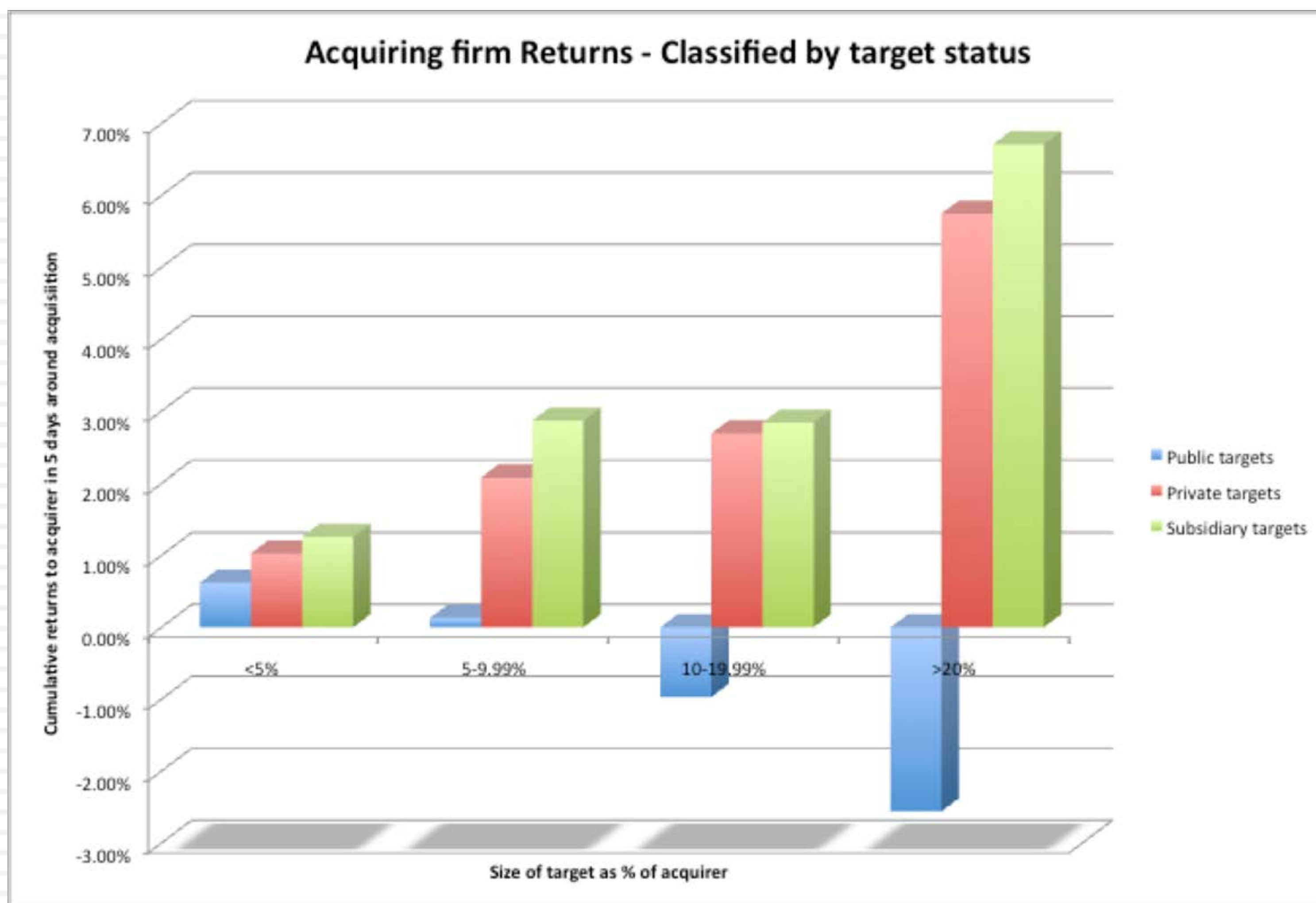
(a) Market-adjusted CARs

Returns in the 40 months before & after bidding war
Source: Malmendier, Moretti & Peters (2011)

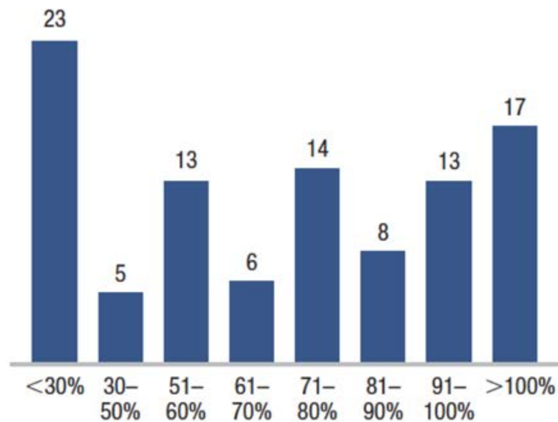
2. Better off buying small rather than large targets…

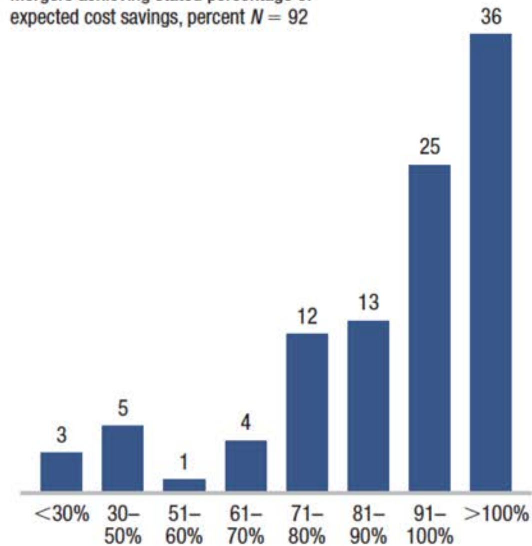


3. And focusing on private firms and subsidiaries, rather than public firms…



4. On cost synergies, not growth synergies





Lesson 7: For acquisitions to create value, you have to stay disciplined..

1. If you have a successful acquisition strategy, stay focused on that strategy. Don't let size or hubris drive you to "expand" the strategy.
2. Realistic plans for delivering synergy and control have to be put in place before the merger is completed. By realistic, we have to mean that the magnitude of the benefits have to be reachable and not pipe dreams and that the time frame should reflect the reality that it takes a while for two organizations to work as one.
3. The best thing to do in a bidding war is to drop out.
4. Someone (preferably the person pushing hardest for the merger) should be held to account for delivering the benefits.
5. The compensation for investment bankers and others involved in the deal should be tied to how well the deal works rather than for getting the deal done.

Analyzing a Deal

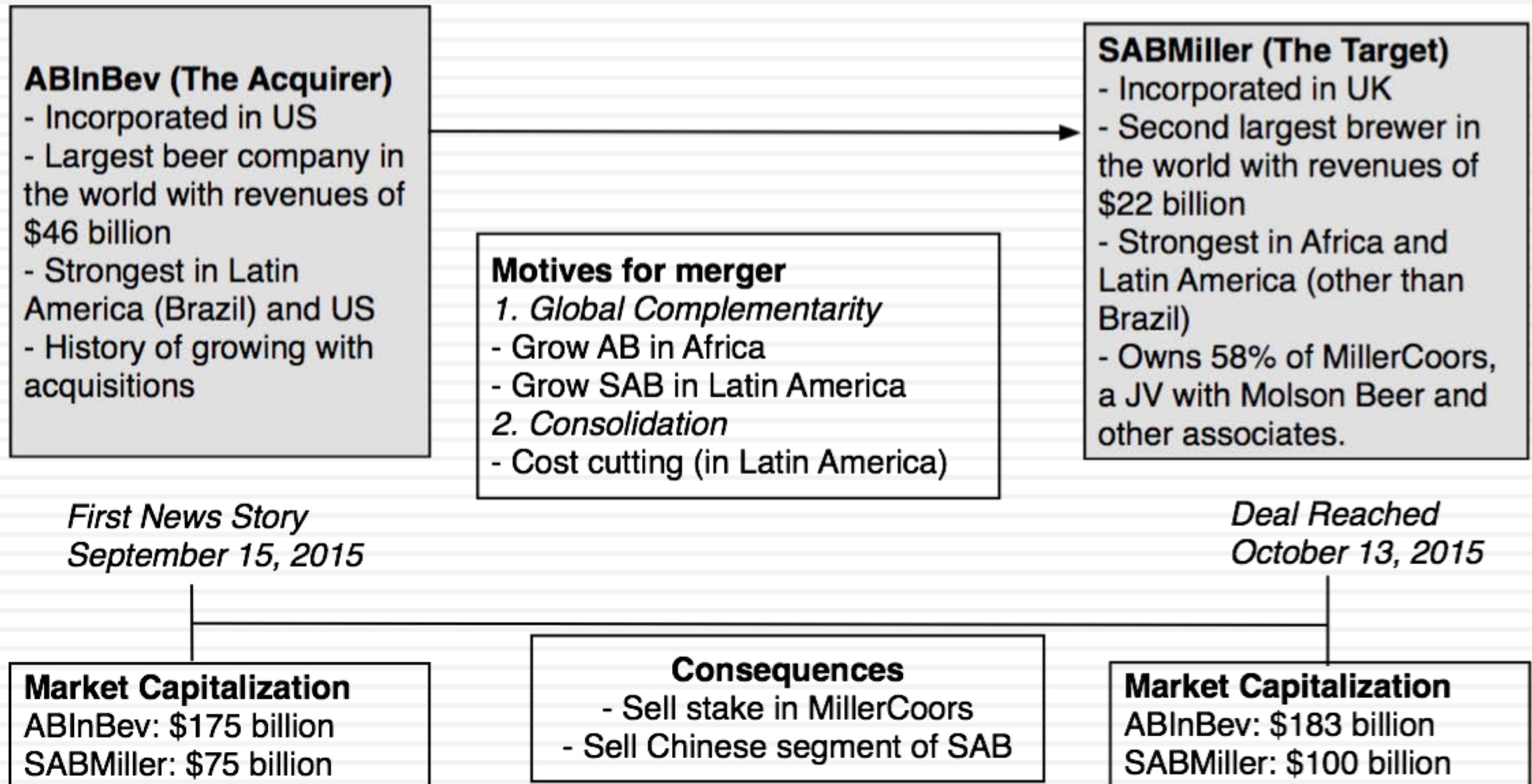
The Three (Value) Reasons for Acquisitions

- Undervaluation: You buy a target company because you believe that the market is mispricing the company and that you can buy it for less than its "fair" value.
- Control: You buy a company that you believe is badly managed, with the intent of changing the way it is run. If you are right on the first count and can make the necessary changes, the value of the firm should increase under your management
- Synergy: You buy a company that you believe, when combined with a business (or resource) that you already own, will be able to do things that you could not have done as separate entities. This synergy can be
  - Offensive synergy: Higher growth and increased pricing power
  - Defensive synergy: Cost cutting, consolidation & preempting competitors.
  - Tax synergy: Directly from tax clauses or indirectly through dent

The Acquisition Process

1. Status Quo Value of target firm: Start with a status quo value of the target firm, leaving both its good points and it flaws in place.
   - *Undervaluation = Status Quo Value – Market Price*
2. Optimal Value of target firm: Without bringing the acquiring firm into the picture, value the target firm, run optimally, with its strengths intact (and even enhanced) and its flaws fixed, as best as they can:
   - *Value of Control = Optimal Value – Status Quo Value*
3. Value the acquiring firm: Value the acquiring firm, with its strengths and flaws in place.
4. Value the combined firm with synergy benefits included: Built in the cash flows, growth and discount rate effects into the value:
   - *Value of Synergy = Value of combined firm with synergy – Acquiring firm value – Optimal Target firm value*

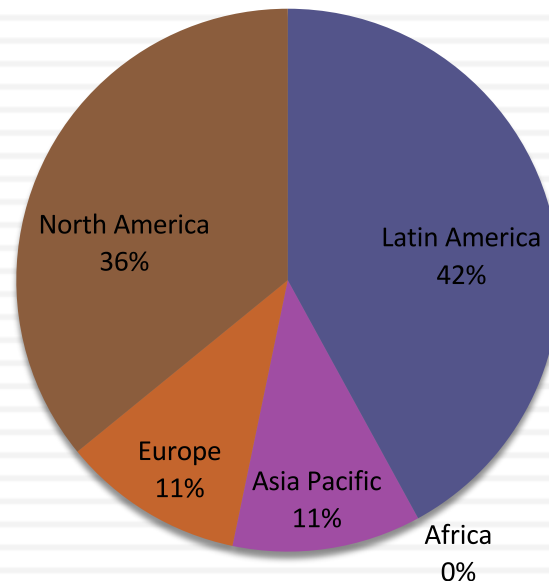
A Really Big Deal! InBev buys SABMiller



The Acquirer (ABInBev)

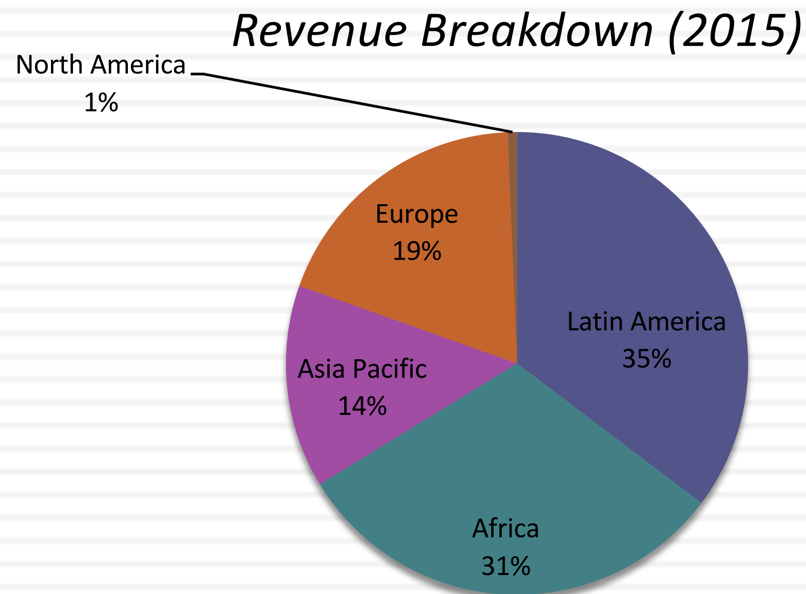
Capital Mix		*Operating Metrics*	
Interest-bearing Debt	$51,504	Revenues	$45,762.00
Lease Debt	$1,511	Operating Income (EBIT)	$14,772.00
Market Capitalization	$173,760	Operating Margin	32.28%
Debt to Equity ratio	30.51%	Effective tax rate	18.00%
Debt to Capital ratio	23.38%	After-tax return on capital	12.10%
Bond Rating	A2	Reinvestment Rate =	50.99%

Revenue Breakdown (2014)



The Target (SABMiller)

Capital Mix		*Operating Metrics*	
Interest-bearing Debt	$12,550	Revenues	$22,130.00
Lease Debt	$368	Operating Income (EBIT)	$4,420.00
Market Capitalization	$75,116	Operating Margin	19.97%
Debt to Equity ratio	17.20%	Effective tax rate	26.40%
Debt to Capital ratio	14.67%	After-tax return on capital	10.32%
Bond Rating	A3	Reinvestment Rate =	16.02%



Step 1: SAB Miller Status Quo Value

	SAB Miller	*+ Coors JV*	*+ Share of Associates*	*SAB Miller Consolidated*
Revenues	$22,130.00	$5,201.00	$6,099.00	
Operating Margin	19.97%	15.38%	10.72%	
Operating Income (EBIT)	$4,420.00	$800.00	$654.00	
Invested Capital	$31,526.00	$5,428.00	$4,459.00	
Beta	0.7977	0.6872	0.6872	
ERP	8.90%	6.00%	7.90%	
Cost of Equity =	9.10%	6.12%	7.43%	
After-tax cost of debt =	2.24%	2.08%	2.24%	
Debt to Capital Ratio	14.67%	0.00%	0.00%	
Cost of capital =	8.09%	6.12%	7.43%	
After-tax return on capital =	10.33%	11.05%	11.00%	
Reinvestment Rate =	16.02%	40.00%	40.00%	
Expected growth rate=	1.65%	4.42%	4.40%	
Number of years of growth	5	5	5	
Value of firm				
PV of FCFF in high growth =	$11,411.72	$1,715.25	$1,351.68	
Terminal value =	$47,711.04	$15,094.36	$9,354.28	
Value of operating assets today =	**$43,747.24**	**$12,929.46**	**$7,889.56**	**$64,566.26**
+ Cash				$1,027.00
- Debt				$12,918.00
- Minority Interests				$1,183.00
Value of equity				**$51,492.26**

Price on September 15, 2015: $75 billion > $51.5 billion

Step 2: SABMiller: Potential for Control

	SABMiller	*ABInBev*	*Global Alcoholic Beverage Sector*
Pre-tax Operating Margin	19.97%	32.28%	19.23%
Effective Tax Rate	26.36%	18.00%	22.00%
Pre-tax ROIC	14.02%	14.76%	17.16%
ROIC	10.33%	12.10%	13.38%
Reinvestment Rate	16.02%	50.99%	33.29%
Debt to Capital	14.67%	23.38%	18.82%

SABMiller: Value of Control

	Status Quo Value	Optimal value	
Cost of Equity =	9.10%	9.37%	
After-tax cost of debt =	2.24%	2.24%	
Cost of capital =	8.09%	8.03%	
After-tax return on capital =	10.33%	12.64%	
Reinvestment Rate =	16.02%	33.29%	
Expected growth rate=	1.65%	4.21%	
Value of firm			
PV of FCFF in high growth =	$11,411.72	$9,757.08	
Terminal value =	$47,711.04	$56,935.06	
Value of operating assets today =	**$43,747.24**	**$48,449.42**	
+ Cash	$1,027.00	$1,027.00	
+ Minority Holdings	$20,819.02	$20,819.02	
- Debt	$12,918.00	$12,918.00	
- Minority Interests	$1,183.00	$1,183.00	*Value of Control*
Value of equity	**$51,492.26**	**$56,194.44**	**$4,702.17**

Price on September 15, 2015: $75 billion > $51.5 + $4.7 billion

Steps 3 &4: Valuing Synergy

	Inbev	*SABMiller*	*Combined firm (status quo)*	*Combined firm (synergy)*
Levered Beta	0.85	0.8289	0.84641	0.84641
Pre-tax cost of debt	3.0000%	3.2000%	3.00%	3.00%
Effective tax rate	18.00%	26.36%	19.92%	19.92%
Debt to Equity Ratio	30.51%	23.18%	29.71%	29.71%
Revenues	$45,762.00	$22,130.00	$67,892.00	$67,892.00
Operating Margin	32.28%	19.97%	28.27%	30.00%
Operating Income (EBIT)	$14,771.97	$4,419.36	$19,191.33	$20.368
After-tax return on capital	12.10%	12.64%	11.68%	12.00%
Reinvestment Rate =	50.99%	33.29%	43.58%	50.00%
Expected Growth Rate	6.17%	4.21%	5.09%	6.00%

The value of synergy

	Inbev	*SABMiller*	*Combined firm (status quo)*	*Combined firm (synergy)*
Cost of Equity =	8.93%	9.37%	9.12%	9.12%
After-tax cost of debt =	2.10%	2.24%	2.10%	2.10%
Cost of capital =	7.33%	8.03%	7.51%	7.51%
After-tax return on capital =	12.10%	12.64%	11.68%	12.00%
Reinvestment Rate =	50.99%	33.29%	43.58%	50.00%
Expected growth rate=	6.17%	4.21%	5.09%	6.00%
Value of firm				
PV of FCFF in high growth =	$28,733	$9,806	$38,539	$39,151
Terminal value =	$260,982	$58,736	$319,717	$340,175
Value of operating assets =	$211,953	$50,065	$262,018	$276,610

Value of synergy = 276,610 – 262,018 = 14,592 million

Passing Judgment

- If you add up the restructured firm value of $56.2 billion to the synergy value of $14.6 billion, you get a value of about **$70.8 billion**.
- That is well below the **$104 billion** that ABInBev is planning to pay for SABMiller.
- One of the following has to be true:
  - I have massively under estimated the potential for synergy in this merger (either in terms of higher margins or higher growth).
  - ABInBev has over paid significantly on this deal. That would go against their history as a good acquirer and against the history of 3G Capital as a good steward of capital.