Blog post: Big Markets, Over Confidence and the Macro Delusion
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THE MACRO DELUSION: HOW OVER CONFIDENCE CREATES OVER PRICING (BUBBLES) AND WHY IT IS A FEATURE OF MARKETS (NOT A BUG)!

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Big Market Dreams

A billion plus people, high growth, surging middle class = Marketing Wet Dream

The dream behind social media company valuations. It is a big market, really big, really, really big.

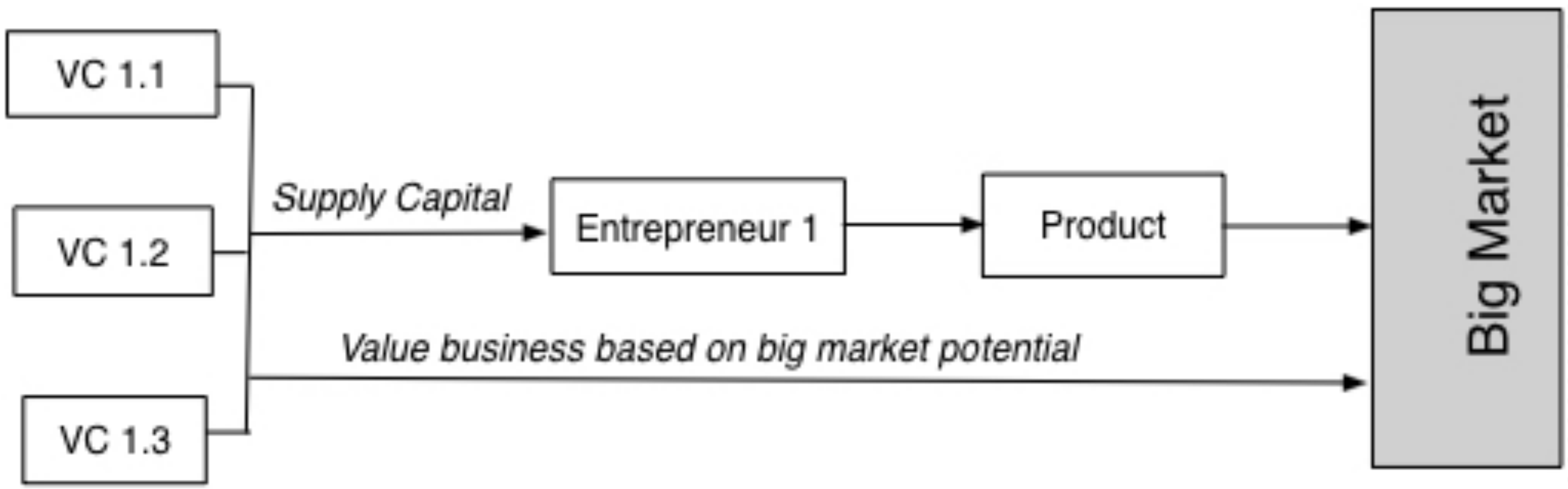
If you have been watch taxi cabs be decimated by Uber, get ready for your business to be “Uberized”.

Your data, your calendar, your contacts, your music, your life is in the cloud, and someone is going to make money off that.

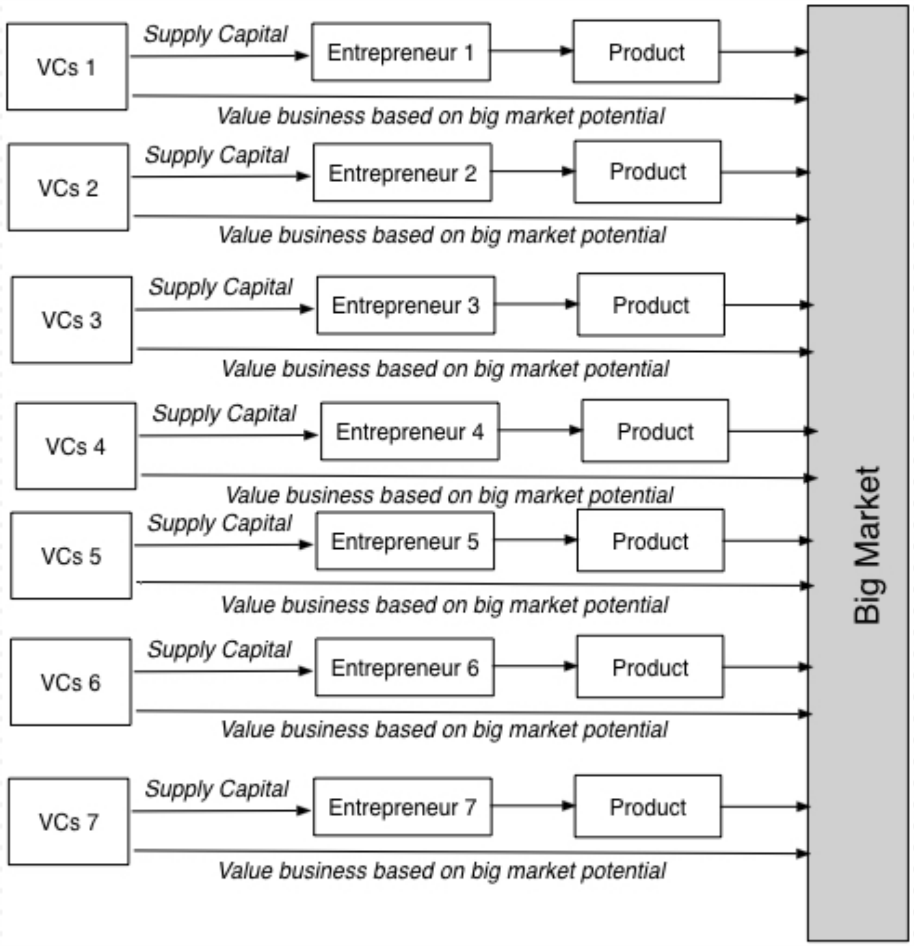
The easy (and lazy) answer: It's a bubble!!

- The minute you classify a market as being in a bubble, you have already passed judgment on investors in the market. At least in your view, they are irrational, greedy and perhaps even stupid.
- By doing so, you eliminate any chance you have of understanding why investors in that market are pricing assets the way they are and perhaps learning from that understanding.

A big market story: An entrepreneur sees a big market, and acts..



Others see the same market too..



In a world of supreme rationality, the probabilities and values should adjust

- If each of these entrepreneurs were rational and unbiased, they should each assess a fair probability of success, given the big market and the existence of competition.
- In effect, this reassessment should lead to lower expected cash flows and values for all the entrants, and perhaps lead some of them to drop out (and cause new entrants to hold back)>

Add the secret sauce: Over confidence

- Empirical research suggests that individuals who become entrepreneurs and venture capitalists share a common characteristic. They tend to be over confident.
- With that over confidence, each entrepreneur over estimates his or her likelihood of success in the big market and attracts venture capitalists who buy into that point of view.

With the following consequences

1. The companies in the big market will be collectively over priced.
2. As the sector matures and the results start coming in, you should expect to see:
   a. Revenue growth will come in lower than expected, at least in the aggregate.
   b. Operating margins will come under pressure as competition heats up and firms cut prices to gain market share.
   c. Growth will become more expensive (more reinvestment)

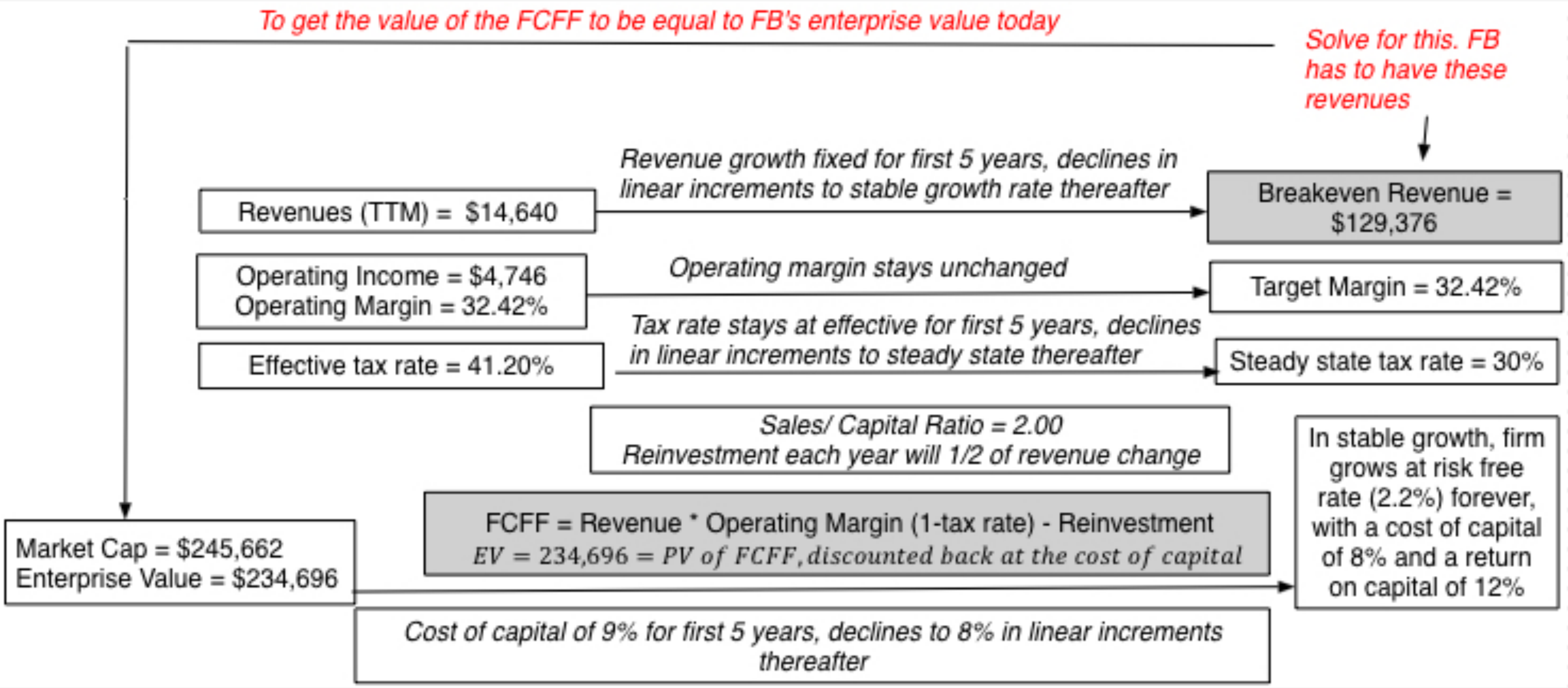
Some general propositions about the magnitude of over pricing..

1. As the size of the potential market increases, the extent of the over pricing should also increase.
2. The earlier a market is in the life cycle, the greater will be the over pricing.
3. The more a market is governed by global networking benefits (winner-take-all), the greater will be the over pricing.

An example: Social Media Companies and the Online Advertising Market

- With Facebook leading the way, social media companies have seen their market profile increase (and with it their market capitalizations).
- With almost every one of these companies, the big market that has been offered as the prize is the growing online advertising market, a market that Google has ridden successfully for the last decade.

Imputed Revenues: The Facebook Example



Company	*Market Cap*	*Enterprise Value*	*Current Revenues*	*Breakeven Revenues (2025)*	*% from Online Advertising*	*Imputed Online Ad Revenue (2025)*
Google	$441,572.00	$386,954.00	$69,611.00	$224,923.20	89.50%	$201,306.26
Facebook	$245,662.00	$234,696.00	$14,640.00	$129,375.54	92.20%	$119,284.25
Yahoo!	$30,614.00	$23,836.10	$4,871.00	$25,413.13	100.00%	$25,413.13
LinkedIn	$23,265.00	$20,904.00	$2,561.00	$22,371.44	80.30%	$17,964.26
Twitter	$16,927.90	$14,912.90	$1,779.00	$23,128.68	89.50%	$20,700.17
Pandora	$3,643.00	$3,271.00	$1,024.00	$2,915.67	79.50%	$2,317.96
Yelp	$1,765.00	$0.00	$465.00	$1,144.26	93.60%	$1,071.02
Zillow	$4,496.00	$4,101.00	$480.00	$4,156.21	18.00%	$748.12
Zynga	$2,241.00	$1,142.00	$752.00	$757.86	22.10%	$167.49
Total US	**$770,185.90**	**$689,817.00**	**$96,183.00**	**$434,185.98**		**$388,972.66**
Alibaba	$184,362.00	$173,871.00	$12,598.00	$111,414.06	60.00%	$66,848.43
Tencent	$154,366.00	$151,554.00	$13,969.00	$63,730.36	10.50%	$6,691.69
Baidu	$49,991.00	$44,864.00	$9,172.00	$30,999.49	98.90%	$30,658.50
Sohu.com	$18,240.00	$17,411.00	$1,857.00	$16,973.01	53.70%	$9,114.51
Naver	$13,699.00	$12,686.00	$2,755.00	$12,139.34	76.60%	$9,298.74
Yandex	$3,454.00	$3,449.00	$972.00	$2,082.52	98.80%	$2,057.52
Yahoo! Japan	$23,188.00	$18,988.00	$3,591.00	$5,707.61	69.40%	$3,961.08
Sina	$2,113.00	$746.00	$808.00	$505.09	48.90%	$246.99
Netease	$14,566.00	$11,257.00	$2,388.00	$840.00	11.90%	$3,013.71
Mail.ru	$3,492.00	$3,768.00	$636.00	$1,676.47	35.00%	$586.76
Mixi	$3,095.00	$2,661.00	$1,229.00	$777.02	96.00%	$745.94
Kakaku	$3,565.00	$3,358.00	$404.00	$1,650.49	11.60%	$191.46
Total non-US	**$474,131.00**	**$444,613.00**	**$50,379.00**	**$248,495.46**		**$133,415.32**
Global Total	**$1,244,316.90**	**$1,134,430.00**	**$146,562.00**	**$682,681.44**		**$522,387.98**

Measuring up against the online advertising market

In 2014,
Total Global Ad Spending = $543 billion
Online (Digital) Ad Spending = $138 billion

Online as % of Total Market	Annual CAGR in Total Ad Spending: 1.00%	2.00%	3.00%	4.00%	5.00%
30%	$182.49	$203.38	$226.42	$251.81	$279.76
35%	$212.90	$237.27	$264.15	$293.77	$326.38
40%	$243.32	$271.17	$301.89	$335.74	$373.01
45%	$273.73	$305.07	$339.63	$377.71	$419.64
50%	$304.15	$338.96	$377.36	$419.68	$466.26

What does it mean?

- Collectively, companies that derive most or all of their revenues from online advertising (and expect to continue to do so) are over valued.
- Individually, there are one, two or perhaps even three companies in this space that are under valued, because they will end up as winners in a big market.
- However, the winner may not be a public company yet (Snap Chat?) or perhaps not even be started yet.

Lessons to learn?

- If you are a trader, you are betting on prices (not value), you should not care, other than getting your timing right. *Buy while the bubble is forming and sell before it bursts.*
- If you are an entrepreneur, you cannot fight the over confidence that made you one, but you should try to incorporate intrinsic valuation (DCF) into your tool kit. It will force you to put numbers on your expectations and provide a template for delivering them.
- If you are a venture capitalist, *your success comes from your capacity to pick the right horse in the race*.
- If you are a public investor, *never say never about investing in a company*.

Final Thoughts

- Bubbles are a feature of markets, not a bug: It is the nature of markets for bubbles to form and burst.
- Bubbles are healthy: While some bubbles create significant side-costs for society, bubbles for the most part are a sign of health in markets. A market without bubbles is one without innovation, experimentation and audacity.