START-UPS AND VENTURE CAPITAL

2018

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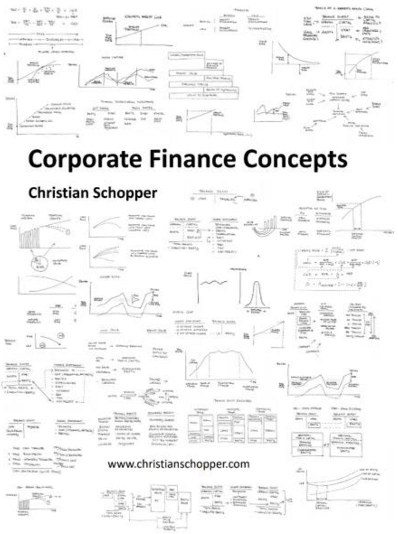

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Intro

- The start-up stage clearly represents the highest level of business risk
  – This high level of business risk requires the financial risk to be kept as low as possible
- The high overall risk of the company will attract only those investors who are prepared to accept such a high risk
  – They will, consequently, require a correspondingly high return
- Because venture capitalists normally require very high rates of return on their investment portfolio, a later exit is inevitable
  – As the total risk of the company reduces over its transition from launch to growth, the returns on new capital will inevitably decline
- Two attractive exit routes for venture capitalists are a trade sale, or the public flotation of the company on a stock exchange
  – In many cases, a start-up business will either be very successful or will fail completely

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Startup Characteristics

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Start-up businesses	
Business risk	Very high
Financial risk	Very low
Source of funding	Venture capital
Dividend policy	Nil payout ratio
Future growth prospects	Very high
Price/earnings multiple	Very high
Current profitability, that is, eps	Nominal or negative
Share price	Rapidly growing but highly volatile

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The Contribution of New Businesses to the Economy

- It is important for any economy, whether growing or mature, to have a good supply of start-up businesses and industries
  – These are needed to replenish the employment prospects and wealth creation power of the current mature and declining industries

- A major problem for those economies which industrialized first is how to replace many of these now dying industries, on which the past growth of the economy was based

- There is no doubt of the strategic importance of this start-up category of business and this is true whether it is a stand-alone company or is created as a division of a larger business

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Very High Level of Business Risk

- The first stage of many start-up businesses requires investment in research and development in order to try to identify new product concepts
  - This is the pre-launch stage of the business, and funding at this stage is often referred to as seed capital

- If the product opportunity still appears financially attractive, there is normally considerable additional expenditure required for operations
  - Operating facilities, support facilities, and initial sales and marketing activities before
  - The inflows from sales revenues are not only small but delayed, while the cash outflows still include high levels of one-off launch-associated costs as well as the normal ongoing operating expenses

- Capital invested at this stage is slightly less of a gamble than seed capital but still enormously risky, is known as start-up capital
  - Some venture capital companies - and some of their individual counterparts, known as business angels – have a preference for investing only at the seed stage, others only invest in start-ups

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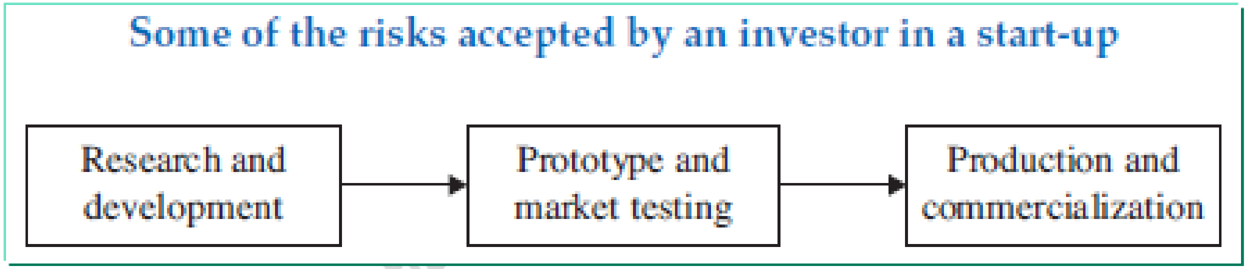
Risks Accepted by Investors



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Correspondingly High Level of Return?

- The theoretical argument is that the very high business risk at the start of the product's life cycle is almost exclusively caused by the unique risk associated with the product

- Therefore this can be diversified away by rational investors, who would always incorporate this high-risk investment into an efficiently constructed portfolio
  - The dramatic implication of the CAPM theory is that a start-up business does not need to offer significantly enhanced rates of return to investors to compensate for the high business risk because this is mainly unique, diversifiable risk

- Yet in practice the returns demanded by investors in new business start-ups are significantly higher than for more mature companies

- The true expected value of the resulting cash flows is going to be depressed however due to the sequential probabilities which need to be applied to each subsequent stage of the project

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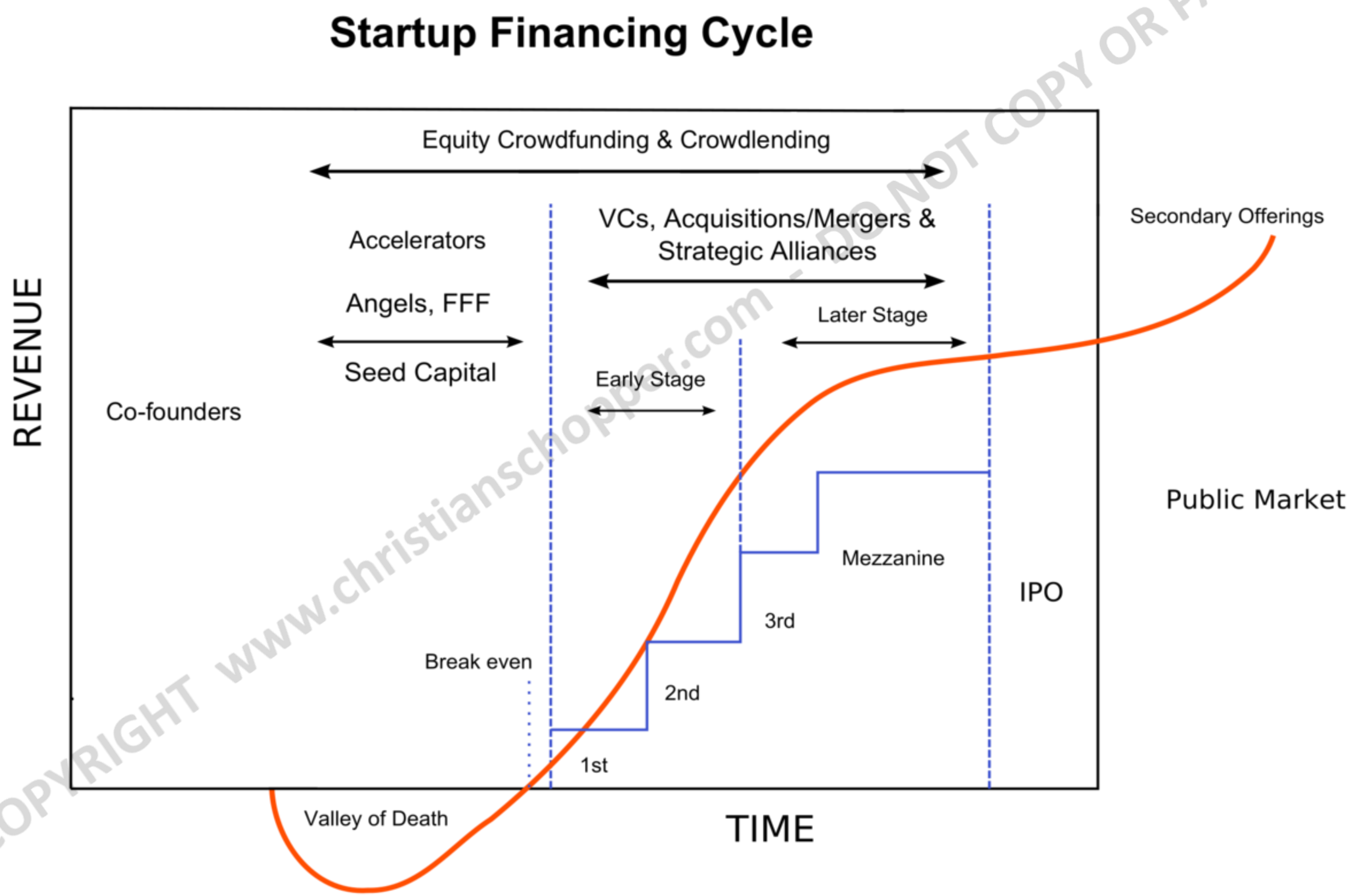
Funding of Start-Ups



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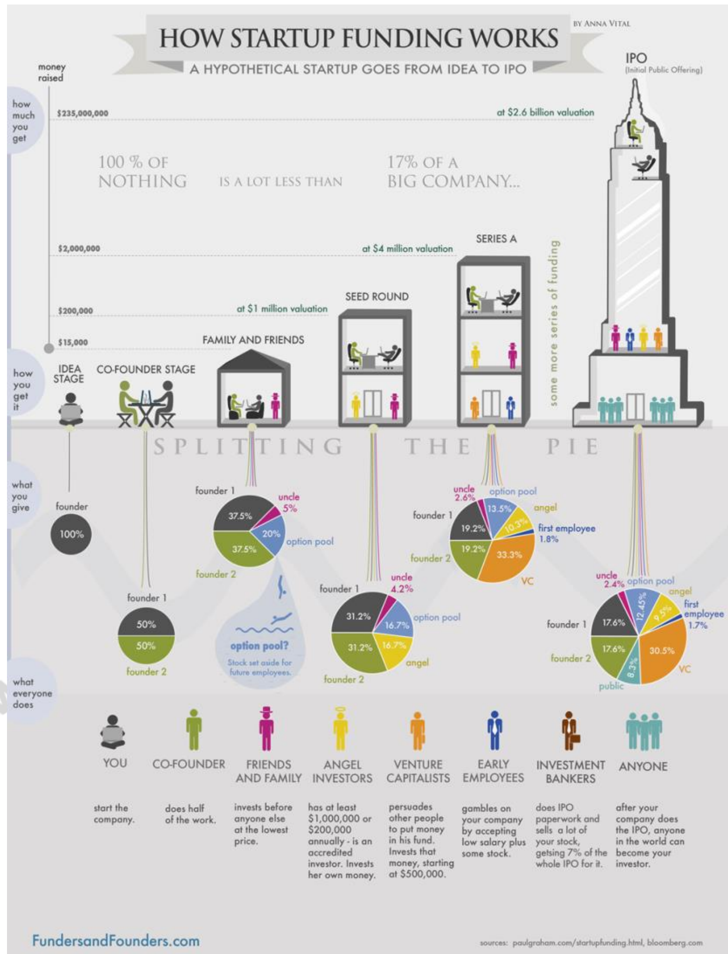
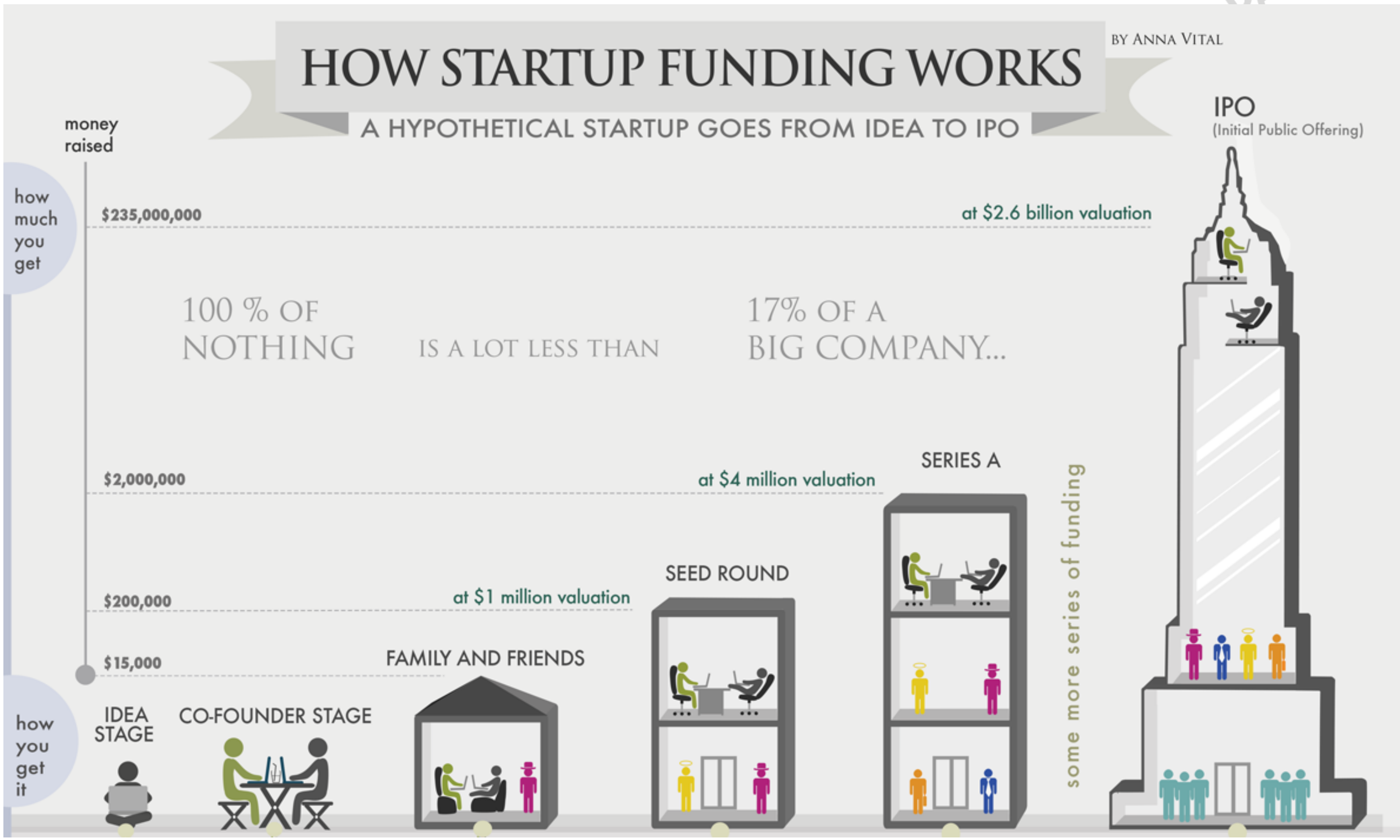
Funding of Start-Ups (cont´d)



Funding of Start-Ups (cont´d)



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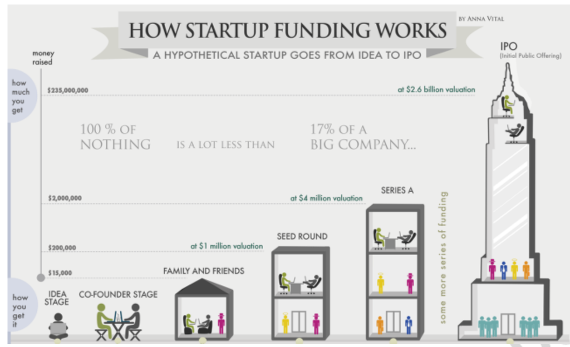

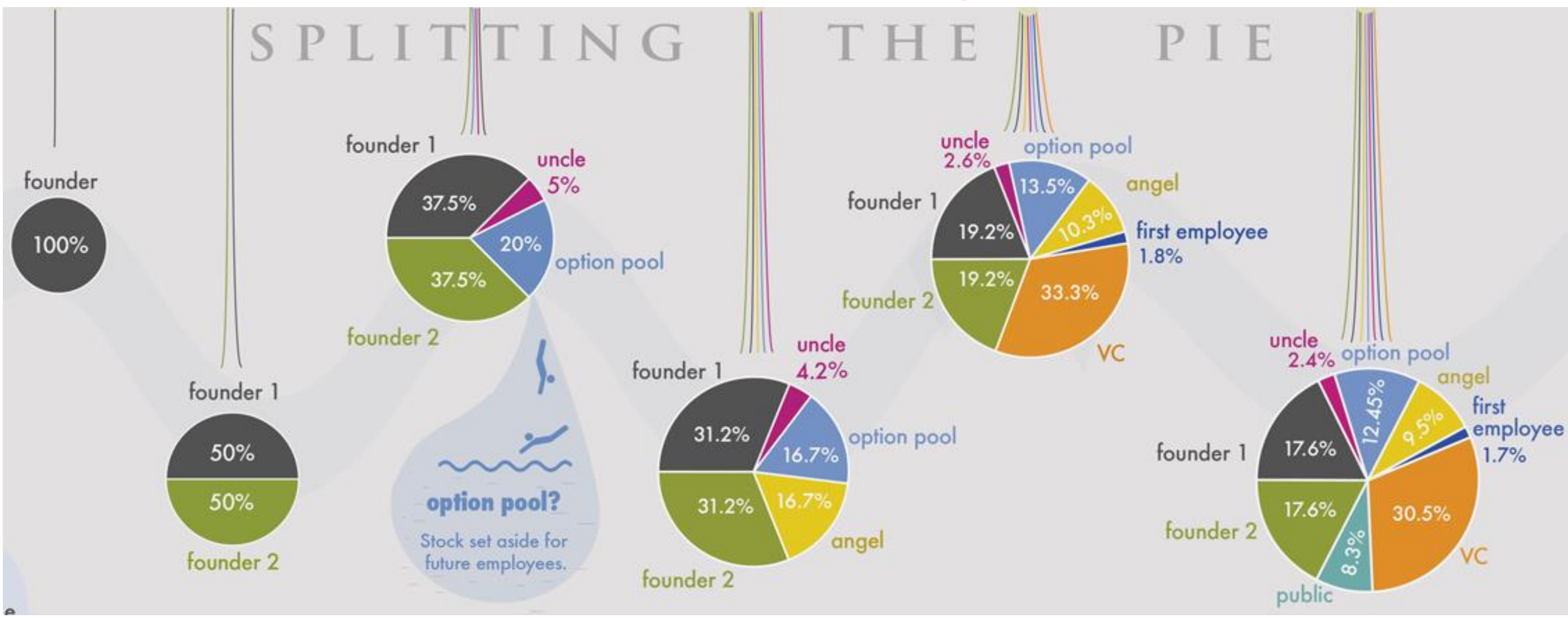

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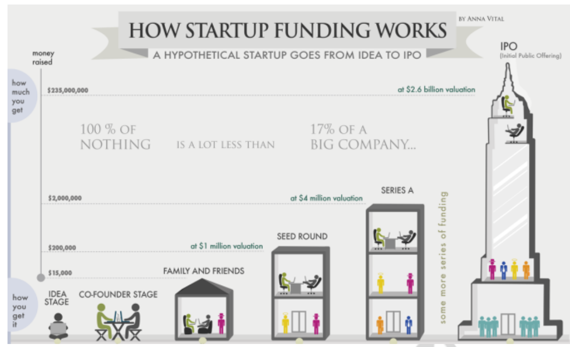

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Real Options

- Sometimes established companies venture out into new businesses (eg diversification) …
  - … in essence, running their own "start-up"-like ventures …
  - … in which case Real Options are of utmost relevance

- Most forecasts turn out to be wrong
  - This is not necessarily a problem: much of the value of the forecasts lies in the act of preparing them, and the considerable thought that goes into the business assumptions

- Options give you the right to do something, but do not require you to do it

- Real options represent a different way of looking at the present value of growth opportunities (PVGO)
  - The value of a company represents the value of its assets-in-place plus the NPV of its future activities; the real options are what gives the company that PVGO. This being the case, it is obvious that companies should conduct themselves in such a way

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Examples for the Value of Flexibility

- Multi-stage projects
  - If a project can be split into stages, rather than investing in the whole thing upfront, then it can be assessed at each stage to see if it is still worth proceeding. This minimizes the risk, and also reduces the amount of cash needed at the start of the cycle

- Timing flexibility
  - If an investment can safely be delayed without handing over a strategic advantage to competitors, then there can be an advantage in delaying it to learn more about the potential market and pitfalls

- Alternative uses
  - An investment in assets becomes more valuable if those assets have more than one possible use. This applies both to tangible assets and to intangibles. For example, a conference hall with fixed seating is potentially less valuable than one where the seating can be removed to accommodate a broader range of activities

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Examples for the Value of Flexibility (cont´d)

- Growth potential
  - Sometimes, it is worth undertaking a small project, with no profit potential, in order to gain entry to a potentially larger market. The cost of the small project (its negative NPV) can be seen as the price paid for the option to grab the later market opportunity should that arise

- Exit option
  - The ability to terminate a loss-making venture has great value. For example, a business committed to paying high rents on an unbreakable 20-year lease might regret not having paid a small premium up-front to negotiate a break clause

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Portfolio Returns

- The conclusions that can be drawn from this analysis are that the (very) high business risk associated with new start-ups is taken into account in the return expected by investors applying the CAPM theory, …

- … but not by directly increasing the discount rate to include the unique risk of the company

- It is vitally important that the cash flow projections resulting from the business plans of prospective start-ups are compiled in a manner totally consistent with the way in which they will subsequently be valued by the venture capitalist
  – Unfortunately, it is not uncommon to find entrepreneurs preparing their plans on a very prudent basis and incorporating decision trees and probabilities to produce the adjusted best estimate expected cash flow, and then for this to be discounted by the venture capitalists at their very high, risk-inclusive, required rates of return

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Need for Low Financial Risk

- The required inverse correlation of business and financial risk leads to the logical conclusion that start-up businesses should be funded by equity, preferably with no debt financing at all
  - In a perfect market, there is no added value from different capital structures but the effects of taxation and costs of financial distress do indicate that capital structure is important to companies

- Any level of debt in a company increases the risk of default, …

- … and investors will reduce the value of the investment by at least the expected value of any costs associated with such default or earlier stage of financial distress

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Need for Low Financial Risk (cont´d)

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- The other key component determining the total impact of the risk of default is the likelihood of it occurring
  - This obviously increases with the relative proportion of debt financing used by the business
  - But for a start-up company the risk can be high if even a small proportion of debt funding is raised
  - The high risk of complete business failure means that no cash inflows may actually be generated, so that any level of outstanding debt would lead to a state of severe financial distress

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Nil Dividend Payout Policy

- In theory, investors should be indifferent as to whether they receive dividends or achieve their return through capital gains…
- … yet the recommended dividend policy for a start-up company is to pay no dividends at all
- The cash flow of a newly formed business is normally highly negative and new funds are needed for the investment opportunities available to the company
- If debt financing is inappropriate this funding has to be by equity, which means that if investors require a dividend they would have to invest more money into the business to pay for this dividend

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Venture Capital Investors

- The ideal equity investors for start-up companies must appreciate the risks involved, including the potential for a total loss of their investment, and must want to receive their financial return in the form of capital gains

- Venture capitalists are normally professional investors who attempt to compensate for the high risks associated with any specific investment by developing a portfolio comprising similarly high-risk individual investments
  - They hope that the complete failure of some investments in the portfolio will be offset by the outstanding success of other investments made

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Venture Capital Investors (cont´d)

- Many venture capital investors specialize in particular industry sectors, such as information technology or bio-technology, but hold a portfolio of investments in the sector, taking the view that the sector will produce winners, but spreading the risk on the individual companies
  - Their industry specialism gives them a greater knowledge of the issues, thus reducing their investment risk. Others will limit their investment portfolio to a particular geographical area, or to a particular size of investment, with which they have experience

- Many venture capitalists have a relatively short investment time horizon
  - If it succeeds, they want to realize their resulting capital gain and reinvest this in more new start-up investments

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Business Angels

- Individuals who invest in venture capital opportunities are known as business angels
  - Often these individuals have made money in their own enterprises and are seeking the excitement and the financial reward of investing in another's business
- Business angel investment is often more informal than that from specialist venture capital companies
  - The documentation is much simpler, and the deal can be done more quickly due to the individuals being satisfied with doing less due diligence
  - Angels ' decision criteria for investment include having a favourable impression of the management team, a familiarity with the sector, projected financial rewards, and a synergy with their own skills

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Business Angels (cont´d)

- They may be a lot more flexible in their approach, prepared to invest for the longer term, and are able to provide management skills which the entrepreneur may lack
- However, angels rarely have ‘deep pockets’ and so cannot invest in second and third round financing
- Also, individuals who have made money in their own companies might have a ‘Midas complex’…

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Corporate Venturing

- An alternative is to accept funding from a large corporate that is undertaking corporate venturing
  - Many businesses, such as Cisco and Siemens, have large corporate venturing arms, the aim of which is (i) invest in promising new ventures in order to exploit their ideas, to obtain the benefit of their new technologies and gain an edge on the market; and (ii) generate a return like any professional venture capitalist

- Issues in regards to Corporate Venturing comprise:
  - 1. Does each party understand the other's motivation?
  - 2. Is a reciprocal arrangement planned whereby the venturer will provide business advice and contacts (similar in some ways to an incubator)? -- If so, does the venturer have a good track record in this area?
  - 3. How important is the investee business to the venturer? -- Many companies moved into corporate venturing at the heart of the dot.com boom, only to retreat again once the bubble burst, leaving their investee companies without recourse to the anticipated further funds

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Fund Flows in Venture Capital

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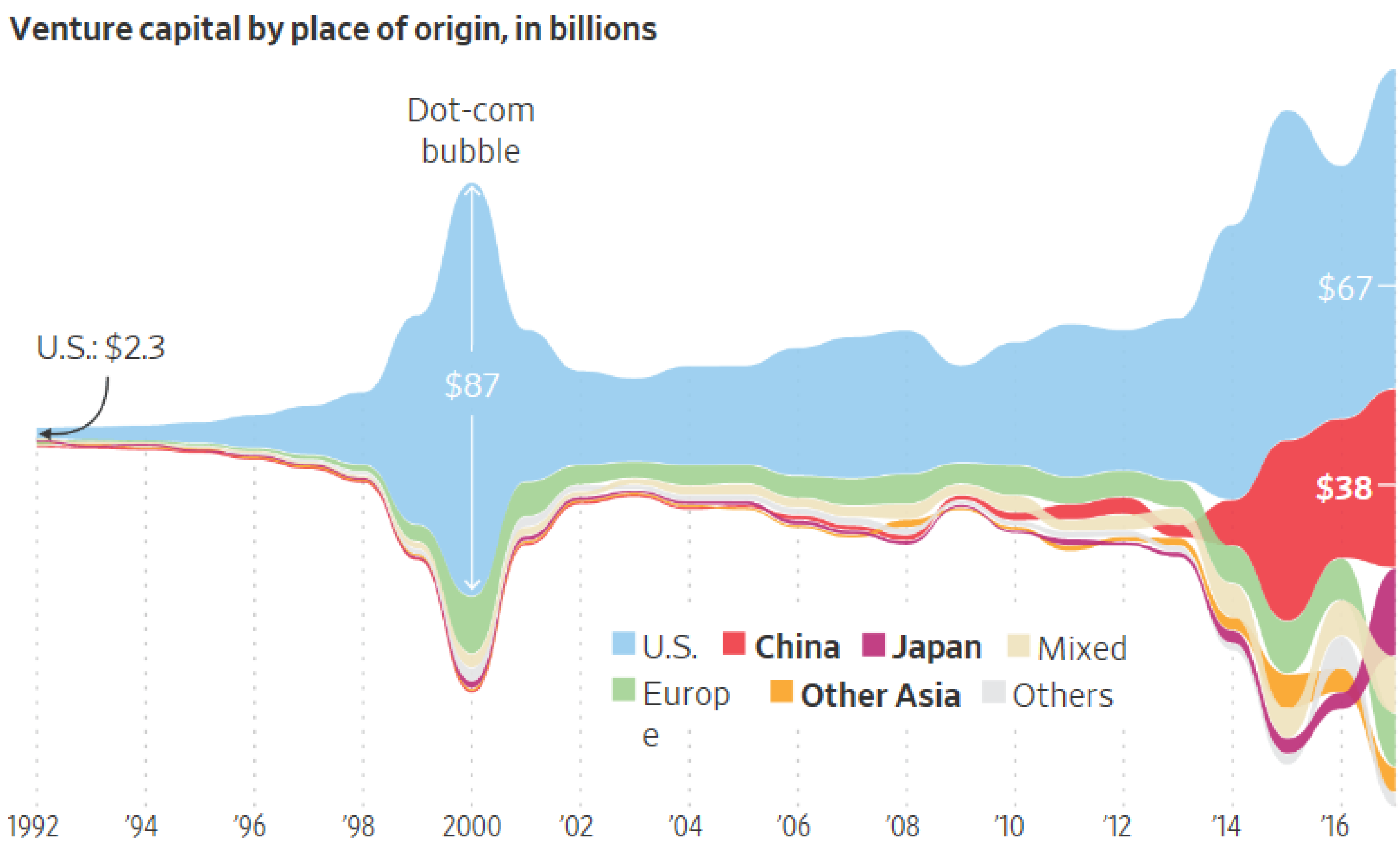
Fund Flows in Venture Capital



Note: Bands represent the amount of investment led by investors of each country, ranked in order from the top for each year.

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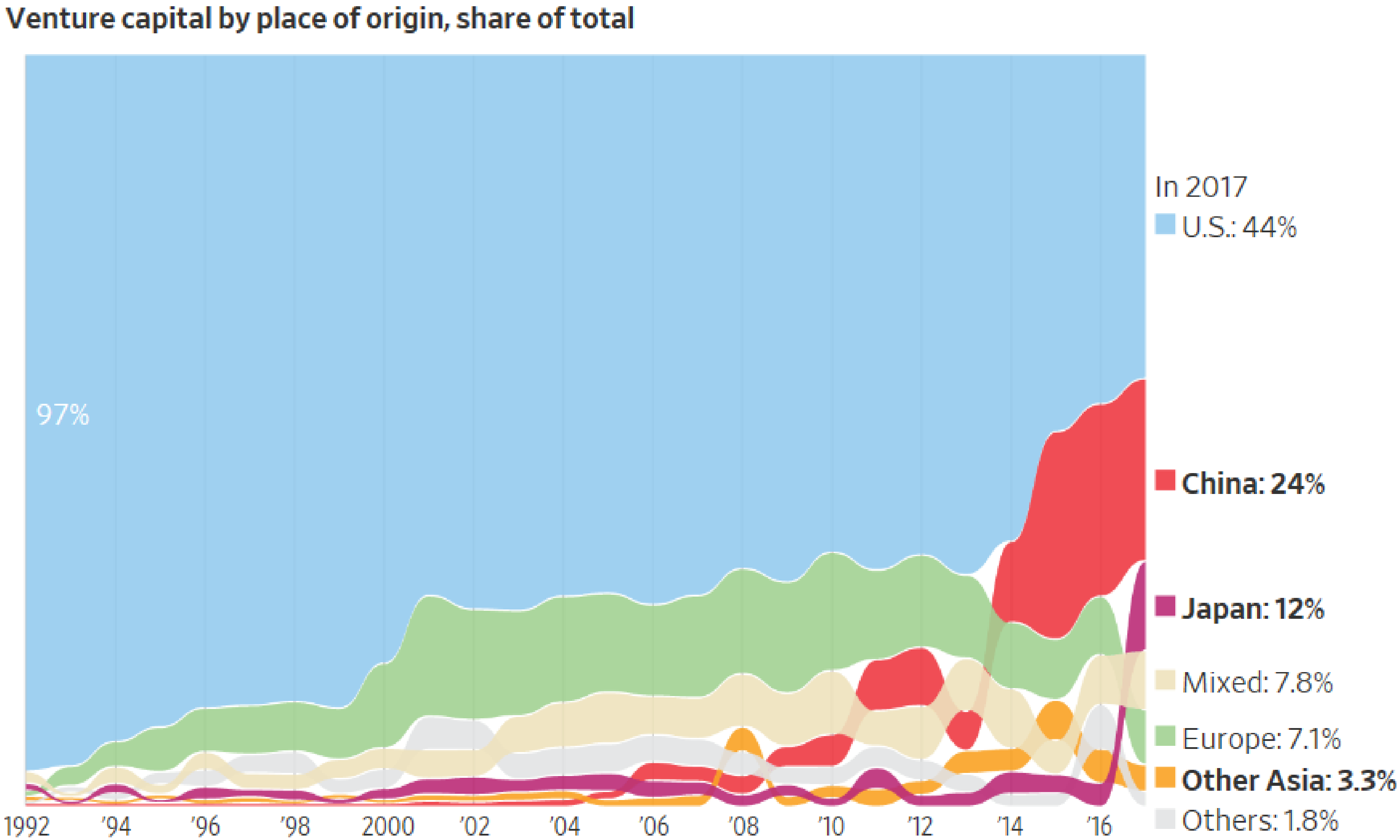

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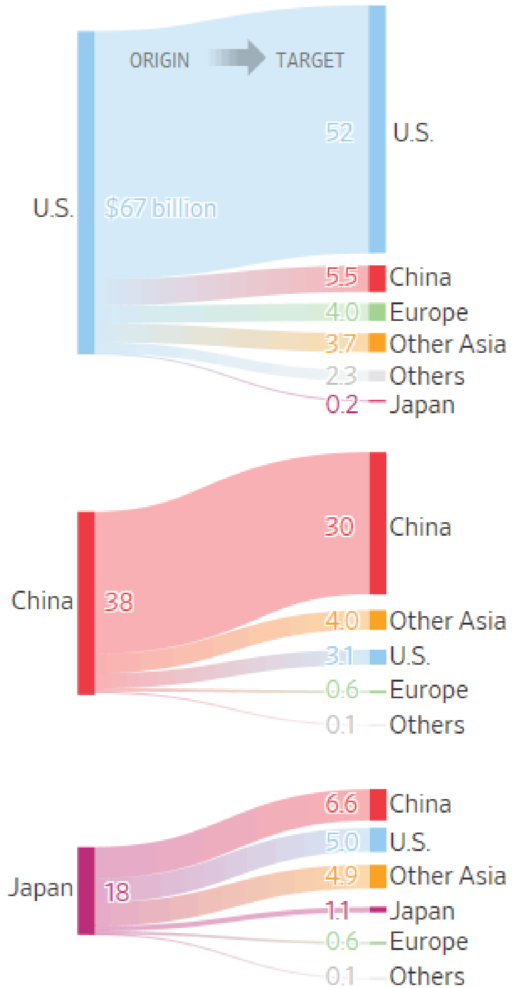
Fund Flows in Venture Capital (cont´d)

Venture-capital flow in 2017



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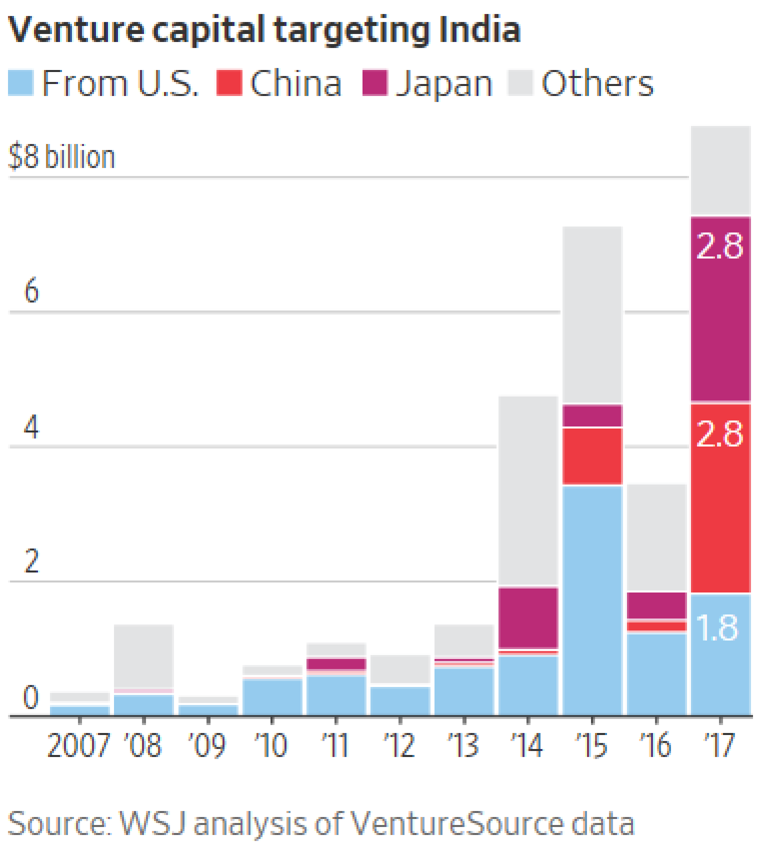

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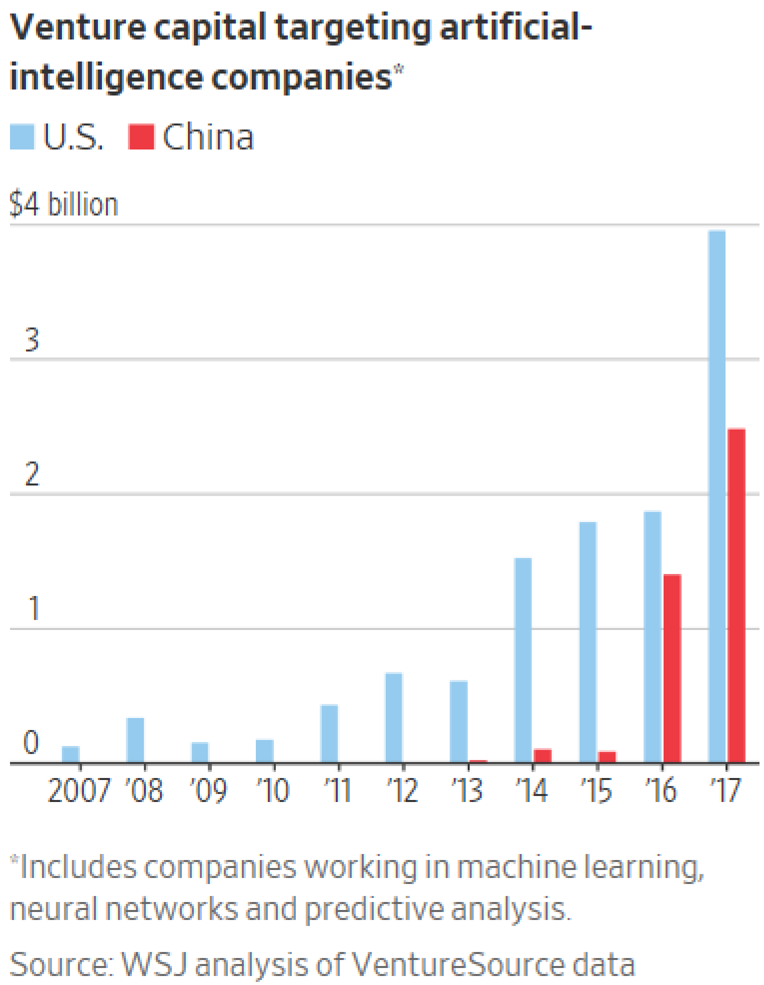

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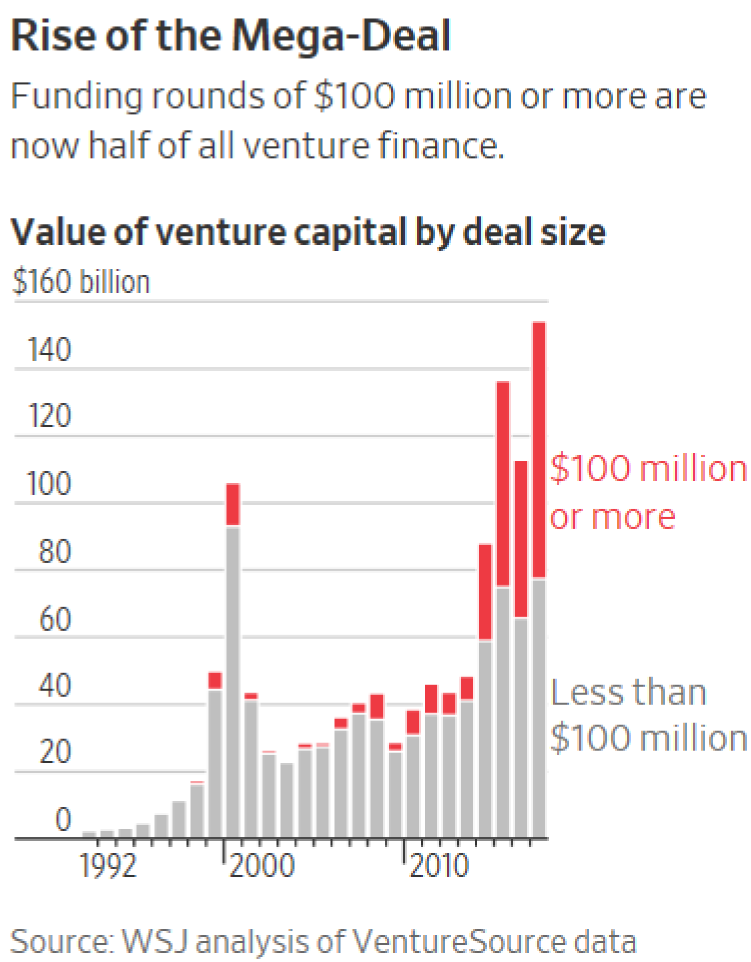

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Fund Flows in Venture Capital (cont´d)

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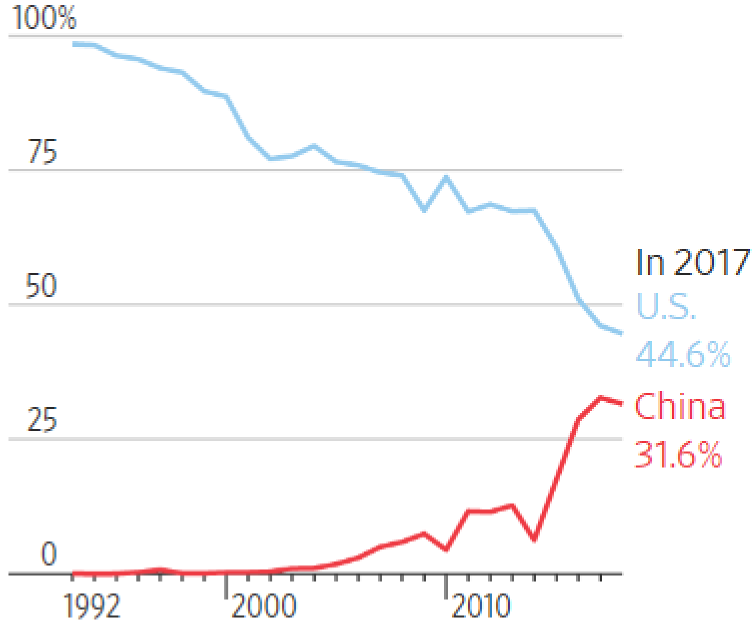
China Bound

The amount of venture money flowing to Chinese companies is now approaching the amount going to U.S. companies.

Venture capital targeting U.S. and Chinese companies, share of total



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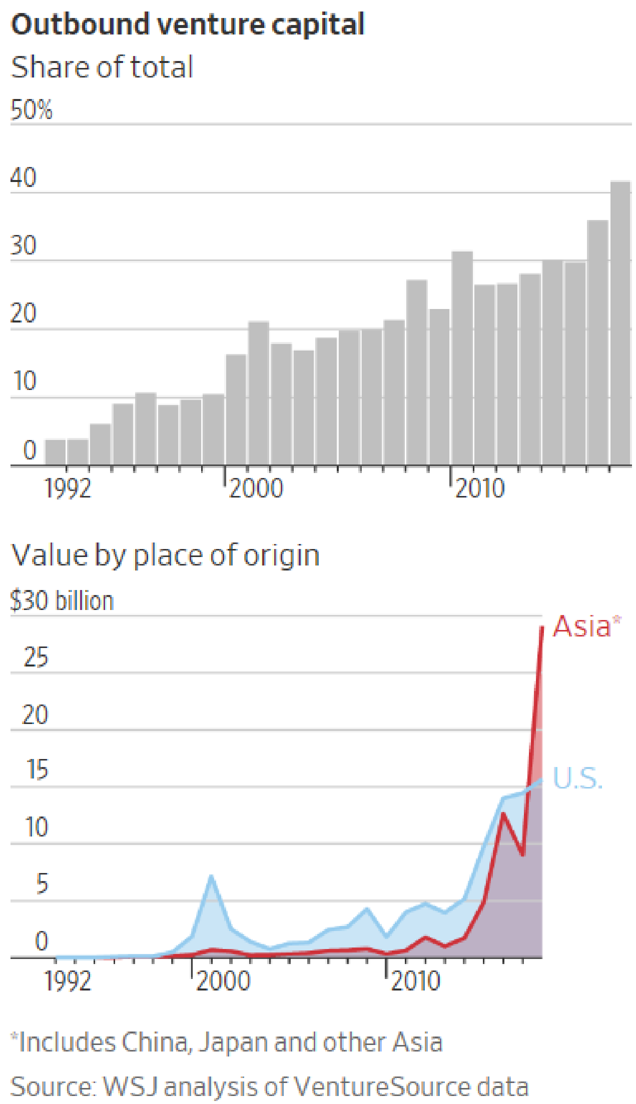

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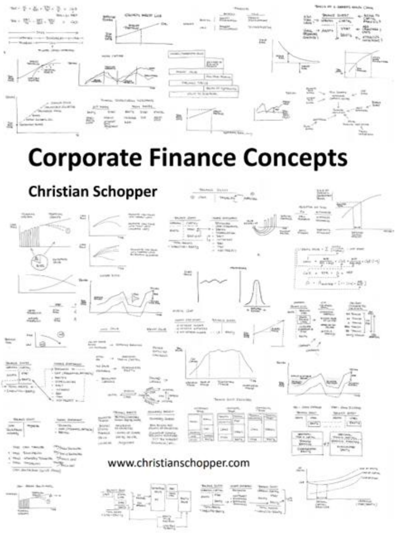

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