

Reasoning about Rationality: The Banality and Necessity of Bubbles

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Abstract

The persistent recurrence of speculative excess is a defining feature of financial capitalism wherever and whenever investors are flush with cash to invest in liquid secondary markets in financial assets. Historically, the appearance of bubbles transcends both political regimes and market structures. Comprehending this is the first and critical step to grasping how capitalism works. The second step cuts against the bulk of the literature on the wastefulness of bubbles and the inevitable crashes that follow; it is to recognize the role that financial speculation has played in funding the episodic deployment of revolutionary technology at systemic scale. The third step is to understand that the phenomenon of bubbles challenges received doctrines of neoclassical economics: the dual hypotheses of efficient markets and rational expectations. Understanding the dynamics of bubbles depends on reasoning about rationality in a universe characterized by inescapable ontological uncertainty.

The Way We Lived Then...and Now

1871 “was a year and an era when everyone was seeking what he could make on the Stock Exchange. There is a peculiar fascination to some people in making money on the Stock Exchange. I know hundreds who would rather make £50 on the Stock Exchange than £250 by the exercise of their profession; there is a nameless fascination, and in the year 1871 the favorite form of making money on the Stock Exchange was by applying for shares, selling them at whatever premium they were at, and the money was considered made—I say considered honourably made.”

(Albert Grant [Melmotte] quoted in Kynaston, *The City of London*, I, p. 266)

The Brush Boom

“There was such a rush for the shares as had never been seen before in Lombard Street, the whole street being blocked by the crowd pressing to get to the bank to pay in their applications The capital was enormously oversubscribed, all the well known City names amongst the list of subscribers, and the shares, which on allotment were to be £3 paid, were on the day of the prospectus dealt on the London Stock Exchange at £7 per share, or £4 premium.”

(Kynaston, I, p, 266)

Stock Market Gambling

“To attempt to trade on such movements is mere gambling with the odds against the trader by a considerable margin. It is astounding that thousands of otherwise intelligent persons persist in trying to make money in this way. Commonly accepted figures of somewhat dubious origin are frequently cited to show that 90% to 95% of all margin players lose money in the stock market. The deep-seated gambling instinct, the well-founded belief that in widely fluctuating markets there must be opportunities for profit nevertheless bring fresh recruits to the brokerage offices in constant streams.

(Carret, *The Art of Speculation*, p. 57)

Why Bubbles Matter: Keynes' Bridge

“The daily revaluations of the Stock Exchange . . . inevitably exert a decisive influence on the rate of current investment. For there is no sense in building a new enterprise at a cost greater than that at which a similar existing enterprise can be purchased; while there is an inducement to spend on a new project what may seem an extravagant sum, if it can be floated off on the Stock Exchange at an immediate profit. Thus certain classes of investment are governed by the average expectation of those who deal on the Stock Exchange as revealed in the price of shares, rather than by the genuine expectation of the professional entrepreneur.”

(Keynes, *The General Theory*, p. 151)

Tobin's Q

q: “the ratio between two valuations of the same physical asset. One, the numerator, is the market valuation: the going price in the market for exchanging existing assets. The other, the denominator, is the replacement or reproduction cost: the price in the market for newly produced commodities.”

(Tobin and Brainard, “Asset Markets and the Cost of Capital”)

What is the Fundamental?

“In the vast majority of cases, the prospects of investment projects—the stream of future returns—cannot be understood in standard probabilistic terms . . . This is obviously true for investments in innovative products and processes for which estimates of returns cannot be based solely on the profit history of existing products and processes.”

(Frydman and Goldberg, *Beyond Mechanical Markets*, pp. 41-2)

The R&D Boom of the Late 1990s

(Brown, Fazzari and Petersen, "Financing Innovation and Growth")

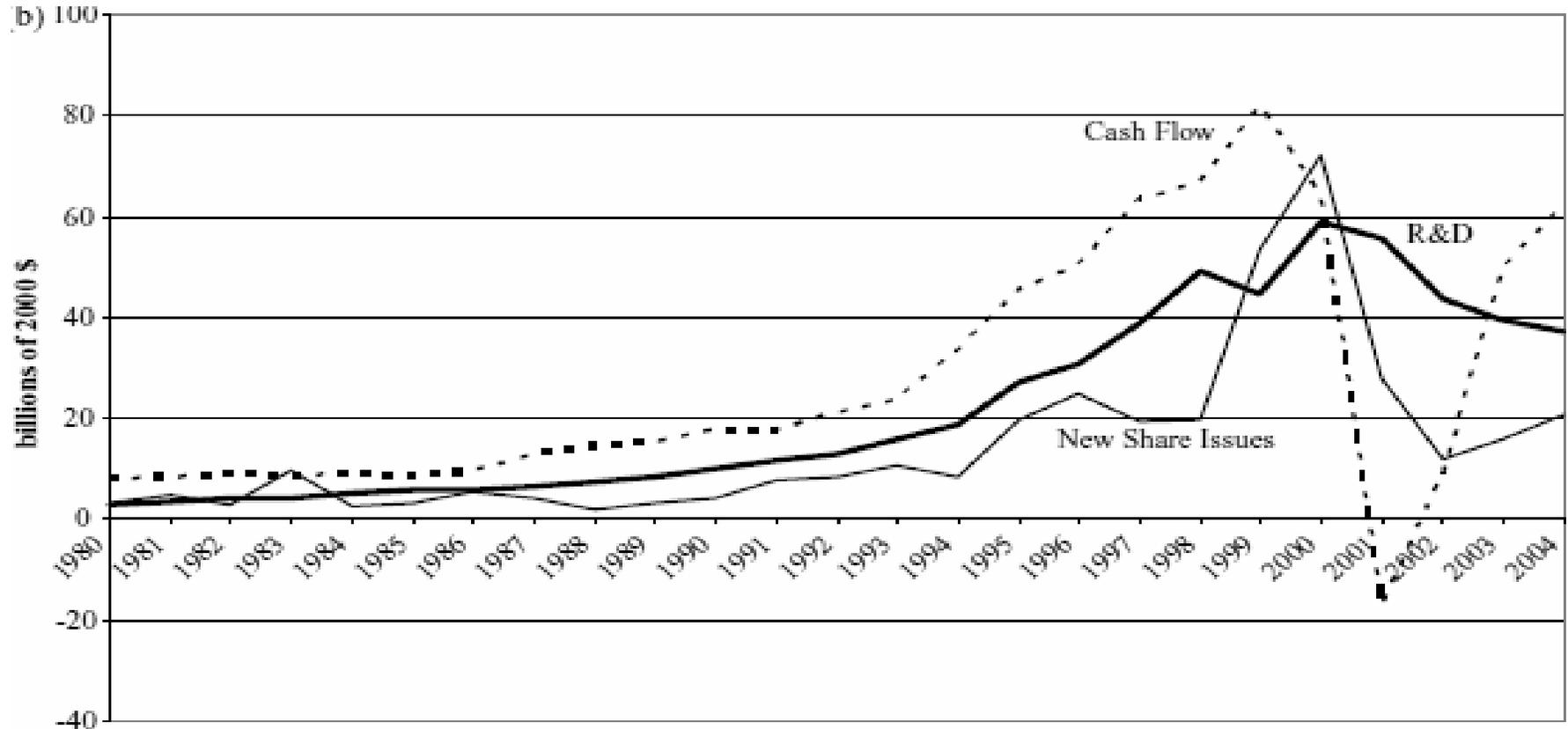
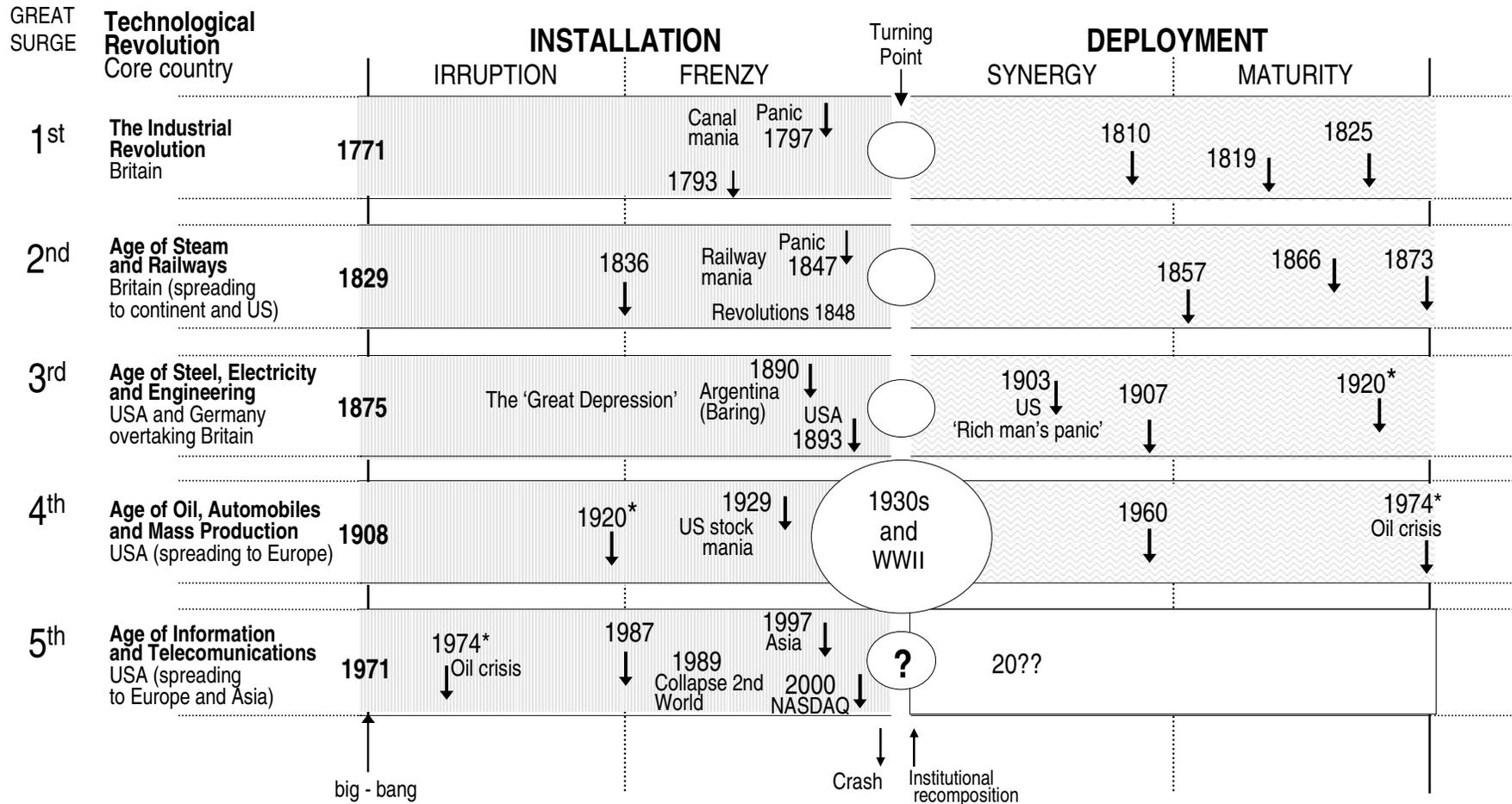


Figure 2b. High-tech R&D, cash flow, and new share issues (young firms). The sample is all young high-tech firms with coverage in Compustat. A firm is classified as young for the first 15 years following the year it first appears in Compustat with a stock price. The high-tech industries are SICs 283, 357, 366, 367, 382, 384, and 737. The heavy line plots the sum of R&D for all young high-tech firms, the dashed line plots the sum of gross cash flow, and the thin line plots the sum of net new stock issues with negative net issues set equal to zero.

Five successive surges, recurrent parallel periods and major financial crises

Source: C. Perez , *Technological Revolutions and Financial Capital*



Note: * Observe phase overlaps between successive surges.

Source: Dates of crises are from Kindleberger (1978:1996), Appendix B

The City of London and Technological Innovation

“Did it matter that by far the most important financial intermediary in the early history of the British motor-car industry was a crook? The answer is surely yes, for quite apart from the specific matter of the shortages of working capital adversely affecting pioneer producers such as Daimler, the Lawson saga marked the beginning of what would be an uneasy, mutually mistrustful relationship between that industry and the City. The industry, not unnaturally, feared being ripped off again; the City, just as naturally, perceived the industry was full of unprofitable “lemons” and was reluctant to subscribe or encourage the subscription of further capital. The analogy with the electrical industry, following the catastrophic “Brush Boom” of the early 1880s, is painfully obvious.”

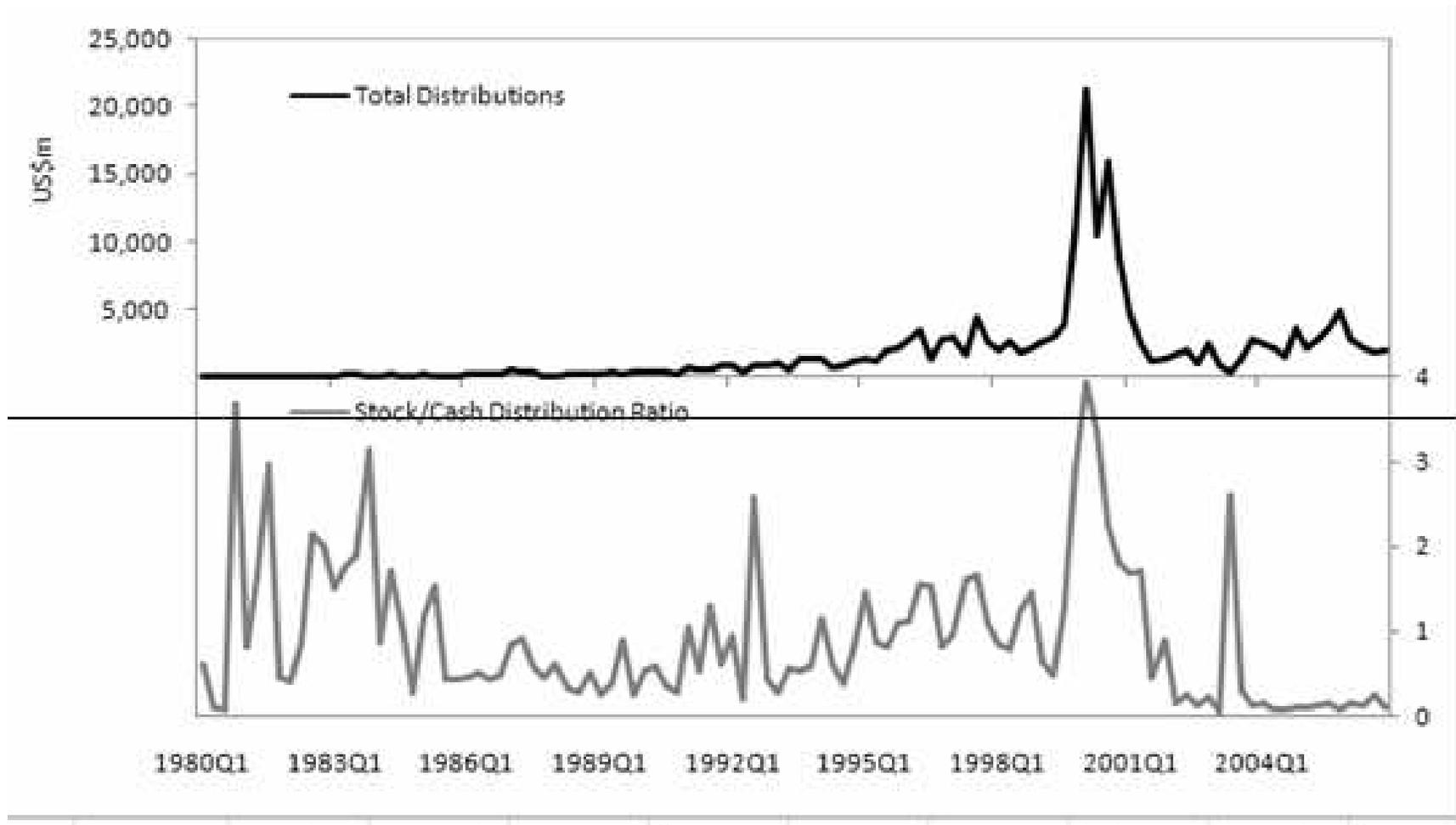
(Kynaston, II, p. 148)

Share Prices and Economic Fundamentals

“[O]n average over the past century, U.S. stock prices have been three times more volatile than fundamentals . . . But the trend in the degree of excess volatility is also telling. Up until the 1960s, prices were around twice as volatile as fundamentals. Since 1990, they have been anywhere from six to ten times more volatile. Excess volatility in equity prices has risen as financial innovation has taken off.

(Haldane, “Patience and Finance,”)

Distributions by US VCs and Stock/Cash Ratio of Distributions



IPO Mckenzie and Janeway, "Venture Capital Fund and the IPO Market"

Keynes' Beauty Contest

“Professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be.”

(Keynes, *The General Theory*, p. 156)

Asset Prices as Signals to Action

“When the decision horizons of market participants are shortened due to short-term incentives, binding constraints, or other market imperfections, then short-term price fluctuations affect the interests of these market participants, and hence will influence their actions. There is then the possibility of a feedback loop, where anticipation of short-term price movements will induce market participants to act in such a way as to amplify these price movements.”

(Shin, *Risk and Liquidity*, p. 10)

What is Rational?

“A rational, profit-seeking individual understands that the world around her will change in non-routine ways. She simply cannot afford to believe that, contrary to her experience, she has found a “true” over-arching forecasting strategy, let alone that everyone else has found it as well.

(Frydman and M. Goldberg, “The Imperfect Knowledge Imperative” p. 27)

“Calculating Where We Can...”

“We should not conclude . . . that everything depends on waves of irrational psychology. On the contrary, the state of long-term expectation is often steady, and, even when it is not, the other factors exert their compensating effects. We are merely reminding ourselves that human decisions affecting the future, whether personal or political or economic, cannot depend on strict mathematical expectation, since the basis for making such calculations do not exist; and that it is our innate urge to activity which makes the wheels go round, our rational selves choosing between the alternatives as best we are able, calculating where we can, but often falling back for our motive on whim or sentiment or chance.”

(Keynes, *The General Theory*, p.p. 162-3)