FINANCIAL SOCIALISM –

THE ROLE OF FINANCIAL ECONOMICS IN ECONOMIC DISORGANIZATION

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Author:

Michael Ehret, Dr.

Reader in Technology Management

Nottingham Business School

Nottingham Trent University

Burton Street,

NG1 4BU Nottingham

United Kingdom

Email: michael.ehret@ntu.ac.uk, Tel. (office): +44 (115) 8488132, Tel. (mobile) +49 (175) 2401721

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Financial socialism – The role of financial economics in economic disorganization

Abstract

A growing body of research shows evidence that financial economics played a significant role in recent financial crises, such as the Subprime Mortgage Crisis, Enron and Long Term Capital Management. This is a wake-up call for managers and investors who employ financial economic models. This paper demonstrates how financial economics decouples market prices from the valuation by customers and resource owners in a systematic way. As an organization principle, financial economics replaces value-driven investment by a theory-driven ruling of anonymous financial markets – a scenario that warrants the title “financial socialism”. The paper presents implications for customer valuation, financial accounting and a maxim for the sound application of financial economic models.

Keywords: Financial crisis, financial economics, Austrian school of economics, securitization, entrepreneurship theory.
1 Introduction—Financial economics and financial crises

Financial economics aims to make investing more robust by employing economic theory and stochastic models for the valuation and trade of securities. A growing body of research shows evidence for systematic failures of financial economics in three recent crises: In the case of Long Term Capital Management the Federal Reserve Bank needed to initiate a historical bail-out to cover the losses produced with financial economic models for speculation on treasury markets. In the case of Enron, managers used financial economic models to move losses off the balance-sheet thereby stimulating a historic fall in stock-market prices. In the case of the Subprime Mortgage Crisis, bankers and mortgage lenders used financial economic models to expand credit and take-on risks that almost broke the financial system (Anonymous, 2010; Chandra, 2003; Fox, 2003; Lowenstein, 2000; Reinhard & Rogoff, 2009). The failures of financial economics come as a wake-up call for business managers and entrepreneurs who employ financial economic models for spotting market opportunities, the design of business models or the estimation of future business risks.

This paper elucidates the systematic features of the failures of financial economics by employing market process theory of the Austrian school of economics. In the Austrian view, entrepreneurs establish businesses as a response to un-served customer needs or idle economic resources. Entrepreneurs employ market prices in order to identify business opportunities and manage projects for their exploitation (Foss, Foss, Klein, & Klein, 2007; Harper & Endres, 2010; Hayek, 1945; Koppl, 2008; Lachmann, 1977; Shane & Venkataraman, 2000; Von Mises, 2007). In contrast, financial economic theorists assume that the market is on a path towards equilibrium.
If markets merely adapt to the equilibrium-price, an individual investor cannot beat the market. If speculators assume the market on the path towards equilibrium, their winning strategy is to bet on the emerging equilibrium price rather than valuing traded assets. Financial economic models employ market data and economic theory in order to inform investors on equilibrium-based investment strategies. By focusing on equilibrium, financial economic models deliberately ignore valuations of individual market participants and the potential impact of rare events. As a consequence, financial economic models decouple prices from the valuations of resource owners and customers in a systematic manner. Decision makers delegate entrepreneurial responsibility and accountability to financial markets, as soon as they make unconsidered use of financial economic models. Such a situation shares characteristic features with socialist calculation elucidated by the scholars of the Austrian school of economics. In socialist calculation, a bureaucracy composed of economists and statisticians employs economic models and market data in order to allocate resources in a theory-efficient manner (Keizer, 1989; Koppl, 2008; Rothbard, 2004; Vaughn, 1980; Von Mises, 2007). At its extreme end, financial economics assumes a world where entrepreneurs are redundant and financial markets have superior knowledge of customer needs and the potential of resources – in other words a world of financial socialism.

This article shows how financial economic models systematically replace value-driven investment with theory-driven speculation. As an implication, managers should strive for value-in-use studies as practiced in business marketing for the evaluation of market opportunities and scrutinize the exposure of financial accounting to the interference of financial market speculation. Despite their limitations, financial economic models may play a useful heuristic role
by representing the ignorance of the decision maker. Financial economic models are a questionable tool for predicting market prices.

The following section introduces the core idea underlying financial economics and its salient features. Section three presents the investment decision in the perspective of Austrian market process theory. Section four compares the financial economic approach of market-driven speculation with the Austrian approach of value-driven investment. Section five presents three cases that demonstrate how financial economics systematically disrupts the performance of businesses and markets. The discussion section provides a summarizing account of the working of financial economics in the three cases, highlights the epistemological cause of the financial economic paradox, and discusses contributions of marketing, entrepreneurship and financial accounting to value-driven investment strategies. Not least, the discussion proposes a maxim for the productive application of financial economic models. A final conclusion accounts for key lessons and implications for future research.

2 Market-driven speculation – the pillars of financial economics

Financial economics proposes that the individual investor cannot beat the market: If markets are rational, individual investors can at best hope to hit the equilibrium price that results from the competitive bidding of buyers and sellers. More specifically, financial economics assumes that the conventional value-driven approach to investment almost certainly fails. In the value-driven approach, investors estimate the present value of future income streams flowing from an investment. Because future income is uncertain, conventional investors employ their experience, information networks and a portion of guts feeling to estimate the value of an investment. Under the assumption that prices for an investment title, like stock, bond or commodity move towards
equilibrium, conventional investors will almost certainly fail as even their best estimations will deviate from the equilibrium price. Therefore, financial economics holds that financial-market-driven speculation strategies will outperform value-driven investment strategies (Derman & Taleb, 2005; Fox, 2009; Taleb, 2007). Financial economics builds market-driven strategies on three pillars:

1. **Economic theory**: Neo-classical economics assumes that financial markets play a key role in removing imperfections of markets for goods and services (Arrow & Debreu, 1954; Fisher, 1919). The more speculators sell underpriced assets to overpaying buyers, the more likely will resulting market prices move towards equilibrium. The key theoretical contribution of financial economics is to substitute net-present value calculation of conventional investors with a system of investment models exclusively using prices of financial markets. On Modigliani and Miller’s assumption that equity and debt are perfect substitutes, a company can use stock market prices to calculate its cost of capital as for example in the Capital Asset Pricing Model (Fama, 1970; Fox, 2009; Modigliani & Miller, 1958; Sharpe, 1963).

2. **Statistics**: Bachelier pioneers financial economics as he proofs that in equilibrium price variations will follow a normal distribution like events of games in a carefully designed casino (Bachelier, 1939, 2006; Fox, 2009; Taleb, 2007). Following Bachelier’s proposition, financial economics applies means-variance analysis in order to calculate the expected price of an investment. Financial economic models assume that asset prices follow a normal distribution. If they trust a pure statistical approach, investors can construct investment portfolios that best match their individual appetite for return-maximization or risk-reduction (Fox, 2009; Markowitz, 1991).
3. **Securitization**: Securities are in use at least since the times of antique Greece. Back then, the philosopher Thales of Milet used to make a profit by providing owners of olive mills advance funding in spring in exchange for the right to rent them out to olive farmers in fall during the olive harvest. (e.g. Keys, Mukherjee & Seru, 2010). An owner can employ a security to convert illiquid assets (e.g. olive mills) into liquid securities (e.g. advance funding from a speculator) (Keys et al. 2010; Loutskina & Strahan, 2009; Shin, 2009). As a key contribution of financial economics, Black, Scholes and Merton propose a model for valuing securities. The Black, Scholes and Merton approach employs the price of the underlying asset, the expected volatility, the going interest rate, the strike price of the option, and the time span for its expiration in order to calculate the option value (Black & Scholes, 1972, 1973, 1974; Merton, 1972). The Black-Scholes-Merton approach enables investors to calculate option prices with the almost exclusive use of financial market data. Financial economics provides the theoretical foundation for the exclusive use of financial data for investment valuation. If markets are rational, equilibrium prices are the superior navigation instruments for investors.

To conclude: Financial economics offers the investor an elegant system of models that make almost exclusive use of financial market data for estimating the future price of an asset. Financial economics claims to transform the craft of conventional value-based investing into a science guided by economic theory and statistic calculation. Financial economics holds that market-driven speculators will outperform value-driven investors and that financial markets will force an economy towards equilibrium.
3 Value-driven investment - Austrian market process theory

Financial economics offers a market-centric theory of speculation under equilibrium conditions. In contrast, the Austrian school of economics emphasizes the role of value-driven investments by entrepreneurs as the driving force of economic growth. Austrian scholars claim that economic action is vital under conditions of dis-equilibrium, where customers have unserved needs or economic resources lay idle (Hayek, 1945; Menger, 1981; O’Driscoll & Rizzo, 1996). Dis-equilibrium provides fertile ground for entrepreneurs who spot productive opportunities for higher valued use of resources and drive business projects for their exploitation (Kirzner, 1973, 1997; Shane & Venkataraman, 2000). Arbitrage is the simplest form of business opportunities, where agile entrepreneurs buy low from undervaluing sellers and sell dear to overvaluing customers. Higher hanging fruits call for the organization of business projects, like the introduction of new products, more efficient processes of production, new approaches to organization or the connection of distant markets (Khalil, 1999; Kirzner, 1973; Schumpeter, 1951). Entrepreneurs employ business projects in order to recombine resources and monetize the results at a profit. Business projects take time from their inception to the monetization through the sale of products. Entrepreneurs need capital investment to buy out resource owners, implement their business idea and monetize the results on product markets (Harper & Endres, 2010; Lachmann, 1977; Lewin, 1999; O’Driscoll & Rizzo 1996). This process is inherently uncertain, as entrepreneurs can never be sure that prices reached on product markets will justify the costs of resources and capital needed to implement the business project (Casson, 2005; Knight, 1921; Langlois, 2007). At the inception, expectation of profit opportunities stimulates entrepreneurs to take action. However, entrepreneurs can only make viable claims on their performance once they have monetized their business project. Entrepreneurs use financial
accounting to navigate their business projects towards profits. Profits indicate business success while losses imply failure or the need for complementary investments (Menger, 1981; Rothbard, 2004; Young, 1987; Von Mises, 2007).

To conclude, entrepreneurs direct investment projects for economic growth and perform two crucial economic activities (Shane & Venkataraman, 2000): (1) The exploration of business opportunities and their (2) exploitation by the means of business projects.

Equilibrium pricing of financial economics is meaningless at best and potential destructive for the management of value-driven investment projects (Koppl, 2008).

In the exploration phase, entrepreneurs need instruments for identifying business propositions that the current market supply does not effectively address (Lachmann 1977; Menger, 1981). Marketing researchers respond to this challenge by developing systematic approaches for exploring the customer-perceived value-in-use as a source for identifying market opportunities (Ballantyne & Varey, 2006; Christopher, 1982; MacDonald, Wilson & Martinez, 2011). Equilibrium prices are useless for this endeavor as they rely on the structure of current supply and disguise the valuations of customers and resource owners.

Take for example the car business. In the quest for more valuable car designs, entrepreneurs explore options for reducing emissions and enhancing performance of cars. For entrepreneurs, the crucial question is the willingness of car-users to pay premiums and take-on trade-offs like lower mileage or longer re-fuelling cycles of new technologies like battery-driven cars. Current market prices of cars do not capture data like driving habits, concerns over emissions, enthusiasm for speed-acceleration, and many more characteristics that crucially determine the value of a car for its user. Successful designs might at some point translate into new equilibria on
the car market. But entrepreneurs need to identify the value-driving elements of the winning
design-formula rather than prospective equilibrium prices.

In the exploitation phase, entrepreneurs need valid information about the performance of their business. For this endeavor they reside on effective payments by customers and resource owners, as only these provide information on the effective value-added by the business. Therefore, financial accounting is a crucial tool of entrepreneurs for navigating their business projects towards profits. Hypothetical equilibrium prices provide no valid information for this endeavor (Vaughn 1980; Von Mises, 2007; Young, 1987).

4 Speculation in equilibrium vs. investment under uncertainty – A comparison of financial economics with Austrian market process theory

While financial economics offers a theory of speculation under conditions of equilibrium, Austrian market process theory highlights the crucial role of entrepreneurial-driven business projects as a response to dis-equilibrium and value-enhancement within an economy. Thus, both approaches provide substantial contrasting pictures of the investment decision:

- By assuming equilibrium prices, financial economics captures a situation where a society has put its resources to their most valuable use and price fluctuations can be expected to be random. In a situation of dis-equilibrium, financial economics systematically hides entrepreneurial business opportunities and exposes investors to rare events not reflected in probabilistic simulations (O’Driscoll & Rizzo, 1996; Taleb, 2007).

- Calculation of equilibrium prices systematically ignores business opportunities by better serving customers or finding higher valued uses of resources (Lachmann,
Entrepreneurs need value-in-use calculations in order to identify profit opportunities and financial accounting in order to track business performance (Lachmann, 1977; Von Mises, 2007; Young 1987). An entrepreneur who substitutes value-in-use estimation and financial accounting with financial economic models systematically decouples a business from its productive opportunities and threats.

- Financial economics assumes continuous time (Merton, 1975; O’Driscoll & Rizzo, 1996). In continuous time, events do neither interact nor follow paths. Every event happens instantaneously and does not influence following events. As long as the continuous-time conditions are given, decision-makers can use probability methods to make predictions. In real-time, events show effects on subsequent events and path-dependencies exist. Producers, consumers and entrepreneurs influence as well as learn from each other. Successful entrepreneurs may attract stampedes of imitators trying to tap into the exposed profit potential. Failing entrepreneurs might create investor panics forcing investors out of a market despite fundamental value propositions. Predictions exclusively building on probabilities are not able to capture such interactions of events (O’Driscoll & Rizzo, 1996; Taleb, 2007).

- In equilibrium, capital becomes a homogenous fund for the speculation on market prices (Modigliani & Miller, 1958). In dis-equilibrium, entrepreneurs have to estimate which combination of assets provides the best support for the exploitation of opportunities. As soon as the composition of capital goods matters, equity and debt cease to be pure financial substitutes. Equity covers the
entrepreneurial risk of a project and entitles for profit from business performance through the value added by the business project. Debtors compensate creditors for their time preference by paying interest (Foss et al. 2007; Lachmann, 1977; Lewin, 1999; Rothbard, 2004; Von Mises, 2007). Entrepreneurs employ the capital structure to direct business projects and exploit their profit potential.

- Financial economics makes the equilibrium price the core angle of calculation. Under dis-equilibrium, entrepreneurs use information about future value propositions for example as a result of value-in-use-studies in order to explore business opportunities (Anderson, Kumar & Narus, 2007; Ballantyne & Varey, 2006; Macdonald, Wilson & Martinez, 2011). Theoretical equilibrium prices are meaningless for the exploration of business opportunities. Speculators who systematically assume equilibrium prices decouple prices from productive opportunities and risk to blindfold themselves against the consequences of rare events. Hypothetical equilibrium prices also distort the valuation of business performance, where entrepreneurs need to factor-in data on effective payments by customers and for resources into their financial accounting records. Equilibrium prices are no valid yardstick for measuring business performance

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To conclude: Financial economics substitutes the role of entrepreneurs with an elegant system consisting of economic theory, stochastic models and security trading. Financial
economics distorts the exploration of business opportunities beyond price inconsistencies on financial markets. Models of financial economics fail to provide relevant information for entrepreneurs who want to measure and navigate the performance of their businesses. As a principle of economic organization, financial economics creates problems similar to those of socialist calculation that Austrian scholars identified. As soon as elites of economists and statisticians establish a system of theory-driven pricing, first-hand information on customer needs and opportunity costs gets lost.

5 The role of financial economics in economic disruption

5.1 Financial economics at work in recent crises

This section investigates how financial economics systematically crowded out entrepreneurial valuation in three cases. Investors established Long Term Capital Management in order to exploit the Black-Scholes-Merton valuation approach for financial speculation. Enron is notorious for its off-balance-sheet structure that hid relevant costs and risks. In the subprime mortgage crisis, financial economics stood at the core of securitization schemes that decoupled house-prices from underlying asset valuation.

5.2 Decoupling Entrepreneurial Judgment from Financial Valuation – The Case of Long-Term Capital Management

Longterm Capital Management (LTCM) is in some respect the most straightforward application of financial economics as a business model. John Meriwether, former leader of the financial arbitrage group at Salomon Brothers, established Long-Term Capital Management as a stand-alone company devoted to financial arbitrage. Meriwether’s idea was to build a business model around the quantitative approaches developed in financial economics. Therefore he hired
a team of top economists, including Myron Scholes and Robert Merton who contributed to the Nobel-Prize winning Black-Scholes-Merton formula for pricing options. Meriwether also invested in cutting edge computing technology. LTCM started operations in 1994 backed with equity funding of around 1 billion US $ provided by Wall Street firms and international banks, but also entrepreneurs and celebrities, making the firm the highest valued start-up company by the time of its inception (De Goede, 2001; Lowenstein, 2000; MacKenzie, 2003; Taleb, 2007).

The approach of LTCM was to use the Black-Scholes-Merton-formula to identify two securities whose prices should converge in theory but failed to do so in reality. LTCM’s model was to sell the high-priced asset short and to buy the low-priced asset long. Take for example bonds issued by treasury banks. During LTCM’s times, recently issued treasuries usually sold at higher prices than similar ones issued six months earlier. Thus, trading old for new treasuries guarantied an almost riskless profit. LTCM took-on debt to finance these transactions and used the leverage to increase its return on equity.

The business model of LTCM started to crack in the aftermath of the Asian financial crisis that had its peak in 1997. In the face of the crisis, investors demanded higher interests on Asian bonds as a compensation for higher perceived risks. LTCM’s equilibrium-pegged models implied that interests should adjust towards pre-crisis equilibrium. Therefore spreads of Asian bonds to US-treasuries should narrow. However, the spreads continued to widen. LTCM passed the tipping point of its business model when Salomon Brothers decided to cut its positions in Russian government bonds. Russian bonds became almost untradeable. On those grounds the Russian government started to default on some of its debt payments. As a consequence, hedge funds and banks massively cut their exposure to Asian bond markets. LTCM rested with a
portfolio of untradeable securities. In addition, LTCM’s creditors aimed to reduce their exposition to LTCM’s bets and started to cut credit lines.

The history of LTCM clearly shows the limitations of economic finance as a blueprint for economic organization. One rare event, like the default of a sovereign state, suffices to destroy the value projections of sophisticated models. LTCM escalated its exposition to rare events by taking on debts and massively increasing its leverage. As a result, its huge share of debts masked substantial share of entrepreneurial risks.

Austrian market process theory elucidates crucial features in LTCM’s business model: First, LTCM envisioned rather mediocre business opportunities of financial arbitrage that Morgenson & Rosner (2011) classify as “collecting pennies in front of a bulldozer”. Second, equity capital is a crucial tool of entrepreneurs to implement their business strategy. Lack of equity diminished the power of LTCM’s management to wither the fall-out from the Asian crisis and stay in business until markets might return to a mode that is more favorable to LTCM’s approach. In contrast to Modigliani and Miller’s thesis that equity and debt are perfect substitutes, entrepreneurs in the business world still need to differentiate between those investors who take on entrepreneurial risks by the means of equity capital and those who prefer a secure return on debt funding. Third, the case of LTCM demonstrates that events in real-time matter for investments. In cases like Russia’s default, the assumption of the “random walk” pattern of prices became untenable. Investors influenced each other in their search to reduce exposure to un-expected risks.

5.3 The User Perspective of Financial Markets – The case of Enron

Enron provides an intriguing example on how the tools of financial innovation can affect the organization of the real economy. The company started as a gas-pipeline operator in 1985. It
soon became one of the key players in the transformation of US energy markets in conjunction with political deregulation. At its peak, Enron was the 7th largest US company commanding assets of US $60 billion, with 8000 employees on its pay-roll (Chandra, 2003; Fox, 2003; Mizrach, 2006; Stewart, 2006). Enron earned favorable positions in stock markets through initial solid performance and continuous growth. Observers regard its downfall as the consequence of its failure to live up to its ever rising stock-market valuations (Jensen, 2004). Short of sufficient business opportunities, Enron’s management and its consultancy Arthur Anderson started to use securities to put costs off-balance-sheet and effectively design misleading earnings statements.

A closer look at Enron’s business model provides some insights into the implications of financial economics for its business users (Chandra, 2003; Fox, 2003; Mizrach, 2006; Stewart, 2006). Key selling points of Enron were long-term energy contracts offering customers the relief from price uncertainties. Thus, Enron’s profit depended on mastering the challenge of securing energy supply to meet its obligations and to finance the supply at lower costs. Selling securities on energy contracts played a key role in offloading financial risk as well as ensuring liquidity. The company created securities on all sorts of uncertainties, including the effects of weather on energy demand.

Enron’s management built this business model upon the implicit assumption that they would be able to insure the customer base against a growing range of uncertainties at a profit.

For that endeavor Enron started to maintain Special Partnership Entities (SPE’s), companies that its management controlled but did that did not show on Enron’s balance sheet. Enron used SPE’s in order to secure supply, hedge risks and provide opportunities for arbitrage on downstream markets. Initially Enron used SPE’s as a tool to finance energy supply and to hedge
against volatility and risks on energy markets. When entering the electricity markets, Enron dramatically raised scale and scope of its off-balance-sheet vehicles. As a result Enron’s balance sheets represented downstream revenues, whereas a substantial share of the costs of energy production remained hidden in the network of its Special Partnership Entities. What started as an operation to manage business risk had obstructed the evaluation of Enron’s performance.

Securitization and financial economics played key roles in the downfall of Enron (Fox, 2003). Initially Enron’s management employed Special Partnerships to outsource a substantial element of the entrepreneurial uncertainties to the securities markets. The resulting contractual structure obstructed a sound calculation of profits. Driven by ever-rising demand for shareholder value, Enron’s management used off-balance schemes to hide costs and polish earnings statements (Jensen, 2004; Mizrach, 2006; Stewart, 2006; Chandra, 2003).

The case of Enron exemplifies the paradox of financial economics: Financial economics assumes that markets are arbitraging down all profit opportunities. Ironically, Enron’s early successes with hedging of energy prices might have undermined the long-term viability of its consumer business. Arbitrage strategies can work only for a limited time. The second lesson of Enron is that managers lose insight into the valuation of business performance when they use securities to offload entrepreneurial risks to financial markets.

5.4 Unfolding of Contractual Constructs and Economic Calculation - The Case of Subprime-Finance

Securities are a key ingredient of the business models leading to the subprime financial crises of 2007. The crisis followed one of the most spectacular housing booms in the US economy, driven by a mixture of economic boom, investment inflows and US government policies for supporting home ownership. Following the dotcom boom, house prices had become unaffordable
for large parts of the US population. The US governments aimed to ease access to affordable housing by improving credit terms for home ownership especially for dis-advantaged households. Two key organizations were Fannie Mae, a mortgage bank set-up by the US government after 1930’s depression, and Freddie Mac, a similar institution established in the 1970’s (Morgenson & Rosner, 2011; Roubini & Mihm, 2010).

These banks searched to exploit the seeming potential of unprecedented growth of property prices. Betting that house prices will continue to rise, mortgages can be monetized by selling securities. In the expectation of rising housing prices, houses would pay for themselves enabling even low-income households to get a foothold onto the property ladder. These schemes allowed households without collateral-assets into the lower end of the market, while those on the higher ends could use their house effectively as a cash machine for monetizing their equity.

The collapse of this system started at a point as investments into construction outstripped demand for houses, around spring 2006. After this peak-point, prices began to collapse. Shrinking property prices implied a reduction of equity and the rise of interest rates. A substantial share of households was driven into negative equity, as the value of the houses failed to match the value of debts used to finance their construction. The default of debts on a massive scale eventually forced banks like Lehmann brothers into bankruptcy and governments to provide bail-outs to avoid a melt-down of the financial system.

Securitization played a key role in the shake-up of the subprime mortgage market. Securities provided the foundation of a shadow banking system, comprising of hedge-fonds, conduits and Special Investment Vehicles (SIC). These organizations serve a common purpose to park illiquid securities off the balance-sheets of mortgage lenders. Under conditions of a growing market this looks like a handsome way to increase the leverage of mortgage lenders. In the face of faltering
growth, participants in the system become unable to identify risks of default. Estimated losses ranged from US $ 50 billion to US $ 500 billion (Roubini & Mihm, 2010). Faced with no credible account on the value of their funds, investors started to retreat first from hedge-funds and arrangements in the shadow-banking-system created around mortgage financing. They soon followed to leave banking and stimulated what general public considers now the most serious financial crisis since 1929.

In the subprime mortgage crises, financial economic valuation of securities has disrupted market performance in two substantial ways. First, securities helped to decouple valuation from the fundamental business value of investments. Security prices have undermined the capability of investors to estimate the value-in-use of the underlying assets. Second, securities obscured the transparency of businesses by putting the crucial assets off-balance-sheet. As a consequence, financial accounting became opaque if not invalid.

To conclude, financial economics has been hiding entrepreneurial risks and thereby induced an over-investment of assets on a scale that disrupted the economy on an un-preceded level. Building on financial economic approaches for market-driven valuation, financial institutions decoupled asset value from related cash-flows. One key lesson of the subprime mortgage-crisis is that value-in-exchange cannot completely decouple from the value-in-use of an asset.

6 Discussion

6.1 Equilibrium-based calculation and the disruption of business

The cases presented in section 5 demonstrate how financial economics replaces entrepreneurs with a system of speculation on market equilibrium prices. In all three cases, reality failed to behave as predicted by the financial economic models. Financial economic models appear to be
useful guides in the context of stable or stabilizing economies. However, the stochastic models
do not capture rare or unique events and can blindfold decision makers for their potential impact,
as in the case of Russia’s default (see section 5.2.). The financial economics proposition that
equity and debt are substitutes weakens businesses against effects of unique events. Businesses
without equity funding provided by supporters of their entrepreneurial vision, will find
themselves helpless in the face of unpredicted events.

The trade of securities connects the domain of financial markets with the domain of real-
world businesses. Enron and the subprime mortgage crises clearly demonstrate how securities
can undermine the sound valuation of opportunities and performance of a business. Financial
economics plays a systematic role, by calling for a theory-driven approach of market valuation.
Rational markets reflecting the valuation of anonymous investors replace the original judgment
of customers and resource owners. Securities have systematically masked solvency of customers
in the case of the subprime mortgage crisis and undermined the validity of the balance sheet of
Enron. Financial economics forms the heart of a system where financial markets systematically
decouple the valuation of assets from the original valuation by customers and resource owners.

6.2 The equilibrium paradox – the epistemic limitations of financial economics

Financial economics holds that the fallible decisions of buyers and sellers are irrelevant in the
face of rational market valuation. In the long run prices will move towards equilibrium and
thereby almost certainly dumbfound individual investors trying to estimate the substantial value
of an investment. The crises presented here demonstrate that the application of financial
economics as an organization principle undermines the epistemological conditions of
equilibrium. Epistemology is concerned with the knowledge conditions of actors (Cowan &
Rizzo, 1996; Lawson, 2003; O’Driscoll & Rizzo, 1996). In the tradition of neoclassical
approaches, financial economics assumes that market participants are in the command of sufficient knowledge to make rational decisions. Hayek (1945) challenges this position and claims that prices are meaningful in dis-equilibrium situations where customers can signal unserved needs or suppliers can signal idle resources in an efficient manner. As soon as prices are generated in a different manner or for different reasons, their potential as meaningful devices of economic communication is undermined. In this light, a dominance of financial markets can undermine the conditions for their own performance. As soon as markets send out distorted signals of customer value or resource capabilities, financial markets fail to allocate resources in an efficient manner. If applied as an organization principle, financial economics undermines the use of knowledge of customers and resource owners. Financial economics furnishes the systematic replacement of entrepreneurs with a system of economic equilibrium models and statistic data analysis, like the socialist calculation approach.

6.3 Entrepreneurs, discovery processes and the meaning of value-in-use

Where financial economics draws on the invisible hand of financial markets for economic organization, Austrian economics emphasizes the visible hand of the entrepreneur. Financial economics assumes that the market communicates productive opportunities frictionless and instantly. Austrian economics holds that opportunities exist that are not reflected by present market prices (Lachmann, 1977; Mises, 2007). Many promising opportunities are not trivially exploited and require investments in activities like market research, R&D, new product development, implementation of new forms of organization and several new activities resulting from creative imaginations of inventors. Stochastic market simulation employing historical market prices does not provide valid predictions of the future value of such activities.
Menger, the pioneer of Austrian economics, highlights that value-in-exchange expressed in the market price of a good is derived from its value-in-use in the user’s value chain (Menger, 1981). Thus, a starting point for identifying business propositions is the potential for enhancing the value-in-use of economic actors (Ballantyne & Varey, 2006; Christopher, 1982; MacDonald, Wilson & Martinez, 2011). For example, customers suffering from high energy bills are a good starting point for entrepreneurs that provide insulation, lower cost heating, more favorable contractual terms, consultancy services on cost reduction and many more. The prediction of equilibrium prices is meaningless in these contexts. Entrepreneurs need to know how their offerings can reduce costs or increase value for their customers. Anonymous market data do not provide valid information for that endeavor. Business-to-business-marketing employs value-in-use calculation as a basic approach for exploring and managing value propositions (Anderson & Narus, 2009; Anderson, Kumar & Narus, 2007). To a growing extent, marketing is using value-in-use calculations to explore opportunities of new market offerings that current market data cannot reveal. Value-driven investments rely on a value-in-use-perspective for the identification of value-propositions.

6.4 Business valuation vs. valuation in equilibrium

Entrepreneurs use financial accounting in order to estimate, measure and navigate business performance. Business performance shows in terms of profit or loss of a firm’s earnings statement, indicating if the business project succeeded in the attempt to move resources into higher valued uses. For that endeavor, entrepreneurs rely on effective prices reflecting the valuations of resource users and product buyers. Hypothetical prices, rendered by mathematical models are meaningless at best and disruptive at worst for measuring business performance.
Securities hold a disruptive potential in the context of business valuation, as they draw-in speculative dynamics from financial markets.

To subsume: Entrepreneurs direct businesses as a productive response to uncertainty and human ignorance. While the rational market approach assumes complete knowledge and uses stochastic methods to master uncertainty, the entrepreneur seeks to explore uncertainty and direct business projects to exploit opportunities (Lachmann, 1977; Von Mises; 2007; Young, 1987). Only to the extent that financial accounting provides valid information on the performance of business projects, it supports entrepreneurs in navigating the exploration and exploitation of business opportunities.

6.5 The scope of financial economics – Towards a productive application of financial economic models

The conclusion, that financial economics is a disruptive investment principle does neither imply that the models are wrong nor that they are useless. The market failures of financial economics offer a core lesson: scientific calculation of market outcomes runs into structural limitations inherent to uncertain market processes. On those grounds, financial economics cannot succeed by replacing the craft of investing with the science of economics.

However, many of the models of financial economics may prove useful and valuable in the hands of craftsmen. For example Taleb, one of the most outspoken critics of financial economics, builds his own dynamic hedging approach on the Black-Scholes-Merton option pricing formula. However, Taleb adapts the option model in order to capture real-world frictions and transaction costs (Taleb, 1997). By the same token, the financial economist Markowitz deviates from his scientific approach in the text-book version of his model (Markowitz, 1987). According to the crafts-men version of Markowitz’s portfolio approach, an inside trader with
almost perfect foresight calculates a low-level of variance. The ignorant gambler would allow for significant higher grades of variance.

Both approaches show the way for a potential productive use of the models of financial economics. Counter to the assumption of the rational market, financial economic models may play a productive role by quantitatively representing the ignorance of an investor. As a rule of thumb, investors are advised to act like casino players in the absence of knowledge of business propositions and like entrepreneurs in the face of idiosyncratic investment opportunities.

7 Conclusion

Used for entrepreneurial projects, markets serve as tools to move resources to higher valued uses. As long as markets provide information on valuation by customers or resource owners, they furnish entrepreneurs in their search for business opportunities and provide signposts for their exploitation. The application of financial economics decouples entrepreneurial judgment from the valuation of assets thereby diluting entrepreneurial accountability in the management of businesses. As an organization principle, financial economics resembles the problem of socialist calculation identified by the Austrian school of economics.

Ultimately, the widespread application of financial economics systematically undermines its basic premise, that the market provides the superior source for the valuation of assets. Once market participants have stopped to exercise judgment, the market ceases in its function to signal higher valued uses for assets. In this context business research can make a vital contribution, by elucidating conditions of productive entrepreneurship and investigating them systematically and empirically. Sound entrepreneurship provides the foundation for businesses to re-flourishing and societies to re-enter sustainable growth paths.
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