# Austrian Foundations for the Theory and Practice of Finance

Gregory M. Dempster<sup>1</sup>

## Abstract

An Austrian perspective on financial theory and practice could address some fundamental problems of epistemology and method in mainstream approaches and help inform a reconstruction of the field of finance education. This paper outlines the development of a distinctive Austrian approach to finance that rests on the foundations of fundamental uncertainty, reasonable views of individual and collective expectations, social capital and embeddedness, methodological subjectivism, and organic, evolutionary processes.

## Introduction

The Austrian School of Economics has a long and distinguished history of dealing with problems of epistemology and method in economics that the mainstream of the profession has predominately ignored. The discipline of finance (a specialized sub-field of economics that deals with the principles of the acquisition, management, and use of money capital, by individuals and firms, as a source of liquidity and investment funding), though typically better grounded in real-world practice than its parent discipline, nonetheless suffers from epistemological problems, as well as methodological inconsistencies, that an Austrian perspective could potentially address.

The goals of this paper are threefold. First, it represents an attempt to draw out the philosophical implications of the Austrian approach for the study of financial markets by focusing attention on the advances in theory and method attributed to certain "leading lights" of the School. Second, it will provide a survey of recent contributions to financial theory and practice that have been made by Austrian economists on the basis of the underpinnings that are laid down in the first section. Finally, it will deal (in preliminary fashion) with the yet unresolved issue of a methodological framework for Austrians who are participating in the reconstruction of financial theory, practice, and education. It is the hope of the author that this work can contribute to the greater project of advancing the School toward a theory of finance that is firmly grounded in the principles of methodological individualism, subjectivism, and realistic views of uncertainty in economic decision making.<sup>2</sup>

In keeping with this threefold purpose, the paper is divided as follows. The next section deals with a framework for the study of finance as constructed by the "leading lights" of the School in the last two centuries: Carl Menger, Ludwig von Mises, F. A. Hayek, and Fritz Machlup. It is argued that this framework provides the basic foundations for an Austrian theory of finance, and that it shares much in common with the broader liberal program of political economy going back to John Locke, Adam Smith, David Ricardo, and John Stuart Mill—a program that some argue has been forgotten to regrettable effect. The following section then provides a summary of recent contributions by Austrian economists to the field

<sup>&</sup>lt;sup>1</sup> Gregory M. Dempster (<u>Gdempster@hsc.edu</u>), Elliott Associate Professor of Economics, Hampden-Sydney College, Hampden-Sydney, VA 23943

<sup>&</sup>lt;sup>2</sup> The viewpoint taken here is that Austrian economics is a sub-paradigm of modern economic thought which stresses these three fundamental principles along with the importance of economic and social institutions. This view puts Austrian thought squarely within the tradition of the Scottish Enlightenment thinkers, such as Hume, Smith, and Ferguson, and the French classical liberals, such as Bastiat, Cantillon, and Say. It also suggests much commonality with other schools of thought that draw from these traditions (new institutionalism, public choice, and constitutional political economy, in particular).

of financial theory. The paper concludes with some thoughts on teaching and conducting research in finance with an emphasis on Austrian themes.

#### Foundations of Austrian Epistemology and Method: Classical and Modern

Austrian economics is part of the larger classical liberal program in political economy that goes back to Locke, Smith, Ricardo, and Mill. Common to these writers are the ideas of individualism in economic method and the importance of institutional context for explaining both individual and aggregate economic phenomena.<sup>3</sup> Locke (1947 [1690]) provides the basic justification for and analysis of the institution of private property, which was later adopted by both Mises (1949) and Murray Rothbard ([1962]1993).<sup>4</sup> Smith (1776) analyzes the function of private property in the marketplace, showing how "prices, through the calculations of profit-seeking businessmen, effectively regulated the production process" (Salerno, 1999), although later Austrian economists derived these precepts directly from Smith's continental counterpart, J. B. Say.<sup>5</sup> Ricardo (1817) adds a preliminary theory of capital, adopted with modification by Eugene Bohm-Bawerk, Knut Wicksell, and eventually, other Austrian economists through the work of Mises and Hayek.<sup>6</sup> Finally, J. S. Mill ([1848]1973, p. 79) extends Ricardo's recognition of the importance of substitutability between capital and labor (dubbed by Hayek "the Ricardo Effect") to form his "fourth fundamental proposition respecting capital," which would form an important basis for Hayek's work on industrial fluctuations:

Demand for commodities is not demand for labour. The demand for commodities determines in what particular branch of production the labour and capital shall be employed; it determines the *direction* of labour; but not the more or less of the labour itself, or of the maintenance or payment of the labour. These depend on the amount of capital, or other funds directly devoted to the sustenance and remuneration of labour (original).

Unfortunately, as outlined by Salerno (1999), the classical school found itself on the eve of the marginalist revolution without an account of "the subjective and nonquantifiable valuations and preferences of the consumer, the *raison d'être* of all economic activity" (Salerno 1999). Its theories of value and distribution were focused on the objective, technical qualities of inputs and outputs rather than on "active determinants" of economic phenomena. It is here where the Austrian tradition, with its emphasis on the subjective nature of costs and benefits in face of an uncertain future, had its origins.

### Development of the Austrian Method: Menger, Mises, Hayek, and Machlup

Considered the proper founder of the Austrian School, Carl Menger (1840-1921) is well known for his contributions to value theory and economic methodology (see, e.g., commentaries by Stigler 1937;

<sup>&</sup>lt;sup>3</sup> By contrast, economic historicism is "all context," while neo-classical economics represents non-contextual individualism in economic method. For thoughtful analyses of the proper place of economic science with regard to institutional context and individual rationality, see Granovetter (1985) and Kirzner (1999). It is important to note that methodological individualism, as a philosophical basis for the study of economic phenomena, is not the same as political or ideological individualism, although many writers of the classical liberal line espouse those as well. On this, see Kirzner (1987, p. 148), where he defines methodological individualism as "the claim that economic phenomena are to be explained by going back to the actions of individuals." See also White (2003).

<sup>&</sup>lt;sup>4</sup> These two Austrian economists incorporated Locke's theory of property without elements of his value theory (see Vaughn, 1978), resting the foundation of property on first-use (or acquisition) rather than on labor. Furthermore, it is true that they did so from slightly different philosophical bases: Mises was, after all, a utilitarian, while Rothbard espoused a natural rights view of property.

<sup>&</sup>lt;sup>5</sup> Jean-Baptiste Say's *A Treatise on Political Economy* (1971 [1880]) was an explicit attempt to elaborate on and popularize Smith's *Wealth of Nations* on the continent; see Sechrest (1999), p. 46.

<sup>&</sup>lt;sup>6</sup> See Gaffney (2008), which explicitly recognizes Ricardian themes that later "would resurface with Mill, Jevons, the Austrians, Wicksell, and possibly--indirectly--in Keynes" (p. 1). On this strand of capital theory in the work of Mises and Hayek, in particular, see below.

Schumpeter 1951; Yeager 1954; and Hayek 1968). A few historians of thought have also noted his initial contribution to monetary theory, among them Streissler (1973) and Aimar (1996). Menger's main connection to methodological developments in the study of finance relate to his monetary analysis and the role he ascribes to uncertainty in economic relations.

In explaining the phenomena of money and the monetary economy, the fundamental issue for Menger is one of origination: Where does money come from, how does its use become pervasive, and what can economic agents know in the context of this pervasive use of exchange media? For Menger, the existence and use of money are among the best examples of organic phenomena, the "unintended results of historical development" (Menger [1883] 1985, p. 130). Money is itself a product of human action but not of human design, and its value at any point in time is also an unintended consequence of thousands of goal-directed individual decisions regarding its potential current and future uses. Therefore, in contrast to the neoclassical framework that came to dominate economic thinking later, Menger considered monetary relations of all types as subject to fundamental uncertainty—a product of the fact that acting man can never know what the exchange value of any item will be in the future, and an insight that is particularly relevant to modern financial transactions. Importantly, this fundamental uncertainty is much more profound than the modern treatment of risk implies. Risk, following the terminology of Knight (1921), refers to the uncertainty associated with future events for which potential values and probabilities can be determined and assigned. The standard textbook analysis of a financial transaction typically employs this concept of probabilistic uncertainty, illustrating it by means of a distribution table where all possible outcomes (or future realizations) are listed and the likelihood of each outcome assigned in the form of a probability associated with its occurrence.

The conception of risk analysis that came to dominate neo-classical thought on decision making has been one of the principal components of financial theory since at least the mid-20<sup>th</sup> century. It underlies most of what we call Modern Portfolio Theory (MPT), the Efficient Markets Hypothesis (EMH), Options Pricing Theory (OPT) and other important cornerstones of modern finance.<sup>7</sup> For example, Markowitz (1952, 1959) developed MPT on the basis of a selection mechanism for financial assets by which the probabilistically-determined expected value and standard deviation of an asset (or portfolio) is compared to an investment universe of similarly calculable risk and return measures. The EMH (Samuelson 1965; Fama 1970) rests on further assumptions about the correspondence between subjectively determined probability distributions of returns and a "true" objective distribution that describes the investment universe. And OPT, based primarily on the Black-Scholes model of options pricing (Black and Scholes 1973; Merton 1973) relies on the calculability of implied risk (measured by the standard deviation of the underlying asset's returns) under assumptions of normally distributed sample means and a stationary data generating process.

Menger's idea of money as an organic phenomenon, however, suggests a very different conception of uncertainty. One might characterize this as *decision ambiguity*: Economic agents are unable to apply to apply risk analysis in most financial decisions because the fundamental inputs into those decisions, including the value of the money that is being traded, are determined neither by deliberate actions on the part of the agents (which would make it controllable) nor by an occurrence or set of events that is independent of individual actions (which would make it potentially predictable in a probabilistic sense). Financial decisions are, rather, often made in contexts where one or more of the inputs (outcomes or likelihoods) into the decision problem are unknown and even unknowable, and where other forms of tacit, localized knowledge become important. In other words, financial decisions are context dependent.<sup>8</sup> Thus, Menger's primary contribution to financial theory comes in the form of a realization about the essential, organic nature of the exchange medium, and its implications for the suitability of risk analysis for financial transactions.

Mises (1881-1973) is sometimes referred to as the modern era's "Dean of the Austrian School,"<sup>9</sup> and his *Theory of Money and Credit* ([1912] 1953) is an obvious starting point for building an Austrian theory

<sup>&</sup>lt;sup>7</sup> Examples of standard textbook treatments of these concepts can be found in Brigham and Houston (2009), a leading textbook in the field of corporate finance, or in Jones (2009), a leading investments text.

<sup>&</sup>lt;sup>8</sup> This bears more than a passing resemblance to the concept of "embeddedness" developed in economic sociology by Granovetter (1985). Embeddedness refers to the notion that human actions are "conditioned by their location in networks" of personal relations (Lewis and Chamlee-Wright 2008, p. 107) which affect motivations to act as well as access to and interpretation of information relevant for action.

<sup>&</sup>lt;sup>9</sup> See Rothbard (1999), p. 143.

of financial markets owing to its status of being the most comprehensive Austrian treatment of money, interest, and the payments system. Mises significantly expanded upon this original framework in his treatise *Human Action* (1949), where he synthesized his insights on economic method with pure economic theory, institutional aspects of money, credit, and financial markets, and applied analysis of the interventionist state. Mises's writings often served as the most basic reference for those who were influenced by him, including Hayek, Machlup, and Kirzner, and still serve that role for Austrian practitioners today.

Among Mises's many contributions to economic science is the extension of Menger's insights about uncertainty—and the impossibility of *homo economicus* as an actual, acting creature—by focusing on the subjective nature of consumer choice. It is this subjectivity that gives rise to the problem of uncertainty highlighted by Menger, and that provides the very basis for the study of all economic actions.<sup>10</sup> The fundamental ideas of money and interest, risk and return, consumption and investment preferences, etc., are defined solely in the minds of market participants, and are expressed objectively only in the contractual (both formal and informal) agreements that they willingly enter into with other economic actors. To the extent that these contractual agreements are proscribed, regulated, or prohibited by forces outside the market system, those ideas and the preferences they are meant to express lose clarity and begin to result in mismatches between consumer intentions (which are, ex ante, always toward greater utility) and their systematic consequences.<sup>11</sup>

In following through with this general mode of analysis, Mises examined the pure theory of money and credit with the goal of showing the important relationship between bank credit conditions (monetary inflation) and fluctuations in industrial activity, which he identified with Ricardo and the Currency School.<sup>12</sup> The main proposition of the Currency School was that the limits of overall economic activity are set by the preferences of consumers, savers, and investors rather than by bank management strategy and policy (as proposed by the competing Banking School). The implication of this proposition is that bank policies relating to monetary inflation and interest rates are subject to those same preferences, and that attempts to inflate outside the bounds set by those preferences would ultimately have perverse effects. This idea, developed further by Hayek<sup>13</sup> (1933, [1929]1935), has subsequently come to be known as the Mises-Hayek theory of industrial fluctuations, or Austrian Business Cycle Theory (ABCT).

A detailed and critical exposition of ABCT is beyond the scope of this paper, and is better dealt with in the context of an examination of Austrian contributions to macroeconomics. However, the most important aspect of ABCT, as it touches on financial theory, relates to its implications for financial decision-making when the interest rate "conveys erroneous expectations about the availability of real funds" (Mueller 2001, p. 6). According to ABCT, this is precisely what policies of interest rate manipulation designed to stabilize the price level or real output will tend to do. Economic agents use price signals as essential data for engaging in "economic calculation," which is the exercise of judgment regarding others' subjective preferences and opportunity costs. Manipulations of those price signals by central banks and other extra-market entities leave agents with a faulty mechanism for the exercise of judgment. Furthermore, it is not enough that economic agents know (or believe) the price signals to be faulty; without an alternative mechanism for processing the widely dispersed, localized, and often tacit knowledge necessary for rational calculation, agents are unable to make the adjustments necessary to coordinate their plans with those of other economic actors. Thus, beyond the "incentive" problems associated with interventionist policies that have been identified by others, Mises laid the philosophical groundwork for the "knowledge" problem that

<sup>&</sup>lt;sup>10</sup> In contrast to the neo-classical paradigm, this subjectivity extends to both ends and means in economic actions. According to Mises, there is no room for an objective view of these concepts in "a science whose subject matter is erring man. An end is everything which men aim at. A means is everything which acting men consider as such" (Mises 1949, pp. 92-93).

<sup>&</sup>lt;sup>11</sup> It should be clear that Mises did not oppose regulation per se, but only regulation from outside the market. Various forms of market discipline, including self-regulating collectives, are not only desirable but absolutely essential in a market system, and would presumably make extra-market regulation superfluous if allowed to develop in accordance with unhindered consumer and producer choices.

<sup>&</sup>lt;sup>12</sup> See Rothbard (1999), p. 148.

<sup>&</sup>lt;sup>13</sup> Hayek also began to explore, in a preliminary fashion, the collective action problem in banking and finance (see Hayek 1933, Section VIII, pp. 173-76 in particular) and the so-called "expectations" problem that he tackled more fully in Hayek (1939), an issue which has subsequently occupied Austrian theorists even to this day (see, e.g., Lachmann 1945; Hoppe 1997; Caplan 1999; Wagner 2000; Block 2001; Carilli and Dempster 2001; and Gertchev 2007).

represents a unique Austrian contribution to economic science, and has many potential applications to financial theory. Among these, mentioned below, is the relevance of "Big Players" in financial decision making and their impact on the workings of the financial system.

Fritz Machlup (1902-1983) is best known for his contributions to the economics of knowledge and information, but his most significant early contribution to economics is the book The Stock Market, Credit, and Capital Formation ([1930]1940), in which he extended the applicability of ABCT and explored the relationship between credit policy, money supply, and the stock market. While Hayek's extensions of ABCT focused on the role of the banking system in the credit creation process and in bringing about overinvestment, Machlup ([1930]1940) examined how this process comes to bear on the financial system as a whole, particularly on capital markets. Machlup's most important insight was his tying of the Mises-Hayek story to the prevalence of large swings and bubbles in markets for financial assets. Machlup countered the various critics of unhindered capital markets by showing how the use of money capital in stock and bond markets is productive, demonstrating that financial markets do not "compete" with real asset markets for scarce capital but, rather, ensure that funds are flowing to the real asset markets that are in line with consumer demands. This process can be distorted, however, when the flow of money capital is elastic enough to allow for a concentration of purely speculative activities. He demonstrated that a set of specific conditions is necessary for money capital to be "tied up" in capital markets for any length of time: (1) the predominance of cash payments over clearinghouse usage; (2) an easy money policy; and (3) a lack of new issues and withdrawals from the market relative to the amount of money capital flowing in. All of these conditions add institutional relevance to the Mises-Hayek business cycle story and provide the basis for counterfactual analysis of financial market outcomes. Machlup's work is also a promising, but as yet underutilized, source of foundations for an Austrian analysis of corporate governance and the effects of separation between ownership and control in modern commercial practice.<sup>14</sup>

#### **Recent Austrian Contributions to the Field of Finance**

Austrian economists have recently found themselves in the forefront of general swing toward examining the implications of less-than-perfect foresight, behavioral heuristics and social embeddedness in economic theory. Armed with the foundational notions of fundamental uncertainty, subjectivism, institutional realism, and the knowledge problem, some have applied aspects of Austrian thought to produce valuable new insights into the role of finance in the capitalist system, and the problems often associated with globalized finance. For example, Koppl and others (Butos and Koppl 1993; Koppl and Yeager 1996; Koppl 2002) have introduced the theory of "Big Players" to illustrate the notion that economic agents' expectations are not formed in a vacuum, but are instead embedded in the decision making context in which they are developed. To the extent that this context involves the presence of big players, those who habitually exercise discretionary power in the market while themselves remaining largely immune from the discipline of profit and loss (Yeager 1998), expectations formation will be focused on determining what those players will do, rather than on the underlying market fundamentals that reflect long-term investment outcomes. Thus, discretionary policy may be the source of considerable instability, particularly in financial markets where expectations form the only basis for market valuations (absent any value-in-use), and systematic overvaluations (asset price bubbles) followed by sudden reversals in investor sentiment often result in disruptions with severe negative consequences for the entire economic system.

Klein (1999) and Klein and Klein (2001) emphasize the role of uncertainty in building an Austrian perspective on corporate governance and on the efficiency of the market for corporate control. In the Austrian view, any market (including one for the control of corporate enterprises) is a "dynamic, rivalrous process that unfolds through time" or, as Hayek so succinctly put it, a "discovery procedure" (Klein and Klein 2001, p. 6). In such a process, the "the future holds genuine surprises" and the results of actions cannot be predicted (*ibid.*). It is therefore the role of the entrepreneur to understand by way of "intuitive, subjective, and qualitative" knowledge that is "inherently imperfect" (*ibid.*). Efficiency is thus only a valid

<sup>&</sup>lt;sup>14</sup> Some of these foundations have been implicitly incorporated into the work of Klein (1999, 2010) on governance and economic organization.

concept in an ex ante sense, and the probabilistic certainty with which *homo economicus* (and modern financial man) makes crucial decisions is the stuff of fairy tales.

Klein (1999) also places the major actions of the entrepreneur firmly in the realm of capital markets (p. 29). Entrepreneurs are the ultimate risk-takers, the residual claimants of the profit (or loss) of any productive enterprise in the capitalist economy. From this basis, Klein (1999) goes on to outline the internal and external sources of governance employed by capitalist-entrepreneurs in limiting the discretionary behavior of their agents, the managers. Some preliminary steps toward an Austrian theory of corporate governance are then outlined (pp. 31-38). The most intriguing aspects of this discussion for the study of finance involve the focus on financiers as entrepreneurs, rather than merely as "surplus spending units" that have no role other than to finance others' investments.

Similar applications of the Austrian perspective have also been applied to the broader theory of financial markets. At least one attempt to outline a general Austrian theory of financial markets has been made by Skousen (1994). He describes the random walk theory of stock prices as a viewpoint asserting the unpredictability of prices in the short term (p. 231), which a strong form of the EMH would hold, and contrasts this viewpoint with that of technical analysts and the like who attempt to predict future price behavior by looking at past and current trends, data patterns, etc., and who implicitly accept the complete lack of market efficiency or even coordination. Skousen then attempts to define the Austrian position as one that holds a unique "middle ground" (p. 233), with a realistic approach to uncertainty, subjectivity, incomplete knowledge and institutional context based on solid philosophical foundations (see Figure 1).

#### Figure 1: Austrians in the Middle (from Skousen, 1994)



Skousen uses this framework to situate the Austrian view in regard to questions like:

- How important is the stock market?
- Can investors beat the market?
- Is there an ideal investment portfolio?

These questions relate directly to the foundations outlined in Section II above. Regarding the first question, for example, the Austrian view suggests that stock markets are vitally important not only for their role in allocating capital, but also for the significant effects on economic outcomes they can produce when unstable or bubble-prone. Behavioral considerations (optimism, pessimism, etc) are thus important for judging the movement of stock prices in the short run, while fundamentals become important for making long-run judgments about economic robustness. The second question relates to the idea of judgment under true uncertainty, as against the (strong form) EMH and its assertion that the market cannot be systematically outperformed, while the third question relates to the idea of subjectivism, as against the program of MPT in which simple measures of historical risk and return provide the entire basis for portfolio selection.

Mueller (2001) picks up on Machlup's theme of the relationship between stock market activity and monetary policy, although he inexplicably neglects to acknowledge Machlup's contribution. Mueller's article provides a rough outline of the Austrian analysis of the bubble economy fueled by monetary expansion, and integrates the micro-level perspective provided by earlier theorists with a macro-level, systemic framework where the "expectations of investors and consumers have become highly unstable and economic action is hampered by the perception of insecurity." Of particular interest is the tying of economic (boom-bust) and stock-market (asset price) bubbles together under this single, unified framework.

Benink and Bossaerts (2001) is one of the more interesting recent applications of Austrian insights into financial market theory that has appeared in a mainstream journal. The article makes an "attempt to come to an understanding of [the Austrian approach to financial markets] in the standard probabilistic language of finance" (p. 1012). The authors identify the major emphasis of this "neo-Austrian" approach to be a competitive market process that "provides a systematic set of forces, put in motion by entrepreneurial alertness (eagerness to make money), that tend to reduce the extent of ignorance among market participants" (p. 1011). Thus, the Austrian view implies the existence of imperfect knowledge and the emergence of pervasive economic regularities, both of which better match the empirical evidence than the standard neoclassical view of rational expectations, continuous equilibrium, and information-efficient prices. Taking the position that the Austrian view of order in financial markets can be reasonably interpreted in terms of the concept of stationarity, the authors then demonstrate that this viewpoint is consistent both with the knowledge of imperfect information on the part of market participants (i.e. traders realize they are working in an inefficient market) and with the inability to completely exploit that knowledge (because they do not necessarily understand the *nature* of the inefficiency).<sup>15</sup> Thus, the dual components of inefficiency and regularity have their statistical counterparts. Their analysis "exemplifies how classical inference can be unreliable when financial markets are inefficient" (p. 1027). Finally, they conclude with a warning that is quite consistent with the general viewpoint so often expressed by Mises, Hayek, and their followers: To know that inefficiency exists in a market is not to know how to correct that inefficiency; only tacit, dispersed, localized knowledge can exploit market inefficiencies and ultimately serve as the basis for rational economic calculation in a complex modern economy. They summarize by stating that "intervention that is based on potentially erroneous inference is certainly ill advised...Hayek's distaste for government intervention in market forces now becomes understandable" (p. 1027).

Other recent applications by Austrian economists to financial theory and literacy have occurred in the areas of risk and uncertainty, financial market volatility, agency theory, and banking reform. Carilli and Dempster (2003) describe the implications of the risk-uncertainty distinction for financial educators. Financial crisis and volatility are explored by Garrison (1996), Bagus (2008), and Prychitko (2010). Padilla (2002) considers the implications of agency theory for insider trading rules in securities markets, while Moss (2000) explores creditor rights and bankruptcy law. Among the most active fields of interest has been in the area of money and banking, where a vigorous debate has developed about the efficacy of free banking, alternative payments systems, and currency reform (see, e.g., Selgin 1988, 1997; Selgin and White 1994, 1996, 2003; Block and Garschina 1996; Rashid and Samad 1996; Reisman 2000; and Carilli, Dempster, and Rohan 2004).<sup>16</sup>

These and other contributions have expanded the impact of Austrian economics on the emerging paradigm in financial theory. Unfortunately, although Austrian economics has much to offer with regard to these and other areas, the original and substantial progress that has been made lacks a unifying framework at this point. This has hindered the development of a truly distinctive Austrian financial pedagogy. Without a general methodological framework to provide a basis for financial market research, work in the disparate areas of finance will continue to be fragmented and uneven. A discussion of this framework is left for the concluding section.

## **Conclusions: Toward an Austrian Theory of Finance**

I have attempted in this paper to provide a survey of the major contributions from Austrian economic science to the sub-field of finance with the hope of identifying some basic foundations upon which a more complete, uniquely Austrian theory of finance might be constructed. The survey began with the philosophical framework provided by Austrian theorists such as Menger, Mises, Hayek, and Machlup, and

<sup>&</sup>lt;sup>15</sup> This is not meant to imply that the Austrian theory of financial markets must be interpreted as implying long-run stationarity in the time series properties of financial data. Others (see, e. g., Coyne et al. 2010; Dempster and Isaacs 2011) argue for an emphasis on non-stationary, or at least non-ergodic, processes.

<sup>&</sup>lt;sup>16</sup> Cowen (1997) also represents an attempt to integrate Austrian macroeconomics with modern financial theory, although his emphasis on rational expectations indicates movement away from the distinctive Austrian paradigm presented here.

continued in providing highlights of recent contributions that can inform an Austrian reconstruction of the field of finance. In conclusion, it may be asked: Where should Austrians who are interested in financial theory, practice, and pedagogy go from here? Recent contributions outlined in this paper demonstrate the value of taking a unique approach to financial analysis and problem solving, and can serve as the basis for promising avenues of research. Austrians should look back (as the aforementioned contributors did) to the work of Menger, Mises, Hayek, and Machlup—with their emphasis on market processes, imperfect knowledge, and realistic views of expectations—to begin creating a truly unified Austrian theory of finance.

Furthermore, there is a growing literature in the field of economic sociology that mirrors much of the criticism of neoclassical rationality and maximization assumptions found in Austrian economics while retaining at least some form of axiomatic rationality (or self-interest) and goal-oriented agency. For example, Abolafia and Kilduff (1988) explore the purposive "actions, attributions, and regulatory efforts of powerful market participants" in the process of conflict that brings about and, eventually, resolves a speculative asset price bubble. Their model treats "economic actors as aggressively self-interested but deeply constrained by the institutional structures within which they operate" (p. 178). Fligstein (1996) integrates the political and economic motivations of markets participants as they attempt to create stability and limit the effects of competition within the markets they inhabit. Uzzi (1999) investigates the role of social networks on the acquisition and cost of capital for mid-sized firms. Developments such as these in economic sociology can form a useful complement to an Austrian reconstruction of financial theory.

It is asserted here that the methodological foundations of a distinctive Austrian approach to finance will rest on the following principles:

(1) Recognition of the **fundamental uncertainty** inherent in financial decision making and the limitations of risk-based expected utility analysis as a theoretical device for explaining corporate and investor behavior;

(2) Reasonable views of **expectations formation** that incorporate bounded rationality, heuristic decision contexts, and the behavioral biases of economic actors, while retaining the Austrian emphasis on intentionality or purposefulness in human actions;

(3) **Institutional context**, **social capital**, and **embeddedness** as explanatory factors (i.e. as both constraints and opportunities) in human choice;

(4) **Subjectivism** in regard to the means and ends of economic action; and,

(5) Organic, **evolutionary processes** as the source of coordination and spontaneous order in markets and institutions.

Koppl (2006) has coined the term BRICE economics to represent the "emerging new orthodoxy" in economics based on the principles of bounded rationality, rule-based (heuristic) decision making, institutions, cognition, and evolution. There is much commonality between the BRICE framework and the one outlined here. Furthermore, the distinct Austrian element in this emerging orthodoxy is easily identifiable from the work of the leading lights summarized above: Reliance on a method of analysis that introduces the dual realities of subjectivism and uncertainty into economic agency while preserving the role of intent-driven, purposeful action on the part of the agents themselves. An orthodoxy based on these principles would retain the best of both neo-classical and behavioral approaches without confining economic science to either complete dependence on or complete absence of the important, historical contexts of market development. In other words, to use the influential language of Granovetter (1985), it would avoid the dangers of both under- and over-socialized models of human action and agency.

## References

Abolafia, Mitchel and Martin Kilduff. 1988. "Enacting Market Crisis: The Social Construction of a Speculative Bubble," *Administrative Science Quarterly* 33: 177-193.

Aimar, Thierry. 1996. "Money and Uncertainty in the Economic Thought of Carl Menger." In Christian Schmidt, ed., *Uncertainty in Economic Thought*, Cheltenham, UK: Edward Elgar.

Bagus, Philipp. 2008. "Monetary Policy as Bad Medicine: The Volatile Relationship Between Business Cycles and Asset Prices," *Review of Austrian Economics* 21: 283-300.

Benink, Harald and Peter Bossaerts. 2001. "An Exploration of Neo-Austrian Theory Applied to Financial Markets," *Journal of Finance* 56: 1011-1027.

Black, Fischer and Myron Scholes. 1973. "The Pricing of Options and Corporate Liabilities," *Journal of Political Economy* 81: 637-654.

Block, Walter. 2001. "Yes, We Have No Chaff: A Reply to Wagner's 'Austrian Cycle Theory: Saving the Wheat While Discarding the Chaff'," *Quarterly Journal of Austrian Economics* 4: 63-73.

Block, Walter and Kenneth Garschina. 1996. "Hayek, Business Cycles and Fractional Reserve Banking: Continuing the De-Homogenization Process," *Review of Austrian Economics* 9: 77-94.

Brigham, Eugene and Joel Houston. 2009. Fundamentals of Financial Management, 12th edition, Mason: Cengage.

Butos, William and Roger Koppl. 1993. "Hayekian Expectations: Theory and Empirical Applications," *Constitutional Political Economy* 4: 303-329.

Caplan, Brian. 1999. "The Austrian Search for Realistic Foundations," *Southern Economic Journal* 65: 823-838.

Carilli, Anthony and Gregory Dempster. 2001. "Expectations in Austrian Business Cycle Theory: An Application of the Prisoner's Dilemma," *Review of Austrian Economics* 14: 319-330.

Carilli, Anthony and Gregory Dempster. 2003. "A Note on the Treatment of Uncertainty in Economics and Finance," *Journal of Education for Business* 79: 99-102.

Carilli, Anthony, Gregory Dempster and J. Rory Rohan. 2004. "Monetary Reform from a Comparative Theoretical Perspective," *Quarterly Journal of Austrian Economics* 7: 29-44.

Coyne, Christopher, Gregory Dempster and Justin Isaacs. 2010. "Asset Values and the Sustainability of Peace Prospects," *Quarterly Review of Economics and Finance* 50: 146-156.

Cowen, Tyler. 1997. Risk and Business Cycles: New and Old Austrian Perspectives, London: Routledge.

Dempster, Gregory and Justin Isaacs. 2011. "Conflict, Credibility and Asset Prices." In Christopher Coyne and Rachel Mathers, eds., *Handbook on the Political Economy of War*, Northampton: Edward Elgar.

Fama, Eugene. 1970. "Efficient Capital Markets: A Review of Theory and Empirical Work," *Journal of Finance* 25: 383-417.

Fligstein, Neil. 1996. "Markets as Politics: A Political-Cultural Approach to Market Institutions," *American Sociological Review* 61: 656-673.

Gaffney, Mason. 2008. "Keeping Land in Capital Theory: Ricardo, Faustmann, Wicksell, and George," *American Journal of Economics and Sociology* 67: 119-141.

Garrison, Roger. 1996. "Central Banking, Free Banking, and Financial Crises," *Review of Austrian Economics* 9: 109-127.

Gertchev, Nikolay. 2007. "A Critique of Adaptive and Rational Expectations," *Quarterly Journal of Austrian Economics* 10: 313-329.

Granovetter, Mark. 1985. "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91: 481-510.

Hayek, Friedrich. 1933. Monetary Theory and the Trade Cycle. New York: Augustus M. Kelley.

Hayek, Friedrich. [1929] 1935. *Prices and Production*, 2<sup>nd</sup> revised edition. London: Routledge and Kegan Paul.

Hayek, Friedrich. 1939. Profits, Interest, and Investment, New York: Augustus M. Kelley.

Hayek, Friedrich. 1968. "Carl Menger." Encyclopedia of the Social Sciences 10: 124-126.

Hoppe, Hans-Hermann. 1997. "On Certainty and Uncertainty, Or: How Rational Can Our Expectations Be?" *Review of Austrian Economics* 10: 49-78.

Jones, Charles. 2009. Investments: Analysis and Management, New York: Wiley and Sons.

Kirzner, Israel. 1987. "The Austrian School of Economics," *The New Palgrave Dictionary of Economics*, New York: Macmillan.

Kirzner, Israel. 1999. "Rationality, Entrepreneurship, and Economic 'Imperialism'," In Sheila Dow and Peter Earl, eds., *Economic Organization and Economic Knowledge: Essays in Honor of Brian J. Loasby*, Cheltenham: Edward Elgar.

Klein, Peter. 1999. "Entrepreneurship and Corporate Governance," *Quarterly Journal of Austrian Economics* 2: 19-42.

Klein, Peter. 2010. The Capitalist and the Entrepreneur: Essays on Organization and Markets, Auburn: Ludwig von Mises Institute.

Klein, Peter and Sandra Klein. 2001. "Do Entrepreneurs Make Predictable Mistakes? Evidence from Corporate Divestitures," *Quarterly Journal of Austrian Economics* 4: 3-23.

Knight, Frank. 1921. Risk, Uncertainty, and Profit, New York: Houghton Mifflin.

Koppl, Roger. 2002. *Big Players and the Economic Theory of Expectations*, New York: Palgrave Macmillan.

Koppl, Roger. 2006. "Austrian Economics at the Cutting Edge," *Review of Austrian Economics* 19: 231-241.

Koppl, Roger and Leland Yeager. 1996. "Big Players and Herding in Asset Markets: The Case of the Russian Ruble," *Explorations in Economic History* 33: 367-383.

Lachmann, Ludwig. 1945. "A Note on the Elasticity of Expectations," Economica 12: 248-253.

Lewis, Paul and Emily Chamlee-Wright. 2008. "Social Embeddedness, Social Capital and the Market Process: An Introduction to the Special Issue on Austrian Economics, Economic Sociology, and Social Capital," *Review of Austrian Economics* 21: 107-118.

Locke, John. [1690] 1947. Two Treatises of Government, New York: MacMillan.

Machlup, Fritz. [1930] 1940. The Stockmarket, Credit, and Capital Formation. New York: Macmillan Company.

Markowitz, Harry. 1952. "Portfolio Selection," Journal of Finance 7: 77-91.

Markowitz, Harry. 1959. Portfolio Selection: Efficient Diversification of Investments, New York: Wiley and Sons.

Menger, Carl. [1883] 1985. Investigations into the Method of the Social Sciences, with Special Reference to Economics, New York: NYU Press.

Merton, Robert. 1973. "Theory of Rational Option Pricing," *Bell Journal of Economics and Management Science*, 4: 141-183.

Mill, John Stuart. [1848] 1973. Principles of Political Economy, Clifton: Augustus M. Kelley.

Mises, Ludwig von. [1949] 1998. Human Action. The Scholar's Edition, Auburn: Ludwig von Mises Institute.

Mises, Ludwig von. [1912] 1953. The Theory of Money and Credit, New Haven: Yale University Press.

Moss, Laurence. 2000. "Bankruptcy Reform in Russia: The Case for Creditor Rights in Russia," *Review of Austrian Economics* 13: 121-146.

Mueller, Antony. 2001. "Financial Cycles, Business Activity, and the Stock Market," *Quarterly Journal of Austrian Economics* 4: 3-21.

Padilla, Alexandre. 2002. "Can Agency Theory Justify the Regulation of Insider Trading?" *Quarterly Journal of Austrian Economics* 5: 3-38.

Prychitko, David. 2010. "Competing Explanations of the Minsky Moment: The Financial Instability Hypothesis in Light of Austrian Theory," *Review of Austrian Economics* 23: 199-221.

Rashid, Salim and Abdus Samad. 1996. "Portfolio Management of the Free Banks of Illinois: An Examination of Historical Allegations," *Review of Austrian Economics* 9: 55-76.

Reisman, George. 2000. "The Goal of Monetary Reform," *Quarterly Journal of Austrian Economics* 3: 3-18.

Ricardo, David. 1817. On the Principles of Political Economy and Taxation, London: John Murray.

Rothard, Murray. [1962] 1993. Man, Economy, and State, Auburn: Ludwig von Mises Institute.

Rothard, Murray. 1999. "Ludwig von Mises: The Dean of the Austrian School." In Randall Holcombe, ed., 15 Great Austrian Economists, Auburn: Ludwig von Mises Institute.

Salerno, Joseph. 1999. "Carl Menger: The Founding of the Austrian School." In Randall Holcombe, ed., 15 Great Austrian Economists, Auburn: Ludwig von Mises Institute.

Samuelson, Paul. "Proof that Properly Anticipated Prices Fluctuate Randomly," *Industrial Management Review* 6: 41-49.

Say, Jean-Baptiste. [1880] 1971. A Treatise on Political Economy: Or the Production, Consumption, and Distribution of Wealth, New York: Augustus M. Kelley.

Schumpeter, Joseph. 1951. "Carl Menger, 1840–1921," In *Ten Great Economists, From Marx to Keynes*, New York: Oxford University Press.

Sechrest, Larry. 1999. "Jean-Baptiste Say: Neglected Champion of Laissez-Faire," In Randall Holcombe, ed., *15 Great Austrian Economists*, Auburn: Ludwig von Mises Institute.

Selgin, George. 1988. The Theory of Free Banking. Totowa: Rowman and Littlefield.

Selgin, George. 1997. *Less Than Zero: The Case for a Falling Price Level in a Growing Economy*, London: Institute of Economic Affairs.

Selgin, George, and Lawrence H. White. 1994. "How Would the Invisible Hand Handle Money?" *Journal of Economic Literature* 32: 1718-1749.

Selgin, George, and Lawrence H. White. 1996. "In Defense of Fiduciary Media—or, We Are Not Devo(lutionists), We Are Misesians!" *Review of Austrian Economics* 9: 83-107.

Selgin, George, and Lawrence H. White. 2005. "Credible Currency: A Constitutional Perspective," *Constitutional Political Economy* 16:71-83.

Skousen, Mark. 1994. "Financial Economics," In Peter Boettke, ed., *The Elgar Companion to Austrian Economics*, Brookfield: Edward Elgar.

Smith, Adam. 1776. An Inquiry into the Nature and Causes of the Wealth of Nations. London: Strahan and Cadell.

Stigler, George. 1937. "The Economics of Carl Menger," Journal of Political Economy 45: 229–250.

Streissler, Erich. 1973. "Menger's Theories of Money and Uncertainty: A Modern Interpretation," In *Carl Menger and the Austrian School of Economics*. Oxford: Clarendon Press.

Uzzi, Brian. 1999. "Embeddedness in the Making of Financial Capital: How Social Relations and Networks Benefit Firms Seeking Financing," *American Sociological Review* 64: 481-505.

Vaughn, Karen. 1978. "John Locke and the Labor Theory of Value," *Journal of Libertarian Studies* 2: 311-326.

Wagner, Richard. 1999. "Austrian Cycle Theory: Saving the Wheat While Discarding the Chaff," *Review of Austrian Economics* 12: 65-80.

White, Lawrence H. 2003. *The Methodology of the Austrian School of Economics*, (Online edition) Auburn: Ludwig von Mises Institute.

Yeager, Leland. 1954. "The Methodology of Henry George and Carl Menger," American Journal of Economics and Sociology 13: 233–238.

Yeager, Leland. 1998. "How to Avoid International Financial Crises," Cato Journal 17: 257-265.