

WHAT AUSTRIAN INVESTING IS NOT (AND WHAT IT IS): A REVIEW AND SUGGESTED WAY FORWARD

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1. Introduction

Various attempts have been made to develop an applied Austrian investment theory or a practical investment framework that is either consistent with or directly derived from the general corpus of Austrian economic theory. This article will first provide a summary review of existing research in this area, both in popular books and in scholarly journal articles, without claiming to be exhaustive. In its review, this article will offer the gentle criticism that much of this existing research has ignored core Austrian insights and principles, rendering the proposed approaches ultimately incompatible with Austrian economics.

Some Austrians have embraced the value investing framework of Columbia Business School and Wall Street fame, having recognized some parallels between value investing and Austrian economic theory (e.g., Leithner, 2017; Taghizadegan et al., 2016). Others have recommended, more generally, that practitioners make capital investments in diversified portfolios (Skousen, 2013), with the caveat that this should be done in jurisdictions with “free markets and free trade” (Skousen, 2013, p. 24), offering the insight that these

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jurisdictions are mostly likely to enjoy increases in productivity and economic growth. Or, broadly, that practitioners should attempt to use the insights of Austrian business cycle theory (ABCT) to time the market (Skousen, 2013), that is, to buy investment assets at times in the business cycle when investment capital is relatively scarce and asset prices relatively low, and then to sell when the opposite is true. Still others have made explicit recommendations to adapt or modify elements of neoclassical finance theory to make them congruent with Austrian theory (e.g., Kruk, 2020; Lewin & Cachanosky, 2021; Turowska, 2022)¹.

After reviewing the existing literature in this area, we have found ourselves in the unfortunate position of sharing and admiring our fellow Austrians' intent to identify or develop an Austrian investment theory, and to offer Austrian practitioners some practical investment guidance, and yet coming to the unpleasant conclusion that most of these previous lines of research have either failed to fully reconcile the Austrian and non-Austrian ideas that they attempt to synthesize or, in some cases, they attempt to import non-Austrian ideas in the areas of finance or investment theory without acknowledgement that there exist contradictory principles which are in need of reconciliation. This paper suggests that, as an alternative, we ought to look within the Austrian framework for a sound basis for applied investment theory, rather than without.

The mainline Austrian view of individual-level entrepreneurship is the judgment-based approach (JBA) (Rapp, Rapp, & Daher, 2023), which links entrepreneurship to making investment decisions (Klein, 2008). The insights of the JBA thus have significant implications for Austrian analyses of extant investment frameworks and for the development of a genuinely Austrian framework for applied investing, implications which we believe have been overlooked by the proponents of both value investing and neoclassical finance theory.

¹ Beyond the suggestions for applied investing just outlined, others have remained more at the macro level of Austrian investing. Arisson (2018), for example, highlights specific Austrian concepts and insights that are relevant for investors to consider, but he remains rather superficial and ambiguous when it comes to a truly Austrian approach to applied investing as such.

More specifically, the JBA presents entrepreneurship as the exercise of decision-making and control over resources under conditions of Knightian uncertainty (Foss & Klein, 2012), action which takes place within the “heterogeneity-uncertainty nexus” (Foss, Klein, & Bjørnskov, 2019, p. 1202). To describe the practical operation of entrepreneurial action within this heterogeneity-uncertainty nexus, the beliefs-actions-results (BAR) framework was developed (Foss & Klein, 2020). The BAR framework describes the entrepreneurial process in three simple stages: the entrepreneur forms *beliefs* about conditions in the present, the future, and the means available for the attainment of his desired ends in the future; next, the entrepreneur *acts* by making a particular investment of controlled resources into a particular plan of production; finally, the *results* of the action or investment are made manifest through time and the entrepreneur realizes either profit or loss. As concepts deeply rooted in Austrian economics, both the JBA and its relative, the BAR framework, provide a sound basis for advancing a truly Austrian theory of applied investing, and they will be used to outline such a theory below.

Moreover, there are discussions among Austrian economists about the fact that traditional investment models might not adequately capture the heterogeneous nature of capital and that greater sensitivity to the qualitative differences between various securities could lead to more well-founded investment decisions (Zelmanovitz, 2020). Against this background, our contribution aims to highlight the unique value of the JBA and BAR framework for practical investment decisions by taking into account the heterogeneity of both the individual investor and the characteristics of his investment object(s).

In summary, our contention is that the JBA and the BAR framework directly originate from Austrian theory and thus form a solid foundation for an Austrian account of applied investment, while value investing and neoclassical finance theory stand in sharp contradiction to it. Therefore, much of the literature on Austrian investment theory or practice has neglected core Austrian insights. And, while many previous attempts to develop more specific and prescriptive investment heuristics have strayed from the insights of Austrian entrepreneurship theory, the JBA and the BAR framework

together should prove most useful for theorists and practitioners who wish to evaluate popular investment theories or advance an investment framework from an Austrian perspective.

2. What Austrian Investing is not

2.1. (*Austrian*) value investing?

In the context of developing a truly Austrian theory of applied investing, one oft-repeated suggestion has been to adopt the investment heuristic of ‘value investing’ (or derivatives thereof) as congenial to Austrian economics, its core insights and principles (García Paramés, 2018; Grimm, 2012; Konrad, 2021; Krug & Mohelsky, 2010; Leithner, 2017; Spitznagel, 2013; Taghizadegan, 2017; Taghizadegan et al., 2016). Value investing is commonly associated with the work of former Columbia University professor Benjamin Graham (2003; Graham & Dodd, 1934) as its founding father (Lowe, 1996; Montier, 2010; Athanassakos, 2011; Spitznagel, 2013) and the investment actions of prominent practitioners of value investing, such as Warren Buffett and Seth Klarman.

At its core (though admittedly oversimplified), value investing describes an intuitive and simple idea: *Buy low, sell high!* This advice seems so obvious and therefore too trivial to even be mentioned, and on the surface there is nothing about it that would seem to contradict Austrian economics. After all, the central focus and starting point of Austrian economic analysis, human action, is goal-directed and seeks to mitigate perceived discomfort (Mises, 1998). Financial investment advice à la *buy low, sell high* may help achieve the financial goals of an acting human being and thereby improve his well-being, and thus appears to be a simple manifestation of the general principle of human action. But the devil is in the details, and while they share some commonalities (Rapp, Olbrich, & Venitz, 2017), the way value investing operationalizes this simplistic advice is problematic, making the investment heuristic fundamentally incompatible with the Austrian framework (Rapp, Olbrich, & Venitz, 2017, 2018; Rapp, Rapp, & Daher, 2023).

In order to buy low in the first place, the value investing paradigm holds that investors must discover ‘undervalued’ stocks. Stocks are undervalued, the reasoning goes, when their ‘intrinsic values’ are higher than their market prices (Calandro Jr., 2009; Hagstrom, 1999, 2014; Kwag & Lee, 2006; Otte & Castner, 2014), taking into account a margin of safety (Athanasakos, 2012; Calandro Jr., 2009; Graham, 2003; Greenwald et al., 2001; Lowe, 1996). In other words, these stocks are believed to be intrinsically worth more than they are currently trading for, a phenomenon often attributed to ‘irrational’ investor behavior (Athanasakos, 2012; Graham, 2003; Hagstrom, 1999; Otte & Castner, 2014; Vick, 1999). A variety of methods or formulas are recommended for calculating the intrinsic value of an asset such as discounted cash flow (DCF), dividend yield, earnings per share (EPS), price to earnings ratio (P/E), price to book ratio (P/B), etc. (Rapp, Rapp & Daher, 2023 with further references).

A stock’s state of ‘undervaluation’ is not seen as permanent. Instead, the value investing paradigm is based on the assertion that market prices tend to approximate the intrinsic value of the underlying stock over time, making periods of ‘undervaluation’ temporary phenomena (Graham & Dodd, 2009; Greenwald et al., 2001; Hagstrom, 2014). The core of value investing, then, is identifying temporarily ‘undervalued’ stocks, investing in them, and waiting for their market prices to approach or exceed their intrinsic values (Calandro Jr., 2009; Grimm, 2012; Gottesman et al., 2017; Hagstrom, 1999; Kwag & Lee, 2006; Lee, 2014; Lev & Anup, 2022; Truong, 2009).

From an Austrian perspective, value investing does not qualify as a suitable approach for applied investing due to at least two fundamental problems. First, value investing goes against the foundational Austrian conceptions of value and price (Rapp, Olbrich, & Venitz, 2017, 2018). Second, it contradicts the Austrian approach to applied entrepreneurship at the individual level (Rapp, Rapp, & Daher, 2023), namely the JBA (Foss & Klein, 2012; McCaffrey et al., 2021). Let us outline these two critical contradictions.

The conceptual foundation of value investing assumes the existence of a ‘true’ value as an inherent characteristic of an asset and asserts that this objective value is what ultimately causes prices and their movements. Intrinsic value is the target, and market

prices are supposed to move systematically around it. In the Austrian paradigm, however, value is strictly subjective, and *differences* in subjective values (rather than one objective value) are at the heart of exchanges and drive market prices (Mises, 1998)². While some Austrian proponents of value investing and its principles have claimed that value in the value investing paradigm is indeed subjective (Leithner, 2017), both conceptually and empirically, this could not be further from the truth. Conceptually, value in the value investing framework is undeniably objective. Indeed, if value were not conceptually objective, the entire value investing paradigm would be logically incoherent, and the whole idea of benefiting by buying ‘undervalued’ stocks and waiting for their intrinsic values to be reflected in market prices would collapse (Venitz, 2019). Rapp, Olbrich, and Venitz (2018, p. 64, original emphasis) explain:

“If intrinsic value was meant to be subjective..., the market price would either have to oscillate around thousands of ‘intrinsic’ values resulting from different market participants’ subjective appraisals of one and the same share at once, which is evidently impossible; or alternatively, the market price would have to oscillate around one particular subjectively appraised ‘intrinsic’ value. However, which of the thousands and thousands of subjective appraisals for the very same share would then cause the market price to oscillate? Why should one particular subjectively appraised ‘intrinsic’ value cause the market price, which can be the outcome of thousands and thousands of independent valuations, to oscillate? Hence, if intrinsic value were indeed a subjective concept, the very idea of value investing would go up in smoke.”

Practically, attempts to assess intrinsic value are neither objective nor subjective but simply arbitrary, because such a thing does

² As elaborated by Simmel (1907) (and adopted by Mises), prices are therefore intersubjective quantities, as they emerge through the interactions of market participants and their respective subjective valuations. “The concept of objective value for Simmel means that, in terms of economic evaluations, it is possible to say that there is an objective value when different agents for different reasons come to the same conclusion about the monetary value that some good has for them” (Zelmanovitz, 2010). Note that this view of objective value is quite different from the value investing view on (intrinsic) value as an inherent attribute of a security.

not exist beyond hypothetical imagination and therefore cannot be grasped (Rapp, Olbrich, & Venitz, 2018)³.

In addition to being irreconcilably at odds with the Austrian theory of value and price, the value investing framework is also at odds with the mainline Austrian view of applied entrepreneurship at the individual level, that is, the JBA (Rapp, Rapp, & Daher, 2023). Put simply, the latter holds that practicing entrepreneurs make judgments in the face of Knightian uncertainty (Knight, 1921) about how best to allocate scarce resources in the present to achieve one or more goals in the future (Foss & Klein, 2012). Because uncertainty prevails in the arena of entrepreneurship, the latter is inherently speculative and requires judgment (Mises, 1998; Klein, 2008; Rapp, 2022). Because the future is uncertain, entrepreneurs cannot know what will happen, but have no choice but to speculate about how the future is likely to unfold based on their tacit knowledge and beliefs (Foss & Klein, 2020; Rapp & Olbrich, 2023). This is true not only for manufacturing entrepreneurs, but also for entrepreneurs operating in financial markets, that is, investors (Klein, 2008).

While at the heart of the Austrian theory of entrepreneurial judgment, there is no room in the value investing framework for judgment and speculation amid uncertainty. On the contrary, this proposition is explicitly rejected. In this view, ‘investors’ are strictly distinguished from ‘speculators’ in that they avoid the uncertainties of the future and instead focus on the verifiable facts of the past to make their investment decisions (Graham, 1958, 2003; Graham & Dodd, 2009; Montier, 2009). However, given

³ The argument that the logic of value in the value investing framework is conceptually objective and practically arbitrary, and thus violates the non-arbitrary and strictly subjective Austrian theory of value, has been misunderstood and misrepresented, including by Konrad (2021) and Taghizadegan (2017). Konrad (2021) accuses Rapp, Olbrich, and Venitz (2018) of conflating subjectivity with arbitrariness, when in fact this is what proponents of the conceptual underpinnings of value investing do. Taghizadegan (2017) fails to recognize that Austrian economic theory straight-out rejects the existence of intrinsic value, which is at the heart of the logic of value investing, when he claims that the approach of value investing is well within the scope of Austrian economics. Because “[v]alue is not intrinsic, it is not in things” (Mises, 1998, p. 96), the very idea of intrinsic value was rightly judged from the Austrian perspective as “the naive conception of the layman” (Mises, 1990, p. 56; Ritenour, 2016, p. 192).

that the ultimate motivation of human action is to improve future well-being, human action, including investment action, is inherently directed toward the future (Mises, 1998).

Instead of adhering to the Austrian view of applied entrepreneurship as speculative, judgmental decision-making under uncertainty directed toward the future, the value investing paradigm corresponds to the opportunity discovery view (ODV) of entrepreneurship (Rapp, Rapp, & Daher, 2023), a highly influential perspective in the management literature (Shane, 2003; Shane & Venkataraman, 2000). The ODV portrays entrepreneurship as the act of discovering and exploiting objectively available profit opportunities, the proverbial grab for the dollar bill on the sidewalk (Holcombe, 2003).

Value investing and the ODV share a vision of entrepreneurs discovering objectively existent (investment) opportunities—which emerge from divergences between the market prices of assets and their equilibrium values—and then eventually earning profit returns when asset prices converge towards equilibrium. Value investors are prototypical opportunity discoverers (Rapp, Rapp, & Daher, 2023). They are seen as discovering and exploiting objectively available profit opportunities in the form of ‘undervalued’ stocks by investing in them and waiting for their market prices to approach their intrinsic values.

The ODV is commonly claimed to be rooted in the work of Austrian economist Israel M. Kirzner (1973, 1979); so one might conclude that, by extension, value investing could therefore be considered a truly Austrian concept. However, Kirzner (2009) himself has been very explicit in dispelling the myth that his work on alertness and opportunity discovery has anything to say about practicing entrepreneurs at the individual level. The notion that entrepreneurs are alert and discover profit opportunities that objectively exist was meant to be a mere metaphor for market equilibrating tendencies rather than a description of the day-to-day actions of practicing entrepreneurs (Klein, 2008). Thus, the micro-level ODV is based on a misinterpretation of Kirzner’s macro-level work (Klein, 2008; Rapp, Rapp, & Daher, 2023). Kirzner’s actual work on individual-level entrepreneurship (e.g., Kirzner, 1982, 1999, 2009) is more in line with the spirit of entrepreneurial

judgment theory (Korsgaard et al., 2015; Rapp, Rapp, & Daher, 2023). The latter, however, rejects the notion that there are such things as profit opportunities that objectively exist out there waiting to be discovered and exploited (Foss & Klein, 2020; see also Korsgaard et al., 2015).

Subjectivism is at the heart of both Austrian economics and its theory of entrepreneurial judgment (Bylund & Packard, 2022), and so the denial of subjectivity and the inherently objective approach that value investing purports to take clashes with the very foundations of Austrian economics. While the logic of value investing mistakenly suggests that there is an objective opportunity for successful investing in the event of a discovery of an 'undervalued' stock, there is no theoretical justification for that in the Austrian framework.

2.2. *(Austrian) finance theory?*

Beyond attempts to force value investing's feet into unsuitable Austrian shoes, other scholars have taken a different but equally objectionable path. This alternative path is rooted in neoclassical economics and, in particular, its contemporary finance theory. Some have explicitly or implicitly argued for adopting concepts from neoclassical finance theory into an Austrian theory of applied investing, overlooking or at least downplaying the apparent contradictions of such an approach. Recent examples of Austrian scholarship that attempts to build on neoclassical finance theory in one way or another include Kruk (2020), Turowska (2022), Lewin and Cachanosky (2021), and Skousen (2013).

Kruk (2020) outlines the valid concern that entrepreneurs may be misled into making economically unwise investment decisions, which fuel the business cycle because investment appraisals based on net present value calculations are adversely distorted by central bank interventions in setting interest rates. To mitigate this threat, Kruk (2020) suggests, among other things, using the CAPM to account for the potential downside risk of interest rate manipulation on investment appraisals arguing that it helps entrepreneurs appropriately price risk into their investment considerations.

However, Kruk (2020, p. 145) herself is somewhat uncomfortable with her proposal, recognizing that the CAPM is inconsistent with the Austrian framework: “While it is not the method consistent with the Austrian theory, it is still one of the most popular tools used by large companies on the market, which is the reason we cannot neglect its importance.” Hering, Olbrich, and Rapp (2021) comment on Kruk and explain that the CAPM is not only unhelpful in guiding entrepreneurs in their investment decisions because it tends to distort their judgments, but that it also has no place in an Austrian applied investment framework. Kruk, now Turowska (2022), acknowledges some problems with her original proposal, but the fundamental flaw at the heart of her proposal remains unchanged: Turowska (2022) continues to advocate the adoption of neoclassical models for an Austrian theory of applied investing.

It is absolutely legitimate from an Austrian perspective to point out that the artificial lowering of interest rates by central banks is a serious problem that negatively impacts entrepreneurial investment appraisal, since it clouds the economic calculations of entrepreneurs and can misdirect them in their investment decisions (Rapp, 2015). However, unfortunately, the proposal to adopt the CAPM is not a viable solution. Instead of being an appropriate means of mitigating the consequences of interest rate manipulation at the level of entrepreneurial investment appraisals, the CAPM is actually “part of the problem of entrepreneurial misjudgment” (Hering, Olbrich, & Rapp, 2021, p. 348) rather than part of the solution (Rapp, 2015). The simple reason is that the CAPM is a prototypical neoclassical model that is largely unrelated to the real world (Hering, 2022), tends in itself to mislead practicing entrepreneurs, and thus has no place in an Austrian-style causal-realist approach to individual-level investment decisions (Herbener & Rapp, 2016; Hering, Olbrich, & Rapp, 2021; Matschke & Brösel, 2021; Olbrich, Quill, & Rapp, 2015).

We applaud Turowska (2022; Kruk, 2020) for correctly identifying a problem *within* the Austrian framework that certainly deserves much more scholarly attention. Unfortunately, however, she proposes to solve this problem with a tool from *outside* the Austrian framework, known from the *neoclassical* toolbox. From an Austrian perspective, however, this tool is unhelpful to support entrepreneurs in their investment decisions (Hering, 2021, 2022; Olbrich,

Quill, & Rapp, 2015). The CAPM ignores central pillars of Austrian economics (Herbener & Rapp, 2016), including the subjectivity of value (Menger, 2007), individual differences in preferences (e.g., Rothbard, 1962), including time preference and preferences for decision-making criteria and mechanisms, the uncertainty inherent in human action (Knight, 1921; Mises, 1998), the fact that markets are not static equilibria but dynamic processes (e.g., Bylund, 2022; Kirzner, 1992; Mises, 1998), and much more. Simply put, the CAPM is the very antithesis of Austrian economics.

Turowska (2022; Kruk, 2020) justifies her proposal by arguing that practitioners prefer very simple methods. This is a decades-old, but unconvincing argument. We can neither prove nor disprove whether practitioners, by and large, always and everywhere prefer simple (and possibly unsound) approaches to more complex ones (which might be more sound). But even if this were the case, neither the popularity of the method nor any other convenience should lead us to overlook the theoretical flaws in adopting the CAPM for an Austrian-style investment framework. After all, it is not the duty of academics to justify a common business practice, and nor is academic theory-building a democratic process where the majority wins. Going down the neoclassical path of arguing on the basis of never-to-occur hypothetical models, in which entrepreneurs do not even play a role (Foss & Klein, 2012; Knight, 1921; Mises, 1998; Rapp, Haßlinger, & Olbrich, 2018), is an untenable dead end. Scholars should resist the seduction of neoclassical simplicity and generally prefer the soundness of an argument (or tool) to its simplicity.

Lewin and Cachanosky (2021) published an insightful book on the theory and history of capital and finance from an Austrian perspective. There, the authors argue in favor of the economic value added (EVA) concept and propose to determine the required discount rates using the weighted average cost of capital (WACC) approach, thereby advocating, albeit much more subtly than Kruk (2020) and Turowska (2022), the application of a neoclassical model⁴.

⁴ Lewin and Cachanosky (2021) are no exception in this regard. Unfortunately, the neoclassical puzzle piece WACC has also found its way into other analyses related to an Austrian view of finance. For example, Lermyte (2023), in his recent effort to provide

Like the CAPM, the WACC is a neoclassical concept, which is built on the works of Modigliani and Miller (1958, 1963). It is derived under the unrealistic⁵ conditions of a ‘perfect’ capital market and implies an artificially fragmented, average discount rate, whereas the fundamental insight of the Austrian school is that *marginal* utility, and thus *marginal* interest rates used as discount rates, are critical to economically sound investment decisions⁶.

Similar to Kruk (2020), Lewin and Cachanosky recognize that the neoclassical concepts they advocate for violate core Austrian insights, in their case by implying an objective understanding of value. Recognizing this imbalance, they advocate adding a subjective twist to the application of these concepts. “The discussion... should not be understood as a description of an application that yields the objective true measure of the value of the firm. Value is subjective, and its estimation, even by a method that follows general rules of calculation, must rely on subjective assumptions and interpretations,” Lewin and Cachanosky (2021, p. 95) argue. However, as with Kruk’s (2020) and Turowska’s (2022) attempts to justify the use of the CAPM within an Austrian investment framework on the basis of its popularity in practice, this reasoning, while seemingly pragmatic and intuitive, is equally problematic. The entire logic of the underlying model is flawed from an Austrian perspective, and this cannot be cured by adding a subjective twist. In other words: One cannot cure the inherent problems of an objectivist, neoclassical model simply by subjectively interpreting and selecting the necessary input data.

“the basis for the development of an authentic Austrian financial theoretical framework,” also uncritically relies on the neoclassical WACC approach to assess—ostensibly from an Austrian perspective—whether “an optimal financial structure [can] be determined ex-ante at the macroeconomic level.” Whatever the outcome of such an assessment, the WACC and its implications cannot be a sound basis for a truly Austrian analysis and theory because it fundamentally violates the Austrian framework.

⁵ We suspect that many practitioners who rely on neoclassical models are aware of how detached the models’ assumptions are from reality but use the models nonetheless for the sake of their convenience. In addition, neoclassical economists have accepted concepts about the limits of knowledge in particular in recent decades, especially in light of the critique offered by Lucas (1976).

⁶ See Marion Ceolin (2024) for a related Austrian critique of discounted cash flow methods.

In his attempt to present an Austrian School-inspired approach to applied investing, Skousen (2013) recommends investing in a diversified portfolio, at least for the majority of investors⁷. However, this generalized recommendation also comes from the neoclassical paradigm rather than the Austrian framework, and it contrasts with the latter because of its inherent claim to absoluteness. In a variety of cases, the Austrian investor may not be well guided by the supposedly universal rule of not putting all his eggs in one basket. The idea that a diversified portfolio is always and everywhere superior to non-diversified investments is the core insight of neoclassical portfolio theory, the foundations of which were laid by Markowitz (1952)⁸. While the advice to diversify one's investments does not contradict Austrian economic theory *per se*, as investing in diversified portfolios is well within the Austrian framework, its neoclassical roots unjustifiably narrow the range of 'permissible' or 'rational' investment choices. Contrary to the neoclassical standard, the Austrian investor is not limited to investing in fully diversified portfolios in order to act 'rationally'; on the contrary, the full range of investments, from putting all eggs in one basket (for example, in a small- or medium-sized family business) to radical diversification, can be promising and rational investment choices from the perspective of the acting individual. Austrian investing is ends- and means-driven and thus contextual. Huerta de Soto (2023, p. 187) correctly asserts:

"Following the law of declining marginal utility, the sensible investor will only increase the number of companies that he owns, if the last marginal investment he can add increases the utility of his portfolio to achieve his goal of a specific return. In other words, he will refrain from including an additional (marginal) investment unless

⁷ Huerta de Soto (2023, p. 183) also recommends an "adequate level of diversification" in the investment selection process, but he, unlike others, explicitly criticizes the neoclassical roots of how diversification is commonly understood and outlines an Austrian approach to diversification that respects the individuality and subjectivity of portfolio selection. Konrad (2021) also argues for an Austrian, praxeological approach to diversification based on individual diminishing marginal utility.

⁸ While Markowitz is commonly cited as the founding father of portfolio theory, Fuller (2023) suggests that Markowitz's Ph.D. advisor, Marschak, who was one of Mises's opponents in the socialist calculation debate, laid the groundwork for and significantly influenced Markowitz.

he considers that it can reduce the aggregate uncertainty of his portfolio. This is a subjective appreciation for each individual, so some will be comfortable with ten companies and others with one hundred. Yet we must consider that the number of companies within a portfolio is negatively correlated with how well anyone can get to know those companies. Time is a scarce resource and too much diversification can act in detriment of our entrepreneurship, as there is just so much brain power and entrepreneurial capabilities that we can dedicate as human beings to analyze each of the companies.”

Contrary to neoclassical portfolio theory from the ivory tower, causal-realist Austrian economics recognizes the individual differences in preferences (Rothbard, 1962) that characterize acting humans in general and investors in particular. An Austrian approach to investing at the individual level must not prescribe specific permissible preferences and investment selection mechanisms. For this reason, the common belief that diversification is absolutely superior to non-diversified investments must be rejected from an Austrian perspective as this belief is only valid under certain assumptions which are never met in practice. Ultimately, the subjective valuations of the acting individual may or may not lead to diversification, both of which may be economizing from the perspective of the acting individual. Therefore, standard neoclassical portfolio theory and its seemingly universal recommendation of full diversification have no place in a truly Austrian theory of applied investing⁹.

2.3. *Trials and tribulations in Austrian applied investing: An interim conclusion*

Austrian applied investing is a critical area of research with important implications for both theory and practice. Unfortunately, as

⁹ In this context, Fuller (2023) makes an additional argument for the incompatibility of neoclassical portfolio theory with Austrian economics. He argues “that Modern Portfolio Theory emerged from the socialist tradition in the aftermath of the socialist calculation debate” (p. 255) and classifies portfolio theory as “a product of the socialist revolt against reason” (p. 277).

illustrated in this paper, recent attempts to advance the field have mostly been misguided. Some have advocated value investing as an Austrian approach to applied investing (e.g., Leithner, 2017; Taghizadegan et al., 2016), while others, including Kruk (2020), Turowska (2022), Lewin and Cachanosky (2021), and Skousen (2013), have explicitly or implicitly tried to import neoclassical models into Austrian theory despite the obvious problems with doing so. Austrian applied investing as a field has suffered from both a *theory-practice* gap and a *theory-theory* gap. Not only have practitioners claiming to act in the Austrian spirit such as Leithner (2017) violated Austrian theory (*theory-practice* gap), but scholars such as Kruk (2020), Turowska (2022), and Lewin and Cachanosky (2021) have also proposed embracing theoretical approaches that fundamentally contradict Austrian theory (*theory-theory* gap). Because both the logic and practice of value investing and the suggested neoclassical models fundamentally violate the Austrian causal-realist approach, they are unsuitable for advancing a truly Austrian theory of applied investing and should be discarded. Rather, a truly Austrian theory of applied investment must come from within the Austrian framework, and it is therefore necessary and useful to look inward for a sound foundation upon which to build the desired theory.

3. What Austrian Investing is

3.1. *Entrepreneurship as investing under uncertainty*

The most relevant aspect of Austrian economics to look towards for this current endeavor is applied entrepreneurship which promises the greatest potential for the advancement of an Austrian theory of applied investing. Austrian entrepreneurship theory has seen many new advancements in recent years, arguably the most important being the development and refinement of the JBA (Foss & Klein, 2012). The JBA is congenial to a truly Austrian theory of applied investing because it views investors as entrepreneurs and “treats investors not as passive suppliers of capital to decision-making firms, but as the locus of economic decision making itself”

(Klein, 2008, p. 183)¹⁰. The JBA explains entrepreneurship as “judgmental decision making under conditions of uncertainty... when the range of possible future outcomes, let alone the likelihood of individual outcomes, is generally unknown” (Klein, 2010, p. 97).

From this Austrian view, the entrepreneur is necessarily a speculator who “deals with the uncertain conditions of the future. His success or failure depends on the correctness of his anticipation of uncertain events” (Mises, 1998, p. 288). Suggesting to “drop the [predominant] concept of *opportunity* altogether” (Klein, 2008, p. 183, original emphasis), the JBA focuses on investment as the unit of analysis in entrepreneurship (Foss & Klein, 2012, 2020; Klein, 2008); that is, when a resource owner makes an investment decision and commits resources *in the present* to a particular project or venture or line of production, in the hopes of a profit return *in the uncertain future*. In this sense, investments are at the core of entrepreneurship, so the insights of the JBA, which explicitly focuses on entrepreneurial investment, should contribute to a truly Austrian theory of applied investment.

Building upon the JBA, Austrian entrepreneurship scholars also developed a new operational framework for understanding the entrepreneurial (investment) process, namely the BAR framework (Foss & Klein, 2020). In this framework, entrepreneurs necessarily begin by forming *beliefs* about current market conditions, as well as the conditions or changes that lay ahead in the uncertain future, and ideas for how best to prepare for or affect those future conditions. Next, *action* describes the execution of an idea or plan conceived of in the previous stage, the point in the process where decisions are implemented and “investments are made—i.e., when resources are acquired, combined, and committed to various production plans” (Foss & Klein, 2020, p. 372).

Finally, the *results* unfold through time as the *beliefs* formed at the beginning of the process are revealed to be correct or incorrect regarding the development of conditions in the future, and likewise the particular course of *action* (investment) chosen will ultimately prove to be successful or unsuccessful in achieving its desired

¹⁰ Others, including Huerta de Soto (2023), have also classified investment as a form of entrepreneurship, thus viewing investors as entrepreneurs.

effects. In this context, Foss and Klein (2020) emphasize that *results*, like *beliefs*, have a subjective dimension, since financial profit and loss can be measured objectively, yet the entrepreneur's understanding of *why* a particular project succeeded or failed must emerge from their own "tacit knowledge, subjective beliefs, etc." (Foss & Klein, 2020, p. 373). Also, the entrepreneurs involved may derive subjective value from other outcomes of the *action* (investment) —completely aside from any financial considerations (Herbener & Rapp, 2016).

We believe that much of the work in the Austrian literature which deals with the subject of applied investment, and which outlines or recommends investment principles, has either overlooked these highly relevant developments in Austrian entrepreneurship theory or otherwise misinterpreted their relationship to alternative approaches to applied investment. Beyond the unintentional omission of the JBA and BAR insights, we have argued that these previous iterations of applied Austrian investment frameworks have also accepted theoretical assumptions which are antithetical to Austrian economic theory generally by adapting elements of neoclassical finance theory or else wholesale adopting the value investing framework. For these reasons, they are inappropriate as a truly Austrian approach to applied investing.

An alternative account of Austrian applied investing, one that respects rather than violates core Austrian insights and principles, is urgently needed. Referring to the neoclassical standard, Klein (2008, p. 183) highlights this need for an alternative when he explains why neoclassical finance theory is inappropriate for developing an Austrian, investment-based theory of entrepreneurship:

"In this sense, entrepreneurship is closely linked to finance... Of course contemporary finance theory focuses primarily on equilibrium models of resource allocation under conditions of risk, not Knightian uncertainty, so entrepreneurship theory cannot be simply a reframing of modern finance theory."

The use of the JBA in conjunction with the BAR framework also avoids other shortcomings associated with alternative investment theories and approaches. The latter have offered Austrian investment theorists and practitioners highly formulaic

investment criteria or heuristics: The value investing framework with its specific appraisal methods and guidance, neoclassical portfolio theory's recipe for highly diversified portfolios with mean-variance and covariance optimization, or the related neoclassically inspired 'passive investing' approach of using capitalization (value) weighted index funds for maximum diversification and fee minimization (Daher & Rapp, 2023), etc.

The BAR framework, on the other hand, is descriptive rather than prescriptive, and is therefore perfectly comfortable with analyzing and explaining investment behavior even when such behavior violates the dictums of established and well-regarded theories that are outside the Austrian tradition. For example, many individual investors form their beliefs about conditions in the future, and the most attractive investment projects available to them, based solely on the advice of a trusted friend or family member. Also, many individual investors hold highly concentrated investment portfolios due to the accumulation of large equity stakes in their own businesses, or because they receive a large equity stake in the companies that employ them as part of their compensation packages, or because they *stick to what they know* and tend to concentrate their investments in their own industries, etc. While these *beliefs* or *actions* might violate the principles of a variety of neoclassically inspired investment approaches, the BAR framework is perfectly accepting of these practices and is capable of explaining them from the perspective of the investor.

Similarly, the BAR framework avoids a narrow focus on a particular set of circumstances or specific types of investments, and it can therefore be used to analyze or explain conceivably any capital investment (Rapp, Rapp, & Daher, 2023), while many of the alternatives we reviewed would —on their own terms— only apply to specific types of investments or specific sets of circumstances. For example, the founders of value investing themselves described the conditions for which value investing is best suited (Graham & Dodd, 2009, pp. 68-69):

"It is manifest... that future changes are largely unpredictable, and that security analysis must ordinarily proceed on the assumption that the past record affords at least a rough guide to the future.

The more questionable this assumption, the less valuable is the analysis. Hence this technique is more useful when applied to senior securities (which are protected against change) than to common stocks; more useful when applied to a business of inherently stable character than to one subject to wide variations; and, finally, more useful when carried on under fairly normal general conditions than in times of great uncertainty and radical change.”

Beyond these self-imposed strictures, the value investing approach is also limited in that it generally requires an observable market price for the security under consideration. In other words, a wide variety of investments, such as unlisted stocks, fall outside the boundaries of value investing because they do not allow for the necessary comparison of the asset’s ‘intrinsic value’ to its market price, which in these cases can only be determined through a sophisticated and time-consuming negotiation process. Likewise, the passive investing framework’s advice—in essence to divide one’s investment capital across as diversified a portfolio as possible and to minimize transaction costs—would seem highly impractical in other contexts outside of securities listed on public exchanges, such as venture capital, or private equity, or real estate and other real assets.

Fortunately, however, Austrian scholars are not forced to limit their own theorizing on applied investing to these approaches. An appropriate alternative to value investing, as well as to neoclassical finance theory, can be found by looking inward to the corpus of Austrian economic theory in the form of the JBA and the BAR framework.

3.2. *The judging capitalist-entrepreneur as Austrian investor*

In the Austrian paradigm, investors *are* entrepreneurs (Marion Ceolin & Mazzoni, 2024). In the spirit of the JBA, they exercise judgment, informed by their previously acquired tacit knowledge and subjective beliefs about the allocation of their scarce resources in the face of radical, Knightian uncertainty and additional knowledge problems (Rapp & Olbrich, 2023), and they take corresponding actions in

the hope of ultimately achieving some desired end(s). In this, investors-as-entrepreneurs, or “capitalist-entrepreneurs” (Rothbard, 2011, p. 283), form a specific class of entrepreneurs. Their judgments and actions are not directed at production processes per se, but at the allocation of their financial resources across different lines of production. In this sense, the judgments and actions are more distant from the production processes and take place at a higher, temporally upstream level. The capitalist-entrepreneurs determine which entrepreneurs will receive the financial resources they need to develop their production processes and realize their plans. They invest primarily in financial securities or even entire companies as bundles of complementary assets, rather than in individual tangible or intangible assets such as machinery, inventory, or patents, as entrepreneurs engaged in production processes typically do. The Austrian tradition offers a special and perhaps unique perspective on the critical role investors play in society (Rothbard, 2011, p. 283):

“[T]he most important case of entrepreneurship, the driving force in shaping the actual structure and patterns of production in the market economy, are the capitalist-entrepreneurs, the ones who commit and risk their capital in deciding when, what, and how much to produce.”

In other words, capital investment is not merely an individual's game of *buying low and selling high*, it is also the principal means of resource allocation in the market economy. It is the mechanism by which the individuals who own and control resources direct them into particular, future-oriented production processes (Foss & Klein, 2012). This is the true nature of all (entrepreneurial) investment activity regardless of the particular form or circumstance. For example, when one firm acquires another, or when an individual purchases a share in a publicly listed stock or mutual fund, or when an individual or firm participates in a venture capital or private equity fundraising round. In all cases, investors take their available resources and allocate them to a particular company, entrepreneur, manager, etc., in the hope of achieving a desired outcome in the uncertain future.

Contrary to the concepts inherent in both value investing and neoclassical finance theories, the Austrian investor is a speculative capitalist-entrepreneur who makes judgments under genuine uncertainty about how best to allocate scarce financial resources to ultimately improve his condition and attain his goals¹¹.

3.3. *Austrian investment appraisal*

While the JBA, in conjunction with the BAR framework, provides a consistent theoretical framework for applied investment, it provides little practical guidance on how to appraise a specific asset and how to make the final investment decision in an economizing manner. However, the appraisal of investment projects is a critical step in the investment process. It serves to assess the (estimated) extent to which a particular asset, such as a company, a share in a company, or real estate property, contributes to the well-being of the investor interested in its acquisition (Herbener & Rapp, 2016). In turn, it informs the investor of the marginal price he can barely accept for the investment if he wants to at least maintain his level of goal attainment and satisfaction.

Fortunately, the development of a distinctly Austrian approach to investment appraisal as an operationalization of the BAR framework does not have to start from scratch. Previous work within the “sister science” (Schmidt 1933, p. 106) of Austrian economics, namely Prussian-German business economics, has laid the foundation upon which a truly Austrian approach can be built. The proponents of this school of thought, including Berliner (1913),

¹¹ That is, at first glance, value investors and Austrians do have in common that they think about the future using, among other things, interpretations of data obtained from past events. And, given the difficulty of obtaining precise information about investment objects, the search for ‘intrinsic value’ can be seen as a search for indications of fundamentals, which is also familiar to Austrians. On closer inspection, however, value investing and the Austrian school of thought show a crucial difference: While proponents of the former undertake the analysis of past data and the search for indications of fundamentals in attempts to discover supposedly objectively existing profit opportunities, the Austrian investor uses this analysis to gain a better *Verstehen* of how to deploy his resources to achieve his ends in an uncertain future.

Hering (2022), Kreutz (1909), Liebermann (1923), Matschke (1975), Mirre (1913), Münstermann (1966), Schmalenbach (1917), and Sieben (1967), have developed a comprehensive theory of investment appraisal based on Austrian insights (Olbrich, Rapp, & Follert, 2022) that can be readily adopted and integrated into the BAR framework. Hering, Olbrich, and Rapp (2021, p. 350) explain:

“Prussian-German Business Economics, especially investment theory,... has been developed in the German-speaking world based on Austrian economics ... and ... fully adopts the perspective of the acting individual rather than building on the well-known escapist assumptions from neoclassicism.”

In this tradition, the preferred and most practically relevant technique of appraising a given asset is a subjectively framed income approach, that is, the determination of the present value of an investment project from the subjective perspective of an acting individual. Given that future earnings are inherently uncertain, such investment appraisal is nothing other than an expression of the exercise of entrepreneurial judgment and, as the initial step in the investment process, relates to the *beliefs* stage of the BAR framework.

The investor's *beliefs* about his ends and means, the future states he deems plausible, and his willingness to bear uncertainty are translated into the relevant inputs to the present value calculation, that is, estimates of future earnings and appropriate discount rates (e.g., Brösel, Matschke, & Olbrich, 2012; Herbener & Rapp, 2016; Hering, 2000; Olbrich, Quill, & Rapp, 2015; Olbrich, Rapp, & Follert, 2022). In other words, the subjective income approach deviates from its popular and widespread competitors, that is, the different variants of DCF methods which draw on neoclassical finance theory. DCF methods suggest the use of ‘cash flows’ that are expected to be earned *on the level of the company being appraised*, that is, independently of individual considerations of the potential investor, as the numerator in the present value calculation. The subjective income approach, on the contrary, urges investors to make a subjective estimate of the financial benefits, that is, the future earnings, that *they personally* expect to actually gain from the investment project. Herbener and Rapp (2016, p. 16) emphasize:

“Future benefits must be forecasted from the perspective of the person who is valuing and choosing. Predictions of future benefits depend upon personal factors, such as the dividend policy, individual tax rates including potential tax loss carry-forwards, and individual synergies.”

The subjective income approach also differs from the neoclassical standard in the form of DCF methods with respect to the denominator of the present value calculation, that is, the discount rates applied. While DCF methods rely on different variations of the supposedly objective, project-specific ‘cost of capital’ as the necessary discount rates, as in the WACC, the subjective income approach discounts future earnings with the investor’s individual *Lenkpreis* (Hering, 2022; Schmalenbach, 1909). The *Lenkpreis* is equal to the investor’s endogenous marginal interest rate (Rapp, Haßlinger, & Olbrich, 2018), that is, the internal rate of return of the marginal project in the investor’s entire financial program—either the last dollar invested, that is, at the lowest rate of return in the program, or the last dollar borrowed, that is, at the highest rate still in the program. It thus reflects the marginal utility of the investor’s funds, and the Austrian investor evaluates a given investment project relative to the marginal utility he could derive from his marginal project, that is, either by investing additionally in that project, if it is an investment, or by paying off part of the most expensive loan in his portfolio, if the marginal project happens to be a loan.

Investors’ subjective beliefs are also reflected in the way they deal with uncertainty. DCF methods consider risk rather than uncertainty and, through the typical application of the CAPM, assume that all investors are risk-averse and follow the mean-variance principle in their portfolio selection. The subjective income approach, on the other hand, takes into account true uncertainty without prescribing any particular level of willingness to bear that uncertainty or any particular decision rule. The main approach to account for the uncertainty inherent in the investor’s subjective assessments of the future is to combine the present value calculation with scenario analyses or simulations, such as the Monte Carlo simulation (Coenenberg, 1970; Hering, 2021; Hertz, 1964; Olbrich, 2014; Rollberg 2012). The latter unfolds in three sequential steps.

First, the investor estimates the probability distributions of both inputs to the appraisal, that is, future benefits and discount rates¹². In the absence of more precise information, standard probability distributions such as the normal distribution are typically assumed, while dynamic market models like fractal time series (Mandelbrot, 1963) might also be incorporated. The simulation is not limited to a single distribution assumption but can be based on several different distribution assumptions. As a result, instead of a single definitive profile, a range of possible distributions of the target value emerges (Keppe and Weber, 1993). Next, the simulation in the narrow sense takes place where random combinations of future benefits and discount rates are repeatedly drawn based on the estimated distributions to simulate target values. Each of these values is calculated and recorded. By conducting a sufficient number of iterations, a frequency distribution of the target variable emerges. Finally, in the third step, the results are analyzed and interpreted. Both the necessary estimates for the simulation input and the selection of an ultimate target value from the resulting simulated distribution are at the discretion of the entrepreneur and require the exercise of his subjective judgment. Hering (2022, pp. 399-400) emphasizes:

“The actual decision under uncertainty is an entirely entrepreneurial one and as such cannot be formalized. The aim of investment appraisal is to provide a quantitative basis for decision-making.”

The investor's *action* (or *inaction*), that is, the second stage of the BAR framework, results from the comparison between the subjectively estimated present value of the investment project and the offer price. If the former exceeds the latter, the project has a positive net present value and thus appears to be worthwhile, and the investor will undertake the investment action. Conversely, if the price

¹² Strictly speaking, there are no probabilities in a world of Knightian uncertainty, at least not objective ones. However, entrepreneurs in general and investors in particular consider future scenarios that they consider plausible and make decisions based on subjectively perceived possibilities and likelihoods. Thus, the formal simulation process, which requires probabilities, can be adapted to a world of Knightian uncertainty by including subjective likelihood estimates of what the future will look like.

exceeds the present value, that is, the investment has a negative net present value, the investor will abstain from the investment action, since accepting it would reduce his degree of goal attainment.

The *results*, as the third level of the BAR framework, are realized over time, if the investor has taken the investment action. They reveal to the investor, with the benefit of hindsight, whether and to what extent his actions contributed to the achievement of his desired ends—in other words, whether he exercised good or bad entrepreneurial judgment.

4. Conclusions

We believe that Austrian applied investment is an emerging and critical area of research, but that the development of a truly Austrian theory is still some way off. We fear that recent contributions that either mistakenly present value investing (or derivatives thereof) as an Austrian approach (e.g., Konrad, 2021; Leithner, 2017; Taghizadegan, 2017; Taghizadegan et al., 2016) or attempt to import neoclassical models into Austrianism (Kruk, 2020; Lewin & Cachanosky, 2021; Turowska, 2022; Skousen, 2013) may (mis)lead future research in an unsustainable direction. Scholars may be tempted to build their future work on these misguided foundations, which we consider undesirable.

As we have discussed, looking outside the Austrian framework for a sound foundation for an Austrian theory of applied investing has a number of shortcomings and disadvantages, such as the need to argue that neoclassical concepts which violate Austrian principles are nevertheless useful tools for Austrian investment analysis, or having to defend the intrinsic value concept on the basis that it is in fact evanescent and subjectively determined by each investor. We propose, instead, looking inward, within the boundaries of the well-established corpus of Austrian economic theory, for the foundation of an applied investment theory.

We suggest that scholars interested in advancing an Austrian theory of applied investment should build on and better explore the implications of the Austrian theory of applied entrepreneurship, that is, the JBA. Given that investors form a particular class of

entrepreneurs—the capitalist-entrepreneurs—who exercise judgment and make decisions about the allocation of their scarce resources in the face of Knightian uncertainty, the JBA, along with the more recent BAR framework, provides valuable guidance for advancing a truly Austrian theory of individual-level investing. One of the merits of this approach is that previous work bridging Austrian economics with the well-established and Austrian-inspired applied accounting and finance research in the German-speaking world (e.g., Herbener & Rapp, 2016; Olbrich, Rapp, & Follert, 2022; Olbrich, Quill, & Rapp, 2015) can be smoothly combined with the more philosophical foundations that can be directly derived from Austrian economic theory. In this way, the BAR framework is brought to life for its specific application to the practicing Austrian investor at the individual level in the form of a truly Austrian approach to investing.

With this paper, we hope to stimulate further interest in and contributions to the ongoing debate, and to have laid the groundwork for future research on applied investment with a truly Austrian flavor.

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