



Regenerative Wealth Management Tool Financial Entropy

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ABSTRACT: This research examines the complex system of financial decision-making through the Rolling Nuts portfolio allocation structure, introducing the concept of *financial entropy* as a metric for the organizing principle and self-sustaining mechanism inherent in investment strategies. The aim of the study is to demonstrate that applying nature-based order in portfolio management enables sustainable, regenerative asset management.

The research methodology compares the performance of six different diversified portfolios (four-, five-, and seven-asset structures) based on 2,000 validated investment decisions, over both short-term (quarterly) and long-term (10-year) time horizons. The results show that investment decisions are primarily determined by subjective factors – such as risk aversion and trend following – while expected returns carry significantly less weight.

The research demonstrates that more concentrated portfolios – as opposed to equal-weighted portfolios – are more efficient, and a strategy focusing on a relatively small number of holdings can result in significant outperformance relative to market benchmarks. The study concludes that the intuitive application of passive, rule-based, and behavior-based investment strategies can be successfully combined with a systems approach, thereby laying the foundation for a scalable, regenerative wealth management tool that supports individual financial self-determination.

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behavioral finance, financial culture, portfolio management, self-sufficiency, sustainable wealth management

PRELUDE

This paper examines the self-sustaining and self-care mechanisms offered by the current capitalist economic system, providing accessible and sustainable solutions for both individuals and society. Just as private individuals can use the uncovered correlations to their advantage, social care systems can also draw inspiration from these mechanisms. The primary aim of this research is to identify a specific order within the highly complex and seemingly chaotic system of investment decision-making, which can serve as a decision-support tool for the prosperity of all stakeholders. Our fundamental premise is that a portfolio based on nature's entropy – as an order grounded in a specific regularity – is inherently self-sustaining, as the criteria considered during its design endow it with the system properties of the surrounding physical and biological world. The universal approach of systems theory allows for this interdisciplinary transformation. By applying structures similar to nature's organizing principles, including fractal geometric patterns described by Mandelbrot sets, the study aims to demonstrate the inherent self-sustaining power within wealth management.

Portfolio management is a chaotic system of complex decision-making processes (Pagdin & Hardy, 2018) that requires an integrated, interdisciplinary approach from chaos theory and systems science. Its sub-discipline, regenerative wealth management, focuses on ensuring a permanent and consistent return for the manager without the need for continuous external energy input or significant artificial intervention. Although the sustainability of asset management can be approached through both active (outperforming the market) and passive (benchmarking the market) strategies (Hayes, 2025), the diversification paradigms that dominated for decades are no longer sufficient in today's rapidly changing, VUCA-characterized investment environment (Carlson, 2019). In the field of portfolio management, capital is increasingly flowing from actively managed funds to passively managed funds (Lovas-Romvary, 2018), which some argue even threatens capitalism itself (Foxman, 2017). Capital finds optimal returns in

less turbulent investment strategies built on stable fundamentals. Proper structural design saves time and energy; similar to the self-organization of open systems, it does not rely on constant, time- and energy-consuming market interventions.

Passive profitability does not require continuous operational intervention, as evidenced by the success of the aptly named "lazy" portfolio strategies (Green, 2019). Fixed-income portfolio theories (Browne, 1999) are widely used today, typically employing a dividend-paying equity diversification strategy (Miller, 2006) to maintain permanent income (Bolder, 2015). The discipline of portfolio management is destined to increase security without unduly risking returns by applying the theoretical and practical tools of optimization (Pfaff, 2013). The evolution of financial culture and literacy is increasingly shifting the focus toward financial freedom (Kiyosaki & Lechter, 2000), where investors wish to decide autonomously on the growth of their capital. Theories examining investor behavior can be divided into two main "schools": one emphasizes the indispensability of diversification (Swensen, 2009), while the other relies on the power of focusing (concentration) (Hagstrom, 2001). Both paths are proven to be suitable for wealth accumulation, as justified by the endowment management of American universities (Ruby, 2021) and the strategies of the world's most successful investors (Israelsen, 2010). Investors and their market perceptions show a complex picture of paradigm shifts: we are moving from the model of the rational investor (Fama, 1970) to the behavioral approach (Kahneman & Tversky, 1979). Behavioral economics highlights that by fine-tuning decision-making (nudging), individuals can be steered in a more favorable direction without restricting their free choice (Thaler & Sunstein, 2011).

Furthermore, the task of decision-makers is significantly simplified if the decision framework in which they operate becomes transparent and tangible (Kennon et al., 2005). In this process, the set-based, simplifying procedures of fuzzy logic play an important role in decision preparation (Borgulya, 1995), and this has now emerged as a systemic principle in the field of diversification risk reduction (Tobin, 1977) and investments. Regenerative finance aims to create net-positive systems that, unlike the short-term profit-seeking of traditional finance, prioritize long-term sustainability and ecological-social renewal (Natsagdorj, 2025). The applied research methodology offers four alternative portfolio construction models that, taking into account the same underlying symmetry, create a framework providing adequate maneuverability for making satisfactory investment decisions.

In this paper, entropy refers to orderliness, although the literature contains ongoing debate about the concept. The study treats order as a matter of perspective: its definition depends on the rules and assumptions that underpin our point of view. When linearity is taken as the standard, chaotic dynamics may appear disorderly; from the opposite perspective, geometric regularity may seem anomalous. To Euclid, a forest might appear disordered, just as measured angles and geometric lines might seem foreign to the forest. If the observer is unable to provide a causal explanation for the phenomena he observes, or to perceive them as a unified whole, he assumes that "this is a complex situation," when in fact it is simply a matter that cannot be understood with his limited rationality. Thus, the roles of the observer and the context are crucial. For example, a network of interrelated behaviors in the social domain may be identified as "disorganized," whereas in reality it can be viewed as a different pattern of organization (and thus as organized) that goes beyond the organizational patterns the observer is capable of perceiving (Mavrofidis et al., 2011).

This study seeks to accommodate patterns found in nature and, in doing so, accepts their complexity. Their immeasurability and order exceed the limits of human understanding. The chaotic order, apparent confusion, entanglement of unknown systems, networked interconnections, and precise yet immeasurable forces that shape our experience are understood here as order because they constitute the rules of the game, we call life.

In this paper, entropy is defined as a strange, inexplicable, self-exciting process hidden within this complexity: a divine creative force and a pattern that introduces an ordering principle into an otherwise imperfect world. This perspective leads us to treat entropy as equivalent to self-organization in systems theory – a kind of invisible orderliness whose presence the paper investigates in wealth management. The study aims to demonstrate and measure this orderliness as the order of self-exciting processes, self-maintaining systems, nature's entropy, and complex investment decision-making.

Particular attention is given to how orderliness emerges from divergent judgements grounded in individual decisions. To examine this, the study uses a comparative empirical analysis to identify discrepancies within an underlying symmetry regime, defined in relation to the model applied.

FINANCIAL ENTROPY

Although the concept of entropy is often debated in the literature and in its original physical interpretation regarding closed systems means disorder. This approach synthesizes entropy as the equivalent of systemic self-organization, acting as a kind of invisible ordering principle whose presence is tracked in the dynamics of wealth management. The goal is to demonstrate and measure this self-sustaining system, the entropy of nature, and the order of complex investment decision-making. The paper pays special attention to presenting the order that emerges as a result of human judgment, which is often divergent and based on independent decisions. To this end, a conflicting empirical analysis is applied to reveal discrepancies within the applied symmetry model.

Entropy is a broad concept that is defined inconsistently across disciplines. In its original sense, it refers to disorder, but it is not a directly measurable physical quantity. Rather, it is a useful mathematical construct for expressing the laws of thermodynamics. Initially formulated for closed systems, the concept is now applied much more widely and no longer functions simply as a measure of disorder in the sense proposed by Clausius (1867). In discussions of entropy, "perfect internal disorder" is

often used to describe thermodynamic equilibrium. However, thermodynamic concepts are far removed from everyday experience, and their use in physics and chemistry has consequently led to considerable confusion and misunderstanding. The interpretation of entropy as internal disorder applies only to closed systems.

Order and disorder depend on perspective: what constitutes order in a closed system may be understood as disorder in an open one. Likewise, when chaos is taken as the starting point, artificially imposed regularity may appear confused or disordered. Order and disorder are two sides of the same coin. There is order within disorder, and disorder emerges within order (Wheatley, 2006). It has been proven that order manifests itself only in the form of local and temporary patterns (systems) in a universe that we call – in the thermodynamic sense – disordered (Swanson et al., 1997). The term “disorder” should not be used in a subjective sense, since a self-regulating complex system can develop a structure that may appear “disordered” at first glance, but in reality, this is how the system responds to and adapts to the demands of its environment, even if this is not obvious to the observer (Martinez-Berumen, 2014). The level of observation is important because it can give rise to differing interpretations, and there is a wide range of literature on the subject (Joslyn, 1990; Luhmann, 1992, 1995; von Foerster, 2003; Spencer Brown, 2008).

In the dynamic processes of open systems, constancy itself is a complex evolutionary state of fluctuation, continuous motion, and change. The more “chaotic” an open system appears, the more capable it is of self-organization, seemingly paradoxically creating its own internal rule system. This “imperfect disorder” can be considered the steady state of open systems, where continuously self-organizing patterns (dissipative structures) emerge even within classical deterministic frameworks. Dissipative systems, however, break away from the traditional closed-system model and provide a framework for understanding how open systems generate order and structure from non-equilibrium conditions (Prigogine–Stengers, 2018).

The principle of “order from disorder” states that the order of a macrosystem is determined by the disorder of its components (Schrödinger, 1944). Achieving perfect control over a self-organizing, open system is an unattainable utopia (Gershenson, 2007). Just as utopian is the Newtonian view that order reigns supreme over everything – that view has been rendered obsolete. In contrast, dynamic systems are systems that evolve over time, and their behavior is chaotic and disordered. The functioning of human-created organizations also exhibits a complex duality between order and disorder: they simultaneously disintegrate and organize; they simultaneously complement and compete with one another; and they simultaneously constrain and facilitate one another (Jia-Wang, 2024). Entropy, as a concept that describes the ambiguity, uncertainty, and chaos present in systems, can offer a new perspective for understanding the internal and external complexity of organizations, and can help identify possible paths for maintaining organizational dynamism and system-level stability (Schneider-Somers, 2006). Current research also aims to represent a system that is stable via such a set of alternatives and to demonstrate its controllability.

The total entropy of open systems can be reduced through exchanges (of information, energy, and matter) with the environment, allowing the system to enter a more ordered state of higher complexity (Stefanescu, 1996). Information and uncertainty (entropy) are closely related, dynamically shaping each other (Fulop, 2001). Self-regulation, decentralization, and encoded information transfer are not only characteristics of terrestrial life but also appear in blockchain technologies and financial evolution (Mero, 2004). In the open, complex system of investment decision-making, the principle of utility selection also utilizes entropy as a scientific tool to simplify diversification. Kirchner and Zunckel (2011) argue that risk reduction correlated with diversification is better captured through entropy. Entropy thus becomes a tool for dynamic portfolio management (Ormos & Zibriczky, 2014) and uncertainty measurement, justifying the effect of diversification (Dionisio et al., 2007).

Therefore, entropy is neither an anomaly nor a measure of chaos, but rather a principle governing both the dynamic and static states of open systems (Lambert, 2002; Grandy, 2009). It is not a measure of “confusion,” but the imprint of the distribution of energy and information among various microstates (Abou-Rahme, 1997). According to the current understanding of the entropy of portfolio management, static structures (diversification dispersion) and dynamic processes (active management) are simultaneously the subject of investigation. While entropy-based applications have already appeared in economics and management (Olbrý’s, 2022; Islamutdinov et al., 2021), this approach is pioneering in the field of regenerative wealth management.

Based on the logic of open dynamical systems (Nicolis–Prigogine, 1978), entropy in this paper is to be interpreted as a kind of “order” that sets boundaries to otherwise chaotic processes. Fluctuation around constancy (e.g., a basic model with fixed symmetry) generates the momentary entropy of the current pattern, from which order ultimately emerges (Baumann, 2013). Perfect straight lines or right angles are rare in nature; if we consider the fractal geometric order of nature as the baseline, then artificial, human-made structures (like a regular building) become “disorderly” or alien compared to non-linear geological permanence. The glass-crystal, artificial order of a cup is only a fleeting moment on a geological scale compared to the sustainable, natural entropy of amorphous sand over millions of years. True, sustainable order is therefore to be found in the system's long-term existence and dynamic equilibrium (Donaldson, 2011), not in its momentary form.

Georgescu-Roegen's (1971) ecological economic paradigm defined low environmental entropy (free energy) as a scarce resource. Although scarcity is real, matter and energy are not lost, only transformed, organized into networks, and creating new, complex forms (emergence). By applying self-sustaining mechanisms and closed material cycles (circular processes), humanity can overcome the fear of natural limits (Mayumi, 2018). The dynamic limits imposed on us by nature – natural entropy – constitute the orderliness within which we can freely move and choose. The unequal distribution of ordered and disordered structures drives

processes, while the high degree of self-organization of life is in itself an engine for the growth of global entropy (Rockenbauer, 2019).

The classical notion that entropy can be overcome has also been illustrated by control programs and mechanisms that capture, transform, and store energy entering an open system (Polanyi, 1958). Accordingly, theories that associate entropy with decay (Rifkin, 1982), disintegration (Wark, 1966), or heat death (Perrot, 1998) should, after careful consideration, be rejected consistently and collectively, since they are based on findings that apply only to closed systems. In our universe, however, perfectly closed systems are exceedingly rare, a perfectly isolated envelope does not even exist (Popper, 1957). Among other reasons, not even on Earth, because gravity is always there (Chang, 2021). Every living system and social system is an increasingly complex open system (Swanson–Bailey, 2008). In open systems – such as those examined in this paper – orderliness can give rise to order within a closed system. Heat death is a thermodynamic concept describing a possible state of a closed system, but it is neither inevitable nor necessarily final.

In open, social, and economic systems, autopoietic (self-organizing) processes dominate. The Gaia hypothesis (Lovelock, 1990) and geological research (Kirschvink, 1992) also prove that our planet, although oscillating between extremes (e.g., ice ages and warming periods), is a dynamic, self-sustaining system. The dynamics of chaos (Gleick, 1999) represent attractors moving on fractals, where macro-determinism is accompanied by micro-randomness (Barnsley, 1988). Through autopoiesis (self-creation) described by Maturana and Varela (1980), systems – including financial ecosystems – continuously renew themselves in interaction with their environment (Gyorgy, 2001) and their own previous states (Kaufman, 2002). In this sense, sustainability means maintaining flow (dynamic) equilibrium and entropy equilibrium (Martinis & Huller, 2012).

The portfolio management procedure synthesized in the present research draws on the non-linear patterns and distributions of nature. In the analysis of the non-equilibrium thermodynamics of living, dissipative economic structures (Kiss & Kiss, 2014), entropy becomes a metric of economic changes (Saslow, 1999) and internal system states (Bryant, 2011). To simplify the complexity of decision-making, this study examines how sufficient "order" can be created in the chaos of investment decisions. This order is provided here by the "Rolling Nuts" symmetry model. As soon as capital is allocated to the portfolio, the artificial equilibrium is immediately disrupted by market fluctuations; "disorder" occurs in the classical sense. However, with periodic re-symmetrization (rebalancing), the system – similar to the entropy-reducing self-organization of open systems – oscillates around an optimized, regenerative state.

The divine-creation model not only anticipates the principle of entropy; entropy, in turn, points directly toward creation. If everything is now in disorder, the argument goes, it must originally have existed in a state of great order. The *Catholic Encyclopedia* (1993), however, defines chaos as a "primordial state, pre-creation existence." Was there an ancient order, an original arrangement? The answer depends on one's point of view. Chaos may be understood as confusion or, alternatively, as a form of order specific to its own conditions.

Disorder is a dynamic process within which static order may be found. Yet entropy research has come to regard entropy not as a directly measurable physical quantity, but as a concept used to model the dynamic process of "being." Perpetual deterioration is presented as the opposite of highly ordered perfection; nevertheless, within our experience of being, it appears to be more definitive than a state of perfection. We – like all organisms in the physical world as it exists today – were perfect only at the moment of Creation. Perfection is not sustainable: it can exist only as a moment. Such a moment is rare and may be described as "a state of disorder." From a divine perspective, it is order; from my necessarily imperfect human perspective, I would call this perfect moment "extraordinary."

Human order, by contrast, is a condition of continuous existence. It is imperfect and subject to fluctuations in entropy. The "right" state appears so fleeting that chaos may seem a more appropriate starting point. This provides the deliberately irreverent basis for the concept of entropy used in this paper: continued existence is treated as order, while the moment of perfection is regarded as seemingly insignificant. Perfection is an unattainable illusion and may not merit extensive effort, since its preservation would require forces beyond our control.

Rather than reject the inevitable imperfection, it must be acknowledged order and use it as the starting point for design as we work within the rules governing the determined, orderly state of existence. Under this conception, entropy is "order" itself, constrained in this article by a clearly defined framework that specifies the symmetry of a portfolio base. The article assumes that an interdisciplinary pattern emerging from the dynamic processes of portfolio management will stimulate the system and generate greater orderliness within those processes.

It is precisely the imperfect, continuously changing entropy-fluctuation of human existence that this paper considers as order. Entropy here is the social rule of the game itself (Dinga et al., 2021), the survival and self-care framework that defines our room for maneuver. In self-organizing processes, the decrease in observed (classical) entropy occurs during phase transitions (Popovic, 2014), and, overall, self-organizing, self-sustaining mechanisms give rise to transitional order.

In this paper's conception, classical disorder is the starting point. It diminishes as the system becomes more ordered and develops into a self-exciting process. Entropy thus becomes a form of order: a moment within an ongoing state of uninterrupted disorder that shapes and organizes life processes, whether or not we choose to acknowledge it. This represents a higher degree of orderliness,

achieved, at most, momentarily. We can therefore make use of these continually emerging moments of “order” by acting according to their rules. With appropriate simplifications grounded in human rationality, the complex rules of this game may become intelligible, allowing our choices to exert some degree of influence over the ongoing contest we call life.

Order may depend on perspective, but it also reflects the distinctive perspective adopted in this article. The article treats nature’s infinitely complex entropy as a form of order within the quantifying framework of wealth management, seeking both to make that order visible and to recognize the validity of alternative interpretations. Order and disorder can coexist and may even arise within one another’s systems. Here, natural ordering serves as a model that may appear disorderly in wealth-management practice. Yet, as an emergent pattern, this entropy may set self-sustaining processes in motion. This paper seeks to demonstrate and analyze those processes through measurable and comparative methods. Behavioral finance remains an active area of research, and entropy has also been successfully applied at the behavioral level (*Jia & Wang, 2024*).

Ultimately, through the reduction of nature’s fractal complexity and a heuristic approach, a self-sustaining portfolio system can be created that serves wealth management goals as a regenerative living entity. Financial entropy is a specific regularity based on the orderliness of nature, which may seem disorderly in terms of organization, but actually represents a self-sustaining, stable order supported by numerical data.

METHODOLOGY

The methodology of the research is based on the Rolling Nuts portfolio allocation structure, which establishes the prevailing sustainability and directing principle of nature in asset management (*Cziraki, 2021*). The natural orderer pattern behind all physics causes sustainability in its area of occurrence (*Kreiner, 2005*), so it became necessary to condense it into an applicable methodology. Previous research acknowledges three distributions of the basic model. Based on the research methodology, four-, five-, and seven-element portfolios have been created (*Figure 1*) with different groups of higher education students (Bachelor, MA and postgraduate).

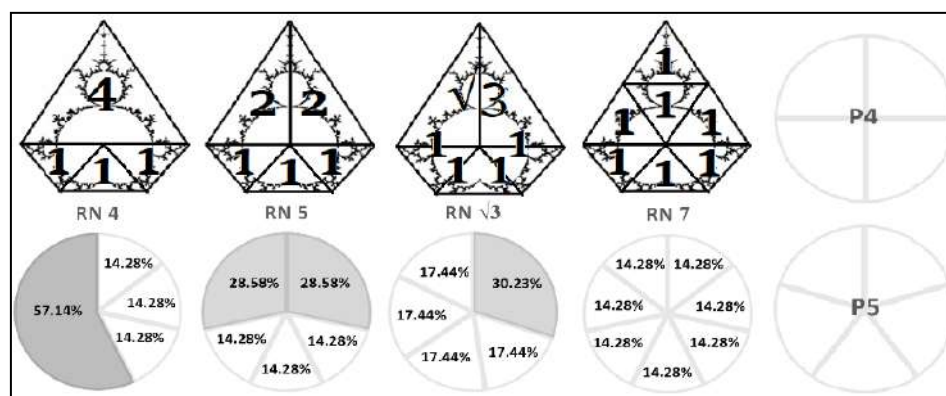


Figure 1: The rolling nuts (RN) and benchmark (P) distributions of the methodology used

The methodology retains the freedom of choice of investment elements, where it examines not only the returns but also the rationale for the investment decision and the range of conclusions that can be drawn from the evaluation. In addition to the four portfolio distributions of the Rolling Nuts model system, two benchmark portfolios (P4 and P5 permanent portfolios) are projected as benchmarks, where the assumption of equal distribution of the selected elements can be compared with the results of the focused models. From the formed six portfolios, three have different degrees of focus (RN 4 and RN $\sqrt{3}$ with one focus, RN 5 with two), while the other three represent an equally distributed structure (with four, five and seven elements), allowing a comparison of the degree of dominance against the permanent distributions. Whether the smaller, the larger or the two-focus solution is more appropriate (dominant behavior), or whether an equal distribution of elements (permanent) produces better results, is one of the basic questions of the research. The evaluation of the results also waded into the detection of differences in the number of elements by comparing two structures with four elements, three with five elements, and one with seven elements. This methodology can determine whether the appropriate solution lies in fewer, some, or many elements. Of course, a much larger number of elements could have been used, as it is not uncommon in real life for a portfolio to consist of up to 100 elements, but here the phenomenon of over-diversification (*Statman, 2002*) arises, which is the negative impact on returns of over-excluding risk. In our case, four, five, and seven elements can already be considered as significant deviations, relative to each other, and if not driven by representativeness on the spectrum of numbers, they may rather suggest expedient solutions by evaluating the results caused by the deviations of a few but well-focused number of elements. The study of the portfolios of a symmetry system can be seen reflected in the paper, where multiple interpretations of the system are given, where a basic diamond structure is interpreted in four different ways. Differences within the symmetry system can be detected in this way, complemented by the empirical choices, over a wide range of data sets and different investment periods.

The research methodology not only examines returns and compares them with benchmarks, but also looks at the human factors behind decision-making as an element of financial literacy (financial culture) to measure investment behavior. The analysis in the field of behavioral investing considers the choice (justification) of investment components, the choice of portfolio focus, the range of lessons learned, and the inclusion of birthdays as a specific marker of human factors. The aspects of the research cover investment decision-making, the identification of successful diversification strategies, returns, focus groups, and the drawing of individual conclusions, with the aim of using this qualitative and quantitative data to make financial culture and behavioral finance tangible and measurable (*Table 1*).

Table 1: Research aspects across the two dimension of financial literacy and behavioral finance

Research Aspects	Financial Literacy	Behavioral Finance
Investment Motives	Factors influencing decision-making?	Decision-making biases? Suggestions for addressing them?
Winning Portfolio	The result of risk tolerance?	Recommended strategies for correcting errors?
Returns	#1 Quantitative Comparison #2 Methodological Comparison	Short-term vs. long-term investment horizons
Focus Groups	Diversification strategies?	Differences in mindset?
Conclusions	What conclusions can be drawn?	Solutions for avoiding poor decisions?

The research participants tracked the performance of their chosen elements in a Microsoft Excel spreadsheet over a period of one semester (three months) supplemented by 10-year projected returns of the same elements. Just as for the quarterly analysis, a minimum of one date per week was included in the analysis, for the 10-year period, each participant was allowed to work with values current on their birthday. This allowed a little personal attachment to be integrated into the methodology alongside the long and short term analysis, and also excluded the potential bias arising from the seasonality of markets (for example, always working with exchange rates on 1 January, reflecting only the exchange rates prevailing at that time). In addition to analyzing the differences in diversification, the methodology can also be used to analyze the size of the item count and to detect differences in the degree of focus/dominance. For item selection, a focus group approach was used, whereby some groups were given full freedom of choice, while restrictions were applied to other groups to show, for example, the beneficial effect of international diversification (*Bugar & Maurer, 2002*). Overall, the research methodology aims to determine which alternative to behavioral decision making is more appropriate and in which time horizon. The paper brings together 287 validated evaluable test completions received, including 148 long-term evaluations and 139 short-term empirical data sets. The short-term analyses were examined over six different semesters so that the results from six different periods can be compared, where short-term vs. long-term clashes are considered. This was also necessary for the research to eliminate the anomaly of comparing only a given short-term investment spectrum with a given longer-term investment period. The more such short-term analyses are paired with long-term evaluations, the closer it can come to understanding the differences in investment diversification, based on comparisons of the formulae analyzed themselves.

Table 2: Time periods examined in the research

10 YEARS	QUARTERS
2020–2010	IX–XII. 2020.
2021–2011	I–IV. 2021.
2022–2012	VIII–XI. 2021.
	I–IV. 2022.
	VI–IX. 2022.
	VIII–XI. 2022.

The study includes six different short-term time horizons (*Table 2*) used to take several periods as a basis while comparing the results of investment decisions with the longer-term (10 years) strategic investment horizon. Short- and long-term analyses of the same selected elements were conducted to see the differences between the passive and active effects of an investment strategy across multiple platforms: justification, return, winning portfolio, focus groups and lessons learned. The research sample represents a total of 1722 investment portfolios (each of the 287 participants created 6 variations; $287 \times 6 = 1722$) and 2009 investment elements (each of the 287 participants selected 7 unique items; $287 \times 7 = 2009$) combined.

FINDINGS

The Investment Targets

The results pertain to both returns (quantitative) and investor behavior (qualitative), with the former being compared over the long and short term, while the latter can be derived from a range of factors by synthesizing the findings. To begin, it is essential to detail the sample composition by categorizing the selected investment components. This classification clarifies the drivers behind the observed returns while shedding light on the underlying preferences that guide free-choice investment decisions. *Figure 2* provides a breakdown of the more than 1,000 investment assets analyzed in this study, organized by their respective asset classes.

The dataset is heavily weighted toward equities (64.82%), followed by commodities (13.87%), foreign exchange instruments (10.66%), and index-tracking assets (10.36%). Given the dominance of equity-based investments across these four categories, the results primarily reflect the 10-year and three-month performance trends of domestic and international stock markets. The sample composition also highlights that these investment choices were made against the backdrop of the COVID-19 pandemic and the Russia-Ukraine conflict.

Despite this focus on equities, the research identifies returns across all monitored asset classes. While current geopolitical and economic volatility inevitably shapes decision-making, the data suggests a clear willingness to accept risk in pursuit of returns, even within an unpredictable environment. Although individuals generally exercise caution with capital, this study addresses the specific question of asset allocation preferences. Consequently, it is necessary to examine the underlying motivations driving the strong preference for equity-type investments.

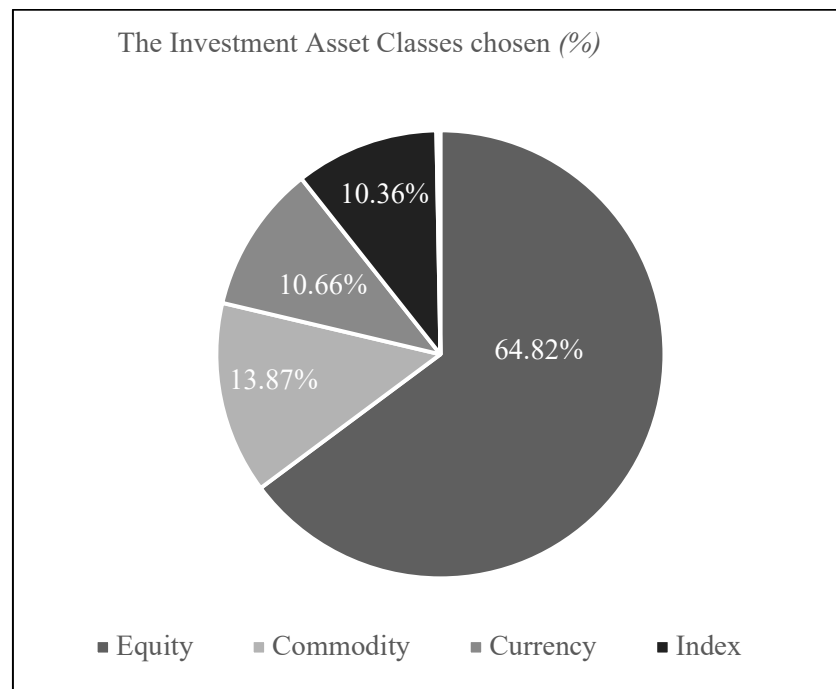


Figure 2: Distribution of the research sample across investment asset classes (%)

Justification of Investment Decision

Following the analysis of the sample, the first objective of this paper is to explore the determinants of investment decision-making as a dimension of financial literacy. Participants were required to articulate their rationale for selecting specific assets, their reasoning for emphasizing particular instruments, and the logic underpinning their portfolio construction. The responses reveal seven distinct categories of motivation, presented hereafter in descending order of frequency:

1. Risk exclusion,
2. Actuality,
3. Personal preference,
4. Industry/sector,
5. Stability,
6. Curiosity and the
7. Importance of Return

The rationale underpinning investment decisions can be consolidated into three distinct clusters, revealing an intriguing spectrum of subjective and objective—as well as sub-subjective—behavioral layers (*Figure 3*).

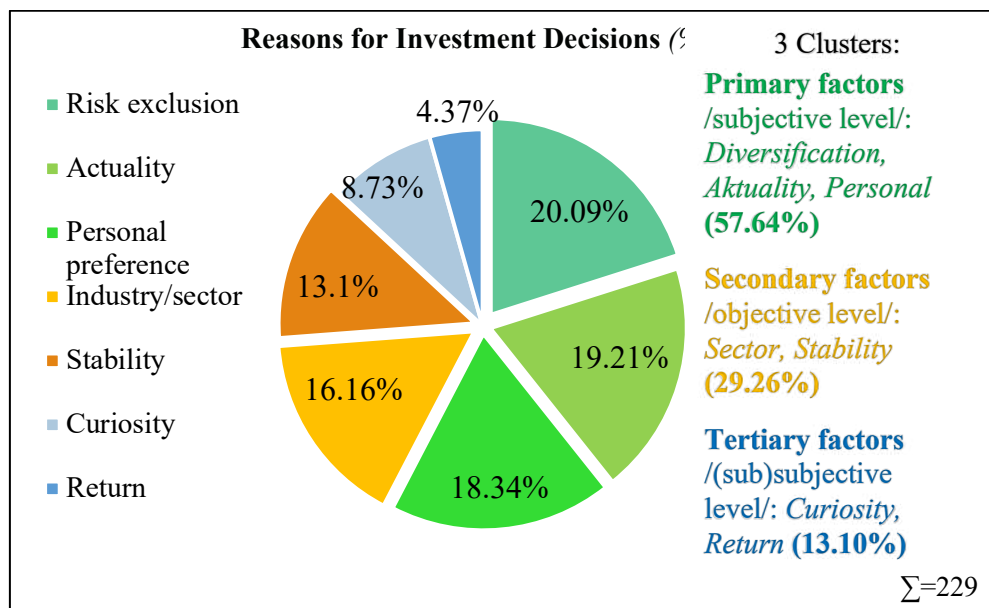


Figure 3: The justifications for investment decisions (%)

Prior to clustering the investment decisions, it is necessary to define the categories that distinguish each rationale, first by the *risk exclusion*, which is cited most frequently as a reason. Systems thinking is reflected in the aspect of diversification, as the specific task was to balance a portfolio with various investments. This high level of diversification (20.09%) is attributable to the fact that risk aversion is one of the most important factors in portfolio construction. When asked why they generally chose these elements, a common response is that this is due to risk aversion (so that, out of curiosity, they prefer to include riskier elements, which are complemented by the elements they consider safe). Systems thinking is also reflected in the next aspect, which is equally influential, namely the intention to diversify investments (17.44%). Risk aversion – as the main tool of portfolio construction – justifies the high percentage of diversification (*Chen et al., 2007*). When asked why one chooses these elements as a system, a common answer is that it is precisely for risk aversion (so that they are more comfortable including riskier elements, out of curiosity, to be organized as a system in addition to the element they consider safe). At this level of reasoning, the importance of risk exclusion and safety is already apparent, which leads to the next group of reasons for the decision, namely actuality.

This category includes all the justifications that were formulated with the adjective “trendy,” “hip,” and “topical.” This is the category of trend-driven investments, which justified the choice of investment item in 19.21% of cases. The reason of actuality draws attention to the behavior orientation of human decision-making, topical (heard, read, picked up, advertised, now on the rise. . .) information also means the ability to direct human attention, at the same time as the appearance of awareness. Actuality is indeed a human factor, as it is subjective to what we attribute to timeliness or rather it is the investor’s focus on a relatively short time horizon. The short-term investment mindset is a characteristic of the behavioral investor (*Gordon, 2010*) and as such, a human factor. It was also the main investment rationale for this research based on the biggest argument of actuality.

A related but distinct set of responses falls into the category of *personal* justification as the second most common preference. Here, responses that demonstrated a personal attachment to the investment product, preferences such as brand loyalty, “I/family have the same,” “we use this,” “favorite product/service” or “I like this” were included. The personal justification emerges as a further subjective aspect in the analysis, again reflective of the behavioral investor, here reflecting the importance of emotionally based decisions (*Taffler & Tuckett, 2010*). The justification of actuality and personal attachment as two subjective factors form the first cluster of decision making, which as a major reason is found in 57.64% of the investment decisions underlying the research.

The secondary factors that follow the first cluster reflect the objective level of decisions, where they include *sector/industry* and the need for *stability* in an investment. The high belief in industries may occur because, without precise, accurate company knowledge, a booming industry can be chosen as an investment target, eliminating our information gaps, which also stem from human limited rationality. This way of thinking – that the industry is the third most important reason – is closer to systems theory, whereby it first could be defined as a large set of decisions to further narrow down and make decisions that are more satisfactory. Choosing to invest by sector reflects a more conscious attitude, assuming a certain knowledge of how each industry operates and how systems are organized.

The *stability* is a well-defined objective set of responses, which 13.10% of the respondents mentioned as a specific reason for their decision as an expectation of an investment. Long-established, broad market players with a high market capitalization, dominant market players, or those who attractively project stability have been included in this category. As secondary factors at the

objective level, sector, diversification, and stability together account for 29.26% of the investment rationale, after which two additional factors emerge as another subjective decision level.

This is the (sub)subjective set of decisions that can be formulated as cluster 3, with the two categories of *curiosity* (8.73%) and *return on investment* (4.37%). In the final categorization of justifications, the research represents another set of decisions influenced by human factors of curiosity (randomness, random, test) and return (yield, profitability) playing a decisive role in the choice of investment. The reason for curiosity can also be explained by the nature of the research, where one can test the practical (albeit hypothetical, but actual) returns of the items chosen without stakes, depending on real market situations. Seen in this way, the choice of elements can easily be justified as a test, and as curiosity, although a small range of decisions is a distinct category of analysis.

The most surprising conclusion is reached after the categorization of the choice of elements, where the return on investment is the last criterion. The result of this research is in stark contrast to the rational investor hypothesis that has prevailed for decades, where the investor always makes his decisions in the context of return versus risk (safety). Returns do not seem to drive investment decisions, and the current research shows that they are the least influential, whereas an investor would be expected to make decisions in the hope of future returns. This result could be interpreted to mean that risk aversion (diversification) rather than profit maximization (return) plays the main role in decision making so that return is much less (equally or not) important than having our money in a (what we perceive to be) good/safe place. This, in turn, implies a longer-term mindset, where security is much more important than actuality or the expected return that can be achieved and grasped. Investors, on the other hand, tend to have a more short-sighted mindset. So it is not by chance – although surprising – that the role of the return expectation highlighted in the research as the ultimate reason (as a conscious behavior), making you believe in behavioral investing.

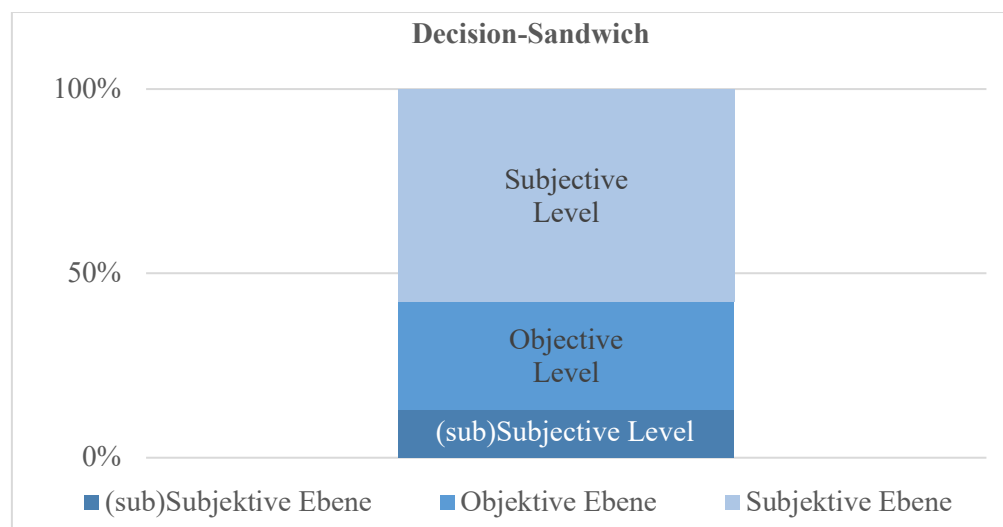


Figure 4: The investment decision sandwich (%)

The findings presented in this paper indicate that investors prioritize human factors and intuition over speculative rationality and calculated return-seeking behavior. A combined objective and primary subjective level accounts for 86.9% of the determinants influencing investment decisions. Notably, a secondary (sub)subjective level occupies the remaining 13.10% of the decision-making spectrum, where yield expectations only emerge as a factor. Overall, subjective levels represent the majority (70.74%) of decision-driving factors, effectively sandwiching the intermediate layer of objective judgments (*Figure 4*). The research suggests that investment decision-making is a *rather subjective* matter, what is consistent with behavioral finance (*Feng, 2025*). The primary rationale for risk exclusion involves a subjective factor in research, because it does not depend on the decision-maker which factor cancels out another factor or not; it is more a matter of intuition than a rational decision (*Çağatay, 2025*).

The Winner

A central question of this study concerns the identification of the superior portfolio model. Through a comparative analysis of six distinct diversification strategies, the research investigates the nature, agents, and rationale behind the most successful distributions. Despite the participants' autonomy in selecting their investment mixes and focal points – which might have theoretically led to disparate or balanced outcomes – the analysis yields definitive, dominant trends. A significant finding is the surprising consistency observed between long-term and short-term performance regarding winning portfolios (*Figure 5*). By quantifying these successes, the study evaluates whether focused or equally weighted strategies proved more effective. Given that each participant independently constructed their portfolio and determined focal points, the resulting 287 winning portfolios provide robust, time-consistent evidence regarding the optimal investment formula.

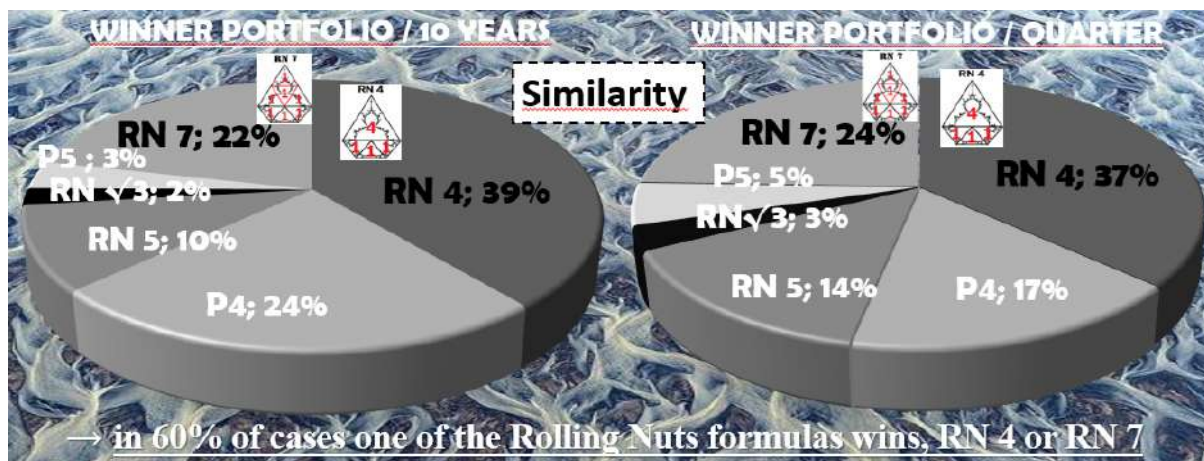


Figure 5: The percentage of winner portfolios

This study develops six portfolios with varying diversification structures, comprising three equally weighted models (containing four, five, and seven assets, respectively) and three focused models (utilizing four and five assets). Participants were granted autonomy in selecting specific investment components and determining their portfolio's focal strategy. Furthermore, birth dates were integrated as individual characteristics. This methodological design effectively mitigates potential biases arising from sample similarities. Under these parameters, the research evaluates which portfolio configuration consistently emerged as the most successful across each semester and throughout the 10-year investment period for each asset-based category.

Over the *long term*, all six portfolio allocations emerge as winners, though two of them do so to a negligible extent: the RN 5 Forces and benchmark 5 portfolios are winners in only a very small number of cases (2% and 3%). Surprisingly, the long-run analysis shows similarities with the short-run results for the winning portfolios, as *RN 4 and RN 7 portfolios emerged as winners in 60% of the cases* over the interval studied. Looking at the pie charts, one can also see the order of winning portfolios, which is similar to the short-term results. If neither the RN4 nor the RN7 portfolio wins, then the Benchmark 4 portfolio follows, and after that only the RN5 distribution. This shows that a smaller number of elements is generally preferable; if not, then it is better to use the highest number of elements (currently 7), though the middle number (5) is not recommended. The three 5-element portfolios together result in a winning outcome in only 15% of cases.

Based on these results, three key findings can be drawn when analyzing the winning potential of the portfolios under review:

1) Of the six portfolios examined, two can be safely disregarded (RN5F, B5) because they rarely emerge as winners; this leaves us with four classifications, which are easier to manage.

2) In two-thirds of the cases, the potential winners can be identified in advance: RN4 or RN7.

3) An average number of elements (5) is not recommended; it is better to use fewer investments (4) or even more (7).

In the *short term*, all six portfolios were winners, of which Rolling Nuts with four elements (RN 4) was the most profitable, as it was the best distribution 37% of the time. This is a decisive result in itself, namely that the portfolio with the highest proportion of focus (and the fewest elements) over the short three-month horizon was the winner. The second most frequently occurring winning portfolio was the seven-element equally distributed version (RN 7), which became the allocation responsible for the highest return 24% of the time. The RN 4 and RN 7 portfolios thus proved to be the overall winners 60% of the time, while the remaining 40% of the time was shared by the other four distributions. The investment items were mainly chosen for the short term by the participants, so the similarity of the long-term analysis did not yield the expected results in the survey.

The symmetry system exhibits scalability in identifying the superior portfolio model; empirical evidence indicates that the RN 4 or RN 7 configurations generate the highest returns in 60% of instances. While variations in investment horizons (three months versus 10 years), individual characteristics (birth dates), and asset selections offer significant scope for divergence, a consistent pattern emerges regarding the frequency and proportions of the top-performing portfolios. The scalability of the research methodology is further validated by the dataset used, mirroring findings from a prior study involving a smaller cohort (81 samples), which also demonstrated a two-thirds dominance of the RN 4 and RN 7 models (Cziraki, 2022). Expanding the dataset to a larger scale consistently confirms these findings, suggesting that the results are robust regardless of sample size.

Furthermore, a short-term analysis conducted during the onset of the COVID-19 pandemic (April 2, 2020) reinforces these conclusions. Despite being limited to 14 cases within a single three-month interval, the two-thirds dominance of the Rolling Nuts portfolio remains observable (Cziraki, 2020). Increasing the number of test items yields results consistent with the initial findings, confirming that while larger portfolios offer greater detail, they maintain the underlying symmetry and proportionality observed in smaller sets. A noted limitation of this research is its focus on the singular winner for specific periods, acknowledging that top performance may fluctuate across different actors or time horizons.

Ultimately, the Rolling Nuts 4 (RN 4) portfolio emerges as the definitive leader, maintaining dominant prevalence across both long-term (37%) and short-term (39%) horizons. As the most focused configuration – featuring a primary element representing 57.14% of the allocation alongside three equally weighted components – the RN 4 might be perceived as high-risk. However, whereas other portfolios rely on equal distribution or lower focal intensity, the RN 4's aggressive focus proved most profitable, even when such allocations were driven by intuition or curiosity. This outcome suggests that focusing on a key asset is more effective than attempting to achieve excessive diversification. While diversification is a standard risk-mitigation tool, it must be balanced with return expectations; consequently, this research identifies the RN 4 symmetric distribution as the optimal instrument for reconciling risk management with performance.

In evaluating the superior portfolio models, both the high-focus configuration (RN 4) and the broad, equally weighted structure (RN 7) demonstrate sustained viability across both short- and long-term horizons; however, to derive more robust conclusions, it is necessary to examine the specific performance metrics and realized returns.

Yield

In terms of the profitability examined, the winning portfolios of the largest growth and their share are identified. The next phase of the paper will demonstrate how much each distribution outperformed the other in terms of percentage returns. *Figure 6* plots the results against the worst return for both the short and long term. The similarity is also apparent here when looking at the order of the two intervals in terms of yield.

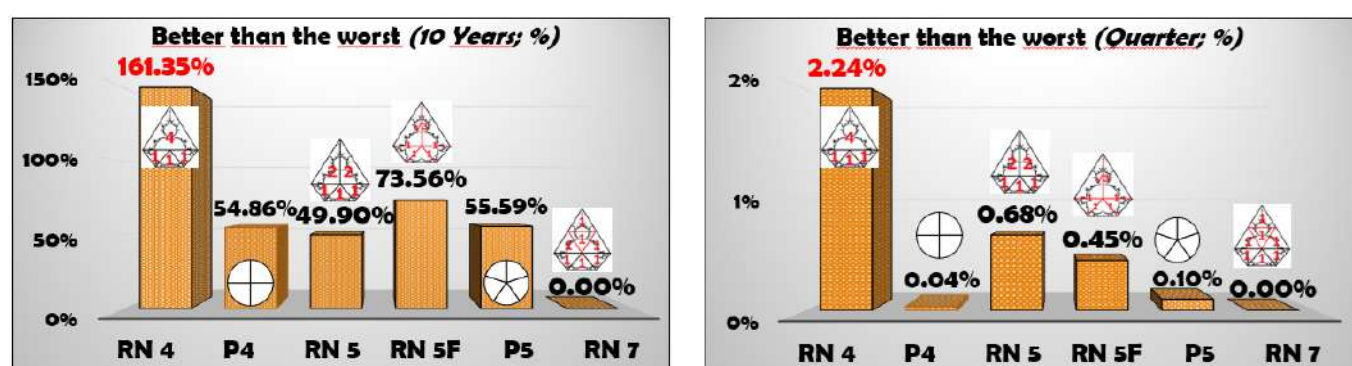


Figure 6: Portfolio return differences by worst performance (%)

The RN 4 portfolio consistently generated the highest returns across both short- and long-term horizons, followed by the five-element Rolling Nuts distributions (RN 5 and RN $\sqrt{3}$). While the benchmark 4 portfolio remains significant in the long term, equally weighted portfolios generally underperformed compared to the focused structures. Specifically, the P5, P4, and RN 7 distributions demonstrated clear underperformance in the short term, with only the low-element models approaching competitive results over the long term. Permanent distributions consistently yielded the lowest returns across all timeframes, thereby reinforcing the criticality of focal strategies. Furthermore, these findings are corroborated by the performance of the remaining two focused portfolios (RN 5 and RN 5 Force), which maintained a tangible positive deviation of 0.45–0.65% over the lowest-performing models in the short term.

The RN 4 portfolio exhibits exceptional performance. While its status as a frequent winner does not inherently guarantee superior profitability, a review of aggregate returns confirms its financial efficacy. Over a three-month horizon, RN 4 outperformed the least efficient diversification structure by 2.24% – an annualized premium of 8.96%. The long-term performance is even more compelling, with RN 4 exceeding the returns of the worst-performing model (RN 7) by 161.35%, representing an annual incremental return of 16.14%.

These findings underscore the critical impact of initial diversification strategies on long-term wealth accumulation. It is important to note that this research focuses on passive investment strategies, where portfolios remain unmanaged throughout their maturity; active intervention would undoubtedly alter these outcomes. However, the data confirms the distinct superiority of specific models. Non-focused portfolios yield relatively convergent results, suggesting that equal allocation strategies produce largely undifferentiated returns regardless of the number of assets involved.

In contrast, focused portfolios consistently outperform the broader field, reinforcing the validity of focal-based management strategies. Among these, the RN 4 configuration is preeminent, significantly surpassing alternative allocations across all time horizons. Given that the RN 4 model demonstrates both a high frequency of success (exceeding 40%) and the most robust return profile, it merits further consideration as a primary instrument for strategic asset allocation.

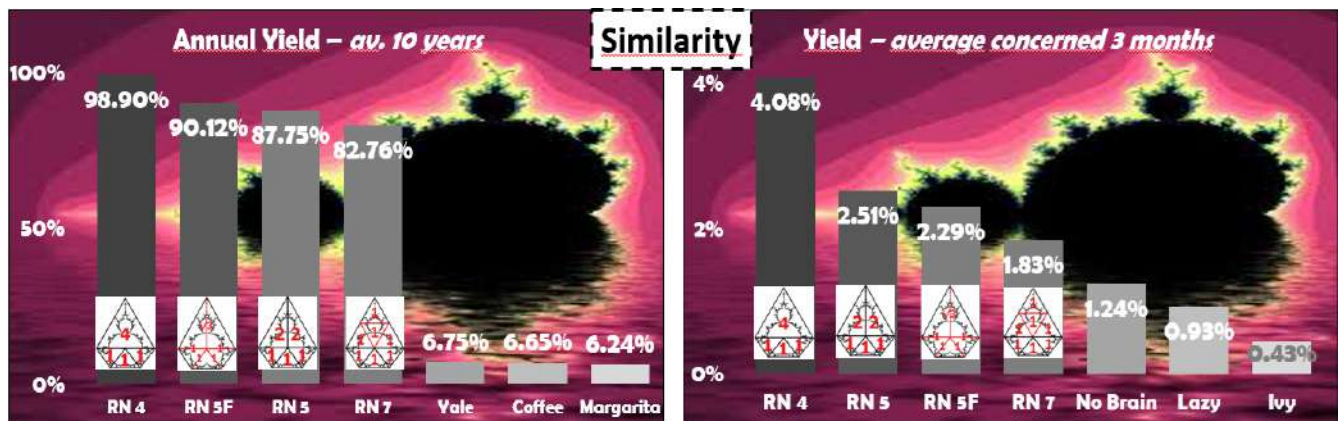


Figure 7: Annual and three months average return on research portfolios and market participants (%)

Regarding investment returns, this paper has thus far examined performance variances through percentage differentials. The analysis now shifts to the evolution of annualized returns for the 1,722 research portfolios, benchmarked against real-market participants (*Lazy Portfolio*, 2026), as illustrated in *Figure 7*. This hierarchy mirrors the profitability trends previously discussed, confirming consistent performance patterns over time. Aggregating the long-term data, the superior RN 4 portfolio yields an annualized return of 98.90% over the 10-year horizon, followed by the RN $\sqrt{3}$ (90.12%) and RN 5 (87.75%) models.

Contextualizing these results against real-world benchmarks – comprising similarly diversified, passively managed instruments – reveals a consistent performance trend regardless of the specific market participant selected. The 10-year longitudinal analysis incorporates the Yale University endowment (six items; 30%/20%/15%), the Coffeehouse portfolio (seven items; 40% focus; *Schultheis*, 2013), and the Margaritaville model (three items; *Burns*, 2017). The performance gap is substantial: the research portfolios achieve an average 10-year return nearly ten times greater than these market benchmarks. While this disparity is primarily driven by the research participants' topical decision-making versus the real-time constraints faced by market professionals – rendering the results illustrative rather than authoritative – it nonetheless demonstrates that intuitive, behavior-driven investment strategies can significantly outperform those of established asset managers. The benchmarks were calculated using the exact same historical data points as the participant portfolios. However, comparing hypothetical, retroactive student portfolios against generalized historical averages introduces may cause survivorship and hindsight biases.

Short-term performance data, extrapolated to annual returns by projecting quarterly outcomes, reinforces these findings. The study evaluates three quarterly periods alongside representative market benchmarks: the No Brainer (four items, equally weighted; *Bernstein*, 2017), the Ivy portfolio (five items, equally weighted; *Faber-Richardson*, 2009), and the Lazy portfolio (six items; 30%/20%/15%; *Swensen*, 2005). In these short-term comparisons, the Rolling Nuts portfolios consistently outperform active market participants, yielding returns between 1.83% and 4.08%. These results support the behavioral principle that conviction-based positioning (*Siegel & Scanlan*, 2014) often surpasses professional investment methodologies.

The scalability of the research model is further evidenced by the striking dominance order observed in *Figure 7*, which remains constant across both short- and long-term horizons. Theoretical extrapolation – whereby the RN 4's 2.84% short-term outperformance relative to the leading benchmark is annualized (11.36%) and projected over a decade – suggests a potential 114% excess return, a figure congruent with the 98.90% long-term realized return. This consistency across disparate timeframes validates the methodology's scalability.

Finally, comparing the Internal Rate of Return (IRR) of the aggregated 1,148 Rolling Nuts portfolios against top-performing market peers (including models by Buffett, Collins, and Farrell) highlights the power of focused strategies. Over a 10-year horizon, the Rolling Nuts models outperform the best market performers by a factor of three (25.88% versus 7–8%). These market benchmarks, typically characterized by two to three components and a high degree of focus, corroborate the study's central empirical finding: passive asset management is most profitable when utilizing a limited number of elements with a significant focal point. These results collectively underscore the efficiency of natural ordering forces in wealth management, where behaviorally informed, subjective-objective decision-making consistently yields superior outcomes compared to traditional professional strategies. No advanced knowledge of statistics is required to interpret the results. The aim of our research is to demonstrate in an accessible way that behavioral finance and intuition-based decision-making can be effective even when compared to funds managed with excessive precision. In our view, representing the differences in percentage returns is more than sufficient for this purpose.

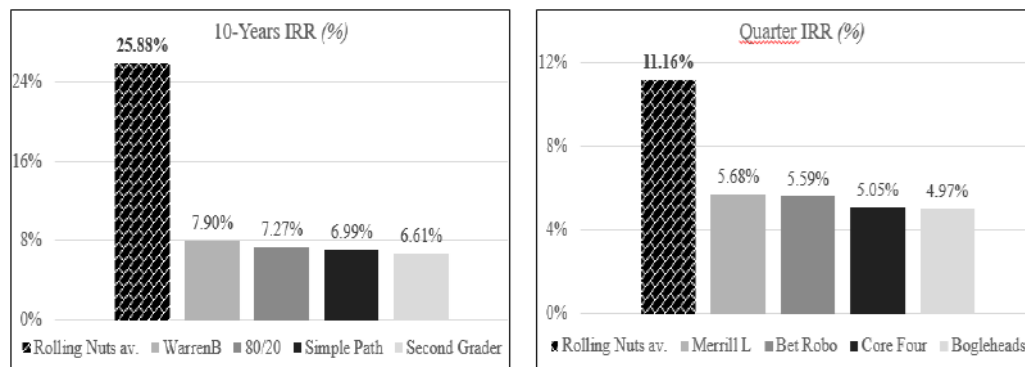


Figure 8: Rolling nuts average versus best performer internal rate of return

Focus Groups

The research employs three distinct focus groups of comparable size to examine dimensions of financial culture, specifically investigating the impact of autonomous investment decisions and the correlation between financial literacy and portfolio performance. The first group's asset selection was constrained by a requirement for international diversification – a strategy complementing traditional diversification metrics (asset class, time horizon, and industry) to mitigate geographical risk (*Wang & McLee, 2011*). The second group was granted full autonomy in asset selection, while the third group comprised non-economics students. By comparing the average portfolio returns of these groups against annual benchmarks, the study reveals significant insights regarding the relationship between financial culture, investment rationale, and asset allocation (*Figure 9*).

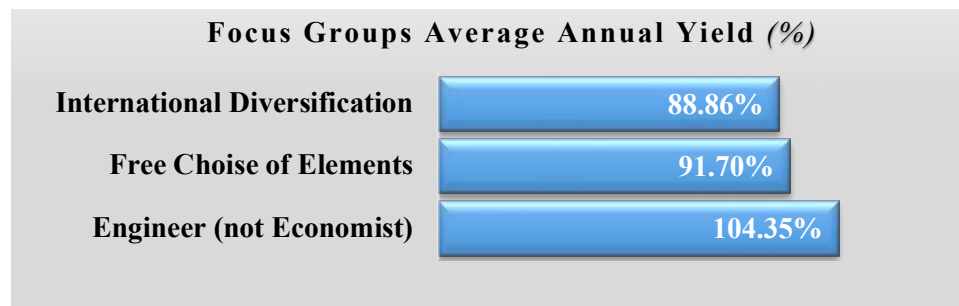


Figure 9: Average annual portfolio return of focus groups (%)

The analysis utilizes 10-year longitudinal data, aggregated annually, to categorize the 148-participant sample into three distinct, comparable focus groups. The internationally diversified group achieved the lowest average performance, with an annualized return of 88.86% across 53 primary portfolios. While this remains robust, granting full autonomy in asset selection yielded a superior return of 91.70% among the 56-participant cohort. Contrary to the hypothesis that formal financial education enhances portfolio performance, this study indicates that minimizing the influence of traditional financial paradigms may significantly bolster returns. The third group, comprising 39 engineering and computer science students lacking formal economic training, serves as an empirical case for this phenomenon. These participants, driven by sector-specific interests – particularly in emerging high-tech industries that experienced significant growth over the past decade – relied heavily on intuition and personal heuristics rather than professional financial metrics. Consequently, this group achieved returns nearly double those of their counterparts. While these findings are partially attributable to the decade-long appreciation of tech-centric industries compared to broader geographical diversification strategies, they provide significant insight into the role of behavioral preferences in investment outcomes. Ultimately, the data suggests that autonomous, intuition-based asset selection consistently outperforms constrained diversification, illustrating the profound impact of subjective preference on realized financial returns.

Lessons Learned

This paper explicitly examines individual learning outcomes as a critical human factor within financial culture. The cyclical process of portfolio management emphasizes the integration of these lessons to refine subsequent decision-making. The current research distinguishes between the consequences of short-term outcomes and the implications of long-term value, acknowledging that the investment time horizon significantly shapes individual goals, expectations, and their ultimate realization. While similar findings emerged across the analyzed time horizons, the priority order varied for each rationale (*Figure 10*). Although a degree of similarity is intuitive, the survey-based nature of the human factor assessment precludes definitive conclusions due to inherent variance in the results. Furthermore, the evaluation framework discourages direct parallels between short- and long-term conclusions, as distinct lessons are derived from differing temporal perspectives. The human factor components of the study are demonstrated through consequence evaluation, which measures the feedback morphology of financial culture observed in

participants post-analysis. Nevertheless, a comparative analysis of these lessons provides valuable insights into the refinement of the methodology, its future trajectory, and the identification of potential errors and learning opportunities.

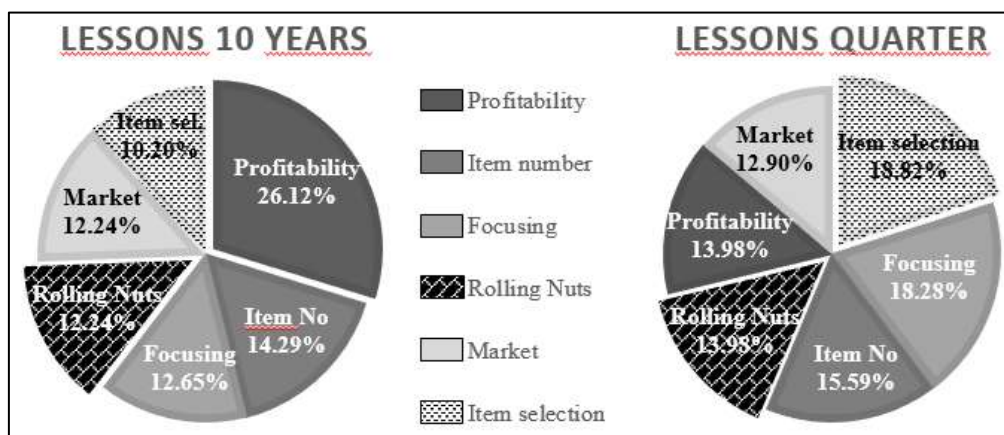


Figure 10: Scope of the lessons learned (%)

Among the six categories of identified lessons, profitability emerged as the primary long-term finding (26.12%), reflecting the participants' conviction in the efficacy of the methodology and passive wealth management. This prioritization of long-term profitability serves as compelling empirical support for regenerative wealth management. Furthermore, it highlights the impact of financial literacy on an individual's subsequent predisposition toward proactive financial self-care. The synthesis of errors, reports, observations, and suggestions underscores the profitability of this approach, catalyzing a fundamental shift in individual attitudes. These results provide robust evidence for regenerative finance and its effectiveness as a management instrument. Individuals may utilize these insights as feedback to inform subsequent decision-making processes across their personal and professional lives. However, behavior-oriented decision-makers have learned a lesson: it is profitable. Once they have internalized this lesson about profitability, they can use it to make better decisions in the future. In the long term, research suggests this is the most important and prominent lesson, although in the short term, profitability ranks only last among the reasons cited (10.20%). This is likely due to the anomaly that a three-month investment obviously doesn't yield as much return as a 10-year one, and when people compare the two, they conclude that the former is "not so profitable." This still makes it profitable, since that is also, so the Rolling Nuts portfolio management strategy appears to be effective, and participants expressed confidence in the passive profitability of capital markets and wealth management.

The next conclusion was the cause for *item selection*, which shows an inverse pattern when observing the two analysis periods. It also suggests that the correct/incorrect item selection is the reason for the results obtained. This implies that when participants observe success stemming from superior asset selection, they do not critique the underlying diversification strategies; rather, they perceive all models as inherently and passively profitable, attributing potential performance gains to the quality of the selected assets. Consequently, participants view the lesson of individual choice as an implicit validation of the methodology's robustness, identifying no systemic flaws that would preclude its future application. Why is item selection the least important factor in the long run, yet the most important one in the short term? There is no clear-cut answer, but in the long run, asset allocation does not have such a significant impact on returns because the self-correcting nature of the capital market smooths out periodic fluctuations. This implies that, regardless of the investments one makes, prices will generally rise over the long term. This symbolizes the strength of the capital market, which, according to these data, has such a positive influence over a ten-year period that it can completely rule out the selection of assets – and the resulting financial errors in behavior. More precisely, it does not completely rule them out, because sometimes the selection of investments can still be seen as the reason for our success, but viewed over a decade, this is the least relevant conclusion. In the short term, a different picture emerges: here, investment selection was identified as the most important factor-meaning this is the main reason why results turned out the way they did over three-month periods. This may be explained by the brevity of the timeframe; it is simply too risky to select investments over such a short period. Even if our elements are sound, they can lead to unexpected surprises during a downturn. The three-month investment period analyzed is too short to rule out errors in the selection of elements. In the short term, the choice of elements is of the utmost importance, at least according to the study participants. This reasoning reflects the individual, personal uncertainty that leads people to hold themselves responsible for their results: they see their own wrong decisions – or, conversely, their success – as the manifestation of the final outcomes. This is a highly subjective perspective that highlights the human side of financial behavior: the evaluation and incorporation of our own decisions into our sense of responsibility. This symbolizes both excessive pessimism and excessive optimism, and one must admit that individual decisions play a role in this short investment period: according to the findings, they have the strongest influence on the results. In contrast, this argument can be ruled out over a longer investment horizon, leading us to ultimately conclude that we

have found a tool that can help us make better decisions in the field of behavioral economics. It simply needs to be applied in the right context, which can eliminate the inconveniences that arise from individual errors in judgment.

An important, behavior-oriented conclusion can be drawn from this implication: since the choice of assets has virtually no impact in the long run, it confirms the power of intuitive decision-making. According to this assertion, one can confidently make investment decisions and trust one's intuitive heuristic, since in the long run, the influence of this decision-making factor is not particularly significant. Thus, intuitive decision-making over long investment periods will pay off, (almost) regardless of the chosen elements or mistakes made.

In both periods, the research identified focusing as one of the three primary conclusions, indicating that participants perceive the focal strategy – regardless of its initial accuracy – as the principal driver of their results. This suggests that the efficacy of the selected focus is the primary determinant of realized returns. Consequently, the critical takeaway for future strategy is to prioritize a precise and well-positioned allocation within the chosen asset set. This conclusion is further supported by participants' conviction in the superiority of focused over equally weighted allocations, reaffirming the importance of emphasizing a singular element to ensure future financial success. In the short term, focus seems to be the most important lesson; in the long term, it is also the third most important consequence. The research clearly answers the question of diversification versus focus. Focus is crucial for both short-term and long-term investments and yields the same returns on asset growth.

The *Rolling Nuts* configuration, as a key finding, reflects the participants' assessment that this model outperforms benchmark strategies, leading them to explicitly advocate for its adoption as a superior method of diversification. This reinforces the effectiveness of the methods used, it should not be considered the primary cause of the results. The approach employed in the methodology represents a sound diversification strategy for the future-both in the short and long term-regardless of the number of investment properties.

The fifth most common argument (over 12% for both time frames) is that the *market (sector/stock market)* is the cause of the results. Here, external factors are responsible for the results or changes in returns, and not our decisions or the way we diversify. This set of lessons demonstrates that participants maintain commitment to their selected assets while viewing portfolio allocation as inherently successful and passively profitable. Notably, participants attribute outcomes primarily to market realities rather than subjective variables. Perhaps the most significant finding is the absence of criticism directed toward either the selection process or the underlying methodology; instead, individuals recognize their success while acknowledging that market influence remains the primary determinant of realized investment valuations. Thus, this reasoning acknowledges that one can make good decisions using the chosen method, but that external causes must ultimately be held accountable for the outcome.

Finally, the lessons learned are completed by the rationale for the *number of items*. Within this category, there is an explicit recommendation regarding the optimal number of assets for effective wealth management. While the current research does not differentiate between specific time horizons, asset combinations, or precise element counts – topics reserved for future inquiry – the findings suggest that an ideal number of components exists for any given investment strategy. Participants inherently determine the desirability of these counts, recognizing that adjusting the number of elements serves as a mechanism to enhance the performance of their selected portfolios. From this assertion, one can also conclude that it is not the elements themselves, nor the relevance of the methods used, that are to blame, but rather that the results depend on the extent to which one has diversified one's investments. In other words: it is not I, or my decision, or the methodology that is influential, but rather the number of investments alone (regardless of strategies) that determines the achievable returns. This assertion leads us to conclude that significant differences can be observed between portfolio strategies using different numbers of investments. Further research is needed to determine under which conditions a large, medium, or small number of elements is required, but this goes far beyond the scope of this study. An analysis of the data revealed that, both in the long and short term, 4 or 7 elements were recommended; however, this depends on the composition of the investment portfolio and does not represent a peculiarity of the methodology. On the other hand, recommending more or fewer investment elements also means that no distinction is made between equal distribution and concentration, and that the average number of elements (here 5) is also not recommended as a diversification method. The analysis is also limited at this point, as there may be a period with the same elements from which 4, 5, or even 7 elements emerge as winners, and the analysis does not consider an infinite number of all periods, but only arbitrarily selected points in time.

Drawing from the synthesis of these findings, three primary conclusions emerge that validate the study's core objectives:

1. Passive wealth management is a demonstrably a viable strategy.
2. The Rolling Nuts formula represents a sustainable and recommended diversification pattern.
3. Focused diversification is inherently superior to permanent, equally weighted allocation strategies.

CONCLUSION

The research analyzed the determinants of investment decisions, portfolio performance, and experiential learning to quantify the multifaceted dimensions of financial culture – encompassing motivations, returns, pedagogical insights, and focus group dynamics – thereby identifying distinct patterns in investor behavior. Regarding decision-making processes, the findings indicate that subjective variables are the primary drivers, supplemented by an intermediate objective layer and a secondary subjective level, with

yield expectations emerging as the least significant factor. Consequently, this study challenges the rational investor hypothesis (Markowitz, 1952) and provides empirical support for the behavioral investor framework (Howard, 2014). The study conducted examined the reasons behind investment decisions, portfolio returns, and the range of experiences in order to measure various aspects of financial literacy and identify discernible differences in investor behavior. The conclusions and solutions derived from these findings are summarized in Table 3, which is explained in more detail below, supplemented by the singularity found in the methodology.

Table 3: Findings of research areas

Research Areas	Financial Literacy	Behavioral Finance
Investment Motivations	Profitability is the ultimate factor.	Subjective–Objective–Subjective Decision-Making Sandwich.
Winning Portfolio	The highest-risk option usually wins.	Few elements, strong focus.
Returns	The regenerative wealth management has proven on itself-based individual decisions.	Similarities across both investment horizons.
Focus Groups	International diversification < Free choice < No economist.	The “non-financial” mindset boosts returns.
Conclusions	#1 Profitability, number of elements, importance of focus. #2 The methodology’s success outperforms the benchmarks.	Success of intuition-based decisions – in the long term.
Methodology	RN 4 in both investment horizons.	RN 4 in both investment horizons.

In terms of portfolio performance, the primary finding is that the Rolling Nuts configurations (RN 4 and RN 7) emerged as the superior models in 60% of cases across both short- and long-term horizons, establishing them as the most recommended among the six distributions evaluated. Notably, the RN 4 model demonstrates superior return profiles and frequency of success within its symmetric framework. As the configuration utilizing the fewest assets, it underscores that the most effective strategy often mirrors nature’s tendency toward simplicity over excessive complexity. The methodological validity is confirmed by double-digit annual returns that outperform real-market benchmarks, providing empirical evidence for a regenerative wealth management instrument, even among participants lacking formal financial training. The analysis indicates that focused allocation is more efficient than equally weighted distribution and that models with fewer elements tend to generate higher returns.

The consistency of these results across varying time horizons validates the scalability of the research methodology. Much like the physical systems recognized by the 2021 Nobel Prize in Physics (Parisi, 2021), this study demonstrates scale independence in investment outcomes, confirming that regenerative portfolio systems remain robust regardless of the analytical scope. The paper establishes the scalability of the Rolling Nuts symmetry system as a self-sustaining model rooted in natural growth patterns. Furthermore, focus group analysis confirms that autonomous decision-making exerts a positive, measurable impact, reinforcing the behavioral investor's principle of "convictional positioning." These findings suggest that intuition-based investment often proves more effective than strategies driven by excessive rational analysis. Consequently, the symmetry model offers a viable framework for future competence development across multiple dimensions of financial literacy.

This research highlights the passive profitability of capital markets and its practical applications for sustainable wealth management, organizational social responsibility, pension systems, and individual financial self-care. Limitations include the demographic composition of the sample – predominantly young, inexperienced university students – which restricts the generalizability of the findings. Additionally, as with all financial analysis, historical performance does not guarantee future results; the study is fundamentally an examination of counterfactual performance during specific historical periods. Final limitation of the research, that the regenerative wealth management instrument was tested in a simulated environment without real capital at risk, which fundamentally alters behavioral psychology compared to actual financial loss scenarios.

In accordance with General Systems Theory, which requires the synthesis of interdisciplinary concepts, this model acts as an innovation in critical systems heuristics (Ulrich, 1983). The study presents a model intended for reliable application in private pension savings, institutional asset management, and financial sustainability. For a system to be widely applicable, and controllable, it must be adaptable and offer viable alternatives; the identified pattern serves not only as a guideline for diversification but also as a management procedure for strategic decision-making. By discovering a systematic mechanism within portfolio allocation, this research delineates a framework for financial sustainability, passive income, and self-sufficiency. Ultimately, this article

systematizes a complex decision-making framework for dynamic portfolio management, revealing an inherent order in wealth management that may be characterized as measurable financial entropy.

Informed Statement: It is confirmed that all 287 student participants provided explicit informed consent prior to focus group participation and data collection, particularly given the integration of personal identifiers (birthdays).

Data Availability: The data that support the findings of this study are available on request from the corresponding author, G, Cziraki.

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