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Chapter 5: Leveraging behavioral economics for customer-centric financial strategy design

5.1. Introduction to Behavioral Economics

Behavioral Economics originates from the overlapping intersection of Psychology and Microeconomics, adopting basic principles from both disciplines in order to develop new insights and enhance our understanding of human behavior. More specifically, Behavioral Economics seeks to include insights from psychology that concern the cognitive, adaptive, and emotional elements of thought as supplementary and corrective elements to microeconomics. Basically, it tries to answer the demand from contemporary and not so contemporary scholars for a theory of choice to fill the gaps in traditional neoclassical models; an issue first raised over 250 years ago, but it has even been considered a desideratum in neoclassical theories. Therefore, Behavioral Economics discusses how psychological insights influence economic decision making processes, with the hope of developing models of behavior that are richer, and therefore better at explaining human behavior.

This is important because traditional economics is built on three basic parental disciplines: philosophy (the sort of fundamental assumptions made about choice and rationality), logic (the tools – mainly in the form of deductive systems – employed in the construction of economic theory), and mathematics (the means used in developing models from the basic and most general axioms, in examining the implications of the axioms, and in communicating ideas). However, without psychologists to ensure that the assumptions are accurate, the logical structure does not reflect what real people do, and the models are unable to make correct predictions about actual behavior. Consequently, Behavioral Economics stresses interdisciplinary collaboration, especially between economists and psychologists, as a means for ensuring that the core assumptions of economic theory accurately depict actual behavior for people whose decision making is prone to error.

5.1.1. Background and Significance

Behavioral Economics (BE), or the application of cognitive psychology to Economics, is a field that has grown out of the realization that both traditional Economics and Finance fail to accurately describe the full extent of human motivation and behavior. Advancements in research techniques, data collection, and technology have brought to light limitations in traditional economic models, particularly as they fail to predict and explain why people may violate the fundamental assumptions that agency preferences are based on, in terms of having information and acting rationally to maximize utility.

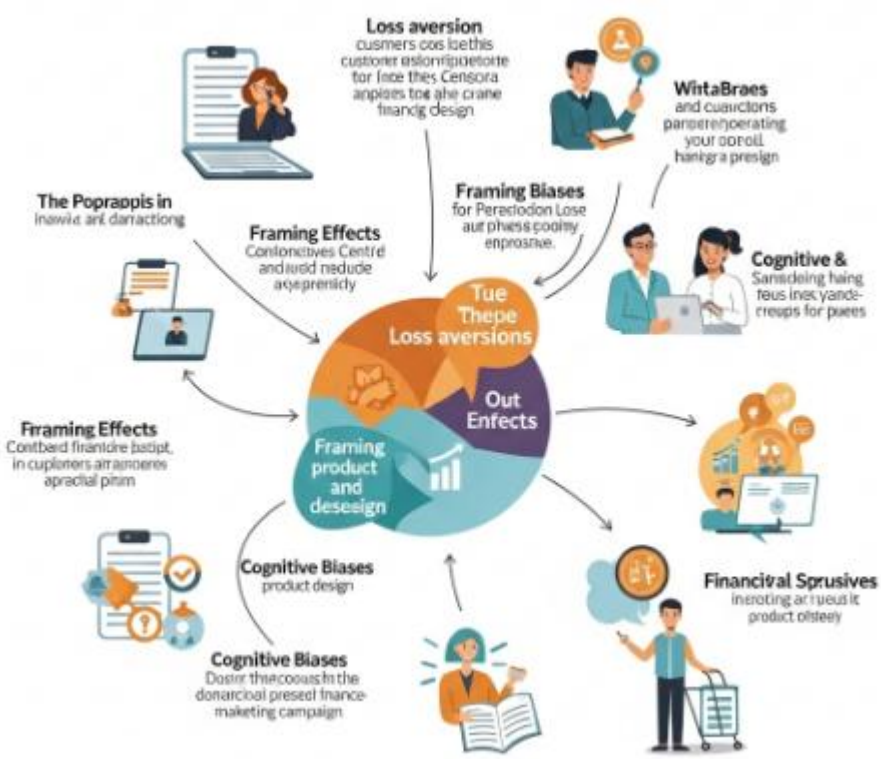

Fig 5.1: Customer-Centric Financial Strategy Design

BE takes a multidisciplinary view that draws upon Psychology, Neurophysiology, Sociology and Anthropology, as well as Economics and Finance, to form a research approach that recognizes and acknowledges human fallibility, bounded rationality, socially positive and socially negative preferences, physical and cognitive limitations, and desire for status-seeking to explain perceived market anomalies and the structurally incomplete nature of markets. Without such broader framings, it is impossible to understand why individuals may act in ways that violate the tenets of traditional models that have deterministic, agent-based ontological foundations. In short, BE proposes that the focus of social sciences should swing back to consideration of the human condition

such as behavior and motivation, and away from the latter's transmission to and influence on observable activity via aggregated macro-state variables.

5.2. Understanding Customer Behavior

For financial institutions, understanding the psychology and behavior of customers is central to designing strategic initiatives that will resonate effectively. Why do customers act the way they do? Who triggers particular responses that create apparent irrationality from a rational perspective? Answering these questions is essential to creating customer-centric financial strategy design. For example, while emotions are considered to cloud decision-making – and therefore, seen as a negative or adverse influence – it is also true that they function as short-cuts to decision-making, especially when decisions are made under pressure. Many decisions are made using learned heuristics, and these involve emotional assessments.

Behavioral decision theory presents a systematic framework and approach to understanding the influences that lead to what may appear to be 'irrational' or biased decision-making. Cognitive or thinking biases focus on the thought processes underlying because not all influences on decision-making stem from irrationality or inaccuracy of thought processes. This errors-in-judgment explanation of deviations from rational behavior is the starting point for behavioral decision theory. Emotions, as signaled or acted upon by customers, or other customers, marketers, or other affected stakeholders, must be factored into strategy design when making decisions about all elements of the service marketing mix. These emotional influences can work as amplifiers or dampeners of the cognitive biases and can operate directly or indirectly. Understanding decision-making and its dependence upon cognitive biases and emotions can help financial institutions design strategic initiatives.

5.2.1. Cognitive Biases in Decision Making

In their work on economics and psychology, the authors describe a robust foundation for the criticism of rationality and highlight how cognitive flaws lead to errors in most decisions. These cognitive biases stem from the pieces of evidence that are processed, the way they are weighed, generalizations from the limited experience of oneself, the influence of emotions on thinking, and the impact of framing and context on evaluation. Judgment and decision procedures have to be simple enough to be feasible. Cognitive salesmanship is designed to prompt intuitive decision making and present external forces that are subtly persuasive to customers struggling with a decision, drawing on the following heuristics. Because of simply being human, we sometimes make decisions that demonstrate an incredible lack of rational deliberation. Consider choosing a bank based

on its reputation for low fees. Or buying life insurance to protect your family in case of unexpected illness. In each case, research shows that we fail to consider all relevant factors in making important financial decisions.

While most consumers know that multiple factors should influence each of these decisions, limited information allows only the most salient factor to dominate decision making. Selection of a bank focusing solely on balance checks or pick of a fund based solely on recent performance ignores the many other things that can and do go wrong. In this case, the star is being cared for emotionally in their work being rough if one adjustment because of recognized emotional limitations. A bank with low service charges may not be there when a family emergency arises. There is adequate research suggesting that expertise helps offset intuitive decision errors. A consumer intending to switch to a local bank or a financial consultant might as well know a local bank's CEO.

5.2.2. Emotional Influences on Financial Choices

What motivates people to save, change jobs, borrow, invest, or spend? To what extent are decision choices influenced by actual economic considerations? How much are they swayed by instant gratification desires, mood, or the prevailing financial environment? Various concepts of emotionality are used to study how people solve economic problems. Emotions are invoked by terms such as cognitive dissonance, happiness, regret theory, temptation, anticipated emotions, fear, mood, sadness, or affective heuristics. Unfortunately there is no consensus on the relevance of the alternative concepts. Thus we find no coherent widely acknowledged branch of behavioral economics that studies emotional effects on economic decision choice. The vagueness may stem from incorporating both positive and negative emotional incentives. The emphasis on mood or hedonic states differs from the main thrust of behavioral decision theory – the detailed inventory of a multitude of specific cognitive biases – but nevertheless it is an important facet of behavioral choice analysis. Forward-looking decision theories aim to delineate optimal incentives or the rules of optimal choice. The contribution of forward-looking models is great mainly for economic policies, which require analyzing the total effect of a public or private choice. Behavioral conceptualizations are essential for deriving behavioral norms and hence validating decision models. Knowledge about decision heuristics is crucial when designing mechanisms for resolving problems in a data-scarce environment. It is certainly necessary; otherwise the decision process spills into policy choice that has to be made.

So it is not surprising to find that behavioral economics is flourishing outside of these more conjectural predictive domains. Many branches of economics employ behavioral insights; for example, pricing or investment decisions, labor market performance analysis, the study of commercial policies promoting short-term consumption, fiscal

analysis tracing the decision patterns of government, or the development of welfare economic policies. But there is little crossover between the behavioral and traditional economic branch of economics when it comes to empirical results, for example, risk aversion and the consequentiality of heuristics in an expected-utility model versus regret and loss aversion in a behavioral choice model.

5.3. Principles of Behavioral Economics

Many of the principles of behavioral economics were empirically verified and established through foundational work. Behavioral economics seeks to understand observed behavior and address shortcomings in predicting decisions using the utility-derived principles of traditional economics. Cognitive psychology contributes to behavioral economics in understanding the simple cognitive heuristics underlying many observed decisions, while drawing on existing knowledge in economics and seemingly mini-utility functions with specific components specialized for particular types of choices, such as social preferences, preferences over risk and uncertainty, and preferences over time.

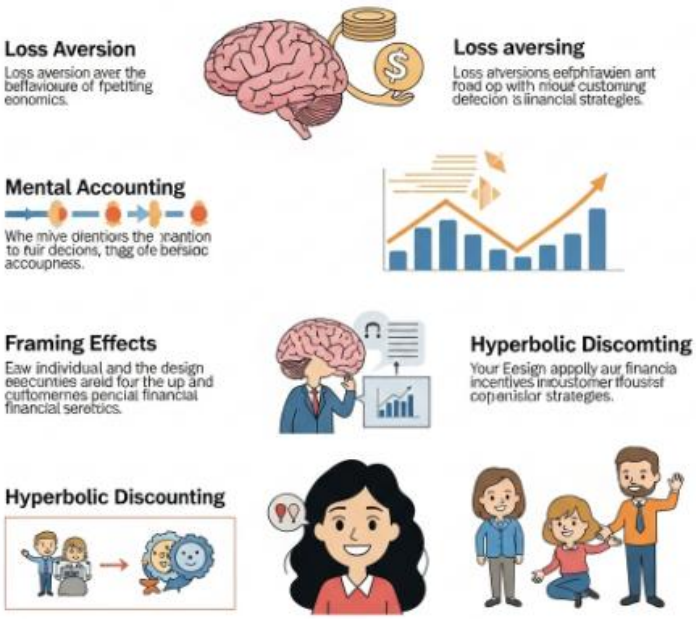

Fig 5.2: Principles of Behavioral Economics

As with other mini-utility functions, these overlapping attempts parallel the behavioral utility function drawing on perceived nested levels of unique satisficing principles with just as many opportunities for parsimonious models as within economic models.

Important principles of behavioral economics include loss aversion, prospect theory, perceptual weighting, framing effects, present bias, and bounded rationality. These principles help explain why losses usually loom larger than gains, why preferences may reverse depending on if acts are perceived as gains rather than losses, whether capitalist or pig-dog, or whether preference weighting generally follows perceptual processes, in particular when there are discrete outcomes.

Behavioral economics can provide insights into investment behavior that challenge the assumptions of efficient markets. By relying on research from psychology, sociology, anthropology, and experimental economics as well as case studies beyond the European and American data used to formulate behavioral models, it may also provide further insights into intertemporal issues concerning saving and finance across cultures in a way that adds to rather than replaces the theory of economics with its assumption of optimizing agents.

5.3.1. Loss Aversion

To start with a definition, loss aversion is described as “the principle that losses weigh more heavily than gains”. To be more specific, the concern is specifically with the choice between gambles described by a probability distribution over gains and losses. The losses weigh about twice as heavily as the gains. Loss aversion is one of the two cornerstones of prospect theory, alongside diminishing sensitivity which (to generalize) says that both losses and gains are elements of the values of outcomes but viewed in the square relation. By now, loss aversion in the general sense lies at the origin of a great number of important psychological research findings concerning what are called “anomalies” in the behavior of economic agents as compared to the methods of classical economics.

Things get somewhat more complicated when we proceed to discuss how loss aversion itself is going to be applied in devising customer-centric business strategies. First of all, we have reasons to expect that loss aversion applies strongest not to the actual value of wealth as such but to the perceived value of it as based on so-called reference levels such as the crossing of the zero level and (at the level of individual customers) possibly previous realizations of the domain in question. The reference dependence of value means that predicted or experienced adapter dynamics are not going to be sufficient in calendar terms for prospect theory to be applicable in a business context. The usually non-expanding differences of time use between distinct groups of customers which are going to be used in order to derive the time-determining preferences only indicate diminishing sensitivity and not loss aversion.

As a second complication, the predicted, reference-dependent value dynamics have to be confronted with the "leniency" (the tendency not to punish a lack of stimulation too much) that the vast majority of customers have demonstrated in applying calendar time. In time use theory, this has been modeled through a random distribution of weights for predicted value differences in the value increase differences at hand.

5.3.2. Framing Effects

There exists an extensive body of experimental research showing that subjects will answer quite differently when presented with the same choice in different ways. For example, subjects faced with what they perceive to have an equal possibility of winning $250,000 while in danger of losing the greater equivalent of $750,000 say that they would be more willing to take the bet if told that it has a 1-in-3 chance of being an applicant for a million dollar life insurance policy or a 1-in-3 chance of being the insured of a million dollar life insurance policy. Other experimental studies have shown that loss and gain assessments in answering questions about certain life choices are also affected by framing effects. When the question is asked with a longer than usual time horizon, subjects are likely to sour on their loss from risk; however, when asked the question on a shorter time visible horizon, subjects prefer to avoid loss.

Such framing effects cannot easily be related to preferences, such as risk aversion or intertemporal substitution, that in standard models describe how different variables are treated across time and states of nature. They indicate that decision-makers often do not apply the same reasoning to problems stated in different ways – even when their two framings pertain to the same life prospect. This appears to be particularly likely where the framing is particularly vivid. Such variations in reasoning often either seem at odds with then current empirical evidence against.

We also find some evidence which suggests that it matters somewhat at least on one of our dimensions; what kind of decision-makers you are dealing with, but probably not much.

5.4. Customer-Centric Financial Strategies

Do traditional concepts of risk return and diversification hold for customers? Most likely not, as customers deal with budgets and so the investment portion at a customer level at any time is not large. Therefore, principles such as the capital market line and the security market line generally do not hold for customers, as at low levels of investment in securities the correlation is likely to be high with that of commercial financial institutions

investing in them. Also, customers generally want money at specific times not with specified probabilities.

Further, does the concept of average customer risk hold? Customers become wealthy not just because they face risk and hence earn a risk premium. They could be unlucky and face worse drawdowns than average. What is key is not the average risk of the customer, but the marginal utility of money for low net worth persons and whether they wish consumption of certain goods at certain time points in the future irrespective of the market. It is also not clear how such risks can then be diversified or pooled, unless they are catering specially to affluent clients who could well be making gambling mistakes. The major point is therefore that behavioral economics models of investor behavior must be allowed to prevail, either alone or with the general risk reward and diversification principles of classical financial theory, to design customer specific products and services so as to maximize customer and investor long term satisfaction.

Like classic financial economics, behavioral finance gives clear inputs to develop "Customer-oriented marketing" better. Behavioral finance shows that most customers wish their financial returns to be smoothened rather than optimally maximized after tax. Hence financial service firms can offer their customers "guaranteed returns" for their products. Such "guaranteed return" investments have a great sales appeal for financial service firms and span products that are long term and short term.

5.4.1. Personalized Financial Products

There is no one-size-fits-all approach to financial planning. To make customer-centric financial strategies maximally effective for individual customers, a growing number of financial businesses build tailor-made solutions based on data about past behavior, expert predictions, and knowledge about planned chief life events. Various fintech firms build personalized financial software centering on these goals.

The Loving Life Company, Allen & Co., HelloInsight, and ReadyForEnrichment allow potential customers via a few questions to assess their own readiness for important next life stages, such as marriage, parenthood, or home purchase, and, to some degree, awkward conversations about family values and goals. Wonderful brands and products in the travel, gastronomy, jewelry, and home improvement sectors, or products that help set up a family – such as child and pet insurances, household help services, and family entertainment media – then act as relevant nudge messages based on positive anticipation of upcoming milestone moments. In this context, "milestone moments" are associated with family memories revolving around expressing love and affection through special experiences that would be positive for anticipatory emotional well-being. The objective of incorporating milestone moments is to act upon the "availability heuristic" by

investing in meaningful brand and product experiences that subsequently trigger happy family memories; serve as mental representations of a vital family-oriented life; and shorten the remembered duration of transitions marking milestones between the past and future, and their impact on emotional happiness.

5.4.2. Behavioral Nudges in Marketing

Marketing of financial services creates diverse challenges. Financial services are intangible, which essentially means that a customer is unable to judge the quality of a service prior to consumption. The organization is often separated from customers by a long waiting time, with the scope for the organization to use this to their advantage being limited. There is very limited demarcation for competition on costs, thus making pricing difficult. These characteristics mean that customers often make poor choices, which has the potential to cause situations like bank runs and increased defaults by borrowers. These challenges have resulted in unique ways of nudge applications that have significant promise.

Prospect theory predicts that people make decisions based on gains and losses from reference points. This would suggest that the presentation of a product would impact their decisions. The prediction gained experimental validation in the case of weakness of will from delay discounting, in that a sample of participants faced with choices between smaller immediate and larger delayed rewards tended to select the suboptimal smaller reward when the description of the reward delays was such that they were framed as losses rather than gains. Experimental validations of the prediction that greater numbers of choice alternatives lower willingness to wait have been found as well.

This also applies to financial services marketing, for instance apart from bank run situations social welfare would be affected by customers applying heuristics to the selection of a bank checking account that focuses solely on the regularity of fees and not their size, leading to a preference for banks with greater frequencies of low dollar fees over banks with infrequent but large fees, when the first mode leads to a greater social cost than the second.

5.5. Designing Financial Strategies

A rational consumer is someone who seeks the maximum possible objective utility at the minimum possible cost. Utility can be defined as the value derived at a particular

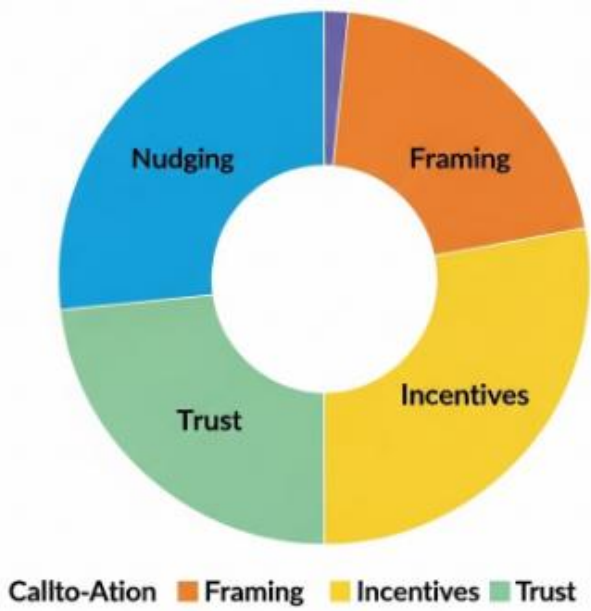

Fig : Leveraging Behavioral Economics for Customer-Centric Financial Strategy Design

moment, modified by affect and expectancies. The consumer today likely faces simultaneous demands on their spending, saving, and investing decisions, yet financial products have driven little consumer engagement because of their complexity. Consequently, consumers tend to rely on the same basic spending patterns, preferring stability over change. In order to optimize the development and design of products, consumer needs must be identified, clarified, and prioritized such that they become actionable opportunities for design. The availability and access to vast amounts of customer-related data suggest that many of these needs can be put on a more objective footing. With the proper techniques, bespoke solutions can be designed at scale, leading to better alignment between provider and customer interests, and ultimately much higher engagement levels.

Research provides evidence that a customer-centric design focus, employing relevant data-driven insights and direct customer input, yields financial strategies that quantify customer preferences. In fact, behavioral strategy development offers a template for the development of viable customer-centric financial strategies across institutional facets, by a wide variety of organizations. Using financial strategies that have been informed with customer-driven selections and pre-validated customer segment focuses renders flexibility in institutional facilitation, enabling the full array of advisory and financial services delivery, from design and education, to monitoring, review, and the facilitation of key actualization moments.

Qualitative customer interviews previously identified six segments of different importance to banks. For each of these segments, specific risk profiles and strategies were developed, and are presented as customer value proposition guides. Through strategies, the relevance of behavioral-type factors to financial decision making becomes evident. Any institution's financial strategy must first recognize that utility is subjective, and even when quantifiable, it may vary across customer segments, resulting in a relative utility that is also quantifiable. Using behavioral drivers, such as a customer segment's interest in particular behavioral serendipities, can aid efforts to pre-qualify specific actionable discussions around the influence of these factors, financial background issues, quick wins, and the relevance of behavioral differences.

5.5.1. Data-Driven Insights

It is paramount to exploit available data most efficiently, as it often happens that the best-performing and best-validated consumer models only use a subset of observed variables to forecast choices. Business problems also have a structure, and only some dimensions of choice predictions are relevant for strategic actions. For example, a customer’s demand for a particular insurance product in the next year is less relevant than the new total amount of insurance he currently holds, indicating a potentially high commission for the financial advisor. Furthermore, looking for patterns in the data helps to identify groups of customers for whom the general model might not be flexible enough or doesn’t use relevant past experiences. Of course, adding flexibility comes at a cost, and it is only worth it when focusing on critical products for customers who have already shown a particular affinity for these products through their past behavior.

The more financial variables we possess, the more granularity we obtain. However, careful inspection is required, as having no movement on an account variable or product can equally indicate a disinterest or the fact that the customer cannot afford alternative labels. Furthermore, no study on the decision parameters’ importance weighs more than market knowledge gained from years of experience. It should ultimately be the compass to model behavior, and a combination of behavioral considerations, data, and business constraints are essential as we build our approach to working with financial data. The more external verification we have of the principal decisions taken by the people we observe, the more confidence we can have in the model describing their behavior.

5.5.2. Customer Segmentation

A financial product appeal varies along different dimensions for each client. Hence, product characteristics should be adapted to financial strategy design based on what else a client possesses or will acquire in the future and how a product interacts with a client's

existing portfolio. A list of service and product needs that determine the design of a product proposition can be long. Here are a few examples. When entering the child rearing phase, parents' focus is on optimizing tax, insurance, education, and investment priorities—for instance, to cover tuition fees for private schools or universities for their children. When parents of children about to graduate enter the retirement savings phase, product propositions should highlight tax-friendly retirement investment products and conservative investment solutions for education saving funds on the one hand and tax-friendly retirement investment products and conservative asset allocation solutions based on the risk profile of clients on the other. As clients dispose of their assets while alive or as heirs receive the assets, clients entering these estate transfer and inheritance notice strategy design phases will benefit from product propositions that focus on estate tax planning solutions as well as those that relate to bequeathment and asset optimization goals.

To be able to adapt the financial strategy design process properly to each customer situation and product portfolio structure, it is necessary to segment clients. Each segment consists of clients that share similar economic situations and product portfolio structure characteristics that are relevant for financial strategy decisions. Segments should be shaped by a few general groups of different sociodemographic, psychographic, or behavioral characteristics. Age, gender, personal status, income, and wealth correlate with different product requirement areas throughout the life cycle, and thus segmentation is a precondition for any implementation of behavioral economics into wealth management product proposition design and financial strategy performance. Vulnerability increases with the number of triggers in the personal life phase and with advance retirement.

5.6. Conclusion

Although primarily targeting shareholders, financial institutions are now also putting their customers at the center of their financial strategies. This has been further emphasized since the financial crisis, which has highlighted how merely shareholder-centric strategies can jeopardize the entire banking system and lead to devastating effects on society as a whole. Consequently, both financial institutions and regulation have shifted towards a more long-term customer-centered business model and away from a short-term and risky approach. This creates an opportunity for institutions to move away from solely profitability-centric key performance indicators towards a more customer-centered focus on customer satisfaction, relationships, and behavioral outcomes. However, merely introducing customer-centric strategies is not enough. Unfortunately, relations between financial institutions and their customers have been increasingly distracted by digitalization, where data and technology have become crucial elements

for a long-term relationship. This text and its elements can assist decision-makers in avoiding common pitfalls when designing strategies based on customer-centric KPIs, which ideally also help to: (i) enrich data as much as possible; (ii) evaluate behavioral economics research in the design of incentives; and (iii) dynamically monitor the impact of applied changes on customer emotions, relationships, experiences, and behavioral outcomes since these are not static. We have introduced Assessment-Decision-Implementation-Monitoring to help that and provided a guide on behavioral economics research to address transitions from emotions to relationships, experiences, and behavioral outcomes.

5.6.1. Future Trends

As previously mentioned, regarding future trends, in the US, Canada, and some EU countries and local groups, there are efforts focused on including behavioral economics insights in financial education programs to foster behavioral change. With the intention of integrating these initiatives at the corporate level, certain institutions have implemented behavioral "nudges" into the design of their products. By interacting with our guiding committees for financial education, we are aware that work is already being done from the foundations in various countries to include these behavioral concepts into financial education programs in a long-term horizon, with the aim of generating a positive decision-making impact on financial issues. And it is only a matter of time before the financial sector in these countries, especially credit institutions, international groups, and insurance companies begin to do so, which will entail an adaptation of these nudges to local particularities, as is now the case in the EU.

As a summary, the strategy design model: who needs help?, the decision-making phases, cornerstones (locus of control, executive functions, and limited information), and nudges, allow companies to identify their clients' problems - they don't know the existence of a potential solution that a product could give, they don't invest in it, or they fall short-, highlight their triggers (attitudes, limitations, or easy-to-use information), as well as the strategic work of design, creation, and segmentation of financial products, tailored to their priorities to ultimately boost behavioral change. The introductory phase of the model offers an immediate vision of future trends in integrating behavioral economics into strategic financial business policy. It is perceived as an exciting horizon that, in the coming years, will allow financial services and insurance sector companies to obtain superior profitability, oriented towards capturing real client needs, aligning the financial and non-financial objectives of the various agents involved, and generating a positive impact on society.

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