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**THE INFLUENCE OF EMOTIONS IN STOCK MARKETS**

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*“One of the best lessons for enjoying a fully satisfying life is to abandon a life dedicated to chasing success and start living one dedicated to discovering meaning. And the best way to find that meaning is to ask yourself a simple question: “How can I be of service? All the great leaders, thinkers and humanitarians have given up self-centered lives and, in doing so, have discovered all the happiness, abundance and fulfillment they desired. Joy is born of giving.”*

**Robin Sharma**

## ABSTRACT

We live in the best time in history to learn skills, acquire information and do business. Trading is something that has been with mankind practically since the beginning of civilizations, going from the tablet accounting system of ancient Mesopotamia to the modern and complex cryptographic markets. In the past, accessing the stock markets was a privilege that only a few were eligible for and certainly something completely analogical, today anyone has the option to buy a share of a U.S. company from anywhere in the world thanks to the opening of these markets to a more general public. Thanks to these advances, new aspirations and professions have arisen in the financial sector, such as assets trading, which has gained great strength in the last three years. While there is a claim that 95% of people who practice this activity fail, this paper will analyze the psychological background of this. Through a survey of professionals and amateurs, I have obtained information on the percentage of profitability relating the preferred training channel, I have analyzed the technical and analytical aspect of the participants, their psychology, and possible apparent cognitive biases, and finally the emotions that most commonly arise when trading. Due to high popularity and growth of this industry, it is necessary to know the non-tangible aspect since it agrees with being one of the fundamentals that differentiate a professional from someone who cannot adapt to the markets and therefore make a trading career. In addition to knowing better the risks that an industry of these characteristics entails.

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## INTRODUCTION

### I. Research aim/Objectives

The general objective of the research is to study the operation, psychology, emotionality that traders and investors have in the markets, and the percentage of losing traders, differentiating according to profitability and other variables.

The specific objectives are: to analyze the way traders operate and their relationship with the market, the psychology they present according to their operation, and the emotional management together with the cognitive biases they may have when facing the market, as well as to confirm or disprove the maxim of whether it is really true that practically most people who practice this activity fail, relating it to their profitability, way of learning and studies, and style and type of trading.

With these objectives in mind, a survey has been developed with the methodology explained below.

#### 1.1 Research questions

This thesis focuses on the analysis of the trading market from a retail point of view, and how emotions influence trader's decision making.

- Do the emotions influence the retail markets and if so, how?
- Does the 95% of the retail traders end up failing in the business?
- Do retail traders exhibit cognitive bias patterns when trading?

#### 1.2 Limitations

It is important to note that, due to the industry in question and binding data protection laws, there is a lack of confidential data and information considered by brokers and online trading platforms.

These limitations are accurate and significant data on the closing, opening, and management of trading on these platforms by the traders, which if analyzed reflect how decision making and therefore emotions can influence the market. As this information is confidential and inaccessible, we will compensate for this limitation by using information subtracted from the results of a survey, and graphs corresponding to such decision making in relation to profit-loss-risk management.

#### 1.3 Expected results

The expected results I aim to obtain is that, in fact, as least 90% of the traders either lose their capital or fail to be profitable in the long term, and that this high failure rate is largely attributed to emotional management and trader psychology.

The hypothesis due to the nature of the industry, the type of business it is, the low success rate and the factors to take into account when making a career in retail trading, is to lay the groundwork for a positive outcome confirming the inaccuracy of the markets and the emotional influence reflected in trader's portfolios and accounts, as well as creating awareness and knowledge of the reality and psychological side of this industry.

## **THEORETICAL FRAMEWORK**

### **II. Background and context**

The world of finance is full of possibilities and positions from which to develop as a professional. A concept known as “trading” has become very popular in recent years within the investment and speculation industry. There is frequent confusion of terms between a “trader”, the person whose professional activity is trading, and an “investor”. The main difference between a trader and an investor is the time objective of their financial activity, while a trader seeks short-term gains through speculation on market price movements, an investor seeks long-term returns through investment in a solid, growing company for example. Although both professions are related in nature in the markets, it is necessary to make a contextualization to understand and differentiate this trend of trading.

But what is trading? In summary and well explained by Cruz (2023): “Trading is a type of stock market operation that consists of buying and selling listed assets (assets with sufficient liquidity to do so) in a financial market. Its objective is to obtain a positive profit in a short period of time, a profit that is called capital gain. Trading is characterized by its speculative nature since it involves buying and selling operations with a short duration or time horizon.” (párr. 2)

### **III. History**

Trading, or the buying and selling of financial instruments, is an activity that has existed for centuries. Trading in goods and commodities has been conducted since ancient times and was the precursor to modern trading. Over time, financial markets became increasingly complex and sophisticated, leading to the development of new forms of trading and the emergence of different types of financial markets. It is necessary to know its history to contextualize it.

It is true that the use of clay tokens to keep records of business transactions has been documented in the ancient Mesopotamian civilization of Sumer, now southern Iraq more than 4000 years ago (Gómez & Olivera G, 2021). This tablet accounting system was used to keep track of production, marketing of goods, and debt. However, this system cannot be considered the beginning of trading as we know it today. Modern trading involves the buying and selling of financial products in an organized market, so it arose in Europe in the 17<sup>th</sup> century, specifically in Amsterdam.

One of the first modern financial markets was the Amsterdam Stock Exchange, which was founded in 1602. It was the world's first stock exchange and allowed investors to buy and sell shares in the Dutch East India Company. As financial markets developed, new forms of trading also emerged, such as bond trading and currency trading, the most popular and largest market today. Speculators' visits to the old trading entities known today as "stock exchanges" were becoming more and more common. These speculators sought to sign contracts to buy or sell commodities and then sign opposite contracts to profit from price fluctuations, rather than deliver or pay to receive the goods (Rendón-Ordoñez, 2018). In 1792, a slave market on Wall Street became the New York Stock Exchange thanks to the Buttonwood Agreement. Traders and speculators could buy and sell securities with commission advantages. However, trading was conducted on an "open outcry" system, which was often chaotic (Gómez & Olivera G, 2021).

Almost a century and a half later, at the Bretton Woods Conference in 1944, the International Monetary Fund (IMF) was established, which set an exchange rate system for currencies with the U.S. dollar pegged at \$35 per ounce of gold. This system made the dollar the reserve currency for capitalist countries after the World War II and allowed trading to evolve. Despite this, the gold standard was abandoned in 1971 and the IMF officially mandated a free system of international exchange rates, which led to the creation of the modern foreign exchange market (Gómez & Olivera G, 2021).

With the emergence of new technologies and the increasing importance of globalization, in the 20<sup>th</sup> century online trading finally was opened to the public worldwide. Today, investors can buy and sell stocks, bonds, currencies, commodities, cryptocurrencies, and other financial instruments through online trading platforms from anywhere in the world. This has led to an increase in the number of people participating in trading, including retail investors and independent traders.

In summary, the history of trading is long and rich, and has evolved significantly over the centuries. From the commodities exchange in the Middle Ages to online trading and new technologies, trading has gone through many changes and will continue to evolve as new technologies and forms of investment are developed.

#### **IV. Why is trading becoming so popular as a digital alternative?**

As has been mentioned, trading is neither an emerging nor new practice, it has been around for many years, but it has certainly become more popular in the last few years. Who wouldn't like to be able to live off their income and investments? Trading has attracted the attention of many people in search of improving their situations and lives because of the numerous advantages and benefits that this practice offers. As technology has evolved and digital processes and practices have become more integrated, trading has been no less as a digital alternative and has also been spreading, to which analysts put forward several reasons for this: the easy access to computers, online systems, networks and platforms that reduce the entry barrier to this activity, a fact that did not happen before, allowing anyone to start their career as an investor, trader, or operate in the financial markets; the wide range of open markets to operate at any time of the day and any day of the week; the low commissions offered by some platforms and brokers; the high volatility of the markets as there are no intermediaries allowing buy or sell instantly; and being a substantially interesting business for the profits that can be generated (Gómez & Olivera G, 2021).



It is undeniable that thanks to the COVID-19 pandemic, a whole process of digitalization has accelerated, including dynamics such as teleworking and even the replacement of some jobs, and this together with the reasons mentioned above, has generated a great interest in digital alternatives such as trading, which has become one of the most searched and sought-after options. This can be clearly seen in the following graph, which represents the evolution of the search for the word “trading” in Google from January 2019 to May 2023, showing a steady increase in popularity with a peak point in January 2021.



**Image 1.** Source: own elaboration

When a trader can make his analysis, and then withdraw and get money from the market month after month in a consistent way, it is logic to think that he has made it to the perfect job, because of the liberties and advantages this business provides; liberty of time, liberty of location, liberty of movement, financial liberty... but there is something that maybe not all the traders, specially new ones take into account; the obstacles that need to be overcome that lead to professionalism and good performance in the financial markets as an asset speculator. These obstacles are mostly related to the psychological factor, with the person who makes the decisions, the trader, and not so much with the technical factor, the trading. The reason for this is that, in the trading business, not losing is not a possibility, and due to the relationship of loss to literary and social terms, it is common for certain emotional traumas to be generated in different degrees, which usually lead to emotional decisions, causing, paradoxically, the feared losses. For a trader, losing in the market must be something normal and conceived (Rendón-Ordoñez, 2018).

There is the famous maxim ‘only 5% of the traders are successful or profitable’, or ‘95% of traders lose everything in the first year’. One theory about this is that trading is perceived as a quick and easy way to capitalize and achieve the desired financial freedom quickly, since you only need to acquire analytical skills. And the reality is far from these beliefs, although yes, it is true that trading is one of the best paid jobs and that can offer you more freedom, it is also one of the most difficult, not because the activity is arduous and complex, but because of the high percentage of people who fail to progress and maintain over time. Well, like everything else, if something offers you advantageous returns and freedoms, it is also going to cost you to get it, because acquiring the skill of trading and mastering it requires time, patience, and above all discipline. Not to mention the key factor in this business which is learning to manage emotions and reprogramming the brain, more on this later. The following is a table of estimated successful traders.

Day traders exitosos	1 año	Largo plazo
Acciones	13% (1)	0,27%
Futuros	1,6% (3)	0,25% (estimación)
Forex y CFDs	1% (4)	0,20% (estimación)
Opciones binarias	0%	0%
Criptomonedas (sin apalancamiento)	Similar a acciones	Similar a acciones
Day traders perdedores	95%	99,8%

Image 2. Source: MejorBrokerdeBolsa

## V. Technical aspects of trading

### 5.1 Which markets do traders work in?

There are several different markets in which traders can participate, and each one has its own characteristics and risks. Here are some of the most common markets for trading:

1. Stock market: A stock market is where shares of publicly traded companies are bought and sold. Traders can buy and sell individual stocks or invest in index funds that track the performance of an entire market.

2. Foreign exchange: Or “Forex”, it is a decentralized global market dedicated to currency trading. Its main purpose is to provide the necessary hedging for the flow of money generated from international trade. It is the market with the largest volume of all, with approximately five trillion dollars traded daily (Forbes Advertorial, 2018). Traders can speculate with the compared prices of two currencies. In this market the trader is always buying, for example in the euro-dollar chart; if the trader opens a ‘long position’ refers he is buying euro with dollar, by the other hand, if the trader opens a ‘short position’ refers he is buying dollar with euro, but it is always purchased based on the reference value of a currency, in most cases the dollar. This is the market with the highest daily volume of all the markets.

3. Commodities: In this market is traded everything related with raw materials such as petrol, metals like gold, agricultural products... etc. This market also has a high daily negotiation volume (Quinaluisa-Molina et al. 2020).

4. Cryptocurrencies: This is the newest market, where digital decentralized currencies like Bitcoin are traded. This market is known because of its high volatility due to the sensitivity to news, and total market volume.

### 5.2 How does retail trading work?

Retail trading refers to the practice of individual investors buying and selling financial instruments, such as stocks, bonds, currencies... through a brokerage firm or online trading platforms. Here are the basic steps involved in retail trading:

1. Open an account: The first step to initiate in retail trading is to open a trading account with a brokerage firm, prop firm, or online trading platform. This process includes the provision of personal data such as name, address, identification number, as well as funding the account with cash or financial assets. Prop firms work a little differently because what they offer is their own capital in exchange for a percentage of the profits and an initial amount.
2. Choose a financial instrument: After opening and funding the account, the trader has the option to select the financial instrument he/she wishes to trade. This process may involve exploring various options such as stocks, bonds, currencies, cryptocurrencies... to choose those that best fit his investment strategy and style.
3. Place an order: The process of buying or selling a financial instrument requires the trader to place an order through his broker or online trading platform. This order must include the amount of the instrument to be bought or sold, as well as the price the trader is willing to pay or receive for it.
4. After the trader has placed the buy or sell order, the broker or trading platform will proceed to execute the transaction on his behalf, buying or selling the financial instrument at an agreed price. The result of this transaction will be reflected in the trader's account balance.
5. Once the operation has been executed, the trader must constantly monitor his investments and manage his portfolio. In this sense, it is essential to establish stop-loss (maximum established loss point of the operation) to minimize losses, diversify positions to reduce risk and adjust them according to variations in market conditions.

### 5.3 Types of trading

There is a fundamental difference between the terms “type of trading” and “style of analysis”. Trading types refer to the different strategies used by traders in the markets. On the other hand, style of analysis refers to the different methods and tools used by traders to execute the trades and make decisions. The main types of trading are:

1. Scalping: The most dynamic and fast one since traders seek to take advantage and profits of very short movements in the price. It is based on the smallest time frames, with each operation lasting even minutes. It is common for a scalper to open different positions in the same trading session.
2. Day trading: It is based on buying and selling financial products and closing those transactions on the same day, without keeping positions open overnight. The objective of day trading is to profit in the same day by taking advantage of short-term price movements.
3. Swing trading: Traders seek to profit by capturing swings in the prices. The goal of swing trading is to take advantage of short- and medium -term trends, which can last from several days to several weeks.

4. Position trading: This is the closest one to investment, there is a fine line that separates these modalities, and that is that position trading tries to take advantage of the long-term movements holding positions. Operations with this strategy can last weeks, months, and even years.

5. Algorithmic trading: An automated trading strategy in which a trader programs a computer with several rules to the computer make the decisions instead of the trader. These computer programs can be designed by individuals, trading companies, or by scientists and mathematics specialists. These programs usually use advanced data analysis techniques such as machine learning, neural networks and so on. This is the most common used by hedge funds.

### 5.4 Analytical trading styles

On the other hand, the most common analytical styles are:

Technical analysis: Also known as “chartist analysis”, is an approach used by traders to analyze market behavior and make trading decisions. It is based on the study of price charts and market data to identify patterns and trends in the price movements. Technical analysis is based on the premise that asset prices reflect all market information, including economic, political, and psychological factors. Therefore, traders using technical analysis focus on analyzing price movements and historical patterns to make predictions about future market movements.

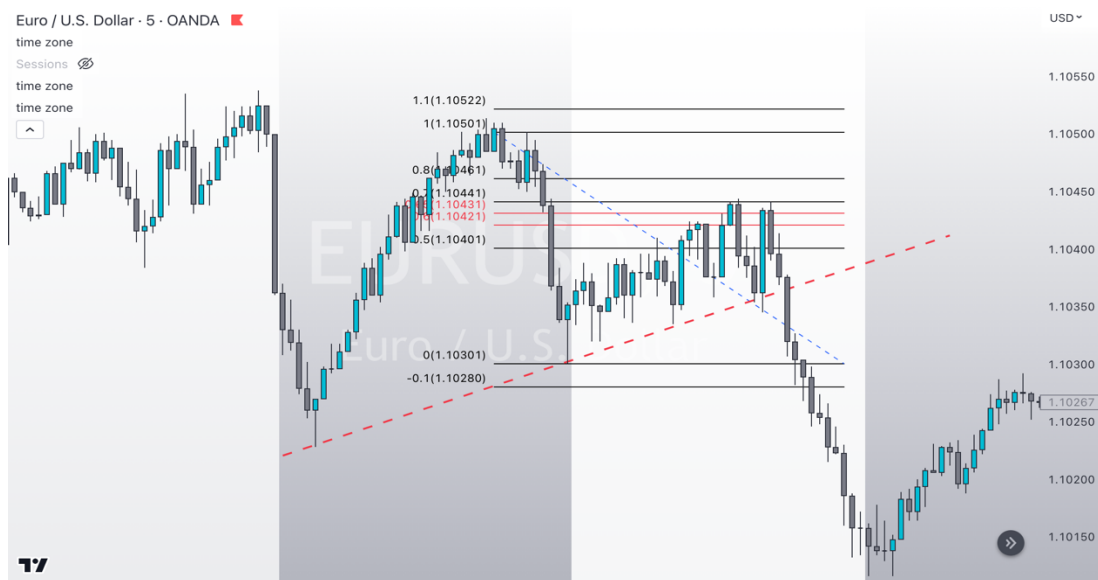


Image 3. Source: own elaboration

Some of the most common tools used in technical analysis include price charts, technical indicators, candlestick patterns and volume analysis. In short, technical analysis is a market analysis technique that relies on the study of price charts and market data to identify patterns and trends in price movement. It is used to make predictions about future market movements. This analytical style is the most used by retail traders. Technical analysts are those speculators who analyze the market using statistics, probability, mathematical models, graphical tools, and indicators... among others. Once

all the rules of the strategy are met, the trader must enter his orders as his strategy indicates (Rendón-Ordoñez, 2018).

**Fundamental analysis:** This is a type of market analysis that evaluates the financial stats and inherent value of a particular asset, such as a commodity, currency, or company. The approach is based on examining economic, financial, and business-related factors that could impact the asset's value over the time. Fundamental analysis considers variables such as a company's financial statements and ratios, government policies, the macroeconomic state of the country, and industry-specific trends, among other factors. The goal of traders utilizing fundamental analysis is to identify assets with healthy financials and growth potential, purchasing shares with the belief that their value will appreciate over time.

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Date	9:37am	Currency	Impact		Detail	Actual	Forecast	Previous	Graph
Sun Apr 30									
Mon May 1	3:45pm	🇺🇸 USD	📅	Final Manufacturing PMI	📊	50.2	50.4	50.4	📈
	4:00pm	🇺🇸 USD	📅	ISM Manufacturing PMI	📊	47.1	46.8	46.3	📈
		🇺🇸 USD	📅	ISM Manufacturing Prices	📊	53.2	49.4	49.2	📈
		🇺🇸 USD	📅	Construction Spending m/m	📊	0.3%	0.2%	-0.3% ↴	📈
Tue May 2	8:00am	🇪🇺 EUR	📅	German Retail Sales m/m	📊	-2.4%	0.4%	-0.3% ↴	📈
	9:15am	🇪🇺 EUR	📅	Spanish Manufacturing PMI	📊	49.0	49.8	51.3	📈
	9:45am	🇪🇺 EUR	📅	Italian Manufacturing PMI	📊	46.8	49.4	51.1	📈
	9:50am	🇪🇺 EUR	📅	French Final Manufacturing PMI	📊	45.6	45.5	45.5	📈

Image 4. Source: own elaboration

Additionally, fundamental analysis can be utilized to determine the intrinsic value of a currency or commodity, such as analyzing the interest rates, inflation, economic growth, and political stability of a country issuing currency. Overall, fundamental analysis is widely used by long-term investors and is viewed as a complementary method to technical analysis, which focuses on analyzing historical patterns and price movements. It is common to understand the fundamental analysis as a complement for the technical analysis. Fundamental traders have the belief that the technical analysis is based on past events, therefore it is not efficient to make decisions based on the past. Governments typically release a significant portion of their economic data on scheduled dates, which makes it possible to compile “economic calendars” (Quinaluisa-Molina, Talavera-carvajal, & Garrido-Jarrin, 2020). Traders can use this calendar to prepare their analysis with pages like [forexfactory.com](https://www.forexfactory.com) as it can be seen in the previous image. Fundamental analysts are those who base their decision making on news, macroeconomic events, and sometimes even insider information, which is illegal (Rendón-Ordoñez, 2018).

**Institutional or “Smart Money” analysis:** It is focused on the activity of institutional investors in the financial markets. Institutional investors are large investors such as banks, pension funds, mutual funds, and insurance companies that have a large amount of capital to invest in financial markets. Institutional analysis seeks to identify the transactions that these institutional investors undertake, as their activity in the market is considered to have a significant impact on asset prices. For example, if a large investment fund starts buying shares of a company, the price of the shares is expected to increase due to additional demand. Institutional analysis may involve tracking institutional investors positions through mandatory regulatory reporting, monitoring fund flows, or identifying trading patterns.



Image 5. Source: own elaboration

This type of analysis can help investors make informed investment decisions by providing insight into the positions of large investors in the market. From the point of view of a retail investor, using this style of analysis, metaphorically, it is to follow the traces left by the institutions to take advantage of their movements, like a remora following the swimming of the whales. These traces are orderblocks, orderflow, price imbalances, bid and ask points, and others. In summary, institutional trading or Smart Money analysis is an analytical approach that focuses on the activity of institutional investors in the financial markets, with the objective of identifying the trades they make and understanding how they affect asset prices. This is the least known and practiced style, and yet being a retail trader, it is the closest to how it is done in the investment banks in a professional way.

Trading is something that has been with mankind for practically all of history, however it has now evolved to the point where there is an entire industry dedicated to it from the stock market point of view.

## VI. Psychology and emotions in the probability business

Understanding and having a background of everything that trading means and how it works, one can then understand that it is a business of probabilities rather than hit and miss, because the trader does not have everything to always win, it is a utopian fact that the vast majority, especially beginners, yearn for, similar to the gold rush, with the difference that in this case, that gold is unattainable. And unlike what is usually said, the market is not efficient, in the academic sense of the concept, because despite the theory and mathematical models or probability, a variant enters the formula that ruins all this, and it is psychology, emotional management, and the human brain, which at the end of the day is the one that ends up making decisions, and is almost completely unpredictable in practice. As Ruben Darío explains in the ISSN magazine, according to successful investors in history, for a novice trader, the success is going to be determined by one principal factor, the emotion and psychology management, instead of the technical and analytical factor, which is also important, but not enough. However, this concept is challenging for most individuals to embrace, resulting in the loss of accounts or

funds partially or totally in the first days, weeks, or months of operation (Rendón-Ordoñez, 2018).

Trading is a very lonely business, and precisely that makes those who start a career as a trader every time you sit to operate faces himself, rather than the graphs themselves, as the analysis of operation is very easy, and is often affected by self-sabotage that people perform themselves. There is a thin line that separates trading with gambling and casinos, and is that at the psychological level similar things happen, it is very easy to fall into despair when you are on a losing streak, and fall into excessive euphoria when you are on a winning streak, in both cases you are a victim of a gambling addiction at different levels depending on the person and the situation, but it is certainly something that anyone who has faced the markets has felt at some point in his career (Rendón-Ordoñez, 2018). Therefore, the most outstanding skill of a trader is cold bloodedness.

Mark Douglas, in his book *Trading in the Zone*, argues the possible psychological, behavioral, and educational aspects that lead to such a high percentage of unprofitable people. What is the real reason for people who are or have been successful in their lives to fail so abruptly in trading? Is it an innate ability, or can you acquire and develop it? Mark says that the only thing that is important to become successful is acquiring the trader's mindset. While this sounds easy, it is something that contradicts the way we have been taught to live and see the world, making the process more complex. The 95% of failures become realistic when you think about the way people live, how life is structured from social influences on the education they receive. The competencies and skills that people learn as a child by getting good grades, career development, and the social skills they acquire through interpersonal relationships, like almost any skill that is learned throughout life, turn out to be inappropriate for trading. Mark asserts that traders must learn to think in terms of probabilities and to set aside any other mentality of what it is supposed to be like to succeed in almost any field (Douglas, 2001).

To understand this in a more academic way, it is necessary to investigate and engage somewhat with neuroscience and anatomy. Scientific studies support that the brain is divided into distinct parts, each of which has a specific function, being in this case the amygdala the part of the brain related to emotions and emotional management, especially survival emotions such as fear. According to the definition provided by Anthony Wright of the McGovern Medical School, the amygdala is the center of operations for emotions, emotional behavior, and motivation. To locate it, if the brain is inverted, the extension of the structure that connects to the hippocampus is known as the uncus. When the uncus is removed, the amygdala, located next to the anterior region of the hippocampus, becomes visible. Like the hippocampus, the amygdala is characterized by extensive pathways that facilitate bidirectional communication, comprising both outgoing (efferent) and incoming (afferent) fibers (Wright, 2020). Ledoux said that the amygdala is the subcortical structure that has been most consistently related to emotion in both animals and humans (Ledoux cited by Navarro & Roman, 2004).



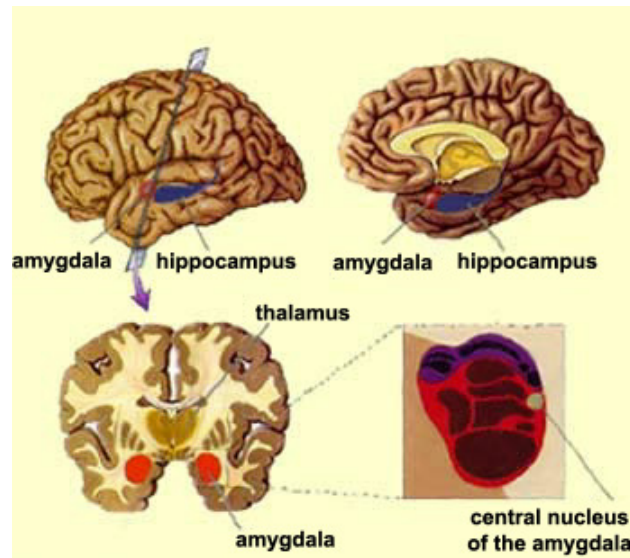


Image 6. Source: thebrain.mcgill.ca

So much so that the identification of the amygdala as the brain region involved in emotions dates to 1937 and 1939, with the classic studies carried out by Klüver and Bucy in monkeys (Klüver and Bucy cited by Navarro & Roman, 2004). These investigations observed that bilateral removal of the anterior temporal lobe in these animals triggered reactions such as anger, fear, submissiveness, hyperorality, changes in feeding patterns and hypersexuality. Later, Weiskrantz was able to further refine and attribute these changes to amygdala lesions (Weiskrantz cited by Navarro & Roman, 2004). From a functional point of view, the amygdala's job is the emotional processing of external stimuli, as it is connected to receiving stimuli from all sensory association areas. It is this convergence of anatomical connections that places the amygdala as the structure responsible for processing stimuli and relating them to reinforcement or punishment (Jones et al. cited by Navarro & Roman, 2004). The amygdala, as an integral component of the brain's emotional circuitry, particularly contributes to the regulation of negative emotions like fear, anger, or disgust. Its involvement in the emotional response of traders facing risky or uncertain situations is noteworthy. Emotional reactions have a direct impact on the capacity to make logical and impartial decisions, ultimately influencing the trading results.

Based on studies conducted in the field of cognitive psychology and thanks to laboratory experiments, the psychology of finance shows that traders do not reach the assumption of formal rationality, or at least as classically suggested (Ackerloff et al. cited by Haro, 2014). When operating in financial markets and making decisions, emotions come into play that bias traders' behaviors, generating certain cognitive biases common in this business, consequently affecting the outcome of operations and investments in the short, medium, or long term; this will be discussed in more detail below.

Something that characterizes financial markets throughout history are the competitive spirals that grow in them, seeking higher and higher returns in the shortest possible time (Kindleberger & Aliber cited by Haro, 2014). These spirals, also known as "bubbles", are directly related to technological evolution and development: more volatile and profitable products in a progressively shorter time and gradually increasing levels of risk, one of the most recent examples being cryptocurrencies. Over time, there has been a gradual decline in external control over financial market participants, such as regulation, coercion, or evaluation. As a



result, more importance has been given to self-control or belief in the self-regulatory capacity of the participants themselves, financial decentralization (Haro F. A., 2014).

It is already understood that trading is a business of probabilities, and in any case, of chance, but above all of probabilities, where a meaning of 'sports competition' is understood, and there is a statement that says that the mentality of a trader equates to that of a professional athlete. The trader's objective is none other than to use all the tools at his disposal to minimize the probability going against him, or in other words, to get as close as possible to a positive probability for his analysis. Returning to the term of the competitive spiral to achieve the best returns in the shortest possible time or to obtain the most profitable operations, in this competition we can distinguish several emotions related to distinction and pride, or 'always being right'. As the director of a stockbroker in Paris argues, the feeling of winning or being right having achieved a feat in such a competitive environment accompanies the fact of wanting to stand out above others (Haro F. A., 2014). The representation of markets as a game or competition leads to an environment of interconnectedness, and a lack of certainty as to the number of participants. This context generates a range of emotional experiences that oscillate between euphoria and dismay. These extremes of the emotional spectrum are the limits that traders face, and striking a balance between them is a skill that every 'participant in this game' should seek to develop (Haro F. A., 2014). All this is very well reflected, according to Pixley (cited in Haro, 2014, p.246) in the words of a London stockbroker when, in describing his job, he states, "It gets your adrenaline pumping. You can feel like you're in misery and then be ecstatic. You get it wrong, of course, you get it wrong, and you get depressed. But my God when things change! Every day is a challenge."

This constant relationship between euphoria and consternation is directly related to market trends and oscillations. If the trader is in a trend that is favorable to his analysis and therefore to his results, he will be surrounded by euphoria, if on the other hand the trend is contrary to his interests and probabilities, it will be dismay that invades him (Haro F. A., 2014). What has been generalized as a standard emotion in the markets is fear, caused mainly by two factors: the fear of losing, and the fear of missing out (FoMO).

The fear of losing is primarily related to the uncertainty of markets and trends; markets, despite being in the game of probability, are unpredictable and that is undeniable, unless a trader has privileged information, which is already known to be illegal, it is impossible to predict with mathematical accuracy the future movements. Secondly, the fear of losing is promoted by the ego, people are usually not prepared to be wrong about their own ideas, because cognitive dissonance occurs, therefore and paradoxically, a trader who is afraid of losing will be by the fact that his ego prevents him from accepting being wrong, making that fact of not accepting the error is what ends up leading him to have to lose. Pixley (cited in Haro, 2014, p.246) comments on how an investment banking manager with more than a decade on Wall Street expresses himself "You think you've analyzed a trade... and you think you've covered all the possibilities, and nothing should go wrong. Then, four hours after you've bought a stock, it behaves in a way it shouldn't. Instantly, your self-confidence evaporates and you're back in "fear mode". Any investment manager who has lived through a couple of cycles, if he is really honest with himself, will admit that most of the time he lives in fear."

The second factor, fear arises in relation to the other participants in that market and is linked to competition and the loss of opportunities when everyone is taking advantage of a certain movement, oscillation, or trend. The main event with this factor is the fact that traders

or investors do not accept losing a possible opportunity, for fear of not finding another similar one and therefore having to keep waiting for that new opportunity, which would not only imply to stop having certain benefits, but also to fuel the impatience that can be felt when operating the financial markets. Trading, making a metaphor, is very similar to sport fishing; the process until a fish takes the bait can become boring, however the emotions when the fisher notices the tug on the rod make that wait worthwhile and if possible, it is intended to shorten it.

Relating these concepts, there is a financial self-help market that is resorted to for the purpose of avoiding emotional trading. The concept of emotional trading implies public acceptance that emotions do indeed exist in the financial markets. And even if they are present, the objective is not to eliminate or hide them, because it is humanly impossible, unless algorithmic trading is used and it is a robot that executes the operations, so the objective is to learn to calm them and manage them so that they do not influence so abruptly in the decision making and therefore in the result of the trader's investment accounts. In other words, the aim is to build a system of reflexive self-control of emotions (Haro, 2006). Emotional management leads to what should be the real goal, a truly professional trading away from the primitive influence of the amygdala: "You can never control the market, but you can learn to control yourself" (Elder, 2004, p.49).

In this context, emotional self-control manifests itself as an extremely intense and extended form of rationality that completely dominates the field of decision-making. To reach this point of rationality, Ampudia de Haro exposes 3 steps:

- 1 A prior analysis and study of the market from a technical and fundamental point of view.

- 2 Planning the management of funds in three stages: survival at the beginning, increasing profits or keeping in balance in the intermediate stage and obtaining exponential profits at the end.

- 3 Establishing personal trading and operation management rules, when and how to exit the market or how far to hold a losing trade, these rules must be respected independently of any other factor, thought, or feeling.

The main barrier to prevent emotional management from moving the trader away from profitability is discipline, understood as self-imposed rules adapted to his operations and their strict compliance. It is common for emotions such as anxiety or fear to manifest themselves when closing a losing operation: the investor, as has already been explained, because of ego, always thinks he is right and therefore gets an assured profitability from his operation and feels fear of recognizing that he is losing money. In the same way, he usually rushes to close the operation if it is a winning one, thus losing a higher profit, or worse, his own loss/profit ratio (Haro F. A., 2014).

Knowing how emotions can influence trading, it is interesting to point out and explain the main possible cognitive biases derived from these emotions when practicing this activity. Since the possibility and the list is objectively numerous, only the main or most common ones in relation to traders will be pointed out.

**Overconfidence:** this bias refers to altering reality by overestimating one's own abilities and skills above objectivity and other people, both when predicting situations and making decisions (Moriñigo, 2019). In general, when a person performs an activity with some hope of obtaining a benefit or achieving a goal, he or she tends to believe and consider that his or her abilities and skills surpass anything else and that therefore he or she will be able to achieve it or overcome any obstacle by the mere fact of believing it. The risk involved in this confirmation bias in trading is that due to the overestimation of their capabilities compared to that of others or the market itself, the trader may take undue risks such as trading without a stoploss, or stop loss, causing their results to be highly detrimental. This bias has much to do with the ego state.

**Confirmation bias:** this bias indicates that depending on their beliefs and thoughts, a person is more likely to give or not to give credibility to a specific information if it is aligned with their previous ideas. This type of bias is used and has been used a lot throughout history, for example in the field of politics (Moriñigo, 2019). For example, if a person has a religious ideology and does a search in a browser on credible evidence of the existence of God, he will give more veracity to those articles that talk about how God has left evidence of his existence on earth, rather than those scientific articles that may take an opposite direction. This type of bias can bring consequences to the trader since the information on which he bases his decisions in the market is not objective, therefore he is not making decisions trying to minimize the negative probability, but reinforcing his own ideas, entering again in the point of always wanting to be right.

**Remorse aversion:** As Joaquin T. Moriñigo points out (Biases in behavioral finance and automatic trading, 2019, p.19) this bias can be understood in a very simple way through the sunk cost trend fallacy. This fallacy consists of continuing to invest time, money, or energy in something that is guaranteed to be a losing bet, solely because of the fact of having invested a previous effort or cost that cannot be recovered. That is why it can be so complicated, for example, to leave a harmful relationship, close a business that does not work out, leave a professional career that does not please, or in the case of trading, close an operation or sell an investment that is generating losses due to the initial implicit cost which the trader does not want to assume. This can cause a vicious circle, because the more you invest in something, the harder it is to abandon it, making you spend even more resources on it, preventing you from moving on to something more fruitful (McKeown, 2014).

**Anchoring bias:** consists of prioritizing and giving more strength to the information obtained at the first moment when comparing it with new information. Hence the name, since it "anchors" the opinion and decision making to the first information (Moriñigo, 2019). Anchoring bias in trading occurs when traders are influenced by arbitrary reference points or anchors when making investment decisions. For example, if a trader remembers that a company's stock peaked at \$100 per share in the past, he is likely to set a buy limit based on that anchor and be willing to pay a higher price. This can lead to biased decisions and missed opportunities, negatively affecting results by basing decisions on past benchmarks rather than objective fundamentals.

## METHODOLOGY

### VII. Organization and background of the methodology

#### 7.1 Research Design

Given that the objective of the study will be to analyze possible behavioral biases and emotional patterns as well as the percentage of failure in traders at the retail level, a non-experimental design will be applied in a cross-sectional manner, considering that the research topic has sufficient theoretical support, a descriptive type of research will be carried out to detail the study phenomenon.

As Hernandez, Fernandez and Baptista (2014) explain, non-experimental research is based on research in which variables are not interfered with but are studied directly as they occur organically and naturally, and then analyzed. These same authors state that cross-sectional research designs "collect data at a single point in time. Their purpose is to describe variables and analyze their incidence and interrelation at a given moment. It is like "taking a photograph" of something that happens" (p.154).

#### 7.2 Research approach

The present work will be designed under the methodological approach of the mixed approach, since this is the one that best suits the characteristics and needs of this research.

The mixed research process involves the collection, analysis, and interpretation of qualitative and quantitative data that the researcher has deemed necessary for his study. This method represents a systematic, empirical, and critical process of research, where the objective vision of quantitative research and the subjective vision of qualitative research can be merged to provide answers to human problems (Ortega, 2018).

The technique used for the mixed approach will be the survey, to describe the influence of emotions and cognitive biases of traders and retail investors.

#### 7.3 Research paradigm

The research will have social constructionism as its epistemological basis, and the scientific method as a critical guide for its development and elaboration. The decision of this paradigm is due to the fact that it is the one that best adapts to the characteristics and needs of the research.

In this research, a social constructionist epistemological approach is adopted. This approach is based on the premise that knowledge is not an objective representation of reality, but a social construction influenced by the interaction between individuals and their

environment (Farias, 2023). From this perspective, it is recognized that financial phenomena, such as stock markets, are socially constructed products and that emotions and cognitive biases play a significant role in their formation and dynamics.

Therefore, the social constructionist paradigm and its consequent quantitative approach will allow measuring the perception and emotional influence on rational decision making by the surveyed professionals and freelancers.

#### 7.4 Research methods

In the present work, the following research methods will be used:

1. Deductive method: it will be beneficial to formulate the problem statement, as well as to write and verify the working hypothesis and the conclusions of the research.
2. Historical method: it will be useful in the elaboration of the research hypothesis, the writing of the background of the work, and the theoretical framework.
3. Analytical method: it will be important in the delimitation of the subject, drafting of the problem statement, research questions, objectives, justification, theoretical framework, elaboration of the information collection instrument and interpretation and conclusion of the data obtained.

#### 7.5 Population

The study population is defined as a “limited and accessible set of cases, which will form the reference for the choice of the sample, and which meets a series of predetermined criteria. It is necessary to clarify that when we speak of study population, the term does not refer exclusively to human beings but can also correspond to animals, biological samples, records, hospitals, objects, families, organizations, objects, families, organizations, etc.,” (Gomez et al., 2016)

The study population will consist of 50 professionals and retailers, including traders, brokers, amateurs, investment fund managers and aspiring investors.

#### 7.6 Sample and sampling

Pineda, Alvarado, and Canales (1994) define the sample as "a subset or part of the universe or population in which the research will be carried out with the subsequent purpose of generalizing the findings to the whole" (p. 108). Lopez (2004) also contributes that "there are procedures to obtain the number of sample components such as formulas, logic (...) the sample is a representative part of the population" (p. 69).

For this work, the non-probabilistic sampling method will be used, which according to Pineda, Alvarado, and Canales (1994) "is characterized by the fact that the researcher selects

the sample following some criteria identified for the purposes of the study". In this case, by surveying professionals in the financial sector, such as brokers or traders, or people who aspire to do so, the aim is to obtain a specialized and expert perspective on the subject. Therefore, selecting participants based on their experience and knowledge in the financial sector would be more relevant to the research objectives.

In this way, people who meet the professional and/or personal characteristics will be carefully requested to participate in the research using means such as WhatsApp, LinkedIn, forums, Discord, among others, thus forming the sample for those who decide to participate.

### 7.7 Data collection techniques

The Lifeder editorial team (2021) defines data collection technique as "mechanisms and instruments that are used to gather and measure information in an organized way and with a specific objective. They are usually used in scientific and business research, statistics and marketing."

The data collection technique to be used in this research will be the survey, as it was mentioned before, and will be designed with the Google Forms platform, since it is a simple and useful tool for both data collection and its subsequent analysis and presentation. The survey can be found in Annex II.

According to Garcia Ferrando (cited by Repullo et al., 2003) the survey is "a technique that uses a set of standardized research procedures by which a series of data is collected and analyzed from a sample of cases representative of a larger population or universe, from which it is intended to explore, describe, predict and/or explain a series of characteristics" (p. 527)

### 7.8 Data processing techniques

The technique to be used for the data processing of this research will be descriptive statistics, which Fernandez, Cordero, and Cordoba (2002) describe it as a set of techniques whose purpose is to define and reduce the data obtained in an intelligible form, by means of tables, graphs... among others.

### 7.9 Data processing tools

Regarding the tabulation of the data to be obtained from the survey to be applied to professionals and retailers, including traders, brokers, amateurs, investment fund managers and aspiring investors, the program Microsoft Office Excel for Windows will be used.

### 7.10 Survey

The survey consists of four sections: profitability (relating whether the respondent practices trading as his/her main activity or not and determine the percentage of losing traders), type and style of trading, psychology, and emotionality, to meet the objectives described above. Also, there are additional sections, where personal data and answers are requested from respondents as their main source of study about trading, or their opinion, perspective and

personal practice with certain issues and concepts, in order to segment and relate objectives with the results looking for certain patterns and thus complement and develop in a more detailed way the answers and results.

The first section of the survey is dedicated to the main training channel and the profitability or professionalization of the activity.

Questions are then asked to determine the style and type of trading, including and specifying the market(s) in which the respondent usually trades.

The third section is devoted to a series of questions with both practical examples and closed-answer questions, posing certain problems to understand the psychology that traders have when trading or investing, as well as their possible cognitive biases and habits or preferences in the markets.

Finally, the fourth section is dedicated to know the emotional paradigm that traders may have when trading, asking directly for the emotions with which they most identify themselves when facing an investment or trade.

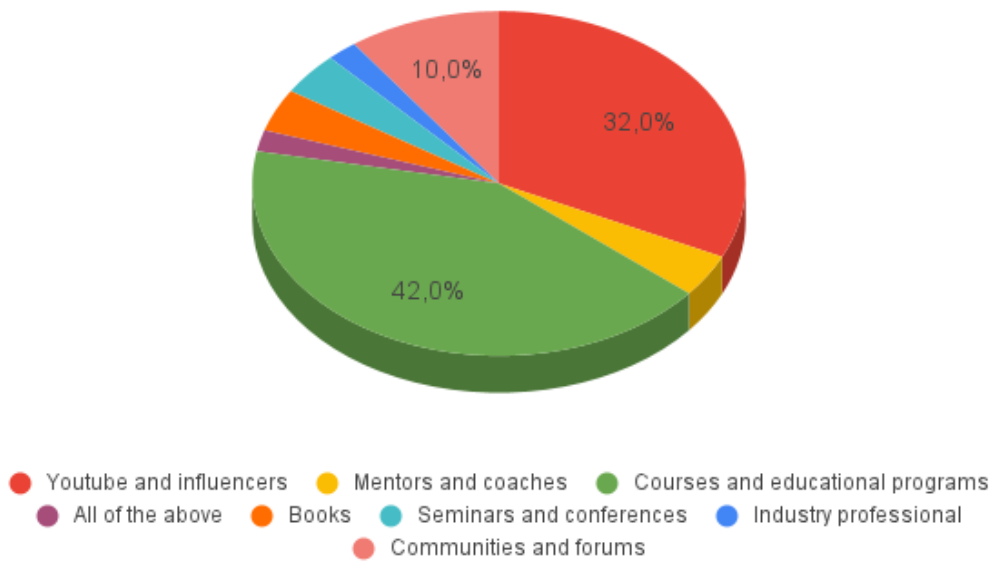
## **VIII Results and analysis**

This section will analyze the responses and data obtained through the survey. All the data have been analyzed with Microsoft Excel, the tables of this program can be found in Annex I. The analysis begins by looking for the profitability of the respondents by filling it with the main source of studies or knowledge, it will continue by commenting on the technical and analytical part of the traders as the market they operate or the type of trading they use, and then analyze the psychology implemented from the theoretical point of view, as practical and underlying cognitive biases. Finally, the emotions and the opinion that the respondents have about psychology and emotions in trading will be observed.

### **8.1 Profitability percentage**

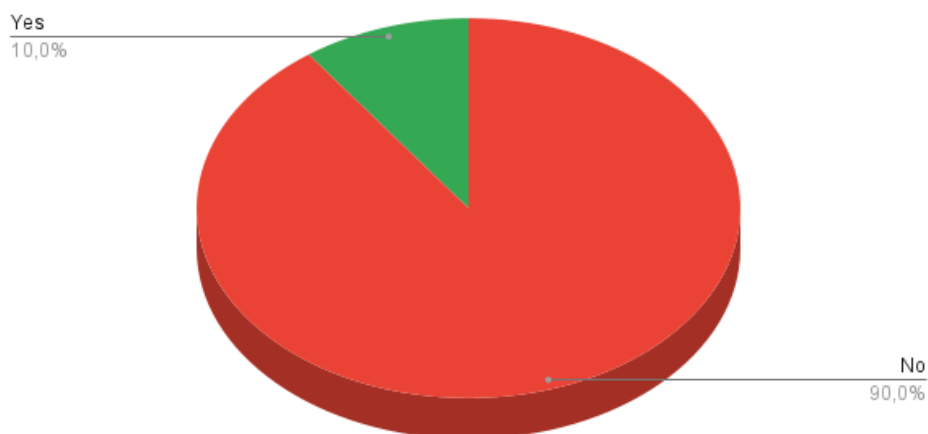
Firstly, it can be seen in **Graph 1** that when asked about the main learning or training channel there is a majority in courses and educational programs (42%) against all other options of the total responses, followed by YouTube and influencers (32%) to learn how to operate the markets.

**Graph 1:** Main training channel



If we relate these results to the profitability of the respondents (**Graph 2**), we can deduce that both the levels of study and the content circulating in trading-related circles are not of high quality, or at least not enough to make a living from trading and investments, as the minority of respondents (10%) currently live from trading and investments, thus responding one of the objectives of this research and reinforcing to the sum that 95% of traders are not profitable.

**Graph 2:** Are you profitable and currently living from trading/investments?

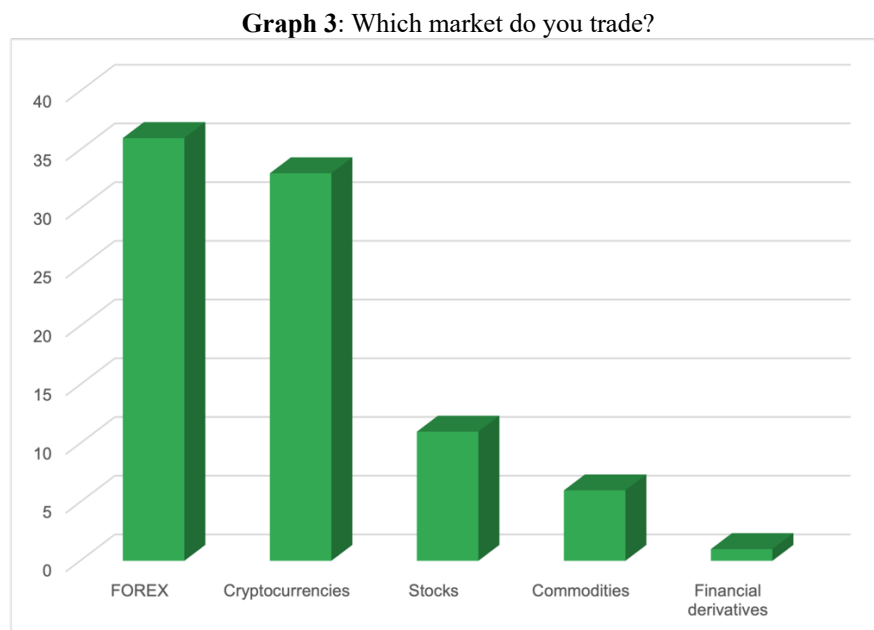




## 8.2 Technical aspect of trading

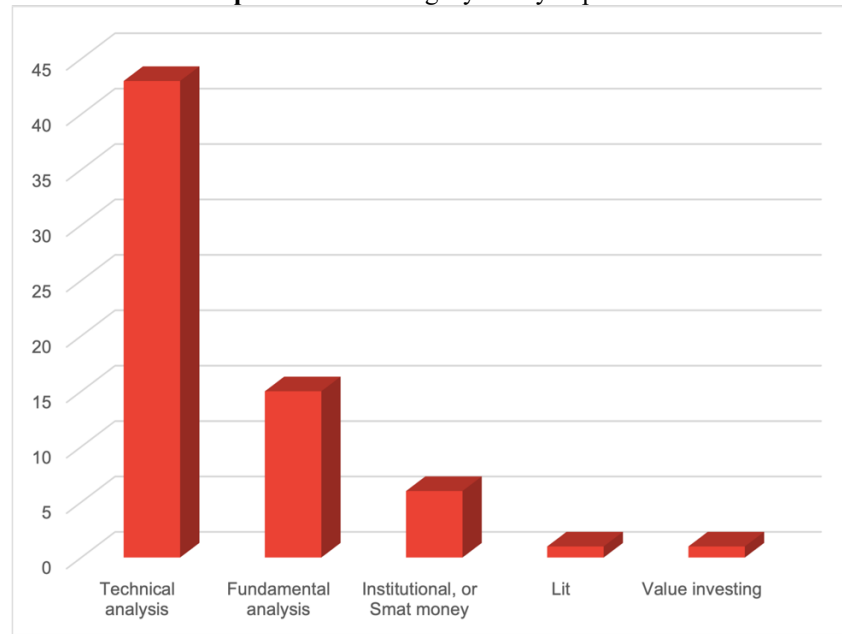
We will now analyze the more technical and analytical aspect of the respondents.

We note that among 50 people trading and investing surveyed, the most recognized and traded market is the foreign exchange market, or FOREX (**Graph 3**) since almost three quarters (72%) of the responses are positioned in this market, together with the cryptocurrency market which accounts for more than half (66%), results which are far from the other options when it comes to investing and trading, since the next most recognized is the stock market (22%), far behind the first two.



Next, we analyze the results in response to the trading style (**Graph 4**), a very distinctive and important part when analyzing the markets, because, as explained above, this corresponds to the tools that respondents prefer and choose when analyzing and executing trades. It can be seen visually that the vast majority opt for a technical analysis style (86%), a figure that corresponds closely to the percentage of unprofitable traders (**Graph 2**)

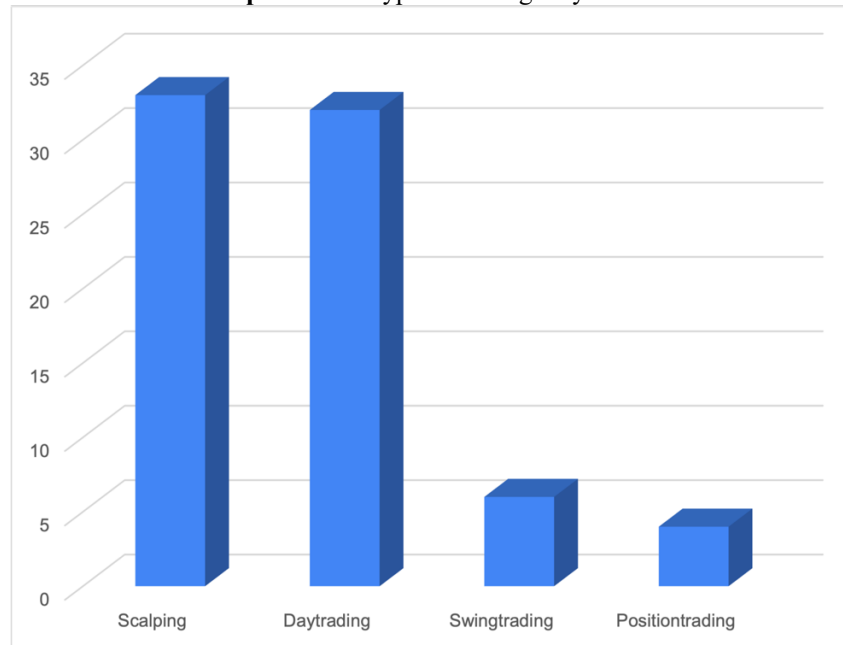
**Graph 4:** What trading style do you practice?



The results continue with fundamental analysis (30%), which is most often used to complement technical analysis, and institutional analysis, or smart money (12%). Therefore, and seeing these results, it is possible to make a relationship between the trading style used and the profitability, because if the great majority uses a certain style, and in the same way the great majority is not profitable with that style, it is possible to deduce that direct relationship. Drawing hypothesis, this style of trading can work, and there will be people for whom it works, but the emotional and psychological aspect is not so much considered, but rather what a graph can capture, likewise it is the content that is taught the most and the most popular.

To finish this section, it is necessary to see the time frame in which the respondents move, which we can analyze by asking about the type of trading they use (**Graph 5**). If we analyze the most selected time frames and those for which traders have a greater preference, we discover that these are the small-time frames, or the fast time frames, with a very even result for scalping (66%) and day trading (64%). This result was the expected, since focusing trading as a professional activity rather than as a long-term investment, it can be understood that the smaller time frames are the most used. However, it would be interesting to point out the possible relationship that this also has with patience and excessive trading, especially with scalping, since being the smallest time frame is the one that moves fastest to the eyes and with which more trades can be completed over an hour or one day.

**Graph 5:** What type of trading do you use?

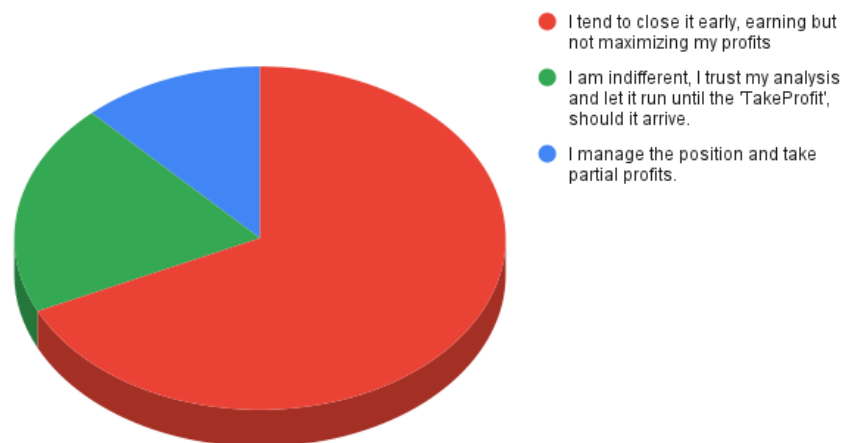


### 8.3 Psychology and cognitive biases

We will continue with the psychological aspect through practical situational questions to measure and analyze both the way of reacting to these situations and the possible cognitive biases that may arise.

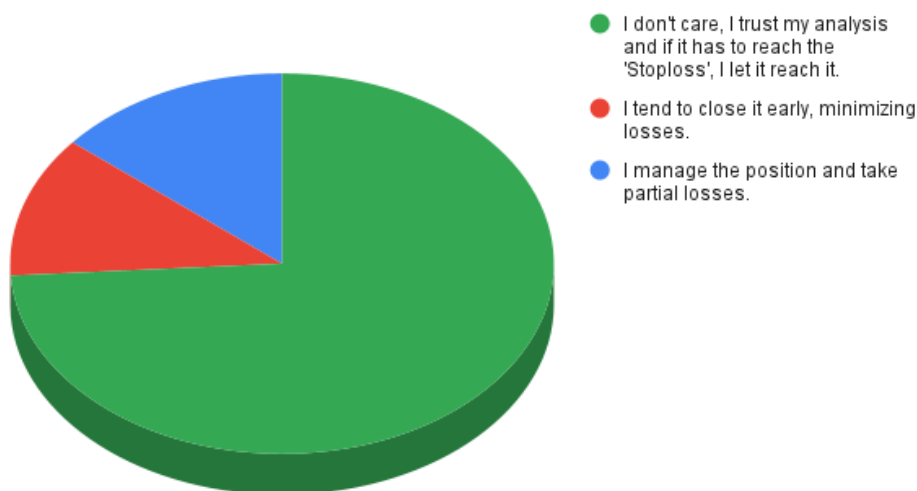
The results of the first question (**Graph 6**) determines what respondents usually do, how they handle the situation and carry out their trades as general rule when they have a trade that has not yet closed and is positive. We can see that the more than half of the responses (68%) tend to close their winning trade early; winning but without reaching the break-even point or profit-risk ratio previously calculated by their analysis and trading rules, which indicates a lack of discipline and self-control while trading.

**Graph 6:** Generally, when you have an open trade, and you are in positive...



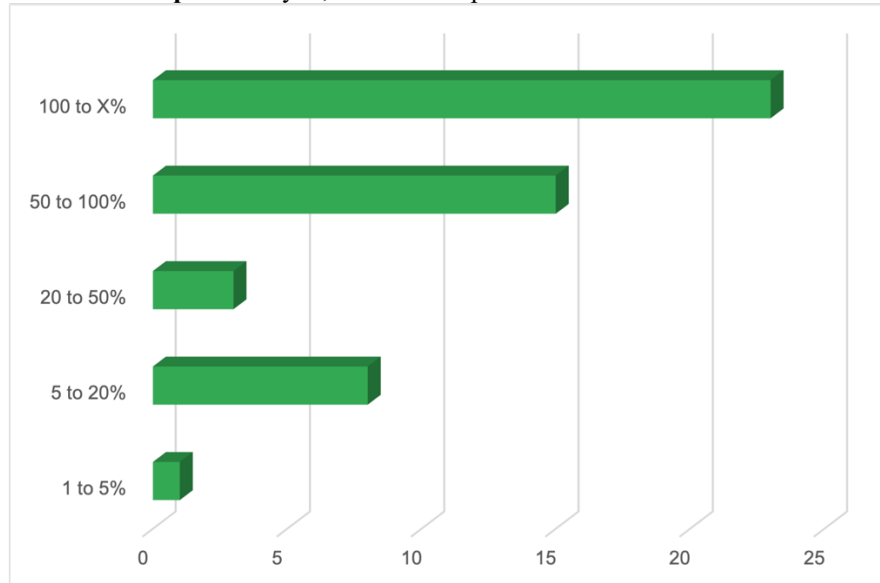
If we now analyze the management of the trade for when it goes negative in **Graph 7** and relate it to the results of the previous question, a noticeable difference can be verified. Now the most selected option is 'I don't care, I trust my analysis...' (74%). So in general, when it goes positive, traders tend to panic, skip their rules and close early, however when they go negative they trust their analysis and respect their rules, this is talking about percentages and probabilities creates a disastrous result in the long term for the portfolios and accounts of the traders since it is necessary to calculate a precious profit-risk ratio to know the percentage and the amount willing to risk for each loss in relation to those gained, expecting a positive total sum. If a trader tends to skip these rules, at the end of the exercise or the year, it is very difficult to end up with profits if he loses more than he wins. It can then be understood that traders accept a loss rather than a gain, since they are winning, fear, euphoria, and above all the fear of losing what they have won even if it does not correspond to what they would supposed to win, enter the mind of the trader ending up closing that trade prematurely in profit.

**Graph 7:** Generally, when you have an open trade, and you are in negative...



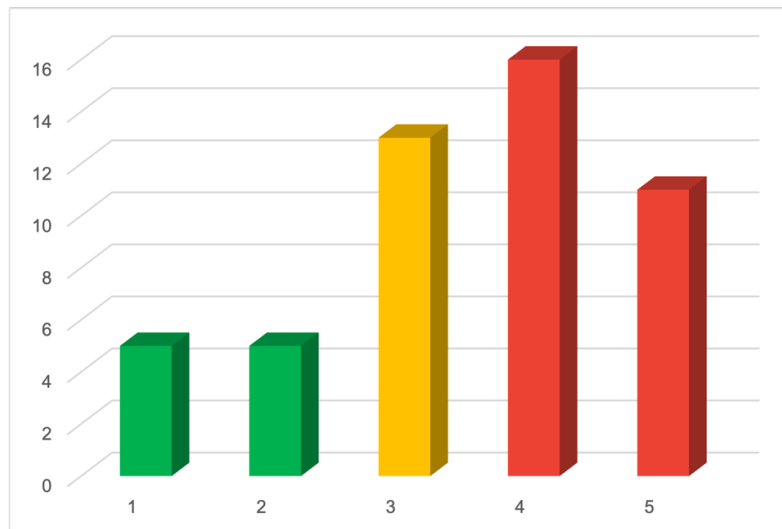
Adding to the psychological paradigm, most of the respondents have really high expectations in terms of annual profitability (**Graph 8**), because grouping the two most common answers we analyze that more than three quarters (76%) think that an annual return of more than 50% of the total account they manage is reasonable. And it is true that this type of business and markets have a high volatility and volume traded daily, but we must not overlook the fact that practically no type of investment can return the percentages mentioned constantly, this is one of the few exceptions. A return of 50% per year trading is possible, even 100%, since it means an average profit of 8.3% per month, and it is possible with the right tools, psychology and setups, qualities that going back to the previous results most respondents do not pick up, however they do expect high profits. Here we find the first cognitive bias, overconfidence, based on a lack of self-criticism, as most traders overestimate themselves and enter the circle of ambition, ego and end up moving away from the practice of that profitability that is kept in their mind.

**Graph 8:** For you, what is the optimal annual rate of return?



The results that respond to the volume of trades by respondents understanding the type of trading they do (**Graph 9**) have been organized in 5 groups with 3 sections in different colors to identify and analyze in a more direct way these results. The 5 groups are divided as follow; if group 1 is marked it means that they perform 0 to 1 trade per day, month, or whatever the type of trading they practice; group 2 from 1 to 2 trades; group 3 from 3 to 4 trades; group 4 from 5 to 6 trades; and group 6 if they perform 6 trades or more. Once this is understood and analyzing the results, we understand that group 1 to 2 (green) would be reasonable and within the standard for a healthy and lasting execution in line with profitability, group 3 (yellow) would already be considered a high number of trades, and groups 4 to 5 (red) would be out of the sustainable and healthy in the long term as a general rule, because the more you are exposed to the market the more risk there is, the more stress the amygdala suffers and the more likely you are to fall into cognitive biases and lose money. However, and curious to see is that more than half of them accept that they are in that red range (54%), that is, most of them are overtrading knowing that most of them practice scalping, expecting high returns, and skipping the rules that favor their probability, because we must remember that this business is based on probabilities. Once again, the concept of overconfidence, ego, fear of losing, and over-ambition is reinforced.

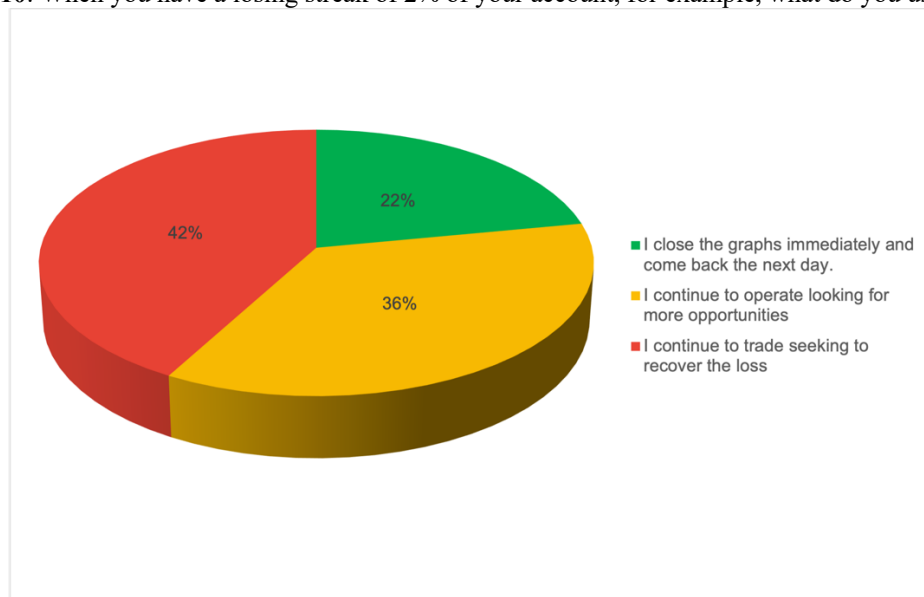
**Graph 9:** Considering the type of trading you use, choose your average trading frequency on the following scale.



Most of the respondents (78%) when they have a 2% losing streak in their trading account continue to trade, which is 39 people surveyed (**Graph 10**).

The problem with this is that within that 78%, 42% continue trading looking to recover that 2% loss, which practically and objectively is a mistake since what this causes is to send the input to the amygdala that it is in danger, and that it must seek by all means to solve it, in this case to recover that loss, causing all the biases and emotions previously mentioned to intensify, falling back into the emotional spiral, causing them to either continue losing, or increase the risk with the idea of recover that loss and end up losing either more than the initial amount, or the entire account and funds. This practice is more common than it seems at first glance, especially among first-time traders and investors without sufficient experience and emotion management. The correct solution, again, to be able to manage emotions and that they do not manage them in these cases is to close the graphs and continue with their day, directly and practically avoiding the possibility of exposing the amygdala to fear and the state of survival.

**Graph 10:** When you have a losing streak of 2% of your account, for example, what do you usually do?



If we observe the following situation proposed to the respondents (**Graph 11**) we can analyze how the participants respond to the aforementioned concept FoMO, or fear of missing out, that is, the tendency to act through impulses and emotions motivated by the fear of losing an opportunity. The results show that almost half of the participants in this situation would buy said asset when they see a resounding rise, wanting to join the movement. Another 44% would remain outside losing the opportunity or would wait to see if the asset continues to rise before buying, both actions are not incorrect, but of course they would not be the best action from a rational position if they are interested in investing in said asset. The remaining 16% would not be affected and would remain in its investment strategy to purchase said asset.

We can then affirm that the FoMO is something that really affects when investing and operating the markets, being the option that was most selected. When they see said rise, their nervous system activates, wanting to immediately join that rise thinking about the profits they will obtain, without previously averaging the risks that it may entail, or without establishing certain rules which are the ones that manage to remove the emotional aspect of the investment, and make an entry and exit as rational and cold as possible.

**Graph 11:** Suppose you have been eyeing a disruptive and groundbreaking new asset that looks promising for a few days, suddenly you see it start to become popular and it rises 20% in the last few hours. How would you react to this situation?



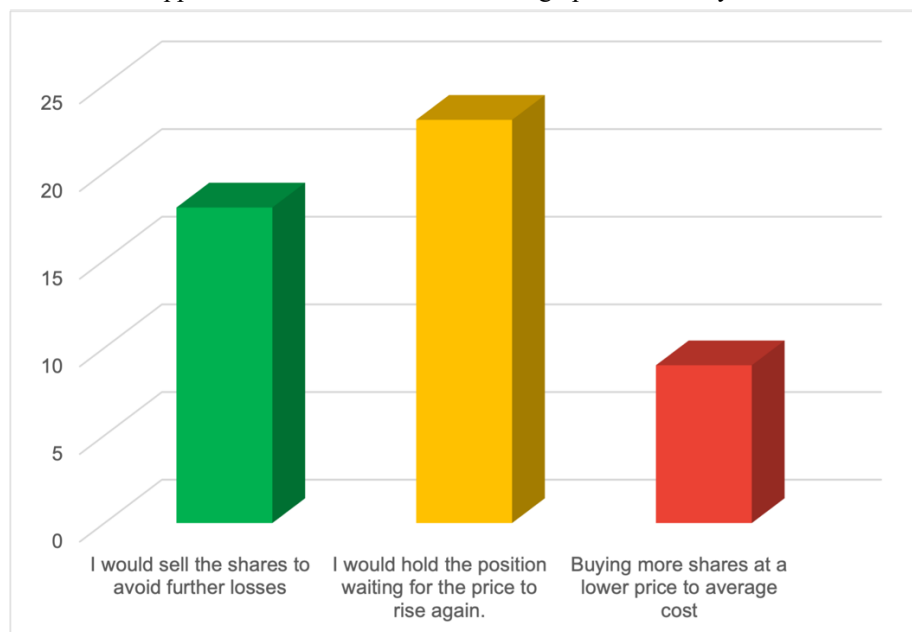
If the participants bought shares of a company at 100€ each and are currently at 80€ (**Graph 12**), the results collected from the responses are very interesting, as they show us different trends and cognitive biases when it comes to investing. The majority would hold the position waiting for the shares to rise again (46%), which corresponds to 23 people out of 50. This option, despite being more optimistic and positive, is also related to aversion to remorse and theory of the sunk costs, since it is preferable to maintain the position and opt for the share price to continue falling even losing the investment completely with the hope or the idea that at some point the price will return around and start to rise. If in addition to this the investment is based in prior or privileged information (which is illegal) the anchoring bias could also be related, in this case such information is unknown, therefore we cannot take it into account. However, if the participants have a clear and premeditated strategy, and an extensive study on the company and its projections, this option may be the best of the three.

This option is followed by the sale of the shares to avoid further losses or greater losses (36%). This can also be a good option depending on the scenario and the moment in which the investment is located, however it can also be linked to the loss aversion bias, since participants prefer to close their investment there even if they lose a percentage. In this case there is a fine line between being a cognitive bias, and a rational and consensual decision, the difference is whether the investor is following a strategy with set rules. If the investor is not doing it like this, it is very likely that he will sell since he is not capable of accepting the risk that an investment entails and therefore the losses that it may entail.

Finally, the last thing the participants would do would be to buy more shares to average the cost (18%). This is the riskiest option of all, as participants are willing to buy more losing stocks in the hope of averaging the cost if it goes up again. Here we find the confirmation bias, since investors tend to give more credibility and importance to their previous analysis or ideas of the investment, logically expecting those benefits, regardless of whether it has gone down or the outlook for the company indicates that there are no positive projections. They stick to their main idea even investing more in it.

Analyzing the previous results together with these, it is very likely that the majority do not follow some rules or an investment strategy, or even skip it, so it could be said that most of the participants are moved by the aversion to remorse, hoping to recover what has been lost, and expecting huge results.

**Graph 12:** Imagine that you have bought shares of a company at a price of €100 each, and after a while the price has dropped to €80. Which of the following options would you choose?



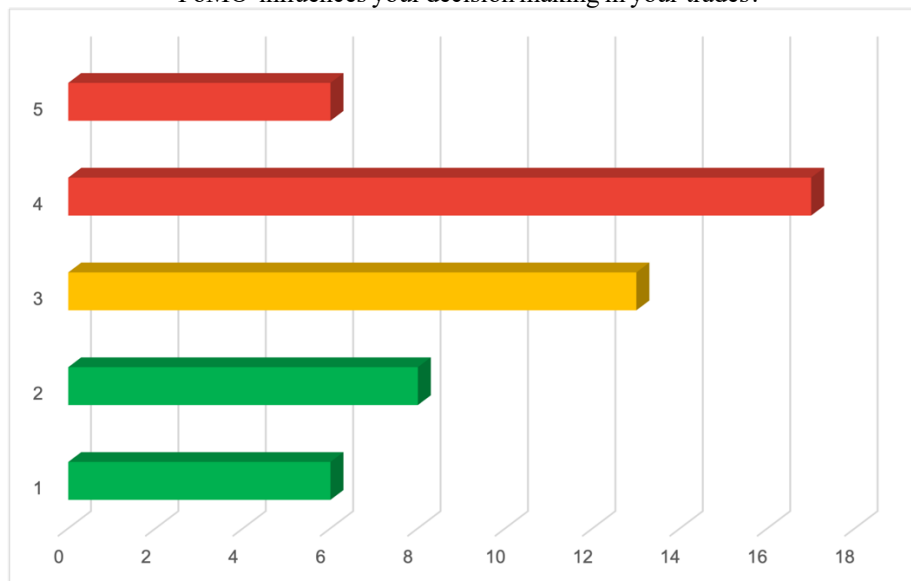
### 8.4 Emotions and opinion

To finish the analysis of the results, we will directly see the emotions that the participants feel when trading and investing and the opinion they have about it.



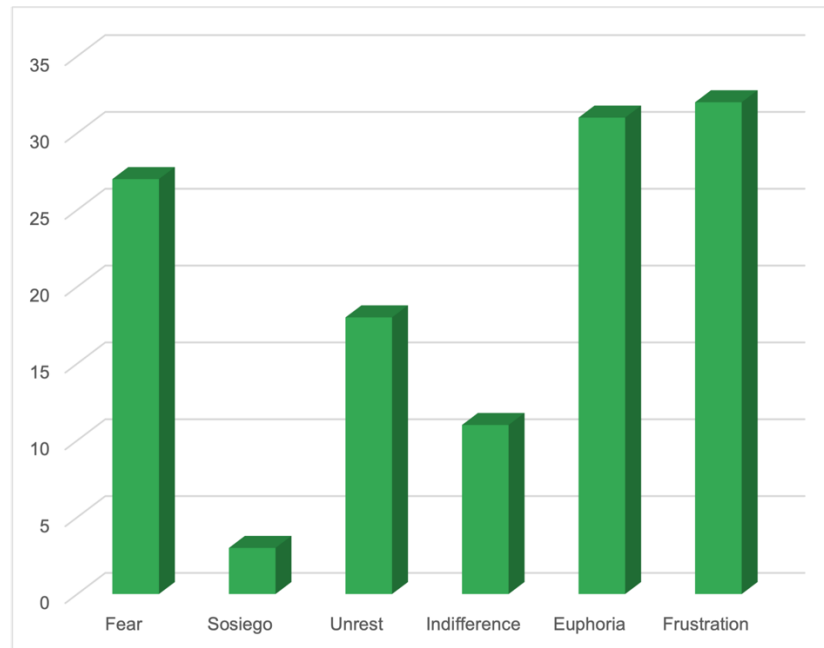
Again, to analyze in a simpler and more visual way how much the FoMO influences the trading of the participants (**Graph 13**) the 5 groups have been divided into 3 colors. The majority of those surveyed opted for option 4 (34%), which indicates that most of them accept that the FoMO does influence their decision-making, but it does not become something completely incidental. We continue with option 3 (36%), which is in the middle, so for them FoMO is not something that has a major impact on their decision-making, but it is not non-existent either. As a small conclusion we can say that in effect the FoMO is something real that traders and investors are aware of, and directly experience its influence, however, and reinforced by previous results, it is not something that they are able to control or even rationalize when it occurs.

**Graph 13:** On a scale of 1 to 5, with 1 being the minimum and 5 the maximum, how much do you consider that 'FoMO' influences your decision making in your trades?



Analyzing the emotions that the participants feel or the ones they most represent when facing the market (**Graph 14**) we can see three clearly differentiated, and likewise very similar, that the most common emotions among the participants are fear (54%), followed by euphoria (62%) and continued by frustration (64%), which corresponds to 34 of the 50 respondents. The two least chosen options were sosiego (6%) and indifference (11%) and it is that these results agree perfectly with what was previously mentioned and the previous results, since these two emotions, which are the most impartial, are probably two fundamental and basic aspects to be able to make trading and investment a career.

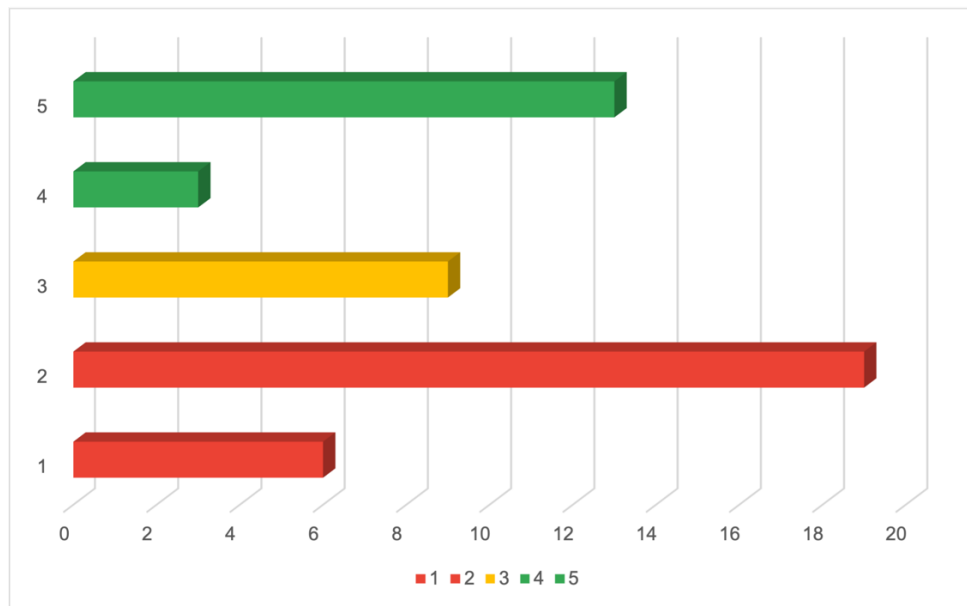
**Graph 14:** Mark the emotions with which you feel most identified while operating.



To finish, again with a scale from 1 to 5 sectioned by color, where red indicates that it is a negative position and green a positive one, we gather that there is a duality of opinions, because although the majority think that emotions or the 'psycotrading' are not a basic part of this business (38%), option 5, the highest, has also been selected a lot, stating that it is a basic part of trading (26%).

This means that although there are many people who are not aware of the importance and influence that their emotions can have when making decisions in a market as aggressive as this one, there are many others who are aware of this facet of trading, and although in practice they do not show it, accepting this fact is the first step to be able to correct it and opt for a more favorable form of investment and mentality that is profitable in the long term.

**Graph 15:** On a scale of 1 to 5, with 1 being the minimum and 5 the maximum, do you consider emotional management, or so-called 'psycotrading', to be a basic aspect of trading itself?



## CONCLUSIONS

We live in the best time in history for doing business, gaining independence, and acquiring information; globalization and technological advances are part of this convergence. More and more people are pursuing that dream of financial freedom and try to undertake business, projects and build their own block of the system, more today that there is an almost primitive professional competition, in any sector and under any position, there is an air of competition and maximum productivity, knowing that if you do not reach the standards and even exceed them, there will be another person in the market more capable than you. That is why the world of investment has become so popular in recent years, having trading as the highest position to aspire to in this world, because trading gives you freedoms, capabilities and opportunities that few other jobs give you; you can practice from anywhere in the world, although in my opinion it should be taken as any other profession, and just as a manager works in his office, a trader must do the same, but if desired, you can practice anywhere in the world; In itself the day is not long dense as an office 8 hours a day; the benefits it brings you are really interesting; and above all you yourself are the one who sets the schedules, salary, and ultimately is managed.

Despite the great attraction that trading and investing as a profession may have at first glance, it is much more complex and profound than it seems, due to this, most people see it as a way out or as something to achieve quickly, as if it were only about changing jobs but they end up failing if not immediately over the first months or years. As it has been possible to verify, it is true that the majority either fail in this business, or rare in the process but still without achieving it, which ends up leaving an approximate percentage of 10% of professionals who dedicate themselves and live from it. Answering one of the objectives of the work, it is true that, not talking about percentages, but most of the people who enter this industry end up failing, the success rate is minimal. Therefore as attractive as it may seem, in my opinion if a business offers such profitability and freedom is not without giving anything in return, in this case you have to learn a new skill, perfect it, and adapt your mind to it, which is not easy, it takes time

and sacrifice, as to reach any high position in a company, but with the added difficulty that depends only on oneself. The results of the survey say so, although with a much larger sample I could draw conclusions in more precise conclusions.

The question of whether emotions influence the markets has also been answered, which agrees perfectly with the expected results, and is that indeed emotions do influence the markets, at least in a retail way, because as it has been proven when trading any market involves a series of emotions that arise almost systematically, such as fear and euphoria. This fact is, in my opinion and under my perspective the factor that most complicates this business and favors the percentages of failure, because it is not easy to control and manage emotions and mid in times of high stress, anxiety, or danger. And is that there are very few traders in my opinion that reflect and work on this, most people exercise and go to the gym because they know that this is good for their body, however there are very few who for example meditate because they know that this is good for their mind, and in this business to have a clear, clean and calmed mind is essential to rationalize the emotions and clam them down

This confirms the cognitive biases that can appear in trading, especially in beginners, almost as if it were a pattern, as if it were the phases of mourning; the euphoria when he wins that leads to overconfidence, the frustration and unrest when he loses that leads to confirmation bias... here again I stress the importance of impartiality, neutrality and having a plan and an order when it comes to invest and trading.

To finish the conclusions, I would like to say that this is a new, striking, and interesting business to be able to make a living for, but that entails an effort and sacrifice behind that few others entail. Because being able to control most of the time the amygdala, the frontal lobe and ultimately the brain, knowing that it works through electrical impulses and chemical reactions is something complex, because as if it were a computer the trader must learn to reprogram it and override all human or natural instinct. As I conceive it, really learning the skill and the analytical part is the simple thing, what is really complicated is learning to manage the trader, who in the end is the one who makes the decisions in the market and before the graphs, because it can be affirmed that emotions do influence the markets and these are not mathematical and perfect systems as they are supposed to be, at least at the retail level.

## ANNEX 1

### Main training channel

	N	%
Courses and ed	21	42
Seminars and cc	2	4
Mentors and coa	2	4
Books	2	4
Communities and	5	10
Youtube and influ	16	32
Indusrry profess	1	2
All of the above	1	2

### Are you profitable and currently living from trading/investments?

	N	%
No	45	90
Yes	5	10

### Which market do you trade?

	N	%
FOREX	36	72
Cryptocurrencies	33	66
Stocks	11	22
Commodities	6	12
Financial derivatives	1	2

### What trading style do you practice?

	N	%
Technical analysis	43	86
Fundamental analysis	15	30
Institutional, or Smat mor	6	12
Lit	1	2
Value investing	1	2

**What type of trading do you use?**

	N	%
Scalping	33	66
Daytrading	32	64
Swingtrading	6	12
Positiontrading	4	8

**Generally, when you have an open trade, and you are in positive...**

	N	%
I am indifferent, I	10	20
I tend to close it	34	68
I manage the pos	6	12

**Generally, when you have an open trade, and you are in negative...**

	N	%
I don't care, I tru	37	74
I tend to close it	7	14
I manage the pos	6	12

**For you, what is the optimal annual rate of return?**

	N	%
1 to 5%	1	2
5 to 20%	8	16
20 to 50%	3	6
50 to 100%	15	30
100 to X%	23	46

**Considering the type of trading you use, choose your average trading frequency on the following scale.**

	N	%
1	5	10
2	5	10
3	13	26
4	16	32
5	11	22

**When you have a losing streak of 2% of your account, for example, what do you usually do?**

	N	%
I close the graphs immediately	11	22
I continue to operate looking for a recovery	18	36
I continue to trade seeking a recovery	21	42

**Suppose you have been eyeing a disruptive and groundbreaking new asset that looks promising for a few days, suddenly you see it start to become popular and it rises 20% in the last few hours. How would you react to this situation?**

	N	%
I buy taking advantage of the rise	20	40
I wait to see if the rise continues	11	22
I stay on the side	11	22
It does not affect me	8	16

**Imagine that you have bought shares of a company at a price of €100 each, and after a while the price has dropped to €80. Which of the following options would you choose?**

	N	%
I would sell the shares	18	36
I would hold the shares	23	46
Buying more shares	9	18

**On a scale of 1 to 5, with 1 being the minimum and 5 the maximum, how much do you consider that 'FoMO' influences your decision making in your trades?**

	N	%
1	6	12
2	8	16
3	13	26
4	17	34
5	6	12

**Mark the emotions with which you feel most identified while trading.**

	N	%
Fear	27	54
Sosiego	3	6
Unrest	18	36
Indifference	11	22
Euphoria	31	62
Frustration	32	64

**On a scale of 1 to 5, with 1 being the minimum and 5 the maximum, do you consider emotional management, or so-called 'psycotrading', to be a basic aspect of trading itself?**

	N	%
1	6	12
2	19	38
3	9	18
4	3	6
5	13	26



## ANNEX 2

# Investor's emotions

The answers are anonymous, please for the survey to be valid the answers must be 100% sincere.

*\* Indicates that the question is mandatory*

Hello! First, thank you very much for helping me with the realization of my thesis.

My name is Óscar, I am a student of marketing at the Rey Juan Carlos University. This is a simple research survey that will not take you more than 5 minutes for my thesis; "The influence of emotions in the stock markets". It is specially designed and addressed to traders and investors. There is no right or wrong answer. To be as realistic as possible, the answers should be as honest and transparent as possible.

All answers are completely confidential and anonymous. They will not be used for commercial purposes.

By completing this questionnaire, you agree to the data processing.

If you have any questions, please do not hesitate to contact me at [ato.magano.2019@alumnos.urjc.es](mailto:ato.magano.2019@alumnos.urjc.es).

Once again, thank you very much for your participation!

### 1. Main training channel \*

*Mark only one oval.*

- ☐ Courses and educational programs
- ☐ Seminars and conferences
- ☐ Mentors and coaches
- ☐ Books
- ☐ Communities and forums
- ☐ Youtube and influencers
- ☐ Other: \_\_\_\_\_

2. Are you profitable and currently living from trading/investments? \*

*Mark only one oval.*

☐ Yes

☐ No

3. Which market do you trade? \*

*Select all that apply.*

☐ FOREX

☐ Cryptocurrencies

☐ Stocks

☐ Commodities

☐ Other: \_\_\_\_\_

4. What trading style do you practice? \*

*Select all that apply.*

☐ Technical analysis

☐ Fundamental

☐ Institutional, or Smart Money

☐ Other: \_\_\_\_\_

5. What type of trading do you use? \*

*Select all that apply.*

☐ Scalping

☐ Daytrading

☐ Swingtrading

☐ Positiontrading

☐ Other: \_\_\_\_\_

6. Generally, when you have an open trade, and you are in positive... \*

*Mark only one oval.*

- ☐ I am indifferent, I trust my analysis and let it run until the 'TakeProfit', should it arrive.
- ☐ I tend to close it early, earning but not maximizing my profits.
- ☐ I manage the position and take partial profits.

7. Generally, when you have an open trade, and you are in negative... \*

*Mark only one oval.*

- ☐ I don't care, I trust my analysis and if it must reach the 'Stoploss', I let it reach it.
- ☐ I tend to close it early, minimizing losses.
- ☐ I manage the position and take partial losses.

8. For you, what is the optimal annual rate of return? \*

*Mark only one oval.*

- ☐ 1-5%
- ☐ 5-20%
- ☐ 20-50%
- ☐ 50-100%
- ☐ 100-X%

9. Considering the type of trading you use, choose your average trading frequency \*

on the following scale:

1. from 0 to 1 operations;
2. from 1 to 2 operations;
3. from 3 to 4 trades;
4. from 5 to 6 trades;
5. 6 or more trades.

Example;

I do daytrading and usually open 4 trades a day, so I mark level 3 on the scale.

*Mark only one oval.*

0 to 1 trades

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

6 or more

10. When you have a losing streak of 2% of your account, for example, what do you usually do? \*

*Mark only one oval.*

- ☐ I close the graphs immediately and come back the next day.
- ☐ I continue to operate looking for more opportunities.
- ☐ I continue to trade seeking to recover the loss.

11. Suppose you have been eyeing a disruptive and groundbreaking new asset that looks promising for a few days, suddenly you see it start to become popular and it rises 20% in the last few hours. How would you react to this situation? \*

*Mark only one oval.*

- ☐ I buy taking advantage of the "Bullish" to get profits.
- ☐ I wait to see if the asset continues to rise before buying.
- ☐ I stay on the sidelines and don't buy, missing the opportunity.
- ☐ It does not affect me at all.

12. Imagine that you have bought shares of a company at a price of €100 each, and after a while the price has dropped to €80. Which of the following options would you choose? \*

*Mark only one oval.*

- ☐ I would sell the shares to avoid further losses.
- ☐ I would hold the position waiting for the price to rise again.
- ☐ Buying more shares at a lower price to average cost.

13. On a scale of 1 to 5, with 1 being the minimum and 5 the maximum, how much do you consider that 'FOMO' influences your decision making in your operations? \*

*Mark only one oval.*

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Totally agree

14. Mark the emotions with which you feel most identified while operating \*

*Select all that apply.*

- ☐ Fear
- ☐ Sosiego
- ☐ Unrest
- ☐ Indifference
- ☐ Euphoria
- ☐ Frustration

15. On a scale of 1 to 5, with 1 being the minimum and 5 the maximum, do you consider emotional management, or so-called 'psycotrading', to be a basic aspect of trading itself? \*

*Mark only one oval.*

Strongly disagree

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Totally agree

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