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How can Portuguese Companies Incorporate Cryptocurrencies in their Investments Portfolios?

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Internship Report
Master's in Business Economics and Strategy

Orientado por
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Abstract

This internship report aims to understand how Portuguese companies can integrate cryptocurrencies in their investment's portfolios. To achieve this objective, I will develop a Porter's Five Forces analysis, a PESTEL analysis, a BCG Matrix, a VRIO analysis, a SWOT analysis and a TOWS Matrix, as well as a market analysis, to combine all the information on cryptocurrencies and how they can or cannot enhance company's investment portfolios. After that, I will elaborate a roadmap of the investment, from the moment of the investment decision to the wallet management, and the post-sale conditions.

By the end of this study, my intention is to help companies in Portugal by letting them know if they can utilize cryptocurrencies for pursuing their investment strategies. According to the literature, cryptocurrencies can be a good investment option, depending on the investment strategy applied. Therefore, this study will be helpful for companies that pursue that type of strategy but do not know much about the cryptocurrencies market.

Keywords: Cryptocurrencies, Investment Portfolios, Corporate Investment.

Resumo

Este relatório de estágio tem como objetivo perceber como podem as empresas portuguesas integrar as cripto moedas nos seus portfólios de investimento. Para atingir este objetivo foi desenvolvida uma análise das cinco forças de Porter, uma análise PESTEL, uma Matriz BCG, uma análise VRIO, uma análise SWOT e uma Matriz TOWS, bem como uma análise de mercado, para combinar toda a informação sobre as cripto moedas e como estas podem ou não melhorar os portfólios de investimento das empresas. Depois disso, elaborarei um roteiro do investimento, desde o momento da decisão de investimento até à gestão da carteira e às condições pós-venda.

No final deste estudo, a minha intenção é ajudar as empresas em Portugal, permitindo-lhes saber se podem utilizar as cripto moedas para prosseguir as suas estratégias de investimento. De acordo com a literatura, as cripto moedas podem ser uma boa opção de investimento, dependendo da estratégia de investimento aplicada. Assim, este estudo será útil para as empresas que seguem esse tipo de estratégia, mas que não conhecem muito bem o mercado das cripto moedas.

Palavras-chave: Cripto moedas, Portfólios de Investimento, Investimento Corporativo.

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1. Introduction

Currently, cryptocurrencies have reached a market capitalization of approximately 2.88 trillion USD (CoinMarketCap, 2025), which highlights their growing relevance as a financial innovation. Since the introduction of Bitcoin by Satoshi Nakamoto in 2008, the value and significance of cryptocurrencies have increased steadily, for instance, over the past year alone, the market has grown by more than 20% (CoinMarketCap, 2025). Nakamoto (2008) described Bitcoin as a “purely peer-to-peer version of electronic cash that would allow online payments to be sent directly from one party to another without going through a financial institution” (p. 1). This concept captivated both investors and technologists, giving rise to thousands of alternative cryptocurrencies. As of March 2025, there are approximately 13.24 million cryptocurrencies in circulation, with the overall market valued at around 2.74 trillion USD (CoinMarketCap, 2025).

This thesis presents an exploratory study that seeks to answer the question: How can Portuguese companies integrate cryptocurrencies into their investment portfolios? The focus lies on developing a strategic framework using tools such as Porter’s Five Forces, PESTEL, BCG Matrix, VRIO, SWOT, and TOWS analyses to assess whether Portuguese firms should consider cryptocurrencies over more traditional assets such as stocks, real estate investment trusts (REITs), or market indices like the S&P 500. In addition to this strategic evaluation, the study also provides practical guidance, outlining the necessary steps for investing in these assets. The main objective is to support PortusInvest, an economic consultant company where I realized my internship, both in adopting cryptocurrencies for internal investment and in advising its clients. Since the company operates exclusively with Portuguese businesses, the scope of the study is limited to the Portuguese context.

Cryptocurrencies may serve multiple investment purposes (Dyhrberg, 2016; Li, 2021; Su et al., 2020; White et al., 2020; Umar et al., 2021). Bitcoin, the oldest and most widely used cryptocurrency, is often considered a safe-haven asset (Li, 2021; Su et al., 2020; White et al., 2020), meaning it may be used to hedge against political instability. In the United States, for example, Bitcoin investments tend to increase during periods of heightened political and economic uncertainty (Umar et al., 2021). Some scholars go further, arguing that Bitcoin offers hedging capabilities comparable to those of gold (Dyhrberg, 2016). Given the current global context, marked by ongoing conflicts between Ukraine and Russia, and Israel and Palestine, as well as new trade tariffs imposed by the United States (Trump, 2025), it is

reasonable to consider cryptocurrencies as potentially valuable assets for navigating future uncertainty, should they indeed fulfil their proposed hedging function.

Nevertheless, some studies present opposing views. Cheah and Fry (2015), for instance, argue that Bitcoin may be subject to speculative bubbles, asserting that Bitcoin does not have a fundamental value. From this perspective, investing in cryptocurrencies may be comparable to gambling (Andrade and Newall, 2023). Additionally, cryptocurrencies are often associated with illicit activities such as money laundering, tax evasion, and fraud (Sanz-Bas, 2020). Environmental concerns have also been raised, with Mora et al. (2018) projecting that Bitcoin's carbon emissions alone could contribute significantly to global warming by increasing the global temperatures by 2°C.

Despite these concerns, various companies and even governments have begun investing in cryptocurrencies. The United States currently holds over 200,000 units of Bitcoin, valued at more than 18 billion USD, while China holds more than 190,000 units, worth nearly 17 billion USD (Bit.Bo, 2025). Together, these countries account for almost 2% of all Bitcoin in circulation. In addition to these two, six other nations, namely the United Kingdom, Ukraine, Bhutan, El Salvador, Finland, and Georgia also hold notable amounts of Bitcoin (Bit.Bo, 2025). On the corporate side, two prominent examples are Tesla Incorporated and MicroStrategy Incorporated. Tesla reported holding digital assets valued at 1.076 billion USD at the end of 2024 (Tesla Financial Report, SEC, 2024). MicroStrategy is a company known for taking this strategic to the limit, they had nearly 24 billion USD worth of Bitcoin on its balance sheet, out of a total of 26 billion USD in assets (MicroStrategy Financial Report, SEC, 2024), reflecting its heavy reliance on cryptocurrency in their assets, more than just a strategic investment.

While cryptocurrency investment may represent a future trend for companies (Pujari, 2022; Barbosa et al., 2023; Kharb et al., 2024), few studies provide comprehensive strategic analyses incorporating tools such as Porter's Five Forces, PESTEL, BCG Matrix, VRIO, SWOT, and TOWS focused specifically on cryptocurrency adoption. Existing studies are typically narrower in scope, for example, Barbosa et al. (2023) has some of the analysis but only of the food retail sector, Pujari (2022) applies Porter's Five Forces to the banking industry, and Kharb et al. (2024) present a SWOT analysis on greener cryptocurrency transactions.

Drawing upon these and other relevant works, and supported by qualitative analysis, this thesis develops a structured approach for assessing cryptocurrency investments by Portuguese companies. The next section introduces PortusInvest and outlines the key activities undertaken during the internship. Section three provides a literature review on the topic, and section four details the methodology used. The analysis begins in section five with a market study, essential to understanding the sector's evolution, current state, and segmentation by sector and company profile. This is followed by a strategic analysis in section six, which moves from a macro to a micro perspective. On the external side, PESTEL and Porter's Five Forces frameworks are used to examine institutional, economic, and competitive environments, and to assess how these may influence a company's decision to invest in cryptocurrencies. Internally, the BCG Matrix and VRIO analyses assess a company's positioning and capabilities in relation to such investments. The SWOT and TOWS analyses consolidate the findings to diagnose strengths, weaknesses, opportunities, and threats, and propose strategic actions that mitigate risk and enhance potential benefits. All these analyses support the decision-making process of both PortusInvest and its clients. For the ones interested in investing in cryptocurrencies, section seven presents a practical roadmap for investment based on both academic research and internship insights. Additionally, a survey was developed to better understand the interest of PortusInvest's clients in cryptocurrency investment. This includes for example sector-specific analysis, the age of business owners, and the financial profile of companies, factors that may inform future marketing and commercial strategies if PortusInvest wants to be a consultant of companies who invest in cryptocurrencies.

For other Portuguese and even international companies interested in this subject, this study offers valuable strategic insights on cryptocurrency investments. It supports informed decision-making, helping companies determine whether to invest, in which cryptocurrencies, and how these choices align with their strategic goals. For those that do choose to invest, the final section of the study provides a tailored roadmap outlining the key steps involved in implementing such a strategy.

2. The Internship at PortusInvest

This Internship Report was developed as a part of the Curricular Internship realised to complete the Master's degree in Business Economics and Strategy. This internship took place at PortusInvest, a Portuguese company specialized in economical, business and financial Consultancy., from February 2nd until April 30th. From early on, the company explained to me their desire to explore the world of digital currencies because they wanted to know if cryptocurrencies were a good investment to add to their portfolio, and, if they should consult other companies in this matter. Nonetheless, the initial stage the internship focused on providing a comprehensive overview of the company's operations. This was essential to understand PortusInvest's business model and the practical aspects of managing community funds. During this period, I developed activities such as commercial engagement with clients interested in European Union (EU) funds, assisting in the preparation and submission of applications, and monitoring the execution of approved projects. This first phase allowed me to gain valuable practical experience in project management and client relationship management.

After this introductory phase, the internship entered a second stage dedicated to the analysis of cryptocurrencies as an investment and consultancy opportunity. The activities developed included conducting a comprehensive market analysis of the cryptocurrency sector, the development of the Porter's Five Forces, PESTEL, BCG Matrix, VRIO, SWOT, and TOWS analysis. Then, a survey was designed and disseminated among PortusInvest's clients to gauge their knowledge and interest in digital currencies. Based on the survey insights and market analysis, a strategic roadmap for cryptocurrency investment was developed. Finally, all the research, findings, and strategic insights were compiled into this Internship Report. Its purpose is to serve as a decision-support document for PortusInvest, helping the company determine whether to invest directly in cryptocurrencies and whether to expand its consultancy services to cover this emerging field.

In conclusion, the internship at PortusInvest was a fundamental experience for me, providing not only a solid understanding of the company's core activities, in particular EU funds, but also the opportunity to explore an innovative and growing sector like cryptocurrencies. It allowed me the application of theoretical knowledge in a real-world context, develop project management experience, fostered strategic thinking, and contributed actively to PortusInvest's future strategic considerations.

3. Literature Review

3.1. Cryptocurrencies Characteristics and Comparison with Other Types of Investment

It is difficult to define what is a cryptocurrency, Gervais et al. (2014) defined Bitcoin as a decentralised digital currency, however, Bitcoin cannot perform all the basic functions of a currency, since it lacks transactional value and is a poor store of value (Yermack, 2024). Bitcoin can be a safe-haven asset against financial stress, having some similarities with gold (Bouri, 2018). Based on the asset-pricing perspective, is a unique investment product, different from the others, and uncorrelated with the major assets' classes such as equities, bonds, income-producing, physical commodities, precious metals, currency or fine art (Burniske and White, 2017). These characteristics can lead to the use of cryptocurrencies as primarily speculative tools (Baur et al., 2017), which can be the reason for the idea of a bubble in cryptocurrency markets (Cheah and Fry, 2015). Finally, I can state that cryptocurrencies are a technology-based product, in this sense, the literature seems to be in accordance because there are not opinions contrary to this (Maurer et al., 2013; White et al., 2020).

As is difficult to define cryptocurrencies, is also hard to divide them in types (Fokri et al., 2021). By functions, there are a lot of different possibilities, some countries and institutions like the U.S. Securities and Exchange Commission (SEC) or the Swiss Financial Market Supervisory Authority (FINMA) use different approaches (Fokri et al., 2021). Because they can be used as a medium of payment for goods and services, cryptocurrencies like Bitcoin, Ethereum or Tether are currencies in a broad sense, however, just the first two examples are considered coins, because they can store the value that is built on their blockchain (Fokri et al., 2021). Tether is considered to be a token, tokens are digital assets pegged to other currencies, in this case the USD, but they can also be attached to cryptocurrencies like ERC-20 with Ethereum (Mukhopadhyay, 2018). Tokens can then be divided into different classes based on their purpose, in the case of Tether and also USD Coin for example, they aim to replace fiat money in the form of cryptocurrency, so they are considered Payment Tokens or Stablecoins (Fokri et al., 2021). There are also the Utility Tokens, that give benefits to owners, for example, LEO gives benefits to Bitfinex traders (iFinex, 2019). And lastly, there are the Security or Asset Tokens, like OmiseGO, that give asset ownership, but can also, get

you the right to vote, or get dividends (Deloitte, 2019). For this report, I will divide cryptocurrencies in three groups: Bitcoin, stablecoins and altcoins (alternative coins).

Moreover, there is also the problem of regulation on cryptocurrencies, or lack of it. Cryptocurrencies can be used to make illegal and untraceable transactions, like money laundering or tax evasion, therefore, is necessary to create homogenised rules for the transactions using these currencies, so that people can be safe using them (Cheah and Fry, 2015; Dyhrberg, 2016; Rohr and Wright, 2019; Sanz-Bas, 2020). The decentralization aspect of cryptocurrencies is what allows them to be uncorrelated to the other assets, which allows gains of investing in them (Gervais et al., 2014; Burniske and White, 2017; Khaki, 2023). Therefore, regulation should avoid altering this characteristic, otherwise, cryptocurrencies may lose their lack of correlation with other investment options, such as equities, bonds, fiat currencies, or commodities, which would diminishing their diversification benefits.

Apart from the diversification possibilities, historically, cryptocurrencies also offer high returns (Wang and Vergne, 2017; Delfabbro, 2021; Cyril, 2023). In a comparison between a portfolio containing the top10 most transitioned cryptocurrencies in 2023, and other containing the 10 most transitioned stocks from 2023, the result is that the portfolio equally weighted with only cryptocurrencies is the one providing higher annual returns (Cyril, 2023). This portfolio contains stablecoins, which have smaller returns, and cryptocurrencies that had negative returns, in a context of portfolio reallocation the returns could be even better (Cyril, 2023). This is very important because stocks are widely regarded as the best investment in terms of returns in the last 125 years (Dimson, Marsh, and Staunton, 2025; Vanguard, 2025), hence, if cryptocurrencies are exceeding them in terms of returns, they should be regarded as an important investment asset.

However, cryptocurrencies are also the riskier investment (Trimborn et al., 2020; Liu et al., 2021; Cyril, 2023). If we take another look on the portfolio with the top10 transitioned cryptocurrencies in 2023, and comparing it with others containing stocks, the cryptocurrency portfolio is the one with the highest risk associated (Cyril, 2023), even with the presence of stablecoins that because of their attachment with fiat currencies are a lot less risky (Hoang and Baur, 2024). This should warn companies and individual investors that might choose another type of investment if they are not willing to assume this risks. The risk of an asset can be measured by different perspectives, though, authors seem to be in accordance with the case of cryptocurrencies, they have a high risk associated because of their high volatility,

low regulation, and the possibility of bubbles (Cheah and Fry, 2015; Phillips, Shi and Yu, 2015; Andrade and Newall, 2023). Stiglitz (1990) defined financial bubbles as significant deviations between fundamental value and the transaction value of an asset, and Cheah and Fry (2015) state that cryptocurrency fundamental value is zero. So, if cryptocurrencies do not have a fundamental value, or their value is too higher in relation to their fundamental value, crashes can happen (Phillips, Shi and Yu, 2015). This situation has already happened sometimes for cryptocurrencies, the first one in 2011, from June to November, Bitcoin value dropped 94%, from 32 to 2 USD, after that, some more rapidly drops in value, in 2013 or 2017, are another two examples, lastly, from December 2021 until December 2022, cryptocurrencies total market capitalization dropped from 3 trillion to 800 billion USD, with the crash of the cryptocurrency Luna/Terra (CoinMarketCap, 2025). In fact, is somewhat difficult to understand how the prices of cryptocurrencies change, as mentioned by Delfabbro et al. (2021) what explains their increase in value are the expectations of investors and information on possible value in the future, this can lead to scams because creators might spread misinformation to increase value and then leave the market with their gains (Kamps and Kleinberg, 2018). This way is important for individuals and companies, to understand that investing in cryptocurrencies is very different from stocks, private equity, hedge funds, or Real Estate Investment Trusts (REIT), for example. All this other hypothesis provide lesser returns, however, they are less volatile and is possible to calculate their fundamental value to then compare them with their price, something that is different for cryptocurrencies.

3.2. Individuals Investment Portfolios and Cryptocurrencies

There are three main types of investors that the literature considers, these investors follow different approaches to investment, one is more risk averse, while the other is risk taker, the last one is a mix between both, the moderate risk taker. Normally these theories focus on individual investors choices, this part will start by that, and in the next chapter, there is presented the exploration about companies.

The first type of investor is risk averse, therefore, he seeks the maximum diversification of his portfolio because that will reduce the risk, while maintaining stable returns, this is called the Modern Portfolio Theory (MPT) (Markowitz, 1952; Tobin, 1958; Sharpe, 1964; Mossin, 1966; Lintner, 1975). This theory is based on the efficient market hypothesis (EMH), that does not perfectly happen in real world, but helps in demonstrating the theory (Markowitz, 1952). There exists an efficient frontier of risky assets in an efficient capital market, a curve

that is representative of the risk aversion and marginal utility of investors, they only choose riskier asset allocations if the utility of having the asset is higher than the risk associated, according to Markowitz (1952) the curve is concave, which indicates that the marginal utility gains derivate from the growth in asset position is diminishing. This lead to the creation of the capital asset pricing model (CAPM), a model that states that the only relevant risk for an asset is the market risk, since firm-specific risk (systematic risk) is eliminated, they just want to have a diversified uncorrelated portfolio, therefore, if investors diversify their investments across various uncorrelated assets, they will reduce their risks, allowing them to grow in asset position (Markowitz, 1952; Tobin, 1958; Sharpe, 1964; Mossin, 1966; Lintner, 1975). For this theory, investors focus their decisions on indicators like the Sharpe Ratio (Sharpe, 1964), that allow us to compare risk-return combinations, and correlation coefficients, like the Pearson Correlation Coefficient (r) (Pearson, 1895), or the Covariance Matrix (Markowitz, 1959). The literature seems to agree on the capability of cryptocurrencies to be a diversified asset, cryptocurrencies are not correlated with other types of investments (Liu, 2019; Huang et al., 2022). For an enhanced portfolio value, Dempsey (2022) suggests rebalancing the portfolios, and Khaki et al. (2023) that decentralized cryptocurrencies are better for the diversification purpose. This means that investors should not invest in centralized cryptocurrencies such as stablecoins, and they might take advantage of Altcoins seasons to buy alternative coins and Bitcoin seasons to invest in Bitcoin.

The second type of investor also focus on capital asset principal model (CAPM), but in this case, he wants to maximize the return, this called Capital Market Theory (CMT), or Maximum Return Strategy (Sharpe, 1964; Moussin, 1966; Lintner, 1975, Jensen, 2006). Sharpe (1964), explained that riskier assets lead to increased expected returns, in a rule that was proved in the Sharpe-Ratio, in this case, investors do not combine the risk and return combinations with the utility of possessing the asset, they just focus on the risk, because risk is what explains expected returns, and they just want to enjoy higher returns. As you can notice in the equation below, the expected return ($E(R)$), is a function of risk-free rate (R_f) and the systematic risk (β) times the difference between the market return (R_m) and the risk-free rate (R_f) (Sharpe, 1964; Moussin, 1966; Lintner, 1975).

$$E(R)=R_f+\beta(R_m-R_f)$$

This means that for investors who focus on this line, a riskier portfolio is preferred, because the thing that matters the most is enjoying returns, and to do so, investors should increase

risk whenever they can (Jensen, 2006). Normally, investors in this strategy focus on indicators like the systematic risk associated with the asset, that should be high, representing that the asset is more volatile, and consequently, more profitable, the Value at Risk, that is an indicator for measure the downside of aggressive positions, and the maximum Drawdown, that represents the worst fell of an asset, which indicates the resilience in crisis and should be a floor for investments (Fischel, 1978; Jensen, 2006). Hence, this strategy is the one where the investment in cryptocurrencies is more usual, as I have mentioned, most of the cryptocurrencies are highly volatile, but offer good past and expected returns (Wang and Vergne, 2017; Delfabbro, 2021; Cyril, 2023). Therefore, investors representing this tendency should have interest in them, they would mainly have alternative coins in their portfolios, because they have the higher recent return rates (CoinMarketCap, 2025). Nevertheless, this strategy is also associated with the risk of bubbles in cryptocurrencies that I have mentioned earlier, because investors with this strategy only focus of risk and return, letting go the concepts of value and fundamental value (Cheah and Fry, 2015; Phillips, Shi and Yu, 2015).

The last type of investor follows a balanced strategy, or efficient frontier, this is a curve of all efficient portfolios, the ones that maximized the return for every level of risk, that an investor might choose for their investment (Elton, Gruber and Padberg, 1978). For this strategy, investors should choose a level of risk they desire, and the point within the curve will represent the best possible portfolio allocation, this is basically the graphical representation of the Modern Portfolio Theory and allows investors to build a portfolio that is neither focused on diversification, nor focused on returns, therefore, investors base their decisions in indicators from both previous strategies (Elton, Gruber and Padberg, 1978). For this thesis is important that, an investor following this strategy should have a percentage of his investments allocated to cryptocurrencies, as well as another percentage on stocks, markets ETFs, bonds, gold, and other investments. The stablecoins once again would not be used as they do not provide an efficient risk and return combination, but both altcoins and Bitcoins can be used, depending on risk aversion or inclination.

Although, the last three representations do not represent the real market. The arbitrage price theory (APT) introduces more variables like inflation, interest rates, or GDP, and that also impacts the expected returns (Ross, 1976). So, even with the decentralization that cryptocurrencies show, there are other macroeconomic factors that affect cryptocurrencies, however, this impact is smaller than in other assets (S&P Global, 2023). Is also important to

understand that investors are risk averse for gain but exhibit diminishing marginal disutility when it comes to losses (Kahneman and Tversky, 2013). This irrational behaviour can explain euphoria cycles or panic because investors keep their positions even when cryptocurrencies prices fell, and that they probably sell too soon because of risk aversion.

Another perspective on portfolio strategies is the active/passive investment. The passive investment was introduced by Fama (1960), and states that the market is efficient and all the information is available and is reflected in the assets price, therefore, the value of assets in the market corresponds exactly to what they value right now, considering what will happen in the future. This means that it is impossible for investors to beat the market, because he perfectly represents real value. Jensen (1968) studied the possibility of investors beating the market, he developed a study to see if mutual funds managers could consistently beat the market. The result was the creation of Jensen's Alpha (α), an indicator that compares the fund real return, with CAPM, in this case, if α is higher than zero, the manager beaten the market, if is lower than zero, the market was more efficient than the fund manager. His conclusion was that most of the times the market beaten or at least equals the fund manager corroborating with passive investment strategies (Jensen, 1968). For the investors who believe in this theory, the best investment choice is to acquire assets that replicate the market and hold them for a long time (Malkiel, 2003). The market has all the information, and all the participants in it have all the perfect information, so, it is the best choice to invest in index funds or exchange trade funds (ETFs) that represent better the market because they will allow the best outcome in the future, they have low risk and exchange fees, and can allow investors to enjoy passive income, dividends from the companies in the market (Malkiel, 2003). Hence, an investor following this strategy will difficultly invest in cryptocurrencies, they are riskier and more volatile in comparison with assets representing the market, and normally they do not allow dividend receipts. However, some investors started to doubt of this theory because of the results they were having, Warren Buffet or Peter Lynch showed that in the real world they could beat the market. They drawback two books from Benjamin Graham and David Dodd, the Security Analysis (1934) and The Intelligent Investor (1948), that are about companies' analysis and fundamental value and concluded that the market value do not represents perfectly the fundamental value of assets, allowing them gains. Most of the literature showed that they prefer the active investment perspective, that believes the market has inefficiencies that can be enjoyed by investors to make profits (Treynor and Mazuy, 1966; Grossman and Stiglitz, 1980; Fama, 1991). Investors should consider market-

timing skills, so the variable market risk should be higher, leading to higher expected returns (Treyner and Mazuy (1966)). Also, the market information is asymmetric, which allows opportunity to investors if they study the market and find these asymmetries (Grossman and Stiglitz, 1980). Lastly, certain factors like company value or size and investors behaviours generate alpha, and if investors knew how to explore these factors, they could beat the market (Fama and French, 2015). This strategy is denominated active strategy because of this necessity to always be searching for changes in factors and possibilities exploration, in this perspective, investors normally buy and sell assets in the short term to enjoy returns and explore market asymmetries (Fama and French, 2015). Cryptocurrencies are a possible investment if investors believe that they could beat the market, to do so, cryptocurrencies real returns need overcome expected returns in a specific period. Some investors believe in that, while others think that what is happening is the opposite.

The important conclusions that I can take from this section is that cryptocurrencies are a hypothesis regarding investors most common strategies. If they want to develop active investment strategies, they should also study cryptocurrencies markets, then, depending on their vision about the MPT, they can use cryptocurrencies for diversification, to increase returns even with risk, or as a combination of this hypothesis.

3.3. Companies Investment Portfolios

In the last section I saw the evolution of portfolio strategies, however, that was primarily focused on individual investors. Of course that some decisions are similar, mainly for firms that are managed by a single person, that will probably make decisions thinking as a personal investor. Nevertheless, this section is important because I will highlight differences and how that can affect cryptocurrencies investments.

This discussion begins with the premise that companies, depending on their business cycles and operational characteristics, may at times have surplus cash available (Graham and Harvey, 2001; Allen et al., 2007; Bates et al, 2009; Fresard, 2010). They normally prefer to use that cash to invest in financial assets, the reasons for this is that they allow stable returns with low volatility, and at the same time, preserve flexibility, allowing companies for example to sell them, reducing leverage costs, if they want to invest in their company materials or capabilities in the future (Graham and Harvey, 2001; Bates et al., 2009). Another reason that can explain why companies invest in financial assets, is specific sectors or periods where

growing their own business is difficult or too expensive (Allen et al., 2007; Fresard 2010). Fresard (2010) explained that sometimes companies have good operational performance but scarce opportunities to grow, so, what they do is invest in these retain profits to keep or improve a bit their value, and then, they wait until a strategic opportunity appears to invest in their own business. Allen et al. (2007) concluded that investments are important to create strategic alliances and keep financial returns in low expansion periods of their business, in a study to explain why Japanese firms invest in other companies.

Companies invest in financial assets, now is important to understand in which assets they invest and why investing in them over other with different characteristics. If companies are cautious, their purpose is to manage their cash reserves and obtain returns just a bit superior to cash while maintaining high liquidity, in this case, they will be interested in short term assets such as commercial paper, conservative ETFs, or short-term sovereign bonds (Oppler et al. 1999). For this purpose, I conclude that cryptocurrencies are not an option, they are a lot riskier and have high short-term volatility, so they are not a good option if this is the company strategy. Then, there is the objective of maintaining the capital value and get some return, but in a medium to long term (Almeida et al., 2004). When companies have financial constraints, they will invest in financial assets such as stable stocks, corporate bonds, mutual funds or sectorial ETFs, that can be held by a longer period, while maintain good returns, and then, when some different opportunities for both investing or financing appear, they can enjoy them (Almeida et al., 2004). For this strategy, the only cryptocurrency that can have this capability is Bitcoin (Li, 2021; Su et al., 2020; White et al., 2020). However, even Bitcoin is not consensual as a store of value (Cheah and Fry, 2015). The other cryptocurrencies would not be a logical investment if companies' pursuit these objectives. Finally, if companies aim to increase the firm value by investing in assets with high valorisation potential such as derivatives, or aim to strategically diversify, they can choose to invest in assets with higher risk (Bartram et al., 2011). This is the type of companies that would invest in cryptocurrencies, therefore, if a company does not pursuit this objective, it does not make sense to invest in cryptocurrencies according to the literature.

3.4. Cryptocurrencies in Companies Investment Portfolios

In the last sections, I tried to understand what companies' portfolios of investments strategies are and what could be their explanations or interest in the investment in cryptocurrencies. Theory suggests that companies might consider Bitcoin primarily for its

role as a store of value, while alternative cryptocurrencies could also serve as diversification instruments aimed at higher returns. Stablecoins, by contrast, are unlikely to be appealing due to their stability and limited investment upside. In this section, my idea is to study literature related to investments in cryptocurrencies by companies to understand if my conclusions really happen or there are other perspectives specific of this type of assets.

Firstly, it is important to highlight that there is a connection between CEOs interests, and the way they make decisions and manage their companies (Korkeamäki et al., 2017; Caliskan and Doukas, 2015; Serfling, 2014). Leverage decisions and dividend policies are normally impacted by CEOs personal and risk preferences (Korkeamäki et al., 2017; Caliskan and Doukas, 2015). Also, risk preferences of CEOs are aligned with firm risk preferences, which leads to older CEOs less likely choose high risk investments (Serfling, 2014). This means that there exists a higher possibility of companies start investing in cryptocurrencies if the ones of manage them are interested in this type of investment. For PortusInvest it can be interesting to study managers knowledge and willingness to invest in highly risky assets such as cryptocurrencies, because normally they have a huge impact in decision making (Serfling, 2014; Caliskan and Doukas, 2015; Korkeamäki et al., 2017). I can also state that if individuals are becoming more interested and trustier in cryptocurrencies, companies will also follow that trend, because these individuals are some of the ones that run companies. That can be the explanation for the investment in cryptocurrencies of Tesla or MicroStrategy.

Other factors that can affect companies' interest in adding cryptocurrencies to their portfolio of investments are the psychological variables such as trust and brand familiarity with cryptocurrencies firms and trading platforms, they increase the intentions of adding cryptocurrencies in companies' portfolios (Sun et al., 2021). Innovativeness of firms is also positively correlated with their interest in cryptocurrencies, price volatility is not a problem for some companies, if they aim for long term returns (Sun et al., 2021)-

Another important aspects is how can accountability and regulation impact the investment in cryptocurrencies. Cryptocurrencies transactions are poorly regulated by governments given that it does not exist an international standardization (Bourveau et al., 2022). Nonetheless, companies should voluntarily disclosure transactions to protect themselves from penalties in the future (Bourveau et al., 2022). Cryptocurrencies can be accounted for their fair value (Liu et al., 2021; Luo and Yu, 2024), however, the IFRS (International Financial Reporting Standards) accounts cryptocurrency as an intangible asset, like a patent,

which means that only the losses in value are counted, this negatively impacts balance sheets. This way, if the regulation and the rules on financial reporting change in favour of cryptocurrencies, which is possible according to Liu et al. (2021), companies might be more willing to use them as a financial investment, mainly in the accounting section because nowadays rules do not account cryptocurrencies at a fair value (Luo and Yu, 2024).

Other authors focused on strategic analysis about them (Catalini and Gans, 2011; Trimborn et al., 2020; Pujari, 2022; Barbosa et al., 2023; Yudha et al., 2024; Uglitskikh et al., 2024). Companies might be afraid of reputation damage and degradation of public perception because of the dark side of cryptocurrencies such as verification problems and the association with environmental issues (Catalini and Gans, 2011). However, cryptocurrencies importance is increasing and will increase in the future, with new financial metrics that are adjusted specifically for cryptocurrencies, companies can compare for example, volatilities, correlation and liquidity (Trimborn et al., 2020). This helps them in choosing the cryptocurrencies by allowing them to manage liquidity constraints and account for environmental damage for instance (Trimborn et al., 2020). Finally, as I have mention in the introduction, there are some studies that connect strategy analysis frameworks and the possibility of uses of cryptocurrencies. There is a SWOT analysis but is only for the investment in greener transactions using cryptocurrencies (Kharb et al., 2024). A strategic analysis that states that cryptocurrencies should be used for the agricultural sector (Uglitskikh et al., 2024). A Porter's five forces analysis on the use of cryptocurrencies in the online banking sector (Pujari, 2022). A study with all the analysis but is just related to the use of blockchain in the food retail industry (Barbosa et al., 2023). And, finally, a decision hierarchy roadmap on the investment in cryptocurrencies, that can be adapted to the Portuguese landscape (Yudha et al., 2024). These studies are dispersed, and do not provide the full scope of the possibility of companies invest in cryptocurrencies as the present report does. All the strategic overview, and a guideline for companies, focused on Portugal, is an important study that will complement the literature. Another aspect that can be improved in my opinion, but I cannot do in this study, would be a case study evaluation of strategies of real companies in this topic, some companies are adding cryptocurrencies to their portfolios (MicroStrategy Financial Report, 2025; Tesla Inc. Financial Report, 2025), but because this is a very recent trend, I do not have financial data available to do a quantitative and results analysis, and in fact, it does not make sense for companies to disclosure their strategies, which would make them loss the advantage they are constructing.

4. Methodology

The present report was developed from extensive research that provides the necessary information to address the possibility of Portuguese companies using cryptocurrencies in their investment portfolios. Given the multifaceted nature of the research objectives, a mixed-method approach was adopted, combining both qualitative and quantitative methods. This dual perspective was essential to understand not only the theoretical and strategic underpinnings of the cryptocurrency market but also the practical insights and behaviours of potential corporate investors in Portugal.

By studying the market and applying the strategic analysis more mentioned during the master programme, Portuguese companies are provided with a contextual evaluation on the possibility of adding cryptocurrencies to their portfolio of investment. Additionally, a survey for PortusInvest clients was conducted, that helped me understanding what the knowledge and interest that Portuguese companies have in this possibility, which helped to evaluate the feasibility of PortusInvest advising other companies that may be interested in investing in these assets. Therefore, this section is divided into three sub-sections: the application of mixed methods as a guiding framework, the collection and interpretation of survey results, and the discussion of methodological limitations.

4.1. Mixed-Method Approach

Throughout the internship, a mixed-method strategy was implemented, integrating strategic theoretical models with real market data and business perceptions. This approach proved particularly useful for capturing the dynamics of a complex and evolving market such as that of cryptocurrencies. The goal was to ensure a balance between data-supported evaluation and conceptual exploration. Although several of the analytical frameworks used are traditionally considered qualitative in nature, in this study they were applied in conjunction with empirical and numerical indicators, thus forming a mixed analytical base.

The market analysis provided an overview of the global crypto ecosystem, the key topics covered are the market size and evolution, main categories of crypto-assets and segmentation, key players acting in the market, and trends and forecast for the future. To achieve this there were combined reports from different sources, for example cryptocurrencies specialized platforms such as CoinMarketCap, Chainalysis, or Crypto.com, market data providers like Statista and consulting companies, for example

Deloitte and PwC, that helped in the construction of the market analysis by providing real professional examples of market analysis to this market. Finally, some information was gathered via media sources, particularly to support the study of the Portuguese market. All these materials were then combined with the journal publications to produce the best possible representation and explanation of the cryptocurrency market.

To examine the macro-environment, a PESTEL analysis was conducted, addressing Political, Economic, Social, Technological, Environmental, and Legal factors influencing the cryptocurrency sector. Following this, the Porter's Five Forces framework was applied to assess competitive pressures such as the threat of new entrants, bargaining power of suppliers and buyers, threat of substitutes, and industry rivalry.

The internal analysis focused on how companies might position themselves regarding cryptocurrencies as a resource, for this a BCG Matrix was used to evaluate the portfolio positioning of different types of crypto assets, categorising them as Stars, Question Marks, Cash Cows, or Dogs based on market growth and adoption potential. The VRIO Framework further assessed the internal strategic value of investing in cryptocurrencies through the lens of Value, Rarity, Imitability, and Organisation. This provided insight into whether crypto-related capabilities could be a source of sustained competitive advantage for companies.

Building on the internal and external findings, a SWOT analysis was developed to identify the main Strengths, Weaknesses, Opportunities, and Threats regarding crypto adoption in a corporate setting. To transition from diagnosis to strategy, the TOWS Matrix was then applied, this tool enabled the construction of possible strategic responses by aligning internal strengths and weaknesses with external opportunities and threats.

The culmination of the mixed-method approach was the elaboration of an Investment Roadmap, which operationalises the strategic findings into a sequence of actionable steps that companies may follow to initiate and manage cryptocurrency investments. This roadmap addresses pre-investment procedures such as internal team creation, capital allocation policies, cybersecurity partnerships, and regulatory compliance; the investment phase itself, including internal control implementation, market monitoring, and asset storage solutions; and post-investment steps such as valuation reporting and risk management. As such, this component translates the theoretical and empirical inputs into a practical tool that can inform corporate decision-making.

4.2. Survey

To complement the strategic and market analysis, a survey was developed and distributed among all clients of PortusInvest, aiming to gather empirical data on corporate perceptions and attitudes towards cryptocurrency investments. The survey had multiple objectives: to assess general awareness and understanding of cryptocurrencies, to evaluate current usage and future interest and to identify main motivators and barriers perceived by companies considering such investments.

The survey was structured into three main sections. The first section included multiple-choice questions aimed at collecting demographic information, such as age, nationality, region of residence, gender, education level, and employment status, that can be important to commercial or marketing strategies for example. Only respondents who identified as currently employed proceeded to the second section. This segment focused on company-related information, including the firm's location, legal status, industry sector, company size, and the department where the respondent work. It also asked whether the respondent was involved in the company's investment decision-making processes. Those who confirmed such involvement advanced to the third and final section of the survey, which addressed the respondent's knowledge of, interest in, and expectations about cryptocurrencies. This last section began by assessing the respondents' level of knowledge about cryptocurrencies. Based on the literature, key motivating and discouraging factors associated with investing in cryptocurrencies were identified and included in the questionnaire. These aimed to determine which factors exert the greatest influence on Portuguese companies' investment decisions. Subsequently, respondents were asked whether their companies had already used cryptocurrencies and, if so, in what context. To assess the potential growth of this trend, the survey included questions on future intentions regarding the use of cryptocurrencies, possible investments time frames, and factors that might encourage or discourage future investment. Additional questions addressed the perceived importance of cryptocurrencies in future investment strategies and which types of cryptocurrencies were considered most relevant. Finally, the survey asked respondents to assess the usefulness of a market report with strategic analyses and an action plan aimed at increasing companies' awareness and understanding of cryptocurrency investment. The final survey, with an estimated completion time of four minutes, is available in the annexe ([see Figures 17 to 29](#)). It was distributed via email to all clients in the PortusInvest database on May 2, 2025. A reminder was sent on May

16, and the survey closed on May 25. A total of 4012 emails were sent, of which 1944 were opened. However, there were only 104 responses, barely 2,6% of all clients of the company. Although this represents a modest sample, it was sufficient to derive relevant insights, particularly when triangulated with the strategic analysis

The results of the survey provide valuable insights into the knowledge, interest, and investment practices of Portuguese companies regarding cryptocurrencies, which are not readily available through other sources. Notably, more than 46% of respondents stated that they know what a cryptocurrency is but do not understand how the market functions, while nearly 30% reported having only basic knowledge. Only 24.4% indicated that they actively follow the cryptocurrency market. This general unfamiliarity may help explain why only 14.1% of respondents reported that their companies had used cryptocurrencies for any purpose, and only eight respondents confirmed cryptocurrency investments. Despite the low level of current adoption, nearly 36% of respondents indicated that their companies might consider using cryptocurrencies in the future, which signals notable potential for market development. Additionally, 45% agreed that their company should explore the cryptocurrency market further, 38.5% stated that their company must monitor digital asset innovations, and 42.3% believed that blockchain technology will revolutionise financial markets. Regarding perceptions of companies already using cryptocurrencies, 39.7% of respondents viewed such companies as innovative. However, cryptocurrency use was not widely associated with increased credibility, partly due to persistent associations with illicit activities such as money laundering. When evaluating the potential benefits of cryptocurrencies, 46.2% believed they offer diversification benefits, and 34.6% viewed them as a hedge against inflation. However, opinions were divided regarding future investment intentions and the comparative value of cryptocurrencies relative to other investment options. Several risk factors likely contribute to this scepticism: 55% cited excessive volatility as a major deterrent, 43.6% pointed to the market's unpredictability, and 59% indicated that the lack of clear regulation in Portugal negatively affects their investment outlook. In contrast, environmental concerns were considered relevant by only 21.8% of respondents. In terms of motivators, the potential for financial gains was the leading factor, with 53.4% indicating that good returns would motivate investment. Portfolio diversification followed (41.1%), alongside technological adoption, innovation, and growing market acceptance (each with 34.2%). Other motivators such as inflation protection (28.8%), interest from upper management (24.7%), and influence from partners (17.8%) were less influential. Among the

main discouraging factors were high volatility (57.9%), lack of regulation (52.6%), insufficient internal knowledge (46.1%), and concerns about fiscal policy and cyberattacks (both at 44.7%). Reputation risk was important to 22.4% of respondents, while lack of administrative interest was cited by only 9.2%. Interestingly, 41% of respondents said they would consider investing in cryptocurrencies if the main barriers of regulation and volatility were addressed. Among the different types of cryptocurrencies, Bitcoin was the most popular option, with 50% of respondents selecting it as their preferred choice if they invested in cryptocurrencies. A third expressed interest in alternative cryptocurrencies (altcoins), while 16.7% would choose stablecoins. Lastly, respondents were asked how useful they considered a market study with strategic analyses and an action plan for investing in cryptocurrencies. Only 15.4% said it would be very useful for their company, and 19.2% said it would be useful. The remaining respondents considered such a report to be irrelevant or of little value. While the majority of PortusInvest clients may not currently express interest in investing in cryptocurrencies, these results suggest potential value in developing a service that supports the decision-making process for companies that wish to explore this emerging investment avenue. These results are available in the annexe ([see Figures 30 to 56](#)).

4.3. Limitations

Although this study offers valuable insights for Portuguese companies considering cryptocurrency investment, several limitations must be acknowledged. Firstly, the novelty and underdevelopment of this research area present a challenge. There are currently no directly comparable academic studies published in peer-reviewed journals such as the journal of finance, corporate finance, or financial economics that combine strategic analysis with cryptocurrency adoption in a corporate context. These strategic models are internationally recognised, however, their application is inevitably interpretative and may be influenced by subjective judgement. Also, the existing literature is either very recent or only marginally addresses the intersection of cryptocurrencies and corporate strategy. In fact, PortusInvest's motivation for commissioning this study stemmed from the lack of publicly available and consolidated information on the topic. Consequently, this thesis should be considered exploratory in nature. Its findings may be subject to revision depending on the evolution of the cryptocurrency market, particularly regarding future regulatory developments. Moreover, the cryptocurrency market itself is highly dynamic. The number of available cryptocurrencies is growing steadily, and future digital assets may possess different characteristics that address

distinct investment goals not covered in this study. As such, the conclusions drawn herein may not be applicable to future developments in the sector.

A second important limitation relates to the methodology, specifically the scope and composition of the survey sample. The questionnaire was distributed exclusively to PortusInvest clients, which limits the generalisability of the results. For instance, according to Pordata (2023), micro, small, medium, and large companies represent 96.1%, 3.3%, 0.5%, and 0.1% of Portuguese companies, respectively. However, within the survey sample, only 75.8% of respondents were from micro-enterprises, indicating an overrepresentation of larger firms relative to the national corporate structure. A similar imbalance is observed in terms of company location, with 47.3% of responses originating from the “Norte” region, as well as in the sectors and legal forms represented. This sample bias suggests that a future study could benefit from a broader and more statistically representative survey targeting Portuguese companies of all sizes, regions, and industries. Another notable limitation is the respondents’ general lack of knowledge about the cryptocurrency market. Only a minority demonstrated a good understanding of the topic, which may explain the high incidence of neutral responses to agree/disagree questions. To address this issue, future surveys could either include brief educational content about cryptocurrency fundamentals before posing key questions, or limit participation to respondents with a minimum level of prior knowledge.

Finally, given the characteristics of the cryptocurrency market, its volatility, lack of regulation, and rapid evolution, this research relies heavily on recent, uncertain, and somewhat subjective data. The conclusions presented may become outdated as the market matures and as new academic and empirical contributions emerge. Therefore, for more robust and enduring results, it would be valuable for future scholars to investigate this topic further, refining methodologies and incorporating updated information and market innovations. In summary, future research could include a larger and more representative survey of Portuguese companies, as well as a comprehensive comparative study of major cryptocurrencies, focusing on their price history, forecasts, and investment characteristics. Such efforts would significantly enhance understanding and provide a stronger foundation for corporate decision-making in this emerging field.

5. Market Analysis

Up to this point, this report has focused on the theoretical framework and the results obtained from the survey. The following section will now proceed to a comprehensive analysis, integrating these findings with insights derived from established strategic models. This type of analysis is widely supported by academic literature and leading consulting companies as a valuable tool for corporate decision-making.

The analysis begins with an overview of the market, aiming to contextualize the topic for the reader. This includes an assessment of the size and growth trajectory of the cryptocurrency market, followed by a segmentation based on types of currencies, investor profiles and objectives, as well as the sectors in which cryptocurrency usage is most prevalent. Subsequently, key market players and current trends are examined. This will provide a foundation for meaningful conclusions and enable a forward-looking perspective, assisting companies determine whether to invest in the cryptocurrency market as a whole or in specific segments of it.

5.1. Size and Evolution

The first section of the market analysis focuses on the size and evolution of the cryptocurrency market, both globally and in Portugal. This analysis aims to demonstrate the growing global interest in cryptocurrencies and explain why this trend may be relevant for Portuguese companies considering investing in such assets.

The global cryptocurrencies market currently records a trading volume of approximately 145 billion US dollars, with a total market capitalization of 3.35 trillion US dollars (CoinMarketCap, 2025). Since 2013, the market has undergone significant and rapid expansion. In 2021, it reached a then-maximum market capitalization of 2.86 trillion US dollars. This was followed by a period of contraction between 2022 and 2023. However, from the last quarter of 2023 until September 2024, the market rebounded, reaching an all-time high capitalization maximum of 3.71 trillion US dollars. Although there was a slight decline in value up to April 2025, current indicators suggest a renewed upward trend (CoinMarketCap, 2025). This information is visually represented on the annexe ([see Figures 8 and 9](#)). The sustained upward trajectory can be explained by the crescent adoption of cryptocurrencies, in 2024, there were counted 659 million owners of cryptocurrencies worldwide (Crypto.com, 2025).

The Portuguese market reflects this global trend. The number of blockchain startups is increasing, and the regulatory environment remains favourable due to the government light-touch approach to regulation (Statista, 2025). Cryptocurrency adoption is expanding in Portugal, the number of users predicted in 2023 was 276 thousand, approximately 2,7% of Portuguese population (Triple-A, 2024). Statista (2025) predicts adoption on more than 33% of the population, the number is probably a bit lower, nevertheless, the trend is the growing of adoption. Although specific projections for market capitalization and trading volume in Portugal are not available, the cryptocurrency market is expected to generate revenue of 219.4 million US dollars in 2025 (Statista, 2025).

5.2. Segmentation

For the purpose of this report, I will adopt a simplified classification of cryptocurrencies based on their characteristics and similarities. The first distinction is between Bitcoin, which accounts for approximately 60% of the market, and all other cryptocurrencies, commonly referred to as altcoins or alternative coins (CoinMarketCap, 2025). Ethereum, representing around 8% of the market (CoinMarketCap, 2025), is often considered a major cryptocurrency, however, there is significantly less academic research on Ethereum as a potential store of value compared to Bitcoin (Bouri, 2018; Su et al., 2020; White et al., 2020; Li, 2021). Then, I divide the altcoins in two groups, the stablecoins, and the other alternative coins. This distinction is relevant because stablecoins are pegged to fiat currencies and are primarily used as bridge currencies in crypto markets, nevertheless, they offer limited advantages over holding traditional currencies when it comes to investment (Hoang and Baur, 2024). Therefore, from this point forward, the term “altcoins” will refer to non-stablecoins alternative cryptocurrencies. These assets are generally riskier, and investing in them has been compared to gambling (Andrade and Newall, 2023). Despite the difficulty in predicting price movements and high volatility, portfolios that include such altcoins have demonstrated higher returns (Cyril, 2023). **(see Annexe Figures 10 and 11)**

While the cryptocurrency market was initially driven by individual investors, the investor landscape has since diversified. For the purposes of this report, investors will be categorized into two main groups based on their nature and level of institutionalization. Individual or retail investors represent the majority of the market, these are typically individuals with smaller portfolios, lower financial literacy on average, a higher risk tolerance, and greater influence from social media (Aiello et al., 2023). They are estimated to account for 65% to

75% of the total market, although there is no universally accepted figure published by a central authority (Chainalysis Global Crypto Adoption Index, 2023; Fidelity Digital Assets, 2024). Institutional investors make up the remaining 25% to 35% and include companies such as Tesla and MicroStrategy, insurance companies, banks, financial advisors, high-net-worth individuals, family offices, pension funds, hedge funds (traditional and crypto), venture capital funds, exchange-traded funds (ETFs), endowments, foundations, and even governments (Fidelity Digital Assets, 2024). In Portugal, investor data is even less standardized and mostly based on estimates. Nonetheless, the available information suggests that retail investors dominate almost all the national market (Expresso, 2021). Publicly known institutional investors are scarce, which may present a strategic opportunity for Portuguese companies. To date, only one investment fund, “Unbound” by 3 Comma Capital, has disclosed exposure to crypto assets (Jornal de Negócios, 2024). Additionally, Anchorage Digital Bank, led by Portuguese CEO Diogo Mónica, has expressed interest in entering the Portuguese market (Observador, 2021).

Another useful categorization considers the investment objectives. As previously outlined in Section 2.2, some investor’s view Bitcoin primarily as a store of value (Su et al., 2020; White et al., 2020; Li, 2021), while others seek diversification by investing in various altcoins, accepting higher levels of risk (Liu, 2019; Huang et al., 2022; Khaki et al., 2023). These represent the most common motivations for corporate investment in cryptocurrencies, however, there are also other investor types, such as arbitrageurs, who exploit price differences across market, and high-frequency traders like scalpers, who engage in frequent buy-sell transactions (Flipster, 2022). Additionally, there are experimental investors, who are driven by curiosity and a desire to explore emerging technologies (Aiello et al., 2023). Finally, the impact investors focus on acquiring cryptocurrencies that are associated with innovation, sustainability, or financial inclusion projects (Aiello et al., 2023).

5.3. Key players

Another important aspect that must be considered in a market analysis is identifying the key participants in the ecosystem. Especially in a relatively new market such as this one, stakeholders require a shared understanding of the main actors in the cryptocurrency space to support continued adoption and growth of these assets (Chainalysis, 2021). The first group of participants is the technology providers. These entities are responsible for developing and maintaining blockchain infrastructure, ensuring transaction validation and security, and

enabling the safe storage of crypto assets (Chainalysis, 2021). This group includes blockchain organizations such as the Ethereum Foundation, Solana Labs, ConsenSys, and Chainlink, mining operators like Foundry USA, Antpool, and F2Pool, and merchant service providers such as WorldPay, FIServ, and GlobalPayments (Chainalysis, 2021). In Portugal, the market for blockchain technology is growing, as evidenced by the increasing number of blockchain startups, reflecting a rising interest in this area (Statista, 2025).

To facilitate the trading and storage of cryptocurrencies, exchange platforms play a vital role. These platforms may be centralized (CEX), such as Binance, Kraken, or Coinbase, or decentralized (DEX), including Uniswap, PancakeSwap, and Curve (Chainalysis, 2021). Typically, users register and create a wallet, which gives them access to buy, sell, and trade cryptocurrencies, in some cases, these platforms also offer services such as staking, lending, and token launches (Chainalysis, 2021). Portuguese companies interested in investing in cryptocurrencies must select an appropriate exchange platform. A comparative analysis of costs and services is provided in Section 7 to assist in this decision-making process.

Investors, both retail and institutional, also play a fundamental role in this market. A detailed overview of these participants has been provided in the previous section and will not be repeated here. Finally, regulators and governmental bodies are crucial actors responsible for overseeing the cryptocurrency ecosystem and establishing regulatory frameworks. Currently, these entities operate independently across jurisdictions, resulting in fragmented regulatory environments that hinder global market development. The establishment of unified regulations is essential to foster investor confidence and ensure market integrity (Saundal, 2021). In the United States, the cryptocurrency market is primarily regulated by the Securities and Exchange Commission (SEC), whereas in the European Union, oversight is carried out by the European Central Bank (ECB). The ECB is currently exploring the implementation of a digital euro and has introduced the Markets in Crypto-Assets (MiCA) Regulation (European Union, 2023). Portugal is expected to adopt this legislation in the near future, as mentioned by Banco de Portugal (2025), however, it has not yet been enacted yet. Since 2020, Banco de Portugal has served as the supervisory authority for entities operating with crypto assets in the country (Diário da República, 2020).

5.4. Trends

As the cryptocurrency market continues to grow, several emerging trends are likely to shape its future. These trends are relevant to this analysis, as they offer insights into potentially attractive investment opportunities for Portuguese companies and signal how the broader ecosystem may evolve, requiring a strategic reassessment. One of the most significant trends is the evolution of regulatory and legal frameworks (see Figures 12 and 13 in the Annexe). Regulatory bodies are increasing oversight and implementing stricter rules, which enhances the market's legitimacy and paves the way for institutional investment (PwC, 2025). However, this increased control may also reduce one of the key advantages of cryptocurrencies, decentralization and freedom from traditional financial systems (PwC, 2025). Governmental perspectives are proving to be a critical factor in this evolution. In the United States, the Donald Trump administration has adopted a markedly pro-crypto stance, with the SEC establishing a dedicated crypto working group to guide digital asset policy (ResearchandMarkets, 2025). Meanwhile, in the European Union, the Markets in Crypto-Assets (MiCA) regulation has been introduced and is expected to set a global standard for cryptocurrency regulation (PwC, 2025; ResearchandMarkets, 2025).

As you can see in figure 1, another major trend is the increasing participation of institutional investors in the cryptocurrency market. As the regulatory environment becomes clearer and more consistent across regions, institutions are more willing to integrate cryptocurrencies into their portfolios (ResearchandMarkets, 2025).

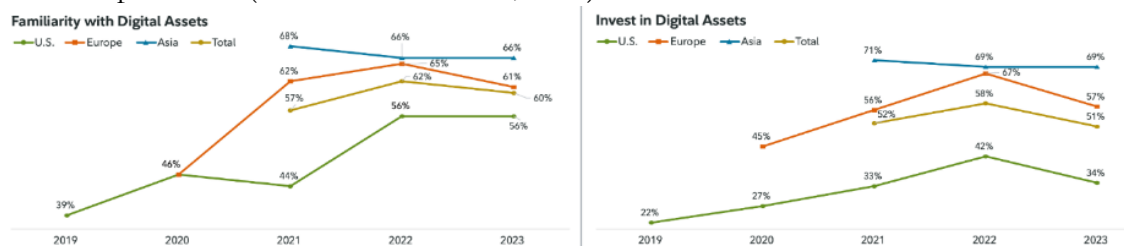


Figure 1: Familiarity and Adoption of Digital Assets.

Source: Fidelity Digital Assets Research (2024).

This trend is important not only for private firms but also for governments, which are gradually increasing their cryptocurrency holdings and exploring the creation of central bank digital currencies, CBDCs (CoinGecko, 2025; Mastercard, 2025). According to CoinGecko (2025), governments collectively hold approximately 2.3% of all Bitcoin in circulation, a share that continues to grow.

Country	Flag	Filings & Sources	# of BTC	Value Today	% of 21m
USA			207,189	\$21,598,233,532	0.981%
China			194,000	\$20,221,485,240	0.924%
UK			61,000	\$6,358,302,060	0.29%
Ukraine			46,351	\$4,831,371,455	0.221%
Bhutan			13,029	\$1,398,010,179	0.062%
El Salvador		Filing	6,089	\$634,683,626	0.029%
Finland			1,981	\$206,488,465	0.009%
Georgia			66	\$6,879,474	0.0%
Germany			0.0	\$0	0.0%
Totals:			529,705	\$55,213,515,343	2.522%

Figure 2: Countries who hold Bitcoin, last updated on 26 February 2025.

Source: Bitbo.io (2025).

Another major trend is the tokenization of real-world assets (RWAs). Tokenization refers to the conversion of physical or financial assets into digital tokens that can be securely traded or owned fractionally on blockchain platforms. As you can see in figure 2, Deloitte (2025) predicts that this market will experience exponential growth, significantly disrupting sectors such as private real estate. Related to these disruptive technologies is the increasing integration of artificial intelligence (AI) in the cryptocurrency ecosystem, along with the rise of Web3 (EconomicTimes, 2025; CoinDesk, 2025; Binance Research, 2025). These innovations may present promising opportunities for Portuguese companies seeking to invest in the sector. For instance, firms could explore investments in Web3 projects or leverage AI-powered investment assistants. One such example is Newton, developed by PayPal and MagicLabs, which automatically manages cryptocurrency investments while prioritizing security and privacy (EconomicTimes, 2025).

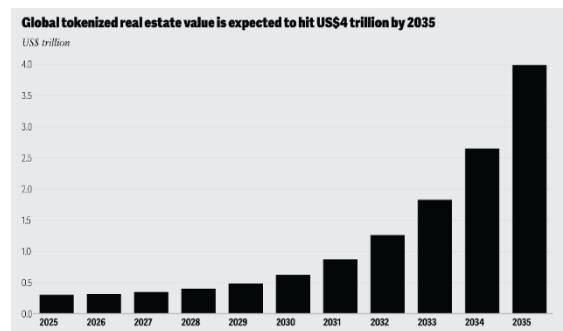


Figure 3: Forecast for the global tokenized real estate value.

Source: Deloitte (2025).

Finally, some researchers highlight recurring market cycles within the cryptocurrency space. Historically, market peaks have tended to occur 12 to 18 months following a Bitcoin halving event, therefore, if this pattern persists, the end of 2025 may mark a new historical high for the market (ResearchandMarkets, 2025). However, external macroeconomic factors such as the imposition of tariffs by the Trump administration have dampened expectations, potentially leading to a smaller peak, consequently, companies must remain attentive to future macroeconomic developments in order to optimize their investment strategies (ResearchandMarkets, 2025; Binance Research, 2025).

5.5. Market Analysis Conclusions and Forecast

This market analysis allows several preliminary conclusions that may be relevant to the decision-making process regarding cryptocurrency investment by Portuguese companies. The substantial and expanding market capitalization, transaction volume, and user base, both globally and in Portugal, reinforce the argument that cryptocurrencies can represent a strategic opportunity for international and domestic investors (CoinMarketCap, 2025; Statista, 2025; Crypto.com, 2025; Binance Research, 2025). Such investments can support companies aiming to diversify their portfolios, these firms might consider Bitcoin or other alternative cryptocurrencies, which have shown consistent growth and often demonstrate low correlation with traditional investment assets such as stocks, bonds, real estate, or market indices (Cyril, 2023; Vanguard 2025). One of the key trends shaping the future of the sector is the rise in institutional investment (figure 1). In Portugal, this trend is still in its early stages, meaning that Portuguese companies could benefit from early-mover advantages (Fidelity Digital Assets, 2024). Global regulators are intensifying their oversight of the cryptocurrency market, however, this increased control is expected to improve transaction safety and security, addressing one of the main concerns investors face (PwC, 2025; ResearchandMarkets, 2025; CoinGecko, 2025). Currently, Banco de Portugal supervises entities operating with crypto assets within the country, however, according to the same institution, Portugal is expected to soon implement the European Union's Markets in Crypto-Assets (MiCA) regulation (Banco de Portugal, 2025). This legislative shift is anticipated to further enhance investor confidence by providing a clear and unified regulatory framework. Finally, cryptocurrencies are reshaping the global financial landscape, the tokenization of real-world assets and increasing worldwide adoption of digital currencies suggest a move towards more decentralized financial systems (EconomicTimes, 2025; Deloitte, 2025; Binance Research, 2025). These developments may offer long-term strategic benefits for companies that position themselves early in this evolving ecosystem.

This section was intended to provide a foundational understanding of the cryptocurrency market, the following section will proceed with a strategic analysis. While the market currently appears to be on an upward trajectory, offering a variety of compelling investment opportunities, especially within the Portuguese context, this does not imply that all companies should engage in cryptocurrency investment without first carefully evaluating the associated risks and potential downsides.

6. Strategic Analysis

The previous section provided an overview of the cryptocurrency market, highlighting its potential and presenting relevant forecasts and future trends. The market analysis is favourable to the investment in cryptocurrencies as they are growing and Portuguese companies can enjoy advantages from being early adopters. However, such an investment decision also requires a comprehensive strategic analysis. This type of analysis is essential, as it provides critical insights into both the internal and external environments of the firm and helps identify potential opportunities and threats that must be considered in the strategic decision-making process (Papulova and Gazova, 2016).

This strategic assessment follows a structured approach, starting with the broader external environment and progressing toward the specific decision of incorporating cryptocurrencies into corporate investment portfolios. Accordingly, the section begins with an external analysis of the cryptocurrency environment using the PESTEL framework, which offers a comprehensive understanding of the macro-environmental factors affecting the market. This is followed by Porter's Five Forces analysis, which focuses more specifically on the competitive dynamics among companies operating in the sector. Subsequently, the internal environment is examined using the BCG matrix and the VRIO framework. These tools allow for the comparison of cryptocurrency investment against other asset classes such as stocks, bonds, real estate, or market indices, helping companies determine whether this form of investment can offer a sustainable competitive advantage. Finally, a SWOT analysis is conducted, followed by a TOWS matrix. These tools serve to summarize the strategic evaluation by identifying the strengths and weaknesses of the investment hypothesis, as well as the opportunities and threats arising from the external environment. More importantly, they assist in understanding how companies can leverage positive aspects and mitigate potential risks. It is important to note that while several tools are available for strategic decision-making, the ones selected for this analysis, PESTEL, Porter's Five Forces, BCG Matrix, VRIO, SWOT, and TOWS are those most extensively studied during this master's degree. For this reason, they have been chosen to guide the analysis presented in this report.

6.1. External Analysis

6.1.1. PESTEL Analysis

The PESTEL analysis is a widely used tool for external strategic evaluation, encompassing six key domains: Political, Economic, Social, Technological, Environmental, and Legal factors (Barbosa et al., 2023). Analysing these areas helps identify potential opportunities and threats, thereby supporting the strategic decision-making process (Johnson et al., 2016). Political factors reveal that governments worldwide are showing increasing interest in cryptocurrencies, both in terms of adoption and regulation, several countries already hold Bitcoin as part of their reserves (Bit.Bo, 2025; CoinGecko, 2025), and there is a global effort to establish regulatory frameworks (PwC, 2025). Political developments in the United States and the European Union are particularly influential, given their significant share in global cryptocurrency transactions (Statista, 2025). In the US, the Trump administration has appointed a crypto-friendly Securities and Exchange Commission (SEC) chair and established a dedicated crypto working group to guide digital asset policy (ResearchandMarkets, 2025). Meanwhile, the European Central Bank (ECB) is exploring the possibility of a digital euro and has created the Markets in Crypto-Assets (MiCA) regulation (European Union, 2023). The implementation of regulatory frameworks and positive government attitudes towards cryptocurrencies enhance the legitimacy, security, and attractiveness of investing in these assets (PwC, 2025). However, in Portugal, the situation differs, MiCA has not yet been implemented, partially due to political instability, including frequent elections and changes in parliament (Banco de Portugal, 2025; SIC Notícias, 2025). Consequently, Portuguese companies should closely monitor governmental changes that may influence the regulatory environment for cryptocurrency investments.

Economic factors also play a crucial role. Global GDP growth is expected to slow due to trade protectionism, geopolitical tensions, and rising costs of wages and services (EY, 2025). For 2025, real GDP growth is forecasted at 1.8% for advanced economies and 4.1% for emerging markets, with global inflation expected to decrease to 3.5% (EY, 2025). In periods of economic uncertainty, Bitcoin may be perceived as a safe-haven asset (Su et al., 2020; White et al., 2020), and cryptocurrencies generally serve as effective portfolio diversifiers (Burniske and White, 2017). However, high volatility, entry costs such as training and custodial services, and pricing complexity can discourage risk-averse companies from investing in this market (Cheah and Fry, 2015). In Portugal, the economic outlook is slightly

more positive than in many other advanced economies. The Portuguese economy should have growth results above the euro area, and is expected to grow by 2.3% in 2025, with inflation projected at the same rate (Banco de Portugal, 2025). Nonetheless, economic uncertainty persists, meaning that conclusions drawn for international companies also apply to Portuguese firms.

From a social perspective, cryptocurrencies are gaining popularity, especially among younger generations, leading many companies to accept them as a form of payment (Chainalysis, 2023). However, due to their decentralized and lightly regulated nature, cryptocurrencies are still associated with illegal activities such as money laundering, tax evasion, and terrorism, moreover, some critics argue that their intrinsic value is negligible, equating cryptocurrency investment to speculative gambling (Cheah and Fry, 2015; Rohr and Wright, 2019; Sanz-Bas, 2020; Andrade and Newall, 2023). Despite this, increasing regulatory oversight is expected to improve legitimacy and safety in this sector (PwC, 2025). In Portugal, these social dynamics are also present, however, low financial literacy and a conservative investment culture may explain the limited institutional engagement with cryptocurrencies (Tavares et al., 2021; Visão, 2025).

Technological factors are central to the cryptocurrency ecosystem. Blockchain innovation not only enabled the creation of cryptocurrencies but continues to drive advances in functionality, security, and investment tools (Hashemi Joo et al., 2020). Technological development in this field is constant and accessible even in less developed countries. In Portugal, the number of blockchain startups has increased significantly, supported by favourable governmental regulations (Statista, 2025). This creates opportunities for Portuguese companies to partner with these startups, for example, by testing unlaunched tokens or developing blockchain-based solutions.

In the environmental considerations, cryptocurrencies, particularly Bitcoin, have been heavily criticised for their energy consumption (Kharb et al., 2024). For companies that prioritise sustainability or adhere to ESG (Environmental, Social, Governance) standards, this may represent a barrier to investment, unless they can justify their environmental responsibility (Qudah et al., 2024). However, a growing trend is the emergence of ESG-focused digital assets, which aim to prioritise sustainability and social impact, these may represent a more appealing investment option for environmentally conscious firms (Cruz and Matos, 2023; Qudah et al., 2024).

Lastly, legal factors are reshaping the cryptocurrency market by enhancing its legitimacy and appeal for institutional investors (ResearchandMarkets, 2025). Regulatory frameworks are being developed globally, the US has established a dedicated crypto working group within the SEC, while the EU's MiCA regulation offers a comprehensive framework for consumer and investor protection, while fostering innovation (European Union, 2023; PwC, 2025). Banco de Portugal (2025) has stated that MiCA will soon be adopted in the country, although it has not yet been implemented, until then, Banco de Portugal remains the supervising authority. Given the decentralized nature of cryptocurrencies, the current lighter regulatory environment may present short-term advantages for investors in Portugal (Statista, 2025). However, in the long term, the implementation of MiCA is expected to benefit Portuguese companies by enhancing transaction security and regulatory clarity.

In conclusion, this PESTEL analysis highlights several key factors that Portuguese companies must consider when evaluating cryptocurrency investments. Political and economic instability, both globally and domestically, should be carefully monitored, as initial investment costs and high market volatility introduce considerable risk. Nevertheless, technological advancement and growing social acceptance continue to expand the possibilities and reduce risk in the cryptocurrency market. For sustainability-oriented firms, investing in energy-efficient or ESG-aligned digital assets is preferable. Lastly, although increased legal regulation may diminish the appeal of decentralisation, it provides essential safety, legitimacy, and confidence for institutional investment. You can see a graphical representation of this analysis below.

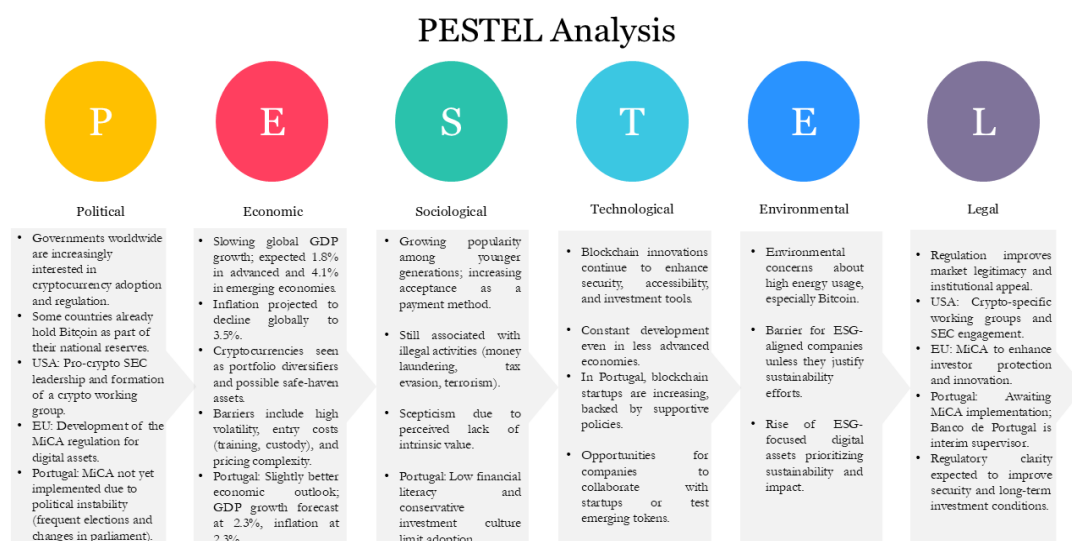


Figure 4: PESTEL Analysis of the possibility of Portuguese companies add cryptocurrencies to their portfolios of investment.

Source: Author's elaboration based on Cheah and Fry (2015), Johnson et al. (2016), Burniske and White (2017), Rohr and Wright (2019), Sanz-Bas (2020), Su et al. (2020), White et al. (2020), Hashemi Joo et al. (2020), Tavares et al., (2021), European Union (2023), Barbosa et al. (2023), Andrade and Newall (2023), Chainalysis (2023), Cruz and Matos (2023), Qudab et al. (2024), Kharb et al. (2024), Bit.Bo (2025), CoinGecko (2025), PwC (2025), Statista (2025), ResearchandMarkets (2025), Banco de Portugal (2025), SIC Notícias (2025), EY (2025), Banco de Portugal (2025) and Visão (2025).

6.1.2. Porter's Five Forces

This sub-section applies Porter's Five Forces framework, a widely recognised tool for analysing industry competitiveness (Besanko et al., 2017). The model includes five forces, the threat of new entrants, bargaining power of suppliers, threat of substitutes, bargaining power of buyers, and industry rivalry, which collectively shape the competitive intensity of a market (Barbosa et al., 2023). While this framework is traditionally used to assess an industry where a company operates, here it is applied to the cryptocurrency market, aiming to understand the competitive dynamics that may influence Portuguese companies considering investment in this sector.

The threat of new entrants in the cryptocurrency market is considered moderate to high. On the one hand, technological access is widely available, any individual or startup can launch tokens or new cryptocurrencies using open-source platforms such as Ethereum or Decentralized Finance (DeFi) protocols (Gandal and Halaburda, 2014). This ease of entry increases competition. On the other hand, achieving a significant market position is considerably more difficult, entrants face substantial barriers such as the need for high capital investment, secure infrastructure, marketing expenses, and the challenge of navigating regulatory uncertainties (Gandal and Halaburda, 2014). Furthermore, market dominance by existing players poses a significant barrier, Bitcoin alone accounts for more than 60% of market share, followed by Ethereum, which benefits from strong network effects and represents nearly 10% of the market (CoinMarketCap, 2025). These two cryptocurrencies dominate the space, limiting the visibility and relevance of new entrants.

In the cryptocurrency ecosystem, suppliers may include developers, miners, and technology providers. In general, supplier power is low due to the high number of actors within each category, which results in significant competition among them (DCF Modeling, 2025). However, Bitcoin represents an exception, its mining is limited and geographically concentrated in areas with low electricity costs. As a result, miners with substantial resources

or large Bitcoin holdings may exert moderate influence over the market (Dinsmore, 2017). That said, due to the pseudonymous nature of ownership and decentralisation, it is difficult for such actors to organise collectively and influence market outcomes (Giudici et al., 2020; Steinmetz et al., 2021).

The threat of substitutes is extremely high in this market. There are over 13.24 million cryptocurrencies available, with constant innovation introducing new ones (CoinMarketCap, 2025). Moreover, traditional financial instruments such as fiat currencies, stocks, bonds, commodities, ETFs, REITs, and even newer digital options such as central bank digital currencies (CBDCs), stablecoins, and tokenised assets serve as viable alternatives (Chuen, 2024). These substitutes are often more safe, better regulated, and less volatile than cryptocurrencies, making them more attractive for risk-averse institutional investors (Cheah and Fry, 2015; Cyril, 2023). In Portugal, another factor further increases the threat of substitution, the cryptocurrency-based Exchange-Traded Funds (ETFs), these instruments track the performance of cryptocurrencies but are not classified as digital assets, and thus are not regulated under MiCA or Banco de Portugal, making them more accessible and appealing than direct cryptocurrency investments (Diário da República, 2020; European Union, 2023).

The bargaining power of buyers, in which are included Portuguese companies, is very high. As previously mentioned, the vast number of available cryptocurrencies and the large number of trading platforms provide buyers with multiple choices (Gandal and Halaburda, 2014). Switching costs are low, and buyers can easily move between assets and platforms. Furthermore, both retail and institutional investors demand high levels of security, transparency, and utility from cryptocurrencies (Hashemi Joo et al., 2020). Price sensitivity is also significant, buyers often switch to cheaper or more functional cryptocurrencies, making it essential for suppliers to remain competitive in pricing and innovation (Gandal and Halaburda, 2014).

Given the above, industry rivalry in the cryptocurrency market is extremely high. Although many new entrants emerge, few achieve lasting market relevance without strong innovation, substantial capital, or clear differentiation. Supplier power remains limited, particularly in open-source environments, and the high threat of substitutes and strong buyer power intensify the competition. Thousands of cryptocurrencies compete for investor attention, and the fast-paced innovation cycle often renders existing technologies obsolete. In addition, exchanges and wallet providers aggressively compete on pricing, user experience, and

security features (Gandal and Halaburda, 2014). These dynamics lead to a constantly shifting market landscape, characterised by high fragmentation and volatility. A diagram of this analysis is presented in the Annexe (see Figure 14).

For Portuguese companies, these conditions present both risks and advantages. On the positive side, as potential buyers, they can benefit from the intense competition by gaining access to a wide range of cryptocurrencies at competitive prices, with platforms offering innovative features and increasing levels of security (Dinsmore, 2017). However, the dominance of Bitcoin makes it a relatively safer investment, though it comes with potential market influence from large holders (Dyhrberg, 2016; White et al., 2020). For all other cryptocurrencies, the current market structure and high rivalry work in favour of the investor, providing opportunities to explore undervalued assets with high potential. Nevertheless, companies must remain cautious and informed to mitigate risks associated with technological obsolescence, market manipulation, and regulatory shifts.

6.2. Internal Analysis

6.2.1. BCG Matrix

Moving to the internal analysis, the first tool used is the Boston Consulting Group (BCG) Matrix, also known as the growth-share matrix (Morrison and Wensley, 1991). This model is typically applied to a company's portfolio of products and evaluates the growth rate and market share of each one, products are then categorised into four groups: Stars, Cash Cows, Question Marks, and Dogs (Kuc and Borkowski, 2021). This analysis helps determine whether a company should invest in, maintain, or abandon each product. Stars are those with high market share and high growth rates and should be maintained, Question Marks have high growth but low market share, requiring further evaluation to assess their potential to become Stars (Morrison and Wensley, 1991). Cash Cows have high market share but low growth, and should be kept while they remain profitable, as they generate stable cash flow, while Dogs, on the other hand, have both low market share and low growth and are usually discontinued (Morrison and Wensley, 1991). In this report, to make comparisons between cryptocurrencies and between cryptocurrencies and other investment possibilities, one BCG Matrix is applied only to cryptocurrency investments (figure 5), and, subsequently, other is applied to traditional investment options along with the three main types of cryptocurrencies: Bitcoin, alternative coins, and stablecoin (figure 6). It is important to highlight that, for the

second analysis, no assumptions are made regarding the valuation of stocks, as companies must conduct their own due diligence. The results presented are generalised averages used to standardise the analysis.

In the cryptocurrency market (figure 5) Bitcoin and Ethereum are considered Stars. Both exhibit high growth potential, Bitcoin benefits from widespread adoption as a means of payment and global recognition, with significant support from countries and prominent companies such as Tesla and MicroStrategy (Li et al., 2021). Ethereum, meanwhile, plays a critical role in supporting smart contracts, decentralised finance (DeFi), and Web3 projects (Messari, 2024). Bitcoin holds approximately 60% of the market share, placing it far ahead of Ethereum, which holds nearly 10% (CoinMarketCap, 2025). Both are placed in the Star quadrant due to their high growth and relative dominance over other cryptocurrencies (CoinMarketCap, 2025). Stablecoins such as USDT and USDC, along with the other alternative coins like XRP, BNB, Solana, and Cardano, are placed

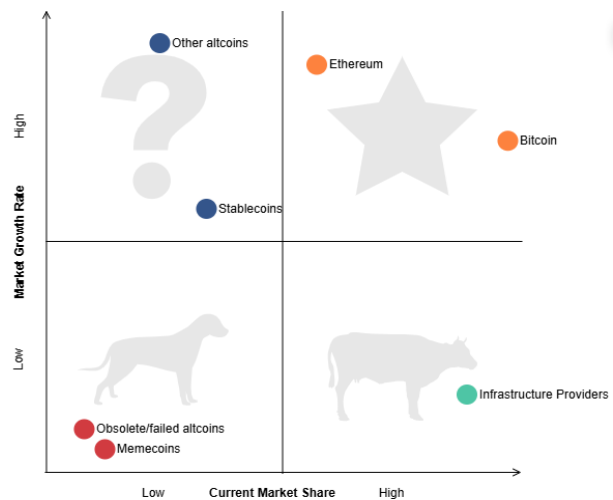


Figure 5: BCG Matrix for the cryptocurrency possibilities.

Source: Author's elaboration on based on Morrison and Wensley (1991), Kuc and Borkowski (2021), Li et al. (2021), CryptoCompare (2023), BinanceResearch (2024), Hoang and Baur (2024), Messari (2024) and CoinMarketCap (2025).

in the Question Mark quadrant. These cryptocurrencies have lower market shares and limited institutional investment, with uncertain coin dominance in their respective niches (CoinMarketCap, 2025). Nonetheless, they are experiencing rapid growth and may become significant in the future due to their diverse functionalities. For instance, stablecoins could be relevant in international transactions, offering faster settlements and functioning as bridge currencies (Hoang and Baur, 2024). Companies should carefully evaluate the potential of these Question Marks to determine which have the capacity to become future Stars and which may become obsolete and move toward the Dog quadrant. Given the consistent expansion of the cryptocurrency market since its inception, there are currently no cryptocurrencies that can be considered Cash Cows. However, infrastructure providers such as Binance and Coinbase can be categorised as Cash Cows within this sector. These established platforms hold a strong market share in exchange services but are now growing

at a slower pace (BinanceResearch, 2024). They generate stable cash flows and offer companies a lower-volatility entry point into the cryptocurrency space, although they are not cryptocurrencies themselves. Dogs in this market are represented by obsolete or failed alternative coins and meme coins. These cryptocurrencies lack practical use or have been replaced by newer and more advanced alternatives, resulting in declining adoption rates (CryptoCompare, 2023; CoinMarketCap, 2025). In some cases, speculative bubbles may have led to inflated valuations, which subsequently collapsed, these assets are considered poor investment options due to their decreasing relevance and value (CryptoCompare, 2023).

In the second matrix, which compares the three main types of cryptocurrencies with more traditional investment categories, the Stars include ETFs based on market indexes such as the S&P 500 and NASDAQ-100, Bitcoin, and stocks of companies in high-growth sectors with strong market positions. ETFs based on major indexes are among the most common assets in investment portfolios due to their wide diversification and reliable long-term returns (Vanguard, 2025). Stocks of consolidated companies in sectors such as technology, artificial intelligence, and biotechnology also fall under this category, as they demonstrate robust market presence and are expected to continue growing (Vanguard, 2025; MSCI, 2025).

Bitcoin is likewise a Star due to its accelerating growth and increasing global adoption (Fidelity Digital Assets, 2025). These investments are advisable for inclusion in corporate portfolios, although the weight of each should depend on the company's specific strategy. The Question Mark quadrant in this analysis includes Real Estate Investment Trusts (REITs), alternative coins including Ethereum, and stocks of emerging companies in high-growth industries. REITs experience cyclical performance,

alternating between periods of strong results and downturns, but maintain a moderate market share. Following the end of recent inflationary pressures, their outlook is improving, and they are expected to achieve stronger growth (Nareit, 2025). Alternative coins, despite their

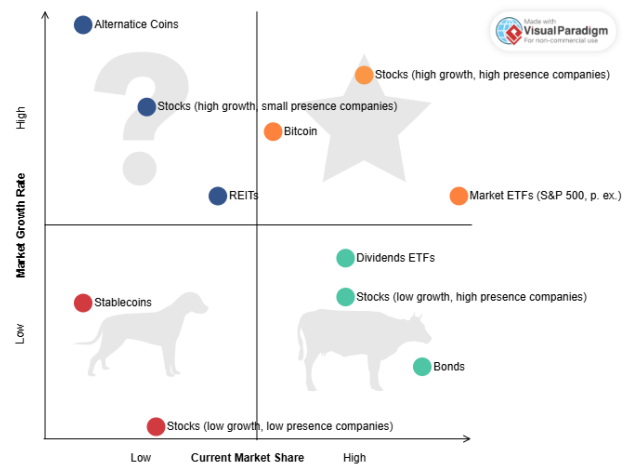


Figure 6: BCG Matrix for the three main types of cryptocurrencies and the most common investment possibilities.

Source: Author's elaboration on website VisualParadigm based on Morrison and Wensley (1991), Kuc and Borkowski (2021), Messari (2024), iShares (2024), Bloomberg (2025), CoinMarketCap (2025), Fidelity Digital Assets (2025), Vanguard (2025), MSCI (2025) and Nareit (2025).

technological significance, remain highly volatile and suffer from limited regulation, which hinders both retail and institutional investment, however, their growth potential remains high (Messari, 2024; CoinMarketCap, 2025). Stocks of smaller firms operating in expanding markets also fit into this group, although they are growing rapidly, they still lack the market share to be classified as Stars (Vanguard, 2025; MSCI, 2025). Cash Cows in this comparative analysis include bonds, whether corporate or sovereign, dividend-focused ETFs, and shares of companies with stable financial performance. These investments have large market shares due to their low risk and consistent returns (MSCI, 2025). Bonds offer the lowest growth among them but are widely held, while dividend ETFs and stable-company stocks exhibit slightly higher growth but have smaller market shares (iShares, 2024; MSCI, 2025; Bloomberg, 2025). These assets should be considered by companies seeking resilience and steady cash flows in uncertain economic environments, so it is normal that investors have a part of their portfolio dedicated to them. Finally, in this second analysis, stablecoins and stocks of companies from declining sectors are placed in the Dog category, as these are not recommended investment options for companies. Stocks from declining industries exhibit negative growth and shrinking market share, and unless a sector is expected to recover, investing in these stocks may result in financial losses (MSCI, 2025). Although stablecoins have useful features, as previously mentioned, they have not yet achieved growth levels comparable to other asset classes, for this reason, at present, they are classified as Dogs in the matrix (CoinMarketCap, 2025). As you can notice in figure 6, this second analysis is more challenging, which lead to worst perspectives for the investment on Ethereum and Stablecoins, as they show lower results in market share and growth rate, respectively.

6.2.2. VRIO Analysis

The VRIO (Value, Rarity, Imitability, Organizational support) analysis is a framework that enables companies to assess their internal resources in order to determine their potential for providing a sustainable competitive advantage (Barbosa et al., 2023). It is commonly applied in strategic planning for resource allocation, innovation, and performance evaluation, and it can also be used to guide investment decisions as well as mergers and acquisitions (Besanko et al., 2017). In this context, the analysis focuses on the potential for Portuguese companies to invest in cryptocurrencies and whether such investments can generate a sustainable competitive advantage, a temporary or unused competitive advantage, or no competitive advantage at all.

Depending on a company's investment objectives, cryptocurrencies can deliver value. For firms aiming to maximise returns, cryptocurrencies are a promising option, although they are highly volatile, they have historically provided higher returns than traditional assets (Wang and Vergne, 2017; Delfabbro, 2021; Cyril, 2023). For companies seeking to diversify their investment portfolios, cryptocurrencies also represent a valuable addition. Bitcoin and alternative coins have shown low correlation with traditional financial assets, thus offering diversification benefits, however, this is not the case for stablecoins because they are pegged to fiat currencies (Khaki, 2023; Hoang and Baur, 2024). Moreover, some studies suggest that Bitcoin may serve as a safe-haven asset during times of financial instability, although this claim remains debated in the academic literature (Cheah and Fry, 2015; Dyhrberg, 2016). Additionally, investing in cryptocurrencies may support a company's positioning as an innovative and forward-thinking organisation, which can be particularly attractive to younger and more tech-savvy customers (Aiello et al., 2023). As long as one or more of these advantages align with a company's strategic goals, cryptocurrencies can be considered a valuable investment.

The rarity aspect is also evident in the Portuguese context. Institutional investment represents approximately 25% to 35% of the global cryptocurrency market, and this percentage is even lower when Bitcoin is excluded (Fidelity Digital Assets, 2024). According to Expresso (2021), institutional investment in cryptocurrencies is almost non-existent in Portugal. This creates an opportunity for Portuguese firms to benefit from first-mover advantages by entering a market that remains largely untapped by national and international competitors.

However, this advantage may be short-lived, as the imitability of cryptocurrency investment is relatively high. The information surrounding cryptocurrencies is publicly accessible, and it is quick and easy to create a digital wallet and start investing (Binance, 2023). Although developing in-house capabilities to effectively select cryptocurrencies and time market entries and exits can be more complex, this barrier can be overcome by outsourcing asset management to specialised firms such as PortusInvest, which can provide cryptocurrency investment services in the future.

The ability of Portuguese companies to organise and support such investments remains limited and varies from company to company, in general, the organisational support for cryptocurrency investment is weak. The Portuguese government has not yet implemented

the EU's MiCA regulation, creating regulatory uncertainty and complicating the adoption of cryptocurrencies for corporate investment purposes (Banco de Portugal, 2025). Moreover, most companies in Portugal lack the necessary knowledge and expertise to navigate the cryptocurrency market and to derive value from such investments (Portugal Fintech, 2024). Very few Portuguese companies have explored or implemented cryptocurrency investments so far. In this context, the present report may serve as a useful reference for companies that wish to investigate this topic further.

As you can observe on table 1 above, the conclusion of this analysis is that Portuguese companies currently have access to a temporary competitive advantage in the field of cryptocurrency investment. The investment adds value and is rare within the national context, however, it is easy to imitate, and most companies lack the internal organisational capabilities to fully capitalise on it. For this reason, if companies wish to benefit from a first-mover advantage, they must act quickly. This requires studying the viability of such investments, acquiring relevant knowledge, and creating the necessary internal mechanisms to support the integration of cryptocurrency investments into their operations.

Hypothesis	Value	Rarity	Imitability	Organizational Support	Result
Integrate cryptocurrencies in investment portfolios	☒	☒	☐	☐	Temporary Competitive Advantage
Integrate traditional assets in investment portfolios	☒	☐	☐	☒	Competitive Parity

Table 1: Comparison between investing in cryptocurrencies and other investment possibilities using the VRIO framework.

Source: Author's elaboration based on Cheah and Fry (2015), Dybrberg (2016), Besanko et al. (2017), Wang and Vergne (2017), Delfabbro (2021), Espresso (2021), Aiello et al. (2023), Cyril (2023), Barbosa et al. (2023), Binance (2023), Khaki (2023), Fidelity Digital Assets (2024), Hoang and Baur (2024), Portugal Fintech (2024) and Banco de Portugal (2025).

6.3. Strategic Analysis

6.3.1. SWOT Analysis

The SWOT analysis is one of the most recognised frameworks in strategic management. It is commonly employed to assess internal factors, namely strengths and weaknesses, as well as external factors, opportunities and threats, which together shape the competitiveness of an organisation (Besanko et al., 2017). In the present study, however, the framework is

adapted to evaluate the implications of cryptocurrency investment for Portuguese companies. Rather than analysing a specific firm, the aim is to understand the broader strategic consequences that this type of investment may entail. Within this context, strengths are defined as the current advantages derived from investing in cryptocurrencies, while weaknesses correspond to present limitations. Opportunities refer to potential, albeit uncertain, benefits that such investments could bring in the future, and threats represent plausible risks that, although not immediately apparent, may emerge over time.

Several strengths can be identified in this type of investment. Firstly, the cryptocurrency market has exhibited sustained growth, often delivering higher returns compared to traditional asset classes (Wang and Vergne, 2017; Delfabbro, 2021; Cyril, 2023). Additionally, cryptocurrencies are decentralised, meaning that their issuance and valuation are not controlled by any central authority (Gervais et al., 2014; Burniske and White, 2017). Instead, they rely entirely on blockchain protocols, this feature grants companies holding such assets in their treasuries a level of autonomy, shielding them from potential monetary interventions that might devalue currencies or affect interest rates and debt servicing costs (Wątarek et al., 2021; Benigno, 2023). This decentralisation also makes cryptocurrencies an effective tool for portfolio diversification, as they tend to exhibit low correlation with more traditional investment instruments, for investors seeking to reduce exposure to systematic risk, this aspect is particularly attractive (Gervais et al., 2014; Burniske and White, 2017; Khaki, 2023). Furthermore, cryptocurrencies offer substantial advantages in terms of transaction speed and liquidity. Unlike conventional banking systems, which often require at least one business day for international transfers, cryptocurrency transactions can be completed within seconds (Niranjanamurthy et al., 2019). Similarly, opening an account and transferring funds into or out of trading platforms is typically fast and efficient, especially when compared to processes associated with dividends or bond yields (Binance, 2023). In parallel, investing in cryptocurrencies opens up opportunities for firms to explore emerging areas such as fintech and decentralised finance (DeFi), where the integration of artificial intelligence and blockchain can enhance security, transparency, and operational efficiency (Deloitte, 2025). Such engagement with advanced technologies may also generate reputational benefits, positioning companies as innovative actors in their respective sectors and attracting interest from stakeholders who value digital transformation (Deloitte, 2021).

Nevertheless, this investment strategy is not devoid of significant weaknesses. One major concern is the intrinsic volatility of cryptocurrency prices. Their fundamental value is often unclear and susceptible to market sentiment, leading to sharp fluctuations in short periods and substantial risk of capital loss (Cheah and Fry, 2015; Phillips, Shi and Yu, 2015; Delfabbro et al., 2021; Steinmetz et al., 2021). Moreover, due to the relative novelty of the market, there is limited availability of historical data and case studies that could guide firms in their risk assessments or investment decisions. Likewise, there is a lack of well-established models specifically designed to evaluate the risks associated with cryptocurrencies (Trimborn et al., 2020). This absence of standardisation diminishes corporate confidence in entering the market (Trimborn et al., 2020). Another issue is the internal knowledge gap, most Portuguese firms have limited experience with cryptocurrencies and do not follow developments in the market closely (Expresso, 2021). On a regulatory level, the complexity and heterogeneity of legal frameworks present additional barriers. While some jurisdictions adopt a more permissive stance, in Portugal companies are required to register with Banco de Portugal before dealing with cryptocurrencies, a procedure not mandatory in other EU member states (Diário da República, 2020; European Union, 2023). This regulatory burden is compounded by accounting challenges. Under current International Financial Reporting Standards (IFRS), cryptocurrencies are treated as intangible assets rather than financial instruments, and thus are not recognised at fair value, resulting in their undervaluation on balance sheets (Luo and Yu, 2024). Environmental concerns also arise from the energy-intensive nature of certain cryptocurrencies, such as Bitcoin, which contributes to carbon emissions and environmental degradation (Kharb et al., 2024). Finally, the novelty and technological complexity of cryptocurrencies make them particularly vulnerable to cybersecurity threats, including hacks and system breaches, for which many companies are currently unprepared (PwC, 2025).

In addition to current strengths, cryptocurrency investment also offers future-oriented opportunities that may not yet be fully evident. For companies facing stagnation or scalability challenges, cryptocurrencies can represent an alternative revenue stream, potentially enabling internal reinvestment without resorting to debt financing (Adhami and Guegan, 2020). Moreover, the knowledge acquired through engagement with these markets may allow firms to redesign their business models, forge new strategic partnerships within the fintech ecosystem, or implement innovations such as crypto payments and product/service tokenisation (Deloitte, 2025). Online treasuries could also unlock interoperability benefits, especially as digital payment infrastructures evolve (Portugal Fintech, 2024). For instance,

companies might be able to receive payments in cryptocurrencies and immediately reinvest them through integrated platforms (Portugal Fintech, 2024; Luo, Rabetti and Yu, 2024). If firms develop these capabilities ahead of their competitors, they may secure a first-mover advantage in a future economic landscape where DeFi solutions play a central role in corporate and individual financing (Aquilina et al., 2024). This could become a source of competitive differentiation, particularly in sectors where innovation is a key driver of value (Deloitte, 2025). Additionally, the integration of such technologies can serve as a learning opportunity for internal stakeholders, fostering skill development and attracting younger professionals who are more aligned with the digital (Steinmetz et al., 2021; Deloitte, 2025).

Despite these potential benefits, several threats must be considered. One such threat is the opacity surrounding some cryptocurrencies, particularly those whose creators are unknown or whose market value is driven primarily by hype or manipulation (Cheah and Fry, 2015). This situation poses liquidity risks and reputational concerns, as illustrated by the emergence of so-called meme coins, including recent state-sponsored examples such as the token launched by the Argentine government, which lacked clear utility or backing (Auer et al., 2022; Reuters, 2025). Furthermore, the association of cryptocurrencies with illicit activities such as tax evasion, money laundering, and terrorist financing could significantly damage corporate reputation, eliciting negative reactions from stakeholders and the broader public (Sanz-Bas, 2020). Environmental issues also remain a persistent source of reputational risk, especially as public scrutiny increases and calls for regulation or penalties become more common (Mora et al., 2018; Kharb et al., 2024). Another significant vulnerability lies in the dependence on cryptocurrency exchange platforms, which act as intermediaries in most transactions. These platforms may be subject to operational failures, cyberattacks, or legal restrictions, all of which are largely beyond the control of corporate users (S&P Global, 2022; PwC, 2025). Moreover, given that these platforms are often based in foreign jurisdictions, firms may be exposed to regulatory developments abroad that affect their assets or transaction capabilities. In this regard, increasing regulatory intervention may pose yet another threat. While it aims to ensure market integrity, stricter regulation may also erode the decentralised nature of cryptocurrencies, diminishing their utility and appeal (PwC, 2025). Finally, the rapid pace of innovation in the cryptocurrency sector introduces a different type of challenge: firms may struggle to keep pace with emerging trends and technologies, risking obsolescence if they fail to adapt quickly (European Central Bank, 2019). A summarised graphic presentation of this analysis is presented below.

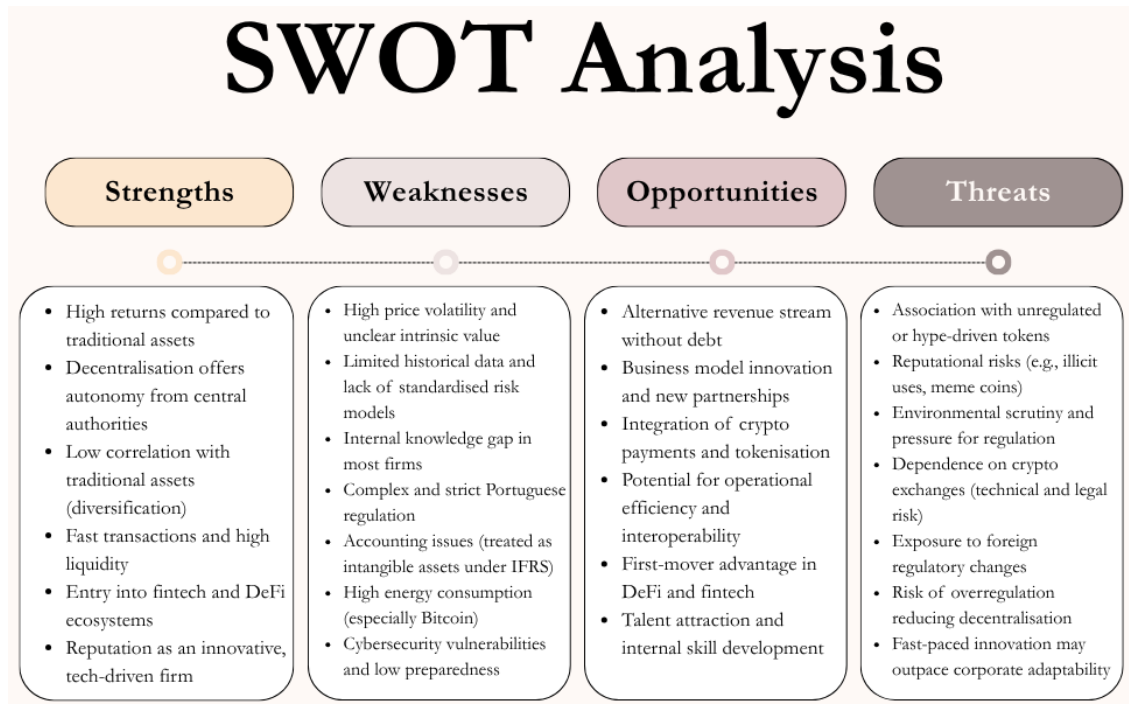


Figure 7: SWOT Analysis of the possibility of Portuguese companies add cryptocurrencies to their portfolios of investment.

Source: Author's elaboration based on Gervais et al. (2014), Cheah and Fry (2015), Phillips, Shi and Yu (2015), Dybrberg (2016), Besanko et al. (2017), Burniske and White (2017), Wang and Vergne (2017), Mora et al. (2018), European Central Bank (2019), Niranjnamurthy et al. (2019), Adbami and Guegan (2020), Diário da República (2020), Sanz-Bas (2020), Trimbom et al. (2020), Deloitte (2021), Expresso (2021), Delfabbro et al. (2021), Steinmetz et al. (2021), Wątorrek et al. (2021), Auer et al. (2022), S&P Global (2022), Benigno (2023), Binance (2023), Cyril (2023), European Union (2023), Khaki (2023), Aquilina et al. (2024), Portugal Fintech (2024), Luo, Rabetti and Yu (2024), Luo and Yu (2024), Kharb et al. (2024), Deloitte (2025), PwC (2025) and Reuters (2025).

6.3.2. TOWS Analysis

Building on the findings of the SWOT analysis, the TOWS matrix offers a complementary and action-oriented framework for strategic planning. This tool enables the alignment of internal capabilities (strengths and weaknesses) with external conditions (opportunities and threats), proposing strategic responses that capitalize on advantages and mitigate risks (Weihrich, 1982). In this context, the TOWS analysis is adapted to explore strategic pathways for Portuguese companies considering investments in cryptocurrencies. It seeks to leverage strengths to seize opportunities (SO), use opportunities to overcome weaknesses (WO),

utilize strengths to mitigate threats (ST), and adopt defensive strategies to minimize the impact of weaknesses and threats combined (WT). The outcome is available in the Annexe ([see Figure 15](#)).

In the strengths–opportunities (SO) quadrant, several initiatives emerge from the intersection of current organizational capabilities and the potential benefits of cryptocurrency adoption. One strategic action involves redirecting profits obtained from high-performing cryptocurrency investments toward internal innovation in emerging areas such as decentralized finance (DeFi) and financial technology (FinTech), which are expected to gain prominence in the near future (Deloitte, 2025). Furthermore, the high liquidity and transaction speed associated with cryptocurrencies can be leveraged to experiment with new digital business models, including tokenized products, incentive mechanisms through cryptocurrency-based reward systems, or even partial implementation of Decentralized Autonomous Organizations (DAOs) for collaborative decision-making (Niranjanamurthy et al., 2019). The decentralized nature of these assets also supports enhanced portfolio diversification and facilitates international payments by reducing exposure to foreign exchange risks (Benigno, 2023). In addition, the association with innovation and modern financial instruments may enhance the firm’s image, attracting technologically skilled professionals and appealing to younger, innovation-driven stakeholders (Aiello et al., 2023).

The weaknesses–opportunities (WO) quadrant focuses on reducing internal limitations through the strategic use of external opportunities. To address the general lack of expertise and internal knowledge about this market, companies should consider forming a dedicated innovation team focused on blockchain technologies and digital finance (Portugal Fintech, 2024). This specialized group would be responsible for staying updated on market trends, developing risk models tailored to crypto-assets, and conducting exploratory investments through sandbox environments or with limited capital exposure (Trimborn et al., 2020). Internal training programs should support the development of competencies in this field, gradually equipping the company with the tools and analytical frameworks necessary to manage these investments effectively. Such a structured approach fosters gradual integration and risk mitigation while maximizing the value of emerging technological opportunities.

In the strengths–threats (ST) quadrant, the aim is to mitigate external risks using existing organizational capabilities. Given the inherent volatility and uncertainty surrounding the valuation of cryptocurrencies, firms can implement dynamic entry and exit strategies based

on price thresholds. Leveraging the fast transaction execution capabilities of blockchain, these mechanisms could reduce exposure to market crashes (Binance, 2023). Additionally, cybersecurity threats and platform dependency risks could be addressed through strategic partnerships with cybersecurity providers and by distributing crypto holdings across multiple platforms. Reputational risks, particularly concerning legal and environmental issues, require more structured responses. Companies should implement internal compliance systems capable of tracing the source of digital assets, verifying the legitimacy of funds, and assessing the environmental impact of their crypto-related activities (Qudah et al., 2024; PwC, 2025). These measures not only reduce exposure to legal and reputational backlash but also position the company as transparent and ethically responsible, reinforcing its innovative brand profile.

Lastly, the weaknesses–threats (WT) quadrant encourages a defensive posture to limit the compounded effect of internal deficiencies and external hazards. My first recommendation is the implementation of portfolio limits, ensuring that cryptocurrency holdings represent only a minor portion of total assets. This constrains the potential damage from regulatory shifts, market volatility, or cyberattacks (Andrade and Newall, 2023). Establishing robust internal reporting systems for crypto transactions is also advisable, especially to ensure regulatory compliance and support eventual audits (PwC, 2025). Publicly communicating the scope and rationale of the company’s involvement in cryptocurrencies may also prevent reputational concerns and align expectations with stakeholders (Buvaneswari and Swetha, 2019). Furthermore, establishing a permanent innovation and risk monitoring unit would enable ongoing evaluation of the crypto market’s rapid developments, reducing the likelihood of strategic obsolescence (European Central Bank, 2019). Collectively, these measures promote a prudent, exploratory approach suitable for early-stage involvement in this complex and evolving market.

7. Investment Roadmap

This report presents the literature, as well as market and strategic analysis regarding investment in cryptocurrencies. However, I believe a step-by-step explanation of this possibility is missing. Companies may possess relevant information and analysis, but it is also important to outline the necessary procedures to start investing in cryptocurrencies. Therefore, the present section serves as a roadmap for investment, covering the pre-investment requirements, the investment process itself, and the post-investment procedures. Based on the exploration conducted during the internship, this aims to be a basic yet fundamental guide for companies in Portugal considering investment in cryptocurrencies.

Before the investment, there are six procedures I identify as crucial. Firstly, companies should establish a team dedicated to managing cryptocurrency investments. This team will be responsible for defining the investment objectives and strategy in coordination with the company's management. Based on that, they should determine the percentage of capital allocated to cryptocurrencies and set limits for risk exposure. Following, companies should consider hiring a specialized cybersecurity firm or working with their current provider to ensure the necessary protections are in place (PwC, 2025). This team can also assist in selecting an appropriate exchange platform according to the company's preferences. **Table 2** in the annex presents a comparison between platforms considering factors such as security, liquidity, transaction fees, legal recognition by Banco de Portugal, and compliance with the MiCA regulation. Portuguese companies currently considering investing in cryptocurrencies would likely choose Mercado Bitcoin, as it is recognized by Banco de Portugal. However, with the expected short-term implementation of MiCA regulation in Portugal, alternatives such as Bitpanda or Crypto.com may be preferred due to lower transaction fees and high liquidity. Binance, Coinbase, or Kraken could also be selected, as they are expected to comply quickly with EU regulations. Other platforms like Revolut, Gate.io, and Bit2Me may also be appealing, as they offer additional services such as debit cards and staking programs. After selecting the most suitable platform, companies must notify Banco de Portugal by submitting three forms and awaiting approval from the institution before initiating cryptocurrency investments (Banco de Portugal, 2021). At this stage, seeking external consultancy in legal and fiscal matters is advisable, as this is a particularly sensitive area. Expert guidance can ensure compliance from the outset, which is essential in such a complex regulatory environment (PwC, 2025). These consultants can also recommend necessary adjustments

over time. Alternatively, companies may opt for indirect investment in cryptocurrencies through ETFs that track price movements. These investments do not require registration with Banco de Portugal and can be made via platforms like Trading212, eToro, or XTB. Nevertheless, such platforms do not offer ETFs based on all cryptocurrencies.

During the investment process, I identify four key practices that may contribute to a better investment experience. The first is implementing internal controls for asset management. This includes defining buying and selling thresholds based on the previously defined risk exposure, establishing cybersecurity protocols with clear guidelines for responding to attacks, and managing wallets effectively. In cases of long-term investment, it is safer to store private keys in an offline wallet, referred to as a cold wallet (Das et al., 2019). The second recommendation is to continuously monitor the market. This is essential for identifying trends and adjusting the investment strategy accordingly, for example, selling an older cryptocurrency that may lose value due to the emergence of a more advanced competitor (Delfabbro, 2021). Another recommendation is to take advantage of yield farming, a practice offered by nearly every platform. It resembles making a term deposit with a traditional bank, but in this case, using a DeFi platform and cryptocurrencies. Companies can put a portion of their cryptocurrency holding in these protocols, generating returns through interest, additional tokens, or transaction fees (Binance, 2024). Finally, it is essential to record all transactions in detail, including dates, amounts, and counterparties. This information is vital for demonstrating regulatory compliance and may be required in the future, especially in the event of retrospective regulations.

In the post-investment phase, it is important to ensure both the security and proper transfer of funds. Companies will likely have chosen platforms with high liquidity and security that are also MiCA-compliant, which should ensure fast and safe transfers from wallets to traditional bank accounts. Regarding accounting, it is once again advisable to consult legal and tax professionals. Since cryptocurrencies are accounted for as intangible assets, the reported values in financial statements may be lower, therefore, for internal purposes, it is recommended to value these assets at fair value to better understand the true results of the investment (Luo and Yu, 2024). A summary of this roadmap is available on the Annexe ([see Figure 17](#)). I believe that if companies follow these procedures, investment in cryptocurrencies will be considerably safer and more efficient. Nonetheless, as conditions in this market are constantly evolving, it is essential that companies regularly update this roadmap to ensure the best possible experience.

8. Conclusions

This internship report examined the strategic and practical implications of incorporating cryptocurrencies into the investment portfolios of Portuguese companies. Through an integrated methodology combining literature review, market and strategic analysis, and empirical data from a client-focused survey, the study sought to evaluate whether companies should include cryptocurrencies in their investment strategies. For PortusInvest specifically, the report serves as a decision-support tool regarding the potential creation of a cryptocurrency consultancy division. The growing relevance of cryptocurrencies in global financial markets, along with their potential role as diversification assets, and stores of value, provides a compelling case for consideration (Delfabbro, 2021). However, such potential is counterbalanced by significant risks, namely market volatility, regulatory uncertainty, and reputational exposure (Cheah and Fry, 2015). This report demonstrates that while cryptocurrencies may present new growth opportunities, their integration into corporate investment portfolios requires a cautious, strategically aligned approach grounded in informed decision-making.

The findings of the study highlight several relevant points. The literature review, although limited in scope, suggests that companies tend to be more receptive to high-risk investments when pursuing portfolio diversification, business scaling, or strategic alliances (Bartram et al., 2011). In such cases, decentralized cryptocurrencies, such as Bitcoin and altcoins, may be appropriate. However, the absence of standardized regulation and persistent reputational risks remain major deterrents. The survey conducted with PortusInvest clients reflected limited familiarity, moderate interest, and significant hesitation regarding crypto investments. Respondents identified volatility, lack of regulation, and cybersecurity threats as primary barriers, although many also recognized potential long-term benefits in terms of diversification and returns. Most notably, there was a prevailing belief that cryptocurrencies will gain relevance in future corporate finance. The market analysis confirmed that the cryptocurrency sector is experiencing rapid growth worldwide, including in Portugal, where favourable socio-political conditions, a technologically proficient population, and rising institutional attention create an encouraging environment (Statista, 2025). Strategic analyses using PESTEL and Porter's Five Forces demonstrated that both macroeconomic and competitive conditions are evolving quickly, and that greater regulatory clarity is beginning to emerge (PwC, 2025; Deloitte, 2025). Internal evaluations using the VRIO and BCG

frameworks indicated that, although cryptocurrencies may offer strategic advantages, most Portuguese firms currently lack the organizational capabilities to pursue these investments effectively (Portugal Fintech, 2024). Bitcoin and selected altcoins may be suitable as high-risk, high-return components within diversified portfolios, while stablecoins, offering limited returns, are more appropriate for liquidity management (CoinMarketCap, 2025). The SWOT and TOWS analyses underscored the strengths and limitations of cryptocurrency investments and proposed mitigation strategies to manage associated risks. The final roadmap offered practical guidance for companies interested in structuring crypto-related investment processes. It is advisable that both PortusInvest and other Portuguese firms adopt a gradual and carefully planned approach to cryptocurrency integration. Initial exposure should be limited in scope and accompanied by internal training initiatives on risk, regulation, and technological considerations. Partnerships with regulated exchanges, legal advisors, and tax experts are recommended to ensure compliance and operational security. PortusInvest may consider offering advisory services tailored to companies seeking to enter this space. However, given the volatility and legal uncertainty of the crypto sector, the firm should not diverge significantly from its core focus on EU community funds, which remains more stable and predictable.

The methodology adopted in this report combined qualitative techniques, such as strategic analysis and literature review, with a quantitative survey targeting PortusInvest's client base. While this yielded valuable insights, several limitations must be acknowledged. The survey sample was not statistically representative of Portuguese businesses, reducing the generalizability of the findings. Furthermore, the novelty of the topic and limited knowledge among respondents may have affected the depth of their answers. On the other side, the market and strategic analysis relied on very recent sources and there are not a lot of comparable strategic studies. Finally, because this market is still evolving, some conclusions may change as the market matures and new cryptocurrencies with new capabilities are launched.

The implications of this research are both practical and policy oriented. For businesses, cryptocurrencies should be seen not as replacements for traditional assets but as potential complements that offer innovation and diversification benefits under the right conditions. From a policy perspective, the study highlights the urgent need for clearer regulatory frameworks and improved financial literacy to facilitate safe adoption (Messari, 2024). This

report contributes to a nascent yet increasingly relevant field by offering a structured, strategy-driven approach to assessing cryptocurrency investment within the Portuguese corporate landscape. Unlike previous studies, which focus only on some analysis and tend to focus on technical or consumer aspects, this work integrates strategic frameworks with empirical findings to generate actionable insights for Portuguese companies. Future research could expand on this foundation through broader surveys involving companies from diverse sectors, comparative analyses of crypto investment outcomes, or studies assessing the regulatory impact on corporate financial behaviour. The emergence of tokenization, Web3, and central bank digital currencies are also themes deserving close academic and professional attention (Deloitte, 2025).

In conclusion, although cryptocurrency investment remains a high-risk, high-reward proposition, it has become a topic that companies can no longer ignore. With adequate preparation, regulatory awareness, and strategic focus, Portuguese firms can place themselves at the forefront of financial innovation. Nonetheless, it is vital to recognize that this is still a costly and complex investment with high entry barriers. Given the current political and economic uncertainty affecting many Portuguese companies, decision-makers must carefully assess whether it is worth incurring such costs. For most companies, a more accessible alternative might be to invest in ETFs that track cryptocurrency prices, which offer comparable returns without the legal and operational burdens of direct ownership. For PortusInvest, the creation of a consulting unit focused on cryptocurrency investments could be a valuable opportunity, particularly considering evident client interest and knowledge gaps. This department could provide critical guidance during entry and exit phases, especially considering the reputational challenges and resistance from traditional financial institutions. However, given the slow expected adoption of cryptocurrencies by Portuguese businesses, such a department should be considered exploratory rather than central to the company's core business model.

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10. Annexes

A1. Evolution of the Cryptocurrency Market



Figure 8: All time cryptocurrency market evolution, market capitalization and volume of transactions.

Source: CoinMarketCap (2025, March 25).

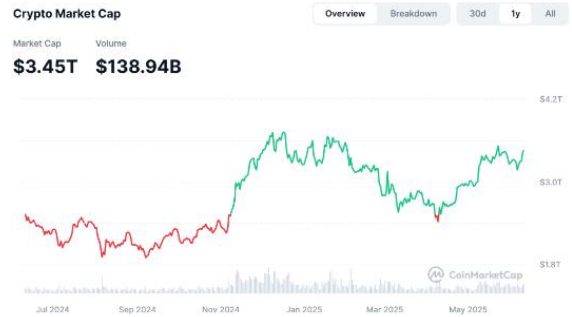


Figure 9: Last year cryptocurrency market evolution, market capitalization and volume of transactions.

Source: CoinMarketCap (2025, March 25).

A2. Distribution of the Cryptocurrency Market



Figure 10: All time market capitalization evolution of four types of cryptocurrencies (Bitcoin, Ethereum, Stablecoins and Other Alternative Coins).

Source: CoinMarketCap (2025, March 25).

Bitcoin Dominance

Bitcoin 63.9% Ethereum 9.1% Others 27.0%

Figure 11: Distribution of relative market share of bitcoin, ethereum and all the other cryptocurrencies.

Source: CoinMarketCap (2025, March 25).

A3. Crypto Regulation stance Worldwide

Crypto regulation at a glance

The table provides a summary of digital asset legislative, regulatory, and licensing status as of January 2025. It factors in the implications of the EU's Markets in Crypto-Assets Regulation (MiCAR), which entered into force in June 2023 becoming fully operational in December 2024. For more information, see jurisdiction specific pages.

	Regulatory Framework	Licensing / Registration	Travel Rule	Stablecoins
United States	⌚	✓	✓	⌚
European Union	✓	✓	✓	✓
United Kingdom	⌚	✓	✓	⌚
Argentina	⌚	✓	⌚	📄
Australia	⌚	⌚	⌚	⌚
Bahamas	✓	✓	✓	✓
Bahrain	✓	✓	✓	⌚
Brazil	⌚	⌚	⌚	⌚
Canada	⌚	✓	✓	⌚
Cayman Islands	✓	✓	✓	✓
Gibraltar	✓	✓	✓	✓
Guernsey	✓	✓	✓	✓
Hong Kong SAR	✓	✓	✓	⌚
India	⌚	📄	✓	📄
Isle of Man	✓	✓	✓	✓
Japan	✓	✓	✓	✓
Kenya	⌚	⌚	📄	📄
Liechtenstein	✓	✓	✓	✓
Mauritius	✓	✓	✓	⌚
Norway	⌚	✓	✓	⌚
Qatar	⌚	⌚	⌚	📄
Saudi Arabia	⌚	✓	⌚	📄

✓	Legislation/regulation in place	Signifies that extensive crypto legislation/regulations have been established.
⌚	Active legislative/regulatory engagement	Indicates that there is ongoing activity, such as regulatory discussions, consultations, or pending implementation of crypto-related laws and regulatory frameworks.
📄	Legislative/regulatory process not initiated	Implies that the jurisdiction has not yet started formulating or considering specific crypto asset legislation or regulatory frameworks.

	Regulatory Framework	Licensing / Registration	Travel Rule	Stablecoins
Singapore	✓	✓	✓	⌚
South Africa	✓	✓	✓	⌚
Switzerland	✓	✓	✓	✓
Taiwan	⌚	⌚	✓	📄
Turkey	⌚	⌚	✓	📄
UAE	✓	✓	✓	✓
Ukraine	⌚	⌚	⌚	⌚

Figures 12 and 13: Summary of crypto regulation stance in the different countries/regions.

Source: PwC Global Crypto Regulation Report.

A4. Porter's Five Forces Analysis

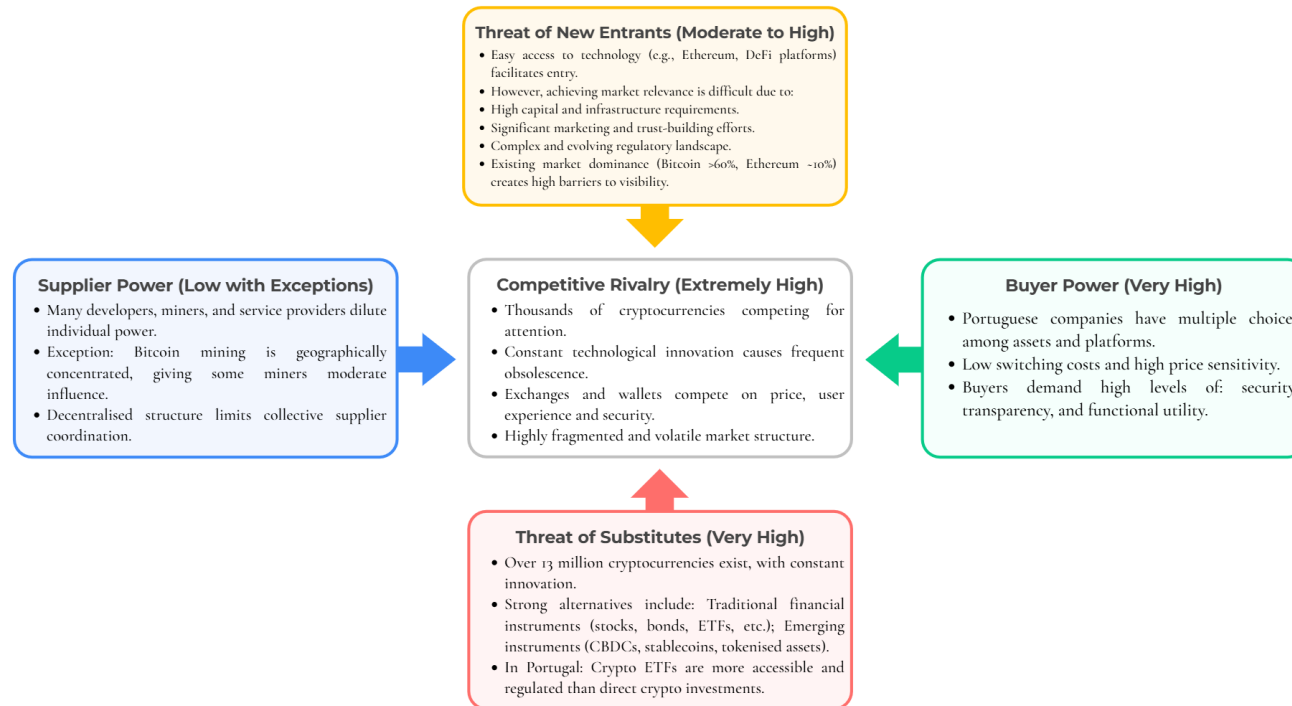


Figure 14: Porter's Five Forces Analysis of the cryptocurrency market.

Source: Author's elaboration based on Gandal and Halaburda (2014), Cheah and Fry (2015), Dyhrberg (2016), Besanko et al. (2017), Dinsmore (2017), Diário da República (2020), Giudici et al. (2020), Hashemi Joo et al. (2020), White et al. (2020), Steinmetz et al. (2021), Barbosa et al. (2023), European Union (2023), Cyril (2023), Chuen (2024), CoinMarketCap (2025) and DCF Modeling (2025).

A5. TOWS Analysis Matrix

Internal Factors External Factors	Strengths	Weaknesses
Opportunities	SO Strategies – Use strengths to take advantage of opportunities. • Redirect profits from high-performing crypto investments toward internal innovation in areas such as FinTech and DeFi. • Utilize high liquidity and transaction speed of cryptocurrencies to experiment with new digital business models (e.g., tokenized products, crypto-based incentives, DAOs). • Enhance portfolio diversification and facilitate international payments, reducing foreign exchange exposure. • Strengthen company reputation and attract technologically skilled professionals and younger, innovation-driven stakeholders.	WO Strategies – Take advantages of opportunities by overcoming weaknesses. • Create a dedicated innovation team focused on blockchain and digital finance to monitor trends and develop expertise. • Engage in exploratory crypto investments via sandbox environments or limited capital exposure to minimize risk. • Implement internal training programs to build crypto-related competencies. • Foster a structured and gradual approach to adoption that reduces risk and increases knowledge retention.
Threats	ST Strategies – Use strengths to avoid threats. • Apply dynamic entry and exit strategies for crypto investments based on predefined price thresholds. • Partner with cybersecurity providers and spread holdings across multiple platforms to mitigate platform risk. • Implement compliance systems to verify asset legitimacy and monitor environmental impacts. • Promote transparency and responsibility, reinforcing a reputation for innovation and ethical conduct.	WT Strategies – Minimise weaknesses and avoid threats. • Set portfolio limits to ensure crypto assets represent only a small fraction of total investments. • Establish internal reporting systems to ensure transparency and compliance with regulations. • Communicate publicly the scope and purpose of crypto involvement to manage stakeholder expectations and protect corporate image. • Create a permanent monitoring unit for ongoing assessment of crypto risks, technological trends, and regulatory changes.

Figure 15: TOWS matrix for the possibility of Portuguese companies add cryptocurrencies to their portfolios of investment.

Source: Author's elaboration based on Weibrich (1982), European Central Bank (2019), Niranjnamurthy et al. (2019), Trimbom et al. (2020), Benigno (2023), Aiello et al. (2023), Binance (2023), Qudah et al. (2024), Portugal Fintech (2024), Deloitte (2025) and PwC (2025).

A5. Investment Roadmap



Figure 16: Personalized Investment Roadmap.

Source: Author's elaboration based on Banco de Portugal (2021), Delfabbro (2021), European Union (2023), Binance (2024), Luo and Yu (2024) and PwC (2025).

A5. Comparison between Exchange Platforms

Platform	Safety	Transaction Fees	Liquidity (24h)	Registered in Banco de Portugal	MiCA (EU) Licensed
Binance	High (2FA, SAFU, audits)	Low: 0.1% (standard spot), 0.075% with BNB	Very High	No	Under adaptation
Coinbase	Very high (FDIC insurance in the USA, 2FA)	Moderate: ~0.5% (standard), reduced with subscription or volume	Very High	No	Under adaptation (partial compliance)
Kraken	High (audits, reserve management)	Moderate: 0.16% (maker) / 0.26% (taker)	High	No	Under adaptation
Crypto.com	High (licensed, insurance, 2FA)	Low: 0.075%-0.4%, depends on CRO staking and volume	High	No	Licensed (Malta)
Bit2Me	High (Cecabank partner)	Moderate: ~1% on average; spread included	Medium	No	Non-licensed (registered in Spain)
Revolut	High (supervised bank, 2FA)	Variable: No base commission; spread ~1.5%-2.5%	Medium-High	No	Non-licensed (headquarters in England)
Bitpanda	High (BaFin licence, secure portfolios)	Moderate: ~1.49% spread, variable depending on asset	High	No	Licensed (Germany)
Mercado Bitcoin	Medium-High (Brazilian infrastructure)	High: 3% (in person < 2500€), 5% (>2500€); online: variable spread	Medium-Low	Yes	Non-licensed
OKX	High (multiple licences)	Low: 0.08% (maker) / 0.1% (taker)	High	No	Licensed (Malta)
Bitstamp	High (external audits)	Moderate: 0.5% (base), decreases with volume	Medium-High	No	Under adaptation (based in Luxemburg)
KuCoin	Medium (no compulsory KYC until 2024)	Low: 0.1% (standard)	High	No	Non-licensed
Bybit	Medium (regulatory risk, offshore)	Low: 0.1% (spot), 0.01-0.06% (derivatives)	High	No	Non-licensed

Table 2: Comparison between exchange platforms.

Source: Author's elaboration based on Binance (2025), Bitpanda (2025), Bitstamp (2025), Bit2Me (2025), ByBit (2025), Coinbase (2025), Crypto.com (2025), Kraken (2025), KuCoin (2025), Mercado Bitcoin (2025) and Revolut (2025).

A6. Survey

Cripto Moedas nas Empresas Portuguesas

Olá! O meu nome é Germano Carvalho Moreira e estou a realizar um estágio curricular na empresa PortusInvest de forma a concluir o Mestrado em Economia da Empresa e da Estratégia da Faculdade de Economia da Universidade do Porto (FEUP).

O presente questionário tem como objetivo recolher informações sobre a percepção, o conhecimento e a aplicação prática das cripto moedas nas carteiras de investimento de empresas portuguesas.

As respostas são anónimas, confidenciais e serão utilizadas exclusivamente para fins académicos e de análise interna para a empresa, contribuindo para a elaboração do relatório de estágio. O tempo estimado de resposta é aproximadamente 4 minutos. Agradecemos, desde já, a sua participação e o tempo disponibilizado.

*** Indica uma pergunta obrigatória**

Ao prosseguir, confirma que compreende os objetivos do estudo e consente, de forma livre e informada, a sua participação.

☐ Sim, aceito participar

☐ Não aceito participar

[Seguinte](#) [Limpar formulário](#)

Figure 17: Survey disclaimer and participants consent.

Source: Author's elaboration on Google Forms.

A – Perfil do entrevistado

Qual é a sua idade? *

☐ Menos de 18 anos

☐ 18 a 24 anos

☐ 25 a 29 anos

☐ 30 a 34 anos

☐ 35 a 39 anos

☐ 40 a 44 anos

☐ 45 a 49 anos

☐ 50 anos ou mais

Qual é a sua nacionalidade? *

☐ Portuguesa

☐ Outra: _____

Em que região reside atualmente? *

☐ Norte

☐ Centro

☐ Lisboa e Vale do Tejo

☐ Alentejo

☐ Algarve

☐ Região Autónoma da Madeira

☐ Região Autónoma dos Açores

Qual é o seu género? *

☐ Masculino

☐ Feminino

☐ Não Binário

☐ Outro/Prefero não responder

Qual é o nível máximo de escolaridade que possui? *

☐ Não tem instrução primária

☐ Instrução primária (4.º ano)

☐ Ensino básico (9.º ano)

☐ Ensino secundário (12.º ano ou curso profissional)

☐ Licenciatura ou CTESP

☐ Mestrado

☐ Doutoramento

Qual é a sua situação laboral atual? *

☐ Ativo – Trabalha por conta própria

☐ Ativo – Trabalha por conta de outrem

☐ Ativo – Estagiário/aprendiz

☐ Ativo – Desempregado à procura de trabalho

☐ Não Ativo

☐ Outra (especificar): _____

[Anterior](#) [Seguinte](#) [Limpar formulário](#)

Figures 18 and 19: Part A of the survey (participant profile).

Source: Author's elaboration on Google Forms.

B – Perfil da empresa do entrevistado

Qual é a região onde se encontra a sua empresa? *

☐ Norte

☐ Centro

☐ Lisboa e Vale do Tejo

☐ Alentejo

☐ Algarve

☐ Região Autónoma da Madeira

☐ Região Autónoma dos Açores

Qual é a forma jurídica da sua empresa? *

☐ Empresário em Nome Individual

☐ Estabelecimento Individual de Responsabilidade Limitada

☐ Sociedade Unipessoal por Quotas

☐ Sociedade em Nome Coletivo

☐ Sociedade por Quotas

☐ Sociedade Anónima

☐ Sociedade em Comandita

☐ Cooperativa

☐ Associação

☐ Outra: _____

Como classifica a empresa onde trabalha? *

☐ Microempresa (até 9 colaboradores e volume de negócios ≤ 2M €)

☐ Pequena empresa (10 a 49 colaboradores e volume de negócios ≤ 10M €)

☐ Média empresa (50 a 249 colaboradores e volume de negócios ≤ 50M €)

☐ Grande empresa (250 ou mais colaboradores ou volume de negócios > 50M €)

Em que setor se enquadra a atividade principal da sua empresa? *

☐ Agricultura, produção animal, caça, floresta e pesca

☐ Indústria transformadora (fabrico de bens)

☐ Construção e obras públicas

☐ Comércio por grosso e a retalho

☐ Alojamento, restauração e similares

☐ Transportes e logística

☐ Tecnologias de informação e comunicação (TIC)

☐ Atividades financeiras e seguros

☐ Imobiliária

☐ Atividades profissionais, científicas e técnicas

☐ Educação e formação

☐ Saúde e apoio social

☐ Administração pública

☐ Artes, entretenimento e atividades recreativas

☐ Outra: _____

Qual é a sua função na empresa? (Assinale todas as opções que se aplicam) *

☐ Administração / Direção Geral

☐ Direção Financeira / CFO

☐ Contabilidade / Gestão administrativa

☐ Direção de Investimentos ou Tesouraria

☐ Direção de Tecnologias de Informação (TI)

☐ Consultoria / Assessoria

☐ Marketing / Comunicação

☐ Recursos Humanos

☐ Proprietário / Empresário em nome individual

☐ Outra: _____

Toma decisões de investimento financeiro da empresa? *

☐ Sim, tenho poder de decisão direta

☐ Sim, participo no processo, mas não tenho decisão final

☐ Não

[Anterior](#) [Seguinte](#) [Limpar formulário](#)

Figures 20 to 22: Part B of the survey (profile of the participant company).

Source: Author's elaboration on Google Forms.

C – Conhecimento sobre Cripto Moedas

Considere-se uma pessoa informada sobre o tema das cripto moedas? *

☐ Sim, conheço bem o funcionamento e acompanho o mercado regularmente

☐ Tenho conhecimentos básicos sobre o tema

☐ Já ouvi falar, mas não tenho conhecimentos

☐ Nunca ouvi falar ou não sei o que são cripto moedas

Indique o seu grau de concordância com as seguintes afirmações: (1-Discordo Totalmente; 2-Discordo; 3-Nem Concordo nem Discordo; 4-Concordo; 5-Concordo Totalmente)

	1 – Discordo totalmente	2 – Discordo	3 – Nem concordo nem discordo	4 – Concordo	5 – Concordo totalmente
A tecnologia blockchain tem potencial para revolucionar o setor financeiro.	☐	☐	☐	☐	☐
O impacto ambiental das cripto moedas é preocupante.	☐	☐	☐	☐	☐
As cripto moedas não oferecem vantagens reais face aos instrumentos financeiros tradicionais.	☐	☐	☐	☐	☐

tradicionais.

As cripto moedas podem ser úteis como reserva de valor para a empresa, especialmente em tempos de inflação.

☐ ☐ ☐ ☐ ☐

Os riscos legais e fiscais são uma grande barreira ao investimento.

☐ ☐ ☐ ☐ ☐

A minha empresa deveria acompanhar de perto as inovações relacionadas com cripto ativos.

☐ ☐ ☐ ☐ ☐

O mercado das cripto moedas é demasiado imprevisível para ser considerado a longo prazo.

☐ ☐ ☐ ☐ ☐

As cripto moedas são demasiado voláteis para serem um investimento empresarial seguro.

☐ ☐ ☐ ☐ ☐

As cripto moedas podem ser uma boa alternativa para diversificar ativos.

☐ ☐ ☐ ☐ ☐

ativos.

A adoção institucional de cripto moedas por parte das empresas influencia positivamente a sua credibilidade.

☐ ☐ ☐ ☐ ☐

Investir em cripto ativos pode aumentar a imagem de inovação das empresas.

☐ ☐ ☐ ☐ ☐

As cripto moedas são associadas a atividades ilegais e lavagem de dinheiro.

☐ ☐ ☐ ☐ ☐

A falta de regulamentação clara em Portugal dificulta o investimento empresarial em cripto moedas.

☐ ☐ ☐ ☐ ☐

A minha empresa deveria aprofundar o seu conhecimento sobre cripto ativos.

☐ ☐ ☐ ☐ ☐

Cripto moedas poderão vir a fazer parte da estratégia de investimento da minha empresa.

☐ ☐ ☐ ☐ ☐

Figures 23 to 25: Part C of the survey (knowledge, experience, and interest in the cryptocurrency market).

Source: Author's elaboration on Google Forms.

A empresa onde trabalha atualmente já investiu ou utilizou alguma vez cripto moedas? *

☐ Sim

☐ Não

☐ Não sei

Se respondeu "Sim" à pergunta anterior, que tipo de utilização foi feita? (Assinale todas as opções que se aplicam)

☐ Investimento financeiro direto (ex: Bitcoin, Ethereum, Teether, XRP, ...)

☐ Meio de pagamento para fornecedores ou clientes

☐ Armazenamento de valor / Proteção contra inflação.

☐ Remuneração de colaboradores.

☐ Outra: _____

A sua empresa considera investir ou utilizar cripto moedas no futuro? *

☐ Sim, a curto prazo (até 1 ano)

☐ Sim, a médio prazo (1 a 3 anos)

☐ Sim, a longo prazo (+ de 3 anos)

☐ Não

☐ Não sei

Que fatores poderiam motivar a sua empresa a considerar investir em cripto moedas? (Assinale todas as opções que se aplicam)

☐ Diversificação da carteira de ativos

☐ Potencial de valorização

☐ Proteção contra a inflação

☐ Adoção tecnológica e inovação

☐ Aceleração crescente no mercado

☐ Interesse da administração

☐ Pressão ou influência de parceiros / clientes

☐ Outra: _____

Que fatores poderiam desencorajar ou impedir a sua empresa de investir em cripto moedas? (Assinale todas as opções que se aplicam)

☐ Volatilidade elevada

☐ Falta de regulamentação clara

☐ Risco reputacional

☐ Falta de conhecimento interno

☐ Risco de segurança digital / ciberataques

☐ Incerteza fiscal

☐ Falta de interesse da administração

☐ Outra: _____

Se tivesse maior conhecimento sobre o mercado das cripto moedas ou se o setor fosse menos volátil e mais regulado, a sua empresa estaria mais interessada em investir em cripto moedas?

☐ Sim

☐ Não

☐ Talvez

☐ Não sei

Na sua opinião, as cripto moedas podem vir a ter um papel relevante em estratégias de investimento da sua empresa? *

1 2 3 4 5

Nada relevante ☐ ☐ ☐ ☐ ☐ Muito relevante

Que tipo de cripto moedas poderiam ser mais interessantes para a sua empresa? *

☐ Bitóole (reserva de valor)

☐ Alternativas: Dólar como Ethereum, Solana, XRP, BNB, ... (diversificação e retorno)

☐ Stábilcoina: indóstatas a moedas fiat como Teether ou USD Coin (estabilidade, mas baixo retorno)

Quão útil para a sua empresa seria um estudo de mercado com análises estratégicas e um plano de ação para o investimento em cripto moedas? *

1 2 3 4 5

Completamente inútil ☐ ☐ ☐ ☐ ☐ Muito útil/Futural

Anterior Seguinte Limpar formulário

Figures 26 to 28: Continuation of the Part C of the survey (knowledge, experience, and interest in the cryptocurrency market).

Source: Author's elaboration on Google Forms.

Cripto Moedas nas Empresas Portuguesas

Obrigado!

Terminou o questionário. Agradeço a sua colaboração!

Figure 29: End of the Survey.

Source: Author's elaboration on Google Forms.

A7. Survey Results

Ao prosseguir, confirma que compreende os objetivos do estudo e consente, de forma livre e informada, a sua participação.

104 respostas

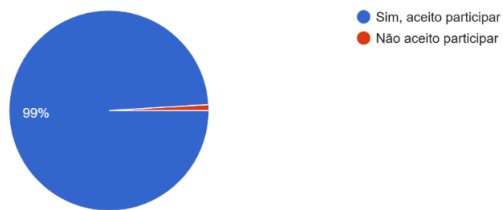


Figure 30: First question results.

Source: Google Forms.

Part A – Participants profile

Qual é a sua idade?

103 respostas

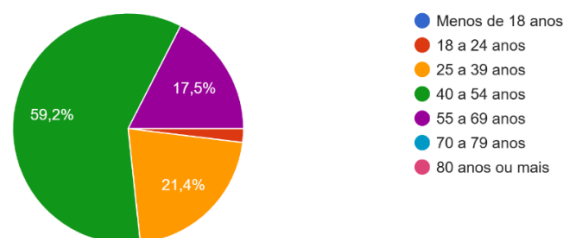


Figure 31: Age distribution.

Source: Google Forms.

Qual é a sua nacionalidade?

103 respostas

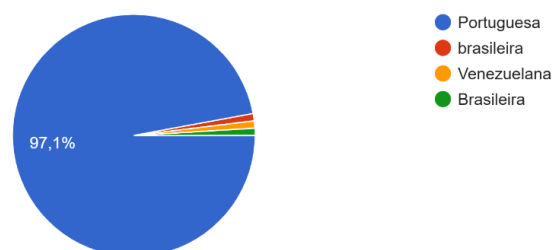


Figure 32: Nationality Distribution.

Source: Google Forms.

Em que região reside atualmente?

103 respostas

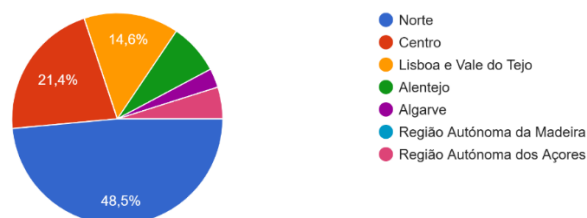


Figure 33: Residence Distribution.

Source: Google Forms.

Qual é o seu género?

103 respostas

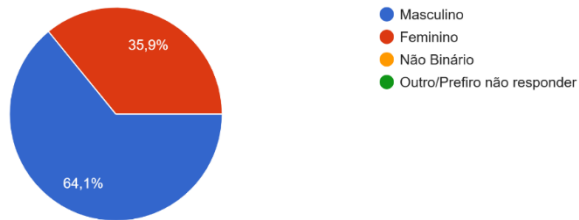


Figure 34: Gender Distribution.

Source: Google Forms.

Qual é o nível máximo de escolaridade que possui?

103 respostas

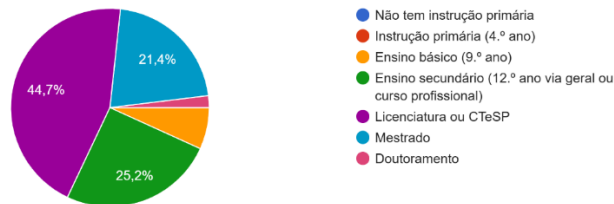


Figure 35: Maximum Scholarity of the participants.

Source: Google Forms.

Qual a sua situação laboral atual?

103 respostas

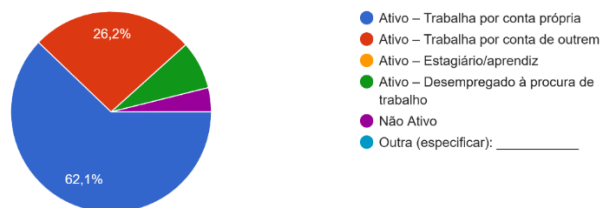


Figure 36: Employment status of the participants.

Source: Google Forms.

Part B – company profile.

Qual é a região onde se encontra a sua empresa?

91 respostas

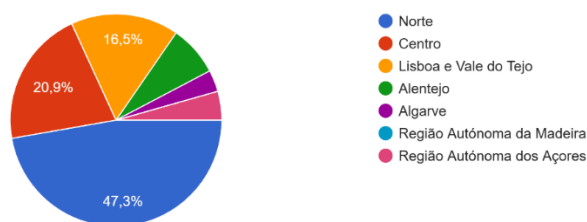


Figure 37: Regional Distribution.

Source: Google Forms.

Qual é a forma jurídica da sua empresa?

91 respostas

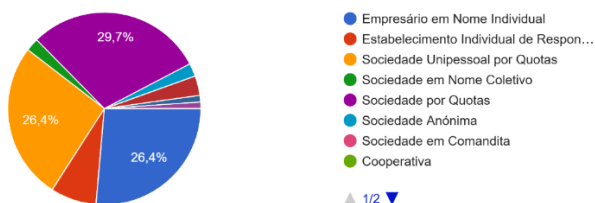


Figure 38: Juridic Form Distribution.

Source: Google Forms.

Como classifica a empresa onde trabalha?
91 respostas

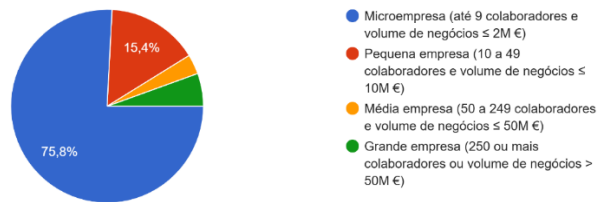


Figure 39: Size distribution.

Source: Google Forms.

Em que setor se enquadra a atividade principal da sua empresa?
91 respostas

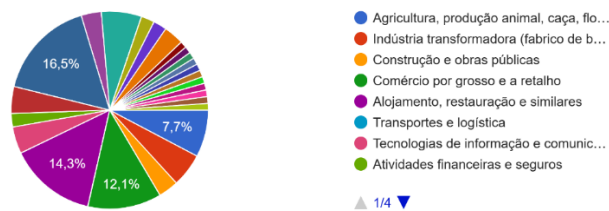


Figure 40: Sector Distribution.

Source: Google Forms.

Qual é a sua função na empresa? (Assinale todas as opções que se aplicam)
91 respostas

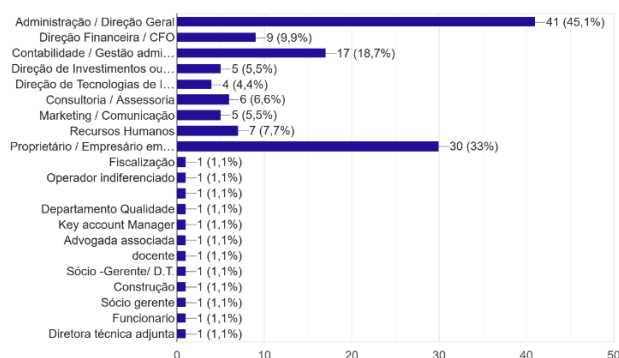


Figure 41: Participants role in the company.

Source: Google Forms.

Toma decisões de investimento financeiro da empresa?
91 respostas

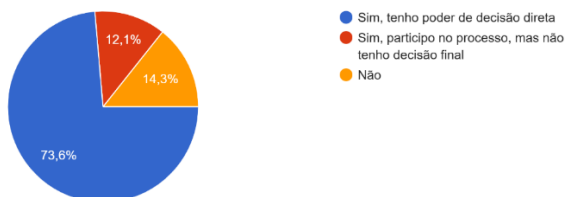


Figure 42: Measuring participant investment decision in the company.

Source: Google Forms.

Part C - Knowledge, Experience, and Interest in the Cryptocurrencies Market

Considera-se uma pessoa informada sobre o tema das cripto moedas?
78 respostas

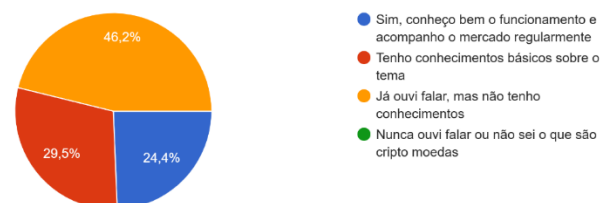
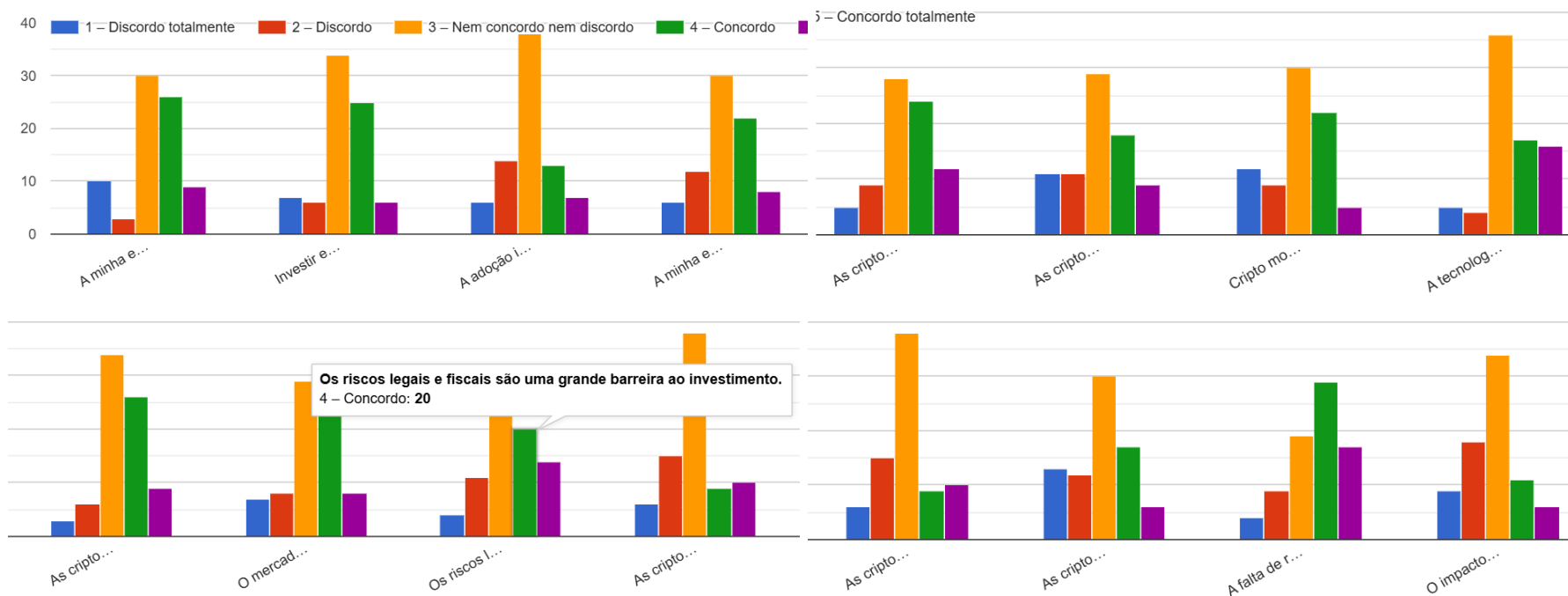


Figure 43: Knowledge about the cryptocurrencies market.

Source: Google Forms.



Figures 44 to 47: Degree of agreement with the statements: (1-Totally Disagree; 2-Disagree; 3-Neither Agree nor Disagree; 4-Agree; 5-Totally Agree).

Source: Google Forms.

A empresa onde trabalha atualmente já investiu ou utilizou alguma vez cripto moedas?

78 respostas

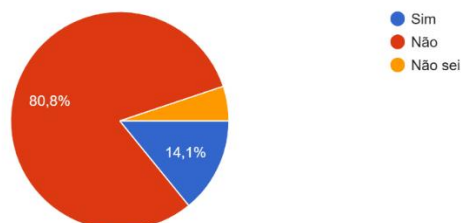


Figure 48: Distribution of the utilization of cryptocurrencies by companies.

Source: Google Forms.

Se respondeu "Sim" à pergunta anterior, que tipo de utilização foi feita? (Assinale todas as opções que se aplicam)

13 respostas

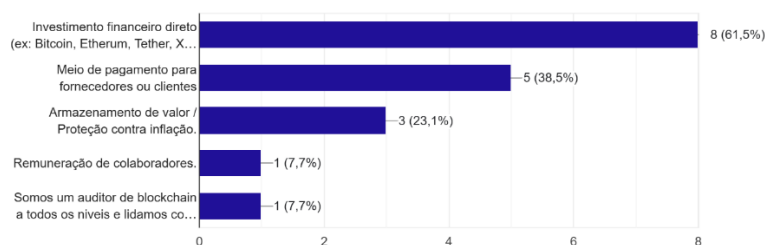


Figure 49: Utilizations of cryptocurrencies.

Source: Google Forms.

A sua empresa considera investir ou utilizar cripto moedas no futuro?

78 respostas

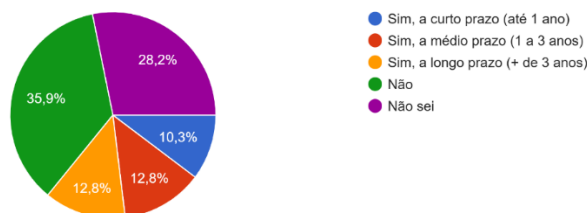


Figure 50: Future utilization of cryptocurrencies by periods.

Source: Google Forms.

Que fatores poderiam motivar a sua empresa a considerar investir em cripto moedas? (Assinale todas as opções que se aplicam)

73 respostas

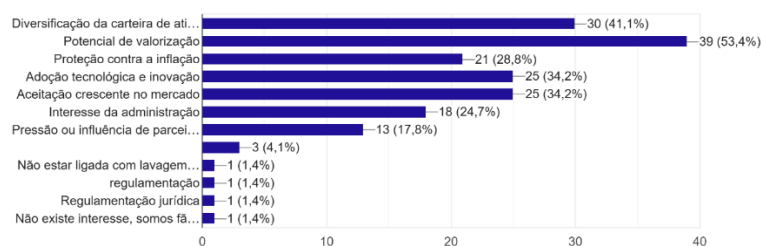


Figure 51: Motivator Factors.

Source: Google Forms.

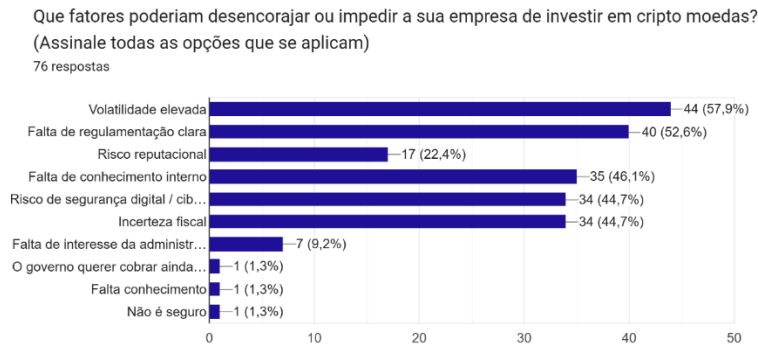


Figure 52: Discouraging Factors.

Source: Author's elaboration on Google Forms.

Se tivesse maior conhecimento sobre o mercado das cripto moedas ou se o setor fosse menos volátil e mais regulado, a sua empresa estaria mais interessada em investir em cripto moedas?

78 respostas

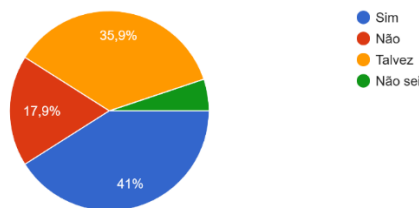


Figure 53: Interest depending on problem solving.

Source: Google Forms.

Na sua opinião, as cripto moedas podem vir a ter um papel relevante em estratégias de investimento da sua empresa?

78 respostas

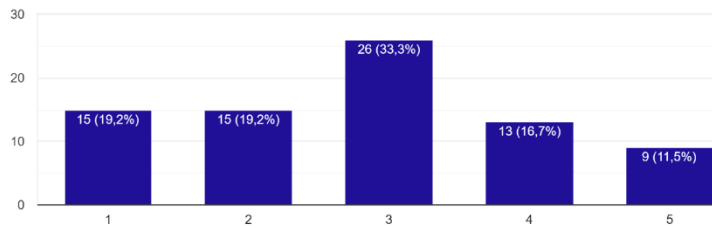


Figure 54: Opinion on future relevance of cryptocurrencies in companies' portfolios.

Source: Google Forms.

Que tipo de cripto moedas poderiam ser mais interessantes para a sua empresa?

78 respostas

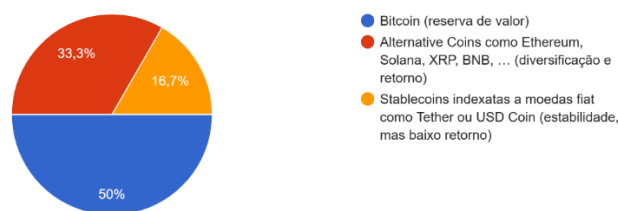


Figure 55: Favourite cryptocurrency types.

Source: Google Forms.

Quão útil para a sua empresa seria um estudo de mercado com análises estratégicas e um plano de ação para o investimento em cripto moedas?

78 respostas

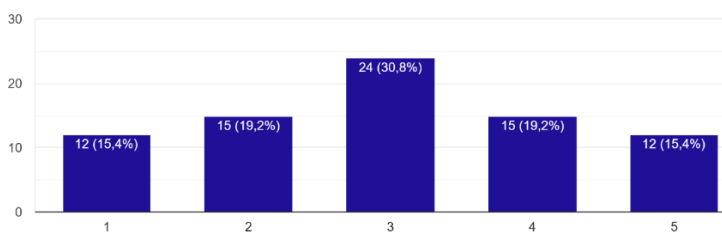


Figure 56: Utility of this report.

Source: Google Forms.