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Cultural Wisdom and Emotional Resilience: Sapta Timira in Financial Decision-Making under Crypto Volatility

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Abstract

The increasing adoption of cryptocurrency has intensified concerns regarding how market volatility influences investors' financial decision-making. Whilst Behavioural Finance Theory highlights the role of psychological factors in investment behaviour, limited attention has been given to culturally grounded mechanisms of emotional regulation. This study examines the mediating role of Sapta Timira, a Balinese philosophical framework concerning the regulation of excessive attachment to seven human attributes, in the relationship between cryptocurrency volatility and financial decision-making. Data were collected from 300 cryptocurrency investors in Denpasar, Bali, using purposive sampling and structured questionnaires. The proposed model was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). The findings indicate that cryptocurrency volatility does not have a significant direct effect on financial decision-making. However, it significantly influences Sapta Timira control, which, in turn, has a positive effect on financial decision-making and significantly mediates the relationship between market volatility and financial decisions. These findings extend Behavioural Finance Theory by demonstrating that culturally embedded systems of emotional regulation can complement conventional psychological explanations of investor behaviour. Practically, the study suggests that integrating culturally grounded behavioural frameworks into investor education and financial literacy programmes may strengthen emotional regulation and support more responsible financial decision-making during periods of market uncertainty. Future research is encouraged to examine similar Indigenous philosophical frameworks across different cultural settings.

Keywords: Cryptocurrency Volatility; Financial Decision-Making; Sapta Timira Control; Cultural Wisdom; Emotional Resilience; Bali; Indonesia

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Introduction

Currently, financial resilience is a priority for both individuals and organisations worldwide across varied digital landscapes. In the early stages of globalisation, the business environment is becoming more multifaceted, dynamic, and competitive (Nisa & Indiani, 2023). An outbreak of the coronavirus pandemic created a domino effect of volatility across all segments of the world's financial markets, leading to declines in stock market indexes, oil and other energy commodities, and metal and mineral commodities. Consequently, investors have been encouraged to pursue "safer" assets: namely cash, gold, real estate, and assets in cryptocurrencies, which have been more readily available to investors. Presently, currencies in the emerging market of cryptocurrencies as cash-equivalent digital assets are attracting considerable and, arguably, speculative attention from investors across the globe (Setiawan & Bhaduri, 2023). Interest in "trading" cryptocurrencies reinforces the potential for disruption in modern supply chains, market transactions, and behavioural patterns. The rise in popularity and accessibility of these assets has encouraged more companies to accept crypto assets as a mode of payment and as an alternative investment resource (Munteanu et al., 2023). Within the last 10 years, virtual currencies have gained considerable popularity and value, representing the first time in modern financial history a new option has opened up for financial markets both nationally and internationally.

Between 2011 and 2021, the value of the cryptocurrency market increased from USD 10 million to approximately USD 3,000 billion (Šťastný et al., 2022). The past decade has seen the most rapid growth and the most dramatic influence on the financial and technological worlds from cryptocurrencies (Kufo et al., 2023). The large prospective returns on investments in digital currencies and the increasing alternatives to traditional payment systems and currency exchanges make digital currency a viable potential substitute (Nayam & Limpiyakorn, 2023). Cryptocurrencies have seen increased recent interest as a safe asset, outpacing traditional financial instruments (Terraza et al., 2024). Since the launch of Bitcoin in 2009, there has been a sharp increase in interest and subsequent trading of cryptocurrencies (Iqbal et al., 2023). Bitcoin also holds the title of the first and oldest cryptocurrency to be released, remaining a fully decentralised digital currency as there are no central banks that control its supply (Gupta & Chaudhary, 2022). Cryptographically secured digital currencies such as Bitcoin and Ethereum incorporate blockchain technology, providing revolutionary transformations to the global economy and the way it is structured (Shahzad et al., 2024). Al-Maskari et al. (2024) suggest that technology will instigate drastic shifts in the social and economic aspects of people's lives, generating jobs and eliminating others in the process.

Amid global structural changes, economic institutions must build and enhance resilience to unpredictability and newly emerging economic challenges. As a fully digital asset, cryptocurrency, while an investment vehicle, does not function quite the same way, nor is it viewed the same as a traditional asset (Fang et al., 2022). When it comes to asset classes, cryptocurrency holds the most volatility and greatest risk of loss (Iqbal et al., 2023). From 2014 to 2018, the number of cryptocurrencies available tripled within that timeframe. On 9 September 2020, CoinMarketCap recorded 6,955 cryptocurrencies with an aggregate value of USD 325 billion (Özdemir, 2022). This rapid escalation in value and liquidity presents a duality of risk and opportunity. In contrast to traditional border restrictions, cryptocurrencies garner borderless engagement (Bhatnagar et al., 2023). This also explains their high volatility, as speculation is a major influencer of price volatility (Setiawan & Bhaduri, 2023). Cryptocurrencies have greater risk and volatility when benchmarked to conventional financial markets (Alsmadi et al., 2023).

A growing number of participants interested in crypto assets have become increasingly involved

in cryptocurrency markets. Due to their dynamic nature and rapid evolution, robust approaches for estimating volatility are required (Queiroz & David, 2023)and the extreme price fluctuations of digital assets demand a deeper understanding of their statistical characteristics (Saef et al., 2023). Price prediction within the crypto space remains an unmatched challenge due to its inherent complexities and unpredictability (Fang et al., 2021; Murray et al., 2023). Nevertheless, Terraza et al. (2024) found that during the COVID-19 pandemic, Bitcoin was a cryptocurrency that provided would-be investors with the most opportunity to diversify and reduce risk in their portfolio.

Cryptocurrency market volatility and its interconnectedness with energy markets can contribute to financial uncertainty and expose investors to potential risks (Huyen et al., 2023). More broadly, financial uncertainty is also a concern in managerial finance, particularly in relation to capital structure decisions and their implications for organisational financial performance (Birru, 2016). Business sustainability depends on strategic investment decisions, as these decisions can influence firm productivity, long-term economic performance, and the financial performance and sustainability of small and medium-sized enterprises (Baumol & Wolff, 1984; Taiwo, 2019). However, inadequate access to finance remains a major obstacle to firm growth and competitiveness (Malhotra, 2007), while financial decisions are also influenced by firm-specific factors, including profitability, liquidity, asset tangibility, and firm size (Doan, 2020). Such financing constraints are particularly consequential in developing economies, where limited access to finance can significantly hinder firm growth (Fowowe, 2017). Although these studies primarily address financial management and corporate financing, they collectively illustrate how financial uncertainty, resource constraints, and investment considerations shape economic decision-making. This broader perspective provides a basis for examining investment decisions in cryptocurrency markets, where price volatility introduces additional uncertainty that may affect investors' risk perceptions, psychological responses, and emotional stability. Accordingly, understanding how investors manage these responses is important for examining the role of emotional resilience and cultural wisdom in financial decision-making under conditions of cryptocurrency volatility.

Cultural insight is immensely helpful when dealing with financial challenges, especially with the unpredictable digital markets. Timira, or “darkness” in the plural, is a concept in Balinese Hindu philosophy. It refers to the seven “darknesses” of the soul — surupa, dhana, guna, kulina, yowana, sura, and kasuran -—as well as the “darknesses” of greed, wanting, pride, and confusion (Subagia, 2016) and self-control (pengendalian diri), a key element in decision-making. By positioning Sapta Timira as a framework of self-regulation, the current study attempts to bridge local wisdom to modern economic situations. It integrates traditional philosophy with behavioural finance, focusing on the digital economy. It is indeed brilliant blend of the old and the new.

Greed, anger, and confusion are emotions that can distort one's rational financial behaviour, which can lead to irrational investing and decision-making (Putu Setyarini, 2023). Sapta Timira can lead individuals to lose self-control. It is in this context, Jang & Johnson (2022) highlight that religious rehabilitation reduces negative emotions, which further explains Sapta Timira's potential cultural-spiritual principles as a resource for modern investors. Religious values also play a pivotal role in shaping ethical financial behaviour, as noted by Kenechi et al. (2017), who emphasise the sacred role of moral guidance in financial affairs, and by Niveditasri & Sanmitha (2020), who show that religious convictions significantly influence people’s socioeconomic attitudes and investment choices. Religious leaders play an important role in promoting ethical financial behaviour by providing financial guidance grounded in religious teachings and spiritual values. Such guidance highlights how moral and spiritual principles can shape individuals' financial decisions and encourage responsible financial behaviour. In culturally-spiritual integrated

modern investors, Budiartini et al. (2022) further mention that the absence of cultural ethical restraint often results in irrational, reckless investing, showing the great importance of cultural integration. Therefore, it can be said that Sapta Timira can be used in conjunction with behavioural finance to enhance and strengthen emotional self-regulation and promote ethical decision-making in finance.

Within the wider worldview of the Balinese people, harmony among people, nature, and the divine, as encapsulated in the Tri Hita Karana, goes well beyond the ritual life of the people to encompass the socio-economic sphere. From the socio-economic perspective, control as described by the seven (Sapta) Timira is viewed as the maintenance of equilibrium in a fluctuating market. As the global economy continues to digitise, the integration of culturally spiritual approaches such as the seven Timira ascription will philosophically respond to the disruption of the market. This is a step towards decolonising financially embedded knowledge, as incorporating local wisdom will demonstrate how tethered emotionally and ethically Balinese people and culture are, even in the digitised and modern economy.

Prior literature on behavioural finance has largely discussed the cognitive biases and psychological factors that affect decision-making in finance (Almansour, 2020; Kapoor & Prosad, 2017) without sufficiently addressing the cultural and emotional aspects in developing economies. The culturally embedded emotional control of Timira and the volatility of cryptocurrencies also remains an unexplored area. This is an important gap to fill as culture has the potential to provide emotional stabilising frameworks in financially turbulent situations, especially within high volatility instruments such as cryptocurrencies.

Integrating cryptocurrency volatility with financial decision-making literature, using control of cryptocurrency volatility as a mediating variable and incorporating local spiritual concepts of control as a reflection of ‘emotional stamina ’, is an innovative advance in the behavioural finance literature. Using culturally connected behavioural finance concepts can demonstrate how Indigenous principles can foster an emotionally stabilising ethical framework within the morally ambiguous terrain of crypto finance. The key question this research seeks to address is: How does volatility within the bounds of the cryptocurrency market affect the financial decisions of cryptocurrency holders and organisations' wallets?’. Within this framework, the mediating role of ‘emotional stamina’ and the spiritually inclined control of the 'Sapta Timira' concept serves as a foundation for building financial resilience and culturally ethical decision-making in finance.

Theoretical Approaches

Theory of Behavioural Finance

As Bikas (2013) puts it, behavioural finance involves the intersection of psychology and the processes surrounding decision-making and the markets. In the case of highly volatile cryptocurrencies, the Behavioural Finance Theory can be applied. Ballis & Verousis (2022) emphasise the need to undertake systematic literature reviews on the behavioural perspectives of cryptocurrencies. Similarly, Al-mansour (2020) argues that financial behaviour is the main driver when it comes to the decision-making of investors concerning where to place their capital.

As behavioural finance theory suggests, psychology is the primary force shaping all decision-making processes, and finance is no exception. The desire to accrue wealth, the need to attain higher positions and intelligence, and the want to attain pleasure, as elucidated in Sapta Timira, are all factors that influence the decisions of investors. This is where Behavioural Finance and Sapta Timira can be joined in explaining the decision-making of all levels of market players during the volatility of the cryptocurrency market, and more specifically, the irrational and short-sighted decisions made during price crashes.

Recognising the role of these psychological factors in the process of financial decision-making enables people and institutions to exercise a greater degree of control over their

emotions and their impulsive behaviours and make more intentional and judicious decisions regarding investments. This enables stakeholders to take actions that are more aligned with their strategic objectives, even when the cryptocurrency market presents extreme levels of uncertainty. Behavioural Finance Theory provides an appropriate foundation for interpreting Sapta Timira within the context of financial decision-making. Whilst behavioural finance explains that investors frequently deviate from rationality because of psychological biases, emotions, and limitations in self-control, Sapta Timira offers a culturally grounded explanation of how excessive attachment to certain human attributes may generate these behavioural tendencies. Consequently, Sapta Timira complements Behavioural Finance Theory by providing an Indigenous perspective on the psychological mechanisms underlying financial decision-making during periods of market uncertainty.

Sapta Timira

Sapta Timira articulates things that cloud a person's mind. In Hindu philosophy, every mind is considered a potential candidate for an enlightened individual. It is, therefore, important that every individual's mind is unencumbered. The term "Timira" is indicative of a darkness that exists in a mind which needs to be obscured with "Sapta," (seven). Therefore, multiples of "seven" can be indicative of the many Timira cases in a society. As already stated above, Sapta Timira refers to seven human attributes that are not inherently negative. However, when accompanied by excessive ego, they may become sources of arrogance, impaired judgement, and behaviour that hinders sound decision-making (Subagia, 2016).

Sapta Timira consists of seven forms of human weakness: (1) Surupa (physical beauty); (2) Dhana (wealth); (3) Guna (intelligence and knowledge); (4) Kulina (family lineage and social status); (5) Yowana (youth); (6) Sura (alcohol and intoxicants); and (7) Kasuruan (power and authority). Subagia (2016), in his book, explains the seven aspects of Sapta Timira through a traditional Balinese literary composition known as Gaguritan, particularly in Pupuh Ginanti. The following verses describe these seven aspects and emphasise the importance of controlling human weaknesses to avoid suffering and attain virtuous conduct.

1. *Sapta-timira kawuwus, Bacakan manahe paling, Netan nyandang laksanayang, Magawe duhkita sai, Wetuning irajah-tamah, Bacakannya siki-siki* (What is called Sapta Timira consists of confused thoughts that should not be followed because they lead to suffering. These arise from aggressive thoughts and laziness and are explained one by one).

2. *Kasuguhan ne pamucuk, Kapradnyanan kaping kalih, Kayohanan kaping tiga, Ping pat kawangsa ne luwih, Ping lima kalistuayuan, Ping nem kasaktian jati* (Wealth (Dhana) is the first, intelligence (Guna) is the second, youth (Yowana) is the third, birth or family lineage (Kulina) is the fourth, beauty (Surupa) is the fifth, and strength (Sura) is the sixth).

3. *Kawiryan kaping pitu, Momon idep ngawe paling, Ne sai nyandang tetehang, Bubhi satwa nggen nasarin, Kasucian ne mautama, Pang sida mamangguh becik* (Power and authority (Kasuruan) are the seventh. An uncontrolled mind can lead to confusion and should always be restrained. Noble wisdom and purity are essential foundations for attaining goodness).

Each element within Sapta Timira has profound implications in the spiritual and psychological life of humans— *surupa* (beauty), *dhana* (wealth), *guna* (skill), *kulina* (lineage), *yowana* (youth), *sura* (alcohol), and *kasuran* (courage) are seven aspects that often influence humans in their lives. The presence of these elements in the human mind can hinder the true understanding of oneself, the universe, and the essence of existence. Unlike general moral or ethical frameworks that emphasise universal principles of right and wrong, *Sapta Timira* offers a culturally rooted introspective lens that connects moral discipline to emotional and spiritual balance. It does not merely prescribe behavioural norms but seeks to transform internal human tendencies that lead to imbalance, such as pride, desire, or greed into awareness and self-regulation. This distinction

makes Sapta Timira a unique Balinese philosophical system that blends spirituality, psychology, and ethics, providing a holistic guide for emotional governance within both personal and economic contexts. Each dimension of Sapta Timira may also be interpreted through the lens of Behavioural Finance. Surupa may encourage overconfidence arising from self-image; Dhana may reinforce wealth-seeking behaviour and excessive risk-taking; Guna may contribute to overconfidence in one's own knowledge; Kulina may strengthen social influence and conformity; Yowana may increase optimism bias and greater risk tolerance; Sura may impair judgement through intoxication or loss of self-control; and Kasuran may encourage excessive confidence when undertaking high-risk investments. Collectively, these dimensions illustrate how culturally embedded human tendencies may influence financial decision-making beyond conventional cognitive biases.

In the context of economics, Sapta Timira offers a culturally grounded perspective for understanding financial decision-making by explaining how excessive attachment to certain human attributes may shape investor behaviour. Each dimension of Sapta Timira can be interpreted through the lens of Behavioural Finance. Excessive attachment to Surupa (beauty or physical appearance) may foster overconfidence arising from self-image. Dhana (wealth) may encourage greed and excessive risk-taking in pursuit of financial gain. Guna (knowledge or competence) may contribute to overconfidence bias by leading individuals to overestimate their investment expertise. Kulina (lineage or social status) may reinforce social influence and conformity when making investment decisions. Yowana (youth) may increase optimism bias and greater tolerance for financial risk. Within Sapta Timira, Sura represents intoxication or excessive attachment associated with alcohol or other intoxicating influences, symbolising impaired judgement and weakened self-control, which may encourage impulsive investment decisions. Finally, excessive attachment to Kasuran (strength, courage, or power) may lead individuals to overestimate their ability to manage uncertainty and undertake unnecessarily risky investments. Collectively, these seven dimensions illustrate how culturally embedded psychological tendencies may influence financial decision-making beyond the conventional cognitive biases recognised in Behavioural Finance Theory.

According to research Sapta Timira can lead individuals to lose self-control Putu Setyarini (2023), . In the financial context, greed can drive individuals to take disproportionate risks or to remain invested in unstable assets, while anger can result in impulsive reactions that are detrimental. This highlights the importance of controlling Sapta Timira in financial decision-making to avoid detrimental behaviour and make more rational decisions. By delving into Sapta Timira within the economic context, we deepen our comprehension of human economic behaviour, shedding light on the intricate interplay between psychological factors and financial choices. Consequently, this research not only offers novel insights but also underscores the significance of broader economic education, the formulation of policies that prioritise societal welfare, and initiatives aimed at fostering awareness of the psychological determinants shaping economic decision-making. The philosophy of Sapta Timira is closely related to the broader Balinese concept of Tri Hita Karana, which emphasises harmony between human beings, nature, and the divine. Within this ethical framework, regulating excessive attachment to the seven dimensions of Sapta Timira contributes to personal balance and responsible social behaviour. In financial decision-making, Tri Hita Karana provides a broader moral context in which emotional restraint and ethical judgement support sustainable investment behaviour, thereby complementing Behavioural Finance Theory from a culturally grounded perspective.

Based on these theories, the following hypotheses are formulated:

H1: The Impact of Volatility in the Cryptocurrency Market on Financial Decisions

The study conducted by Naeem et al. (2022) on the relationship between financial volatility and

the risk of cryptocurrency indexes expands the understanding of diversification and cryptocurrency risk management. The conclusion of this study outlines that the influence of financial market fluctuations on risk and return, and the subsequent decision-making of an individual investor within the market, is impacted by market volatility. In the case of cryptocurrency, rapid changes in price over short periods of time have the potential to shift the confidence and risk appetite of an investor in the cryptocurrency. For this reason, the volatility in cryptocurrencies is likely to have a massive impact on the financial decisions made by an investor.

H2: Crypto Volatility Affects Control of Sapta Timira

High levels of cryptocurrency market volatility impact a person's emotional and psychological control related to Sapta Timira. As described by Subagia (2016), sudden and extreme price changes invoke emotional responses of fear, greed, and anxiety, which are synonymous with the emotional and psychological states of Sapta Timira. Hence, such psychological volatility limits a person's emotional control, which may manifest as loss of self-control and impulsive financial decisions. This is consistent with Setyarini (2023), where loss of control over the Sapta Timira results in loss of self-regulation, and with Jang & Johnson (2022), which states that negative emotions associated with loss of control during uncertain times can be mitigated by moral and religious frameworks. Thus, volatility in cryptocurrency may be an economically rational explanation of loss of emotional control as represented by the Sapta Timira.

H3: Control of Sapta Timira Affects Financial Decision

As Putu Setyarini (2023) points out, emotional manifestations of greed lead people toward extreme reckless behaviours, while anger provoked by loss of self-control causes detrimental behaviours, suggesting the self-regulatory power of the 'Timira' components of wealth, skill, lineage, youth, and courage likely affects decisions pertaining to reckless gambling. Control of excess volatility, emotional discipline, and moral self-restraint itself is of supreme importance, perhaps needed even more so during highly uncertain financial situations like gambling in cryptocurrencies. This is in line with the assertion of Budiartini et al. (2022) that a lack of cultural-ethical bounds leads to irrational financial decisions, and Kenechi et al. (2017) from the moral-ethical perspective of religion as the guiding principle. Thus, the control of 'Timira' components in Sapta Timira overall indicates a lack of moral regression, refining positively emotional correlated behaviours toward rational financial decision trajectories.

H4: Control of Sapta Timira Mediates the Effect of Crypto Volatility on Financial Decision

Drawing from the work of Naeem et al. (2022) and Putu Setyarini (2023), this hypothesis posits the control of Sapta Timira as a mediating variable for the volatility of cryptocurrencies and the decision-making process concerning finances. While volatility in the markets can trigger strong emotions, people for whom the control of Sapta Timira is practised can cope calmly and rationally. Thus, the control of the emotional and moral parameters of a situation, particularly in the context of avarice, value, and ambition, can offer a buffer against the negative impacts of volatile markets on decision-making. This control facilitates the making of a culturally positive, ethically cognate, and financially resilient decision. Based on the theoretical foundation and hypotheses developed above, the conceptual framework of this study illustrates the relationship between cryptocurrency volatility, control of Sapta Timira, and financial decision-making. The model proposes that cryptocurrency volatility directly influences financial decisions and the control of Sapta Timira, while the control of Sapta Timira also exerts a direct effect on financial decisions and serves as a mediating variable between cryptocurrency volatility and financial decision-making.

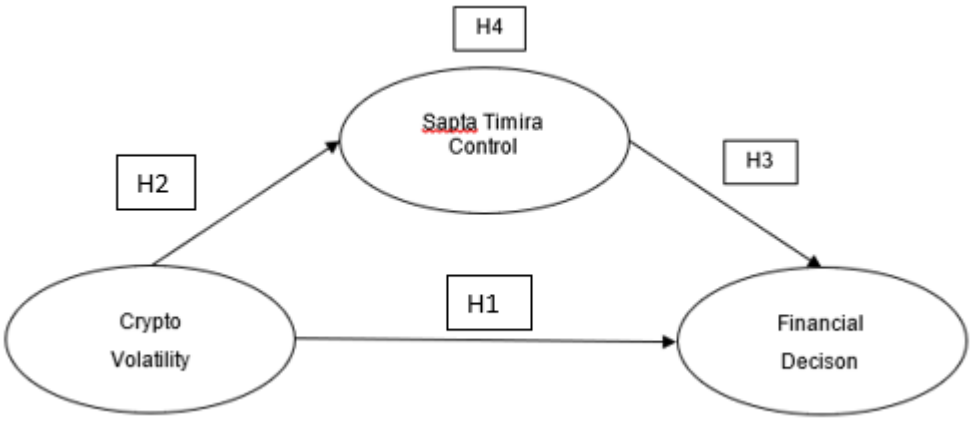


Figure 1: Conceptual Framework Model
Source: Authors (2025)

Methods

This research was performed in Denpasar City, Bali, an area noted for having a unique blend of traditional cultural values and a rapidly evolving digital economy. Denpasar provides a relevant setting to explore how local philosophical thinking, especially Sapta Timira, is intertwined with the behavioural and emotional components of financial digital interaction. Amid the modern economic activities in Bali, the range of espoused spiritual belief systems provides a unique context to study the psychology and culture of crypto investors. The study centres on individuals in Denpasar involved in finance, management, and entrepreneurship, along with their associated experience with digital assets. All research procedures, including data collection and participant consent, have been reviewed and approved by the Ethics Committee of Universitas Pendidikan Nasional, ensuring compliance with established ethical standards.

Sampling Method

The study uses purposive sampling, as the respondents were intentionally chosen according to specific criteria correlated with the goals of the study. The criteria for inclusion were as follows: (1) residents of Denpasar City; (2) having a minimum of two years' experience in either cryptocurrency investment or any cryptocurrency-related financial decision-making; (3) being in a managerial, professional, or entrepreneurial role where financial risk is involved; and (4) being able to respond to the questionnaire evaluation of the research with a reasonable degree of sincerity and completeness. This sampling method ensures that all participants possess adequate knowledge and experience regarding cryptocurrency volatility, emotional control, and financial behaviour.

The total number of respondents is determined to be 300 participants, which is considered adequate according to Sarstedt et al. (2022) for studies using Structural Equation Modelling (SEM) when the population is unknown or infinite. The sample size exceeds the minimum threshold required to ensure statistical reliability and valid representation of behavioural diversity among cryptocurrency investors in Denpasar, Bali.

Research Instrument Design

Data collection was conducted with the aid of a standardised questionnaire, which sought to ascertain the extent of control over the three primary variables: cryptocurrency volatility, Sapta Timira control, and financial decision-making. Each of the variables had three indicators and was constructed based on the theoretical and empirical literature surrounding the variables.

The measurement of volatility in cryptocurrencies considers fluctuations in price perception, uncertainty in the market, and the sensitivity of risk, as noted in the works of Fang et al. (2022) and Iqbal et al. (2023), where the

perception of volatility is considered a definitional element in the behaviour of investors. Sapta Timira control was operationalised as a latent construct reflecting investors' capacity for emotional regulation, ethical restraint, and self-control when making financial decisions under conditions of market uncertainty. The construct was developed based on the philosophical framework proposed by Subagia (2016) and the empirical operationalisation of Putu Setyarini (2023). Rather than measuring the seven dimensions of Sapta Timira individually, this study employed three reflective indicators representing the overall construct of emotional and ethical self-control.

These indicators capture investors' ability to regulate excessive desire, maintain self-awareness, and exercise disciplined judgement in financial decision-making. Within this conceptualisation, the principle of Sura, which refers to intoxication arising from alcohol or, more broadly, excessive attachment to power, wealth, and worldly desires, is reflected indirectly through indicators measuring the ability to control impulsive and emotionally driven financial behaviour. Financial decision-making was defined as investors' capacity to rationally assess alternative investments, manage financial risks, and pursue strategic choices oriented toward long-term objectives, in line with the conceptual frameworks advanced by Birru (2016) and Taiwo (2019). Data were collected using a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The questionnaire was administered in both online and offline formats over a two-week period to maximise respondent participation and ensure adequate data quality.

Data Analysis

Data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM) version 4. This was done because PLS-SEM assesses both measurement and structural models simultaneously and effectively manages complicated relationships among latent constructs. For the analysis, we evaluated the reliability and validity of the measures, balanced the structural framework, and assessed the direct and indirect relationships among the variables to answer the hypotheses that we had constructed.

PLS-SEM is particularly suitable for exploratory behavioural research that consists of numerous constructs and mediation analysis (Sarstedt et al., 2022). In this study, we focus on the direct and indirect impacts of cryptocurrency market volatility. We aim to cover the mediating influence of control through the Sapta Timira on the financial decision-making process. We hope to demonstrate the integral part that local emotional regulation and cultural wisdom play with respect to financial resilience and rationality, especially in the context of digital finance. This is primarily in relation to emotional regulation and financial rationality in the digital financial ecosystem of Denpasar, Bali.

Results and Discussion

Table 1 presents the demographic characteristics of the 300 respondents participating in this study in Denpasar City, Bali. Overall, the sample represents a diverse group of cryptocurrency investors with educational, professional, and financial backgrounds appropriate to the objectives of the study. Male respondents accounted for 60.7% of the sample, while females represented 39.3%, reflecting the continued predominance of male participation in cryptocurrency investment. The largest age group was 31–40 years (34.0%), followed by those aged 41–50 years (27.7%), indicating that the majority of respondents were in their economically active and productive years. In terms of educational attainment, 51.0% held a bachelor's degree, and 30.7% possessed postgraduate qualifications, suggesting a relatively high level of financial literacy and analytical capability.

With regard to occupation, managers and professionals constituted the largest proportion of respondents (40.3%), followed by entrepreneurs (32.3%) and investors or traders (18.0%), indicating that the sample generally comprised individuals with considerable experience in business and financial decision-making. Most respondents had invested in

cryptocurrencies for four to five years (43.7%), while 27.3% reported more than five years of investment experience, reflecting substantial familiarity with digital asset markets. In terms of monthly income, 40.3% earned IDR 10–20 million, followed by 22.0% earning IDR 21–30 million and 15.0% earning more than IDR 30 million. This distribution suggests that the majority of respondents possessed sufficient financial capacity to participate in cryptocurrency investment. Overall, the respondent profile provides a robust empirical basis for examining the relationships among cryptocurrency volatility, Sapta Timira control, and financial decision-making within the context of Denpasar, Bali.

Table 1. Descriptive Profile of the Respondents

Demographic Variable	Category	Frequency (n=300)	Percentage (%)
Gender	Male	182	60.7
	Female	118	39.3
Age Group	21–30 years	64	21.3
	31–40 years	102	34
	41–50 years	83	27.7
	Above 50 years	51	17
Education Level	Bachelor's Degree	153	51
	Master's Degree	92	30.7
	Doctorate	17	5.7
	Diploma/Other	38	12.6
Occupation	Entrepreneur	97	32.3
	Manager/Professional	121	40.3
	Investor/Trader	54	18
	Others	28	9.4
Investment Experience in Cryptocurrency	2–3 years	87	29
	4–5 years	131	43.7
	Above 5 years	82	27.3
Average Monthly Income (in IDR)	<10 million	68	22.7
	10–20 million	121	40.3
	21–30 million	66	22
	>30 million	45	15

Source: Authors (2025)

Reliability and Validity Test

The measurement model demonstrates satisfactory internal consistency and convergent validity (Table 2). Cronbach's alpha values range from 0.722 to 0.886, exceeding the recommended threshold of 0.70. Composite reliability values also exceed 0.70, indicating that the constructs are measured reliably. Furthermore, the average variance extracted (AVE) values are well above the recommended threshold of 0.50, confirming that each construct explains more than half of the variance in its respective indicators. Overall, the measurement model satisfies the recommended validity and reliability criteria proposed by Sarstedt et al. (2022). In addition, all indicators exhibit outer loading values above the recommended threshold of 0.70, demonstrating satisfactory indicator reliability. Consequently, all indicators were retained in the final measurement model, and no indicator removal was required.

Table 2: Construct Reliability and Validity							
Construct	**Indicator**	**Loading**	**Cronbach's Alpha**	**rho_A**	**Composite Reliability**	**AVE**	**Decision**
Crypto Volatility	**CV1**	**0.846**	**0.765**	**0.768**	**0.777**	**0.735**	**Retained**
	CV2	**0.872**					**Retained**
	CV3	**0.857**					**Retained**
Financial Decision	**FD1**	**0.934**	**0.722**	**0.729**	**0.791**	**0.867**	**Retained**
	FD2	**0.928**					**Retained**
	FD3	**0.931**					**Retained**
Sapta Timira Control	**ST1**	**0.904**	**0.886**	**0.899**	**0.93**	**0.816**	**Retained**
	ST2	**0.915**					**Retained**
	ST3	**0.893**					**Retained**
Source: Authors (2025)							

Table 3: HTMT Ratio			
Construct	**Crypto Volatility**	**Financial Decision**	**Sapta Timira Control**
Crypto Volatility	**-**		
Financial Decision	**0.624**	**-**	
Sapta Timira Control	**0.782**	**0.864**	**-**
Source: Authors (2025)			

All HTMT values from Table 3 remain below the recommended threshold of 0.90, confirming satisfactory discriminant validity among the latent constructs.

Structural Model Assessment

The inner VIF values range from 1.000 to 2.114, which are below the recommended threshold of 3.30 (Table 4). These results indicate that multicollinearity is not a concern in the structural model, suggesting that the estimated relationships among the constructs can be interpreted without substantial collinearity issues.

The coefficient of determination (R^2) indicates that the proposed structural model possesses substantial explanatory power. Crypto Volatility accounts for 82.5% of the variance in Sapta Timira Control (R^2 = 0.825), whilst Crypto Volatility together with Sapta Timira Control explains 78.5% of the variance in Financial Decision (R^2 = 0.785). Following the guidelines of Sarstedt et al. (2022), both values exceed the threshold for substantial explanatory power, indicating that the model provides a robust explanation of the endogenous constructs examined in this study.

Table 4: Collinearity Assessment	
Structural Relationship	**Inner VIF**
Crypto Volatility → Sapta Timira Control	**1.000**
Crypto Volatility → Financial Decision	**2.114**
Sapta Timira Control → Financial Decision	**2.114**
Source: Authors (2025)	

Table 5: Coefficient of Determination (R^2)		
Endogenous Construct	**R^2**	**Interpretation**
Sapta Timira Control	**0.825**	**Substantial**
Financial Decision	**0.785**	**Substantial**
Source: Authors (2025)		

Hypothesis Test

The relationships among the latent variables were analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM). Figure 2 presents the structural model illustrating the hypothesised relationships among Crypto Volatility, Sapta Timira Control, and Financial Decision. The model depicts both the direct and indirect effects estimated through the bootstrapping procedure and serves as the basis for testing the proposed hypotheses.

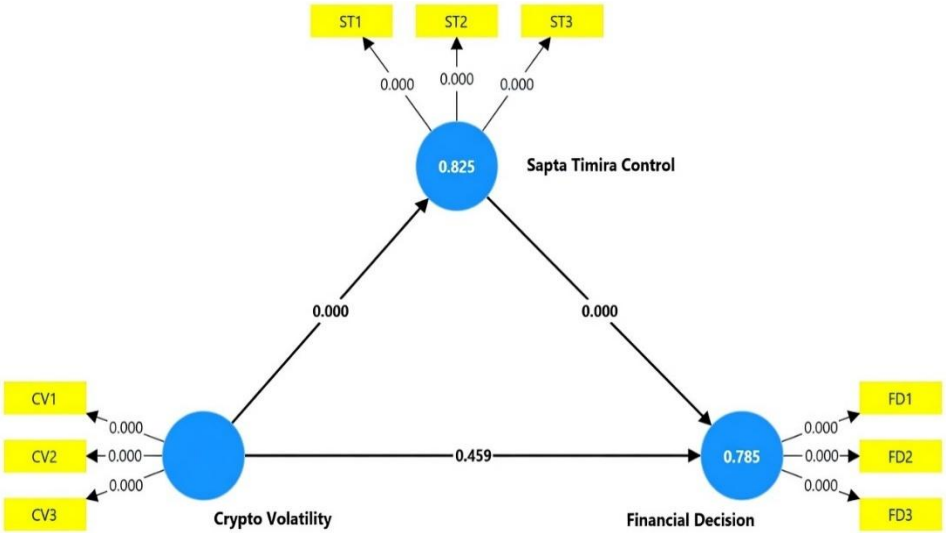


Figure 2: Structural Equation Model Testing
Source: Authors (2025)

Table 6: Regression Weight Structural Equation Model

Structural Relationship	Original Sample (O)	Sample Mean (M)	STDEV	t-value	p-value	Decision
Crypto Volatility → Financial Decision	-0.056	-0.057	0.075	0.741	0.459	Rejected
Crypto Volatility → Sapta Timira Control	0.975	0.976	0.212	4.603	<0.001	Supported
Sapta Timira Control → Financial Decision	0.846*	0.848	0.06	14.173	<0.001	Supported
Crypto Volatility → Sapta Timira Control → Financial Decision	0.825*	0.827	0.059	14.026	<0.001	Supported

Source: Authors (2025)

The bootstrapping results from Figure 2 and Table 6 indicate that Crypto Volatility does not have a statistically significant direct effect on Financial Decision ($\beta = -0.056$, $p = 0.459$), leading to the rejection of H1. This finding suggests that fluctuations in cryptocurrency prices alone do not directly influence investors' financial decision-making. In contrast, Crypto Volatility has a positive and statistically significant effect on Sapta Timira Control ($\beta = 0.975$, $p < 0.001$), supporting H2. This result suggests that heightened market volatility encourages greater emotional regulation and ethical self-control, as reflected in the principles of Sapta Timira.

Sapta Timira Control also exerts a positive and statistically significant effect on Financial Decision ($\beta = 0.846$, $p < 0.001$), supporting H3. This finding indicates that investors who demonstrate stronger emotional discipline and ethical awareness are more likely to make rational and responsible financial decisions

under conditions of cryptocurrency market volatility. Furthermore, the indirect effect of Crypto Volatility on Financial Decision through Sapta Timira Control is positive and statistically significant ($\beta = 0.825$, $p < 0.001$), supporting H4. This finding demonstrates that Sapta Timira Control serves as a significant mediating mechanism. In other words, cryptocurrency volatility influences financial decision-making primarily by strengthening investors' emotional regulation and ethical self-control, rather than through a direct behavioural effect.

Discussion

This study examined the relationships between cryptocurrency market volatility, Sapta Timira control, and financial decision-making within the context of Balinese cultural values. Using Partial Least Squares Structural Equation Modelling (PLS-SEM), the findings indicate that three of the four proposed hypotheses were supported. Whilst cryptocurrency market volatility did not exert a significant direct influence on financial decision-making, it significantly affected Sapta Timira control, which in turn positively influenced financial decision-making and mediated the relationship between market volatility and investment behaviour. These findings suggest that cultural and emotional regulation represents an important explanatory mechanism in understanding financial decision-making under conditions of market uncertainty.

Hypothesis 1 proposed that cryptocurrency market volatility would positively influence financial decision-making. However, the empirical results did not support this proposition ($\beta = –0.056$, $t = 0.741$, $p = 0.459$). The absence of a statistically significant direct relationship indicates that fluctuations in cryptocurrency prices alone are insufficient to explain how investors make financial decisions. Rather than demonstrating that market volatility directly shapes investor behaviour, the findings suggest that other psychological, emotional, and cultural mechanisms may play a more influential role in the decision-making process. Consequently, the present findings should not be interpreted as evidence that Balinese investors are inherently more resilient to market volatility, as such a conclusion would require additional empirical evidence and a different analytical design. Instead, the non-significant result simply indicates that direct market volatility, by itself, does not significantly predict financial decision-making within the present sample. This finding differs from previous studies suggesting that cryptocurrency volatility directly affects investors' risk perception and portfolio decisions (Naeem et al., 2022). One possible explanation is that investment decisions are influenced by multiple interacting factors rather than by market movements alone. In the present context, emotional regulation and culturally embedded ethical values may operate as more immediate determinants of financial behaviour than short-term price fluctuations. Therefore, whilst market uncertainty remains an important external condition, its influence appears to be channelled through internal behavioural mechanisms rather than exerting an independent direct effect.

Hypothesis 2 proposed that cryptocurrency market volatility positively influences Sapta Timira control, and this relationship was strongly supported by the empirical findings ($\beta = 0.975$, $t = 4.603$, $p < 0.001$). The result suggests that periods of heightened market uncertainty are associated with greater awareness of emotional regulation and ethical self-control. Rather than implying that volatility automatically improves investor behaviour, the finding indicates that increased uncertainty may encourage individuals to rely more heavily on culturally embedded principles when evaluating financial risks and making investment decisions. This interpretation is consistent with Behavioural Finance Theory, which recognises that financial decisions are influenced not only by objective market information but also by psychological responses to uncertainty. Within the Balinese context, Sapta Timira provides a culturally grounded framework through which investors may recognise and regulate emotions such as fear, greed, arrogance, and excessive attachment when confronted with volatile market conditions. Consequently, the findings extend existing behavioural finance literature by demonstrating that emotional regulation can be

understood not only through individual cognitive processes but also through Indigenous cultural values that shape ethical judgement and self-control during financial decision-making.

Hypothesis 3 proposed that Sapta Timira control positively influences financial decision-making. The findings provide strong empirical support for this relationship ($\beta = 0.846$, $t = 14.173$, $p < 0.001$), indicating that investors who exhibit stronger emotional regulation and ethical self-control are more likely to make rational and responsible financial decisions. This finding reinforces Behavioural Finance Theory by demonstrating that financial decisions are shaped not only by cognitive evaluations of risk and return but also by an individual's capacity to regulate emotional responses under uncertain market conditions. Within the present study, Sapta Timira functions as a culturally embedded mechanism of self-regulation that encourages investors to exercise restraint, ethical reflection, and balanced judgement when confronted with highly volatile cryptocurrency markets. The finding is consistent with previous studies suggesting that emotional discipline and ethical values contribute to more prudent financial behaviour and reduce the likelihood of impulsive investment decisions.

Hypothesis 4 examined whether Sapta Timira control mediates the relationship between cryptocurrency market volatility and financial decision-making. The indirect effect was positive and statistically significant ($\beta = 0.825$, $t = 14.026$, $p < 0.001$), supporting the proposed mediating relationship. The combination of a non-significant direct effect (H1) and a significant indirect effect suggests that the influence of cryptocurrency volatility on financial decision-making operates primarily through Sapta Timira control rather than through a direct behavioural pathway. In other words, market volatility appears to stimulate psychological and emotional responses that are subsequently regulated through culturally grounded ethical values before influencing financial decisions. These findings highlight the importance of emotional regulation as an underlying mechanism linking external financial uncertainty with individual investment behaviour. Rather than responding directly to market fluctuations, investors appear to interpret uncertainty through culturally informed processes of self-control, resulting in more considered and ethically grounded financial decisions.

From a theoretical perspective, this study extends Behavioural Finance Theory by demonstrating that culturally embedded systems of emotional regulation can complement conventional psychological explanations of investor behaviour. Whilst existing behavioural finance research has primarily focused on cognitive biases, heuristics, and emotional responses, the present findings indicate that Indigenous cultural values may also function as behavioural regulatory mechanisms. In this respect, Sapta Timira offers a distinctive contribution by emphasising self-awareness, moral restraint, and emotional balance within financial decision-making. Similar principles have been recognised in other Indigenous and culturally grounded traditions, including Ubuntu in African philosophy, which refers to a worldview emphasising human interconnectedness, shared humanity, and mutual responsibility. Often expressed through the notion that a person becomes a person through others, Ubuntu highlights communal solidarity, compassion, and ethical conduct in social relationships. Confucian ethics similarly prioritises self-discipline and moral cultivation, whilst Islamic financial ethics promotes moderation, accountability, and responsible financial conduct. Unlike these broader ethical frameworks, however, Sapta Timira specifically conceptualises the regulation of destructive human desires and emotional excesses, thereby providing a culturally specific perspective that enriches the growing literature on culture-based behavioural finance.

The practical implications of this study are equally important. Financial literacy programmes, investor education initiatives, and fintech platforms may benefit from integrating culturally relevant approaches to emotional regulation alongside conventional financial knowledge. Incorporating principles of self-

control, ethical reflection, and emotional awareness into investment education may help individuals make more balanced decisions during periods of heightened market uncertainty. Such an approach may also assist policymakers in promoting responsible participation in digital financial markets whilst recognising the continuing relevance of local cultural values within rapidly evolving financial ecosystems. Several limitations should be acknowledged. First, the Sapta Timira construct was operationalised using three indicators (regulation of excessive desire, self-awareness, and disciplined judgement) representing emotional and ethical self-control.

Although the Sapta Timira construct demonstrated satisfactory reliability and validity, its operationalisation using three indicators may not fully represent its seven philosophical dimensions, including Sura, which refers to intoxication or excessive attachment to wealth, power, and worldly desires. Furthermore, the use of purposive sampling limits the generalisability of the findings beyond experienced cryptocurrency investors in Denpasar. Future research should employ more comprehensive measures of Sapta Timira, probability sampling techniques, and longitudinal or cross-cultural designs to strengthen the robustness and generalisability of the findings.

Conclusion

This study examined the role of Sapta Timira control in explaining the relationship between cryptocurrency market volatility and financial decision-making among investors in Denpasar, Bali. The findings demonstrate that cryptocurrency market volatility does not exert a significant direct influence on financial decision-making. Instead, its influence operates indirectly through Sapta Timira control, which serves as a significant mediating mechanism. These results suggest that emotional regulation, ethical self-control, and the ability to restrain excessive ego and worldly attachments, grounded in the philosophy of Sapta Timira, play an important role in shaping rational financial behaviour under conditions of market uncertainty. The study contributes to Behavioural Finance Theory by demonstrating that financial decision-making is influenced not only by cognitive and psychological factors but also by culturally embedded systems of emotional and ethical self-regulation. In particular, Sapta Timira extends existing behavioural finance literature by illustrating how Indigenous philosophical values may function as behavioural regulatory mechanisms within digital financial markets. The findings therefore highlight the continuing relevance of local wisdom in supporting responsible financial decision-making in increasingly complex and volatile investment environments.

Key Functions for Management and Managerial Practices

The findings have several practical implications for financial institutions, fintech providers, investment advisers, and policymakers. Conventional financial literacy programmes often focus on technical knowledge and investment strategies, whilst giving relatively limited attention to emotional regulation during periods of market uncertainty. The present findings suggest that investor education could be strengthened by incorporating culturally relevant approaches to emotional regulation, ethical self-control, and awareness of excessive desire and pride alongside financial knowledge. Within the Balinese context, the principles of Sapta Timira may provide an appropriate behavioural framework for encouraging disciplined investment behaviour and reducing emotionally driven financial decisions during periods of heightened cryptocurrency market volatility. More broadly, the findings indicate that culturally sensitive behavioural interventions may complement existing financial education initiatives and contribute to more responsible participation in digital financial markets.

Limitations and Recommendations for Future Research

Several limitations should be acknowledged. First, the Sapta Timira construct was operationalised using three indicators of emotional and ethical self-control, which may

not fully capture the seven philosophical dimensions of Sapta Timira, namely surupa, dhana, guna, kulina, yowana, sura, and kasuran. Future research should therefore develop more comprehensive measurement scales to better represent the multidimensional nature of the construct. Second, the use of purposive sampling involving experienced cryptocurrency investors in Denpasar limits the generalisability of the findings to other populations and cultural contexts. Future studies are encouraged to employ probability sampling and include more diverse samples to enhance external validity. Finally, as this study was conducted within a single cultural setting, comparative and longitudinal research is recommended to examine whether Indigenous wisdom traditions similarly influence financial decision-making across different cultural and institutional contexts.

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Ethical Statement

The study was performed in compliance with the Declaration of Helsinki and was approved by the Ethics Committee of Universitas Pendidikan Nasional. The research involved anonymous survey data collected from participants, ensuring that no personally identifiable information was recorded. All participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time. Their responses were used solely for analysis and reporting, with strict adherence to confidentiality and data protection principles.

Conflict of Interest Statement

The authors have no conflicts of interest to declare, financial or otherwise.

Declaration of AI-Assisted Technologies

Artificial intelligence (AI)-based tools were used solely to assist with language editing, proofreading, and improving the clarity and readability of the manuscript. The authors remain fully responsible for the content, interpretation of the findings, and conclusions presented in this manuscript.

We confirm that every reference cited in this manuscript exists, has been consulted by us, and accurately supports the statement for which it is cited, and that all data reported are genuine and appropriately cited. We accept that responsibility for the accuracy of references and data rests solely with us, and that if any reference or data is found to be fabricated, falsified, or misrepresented, the manuscript may be rejected or, if published, retracted.

Author Contribution Statement

WSM contributed to the conceptualisation of the study, designed the methodology, and supervised the overall research process. KWSPP was responsible for data collection, cleaning, and statistical analysis. INS drafted the manuscript and performed critical revisions for intellectual content. All authors reviewed and approved the final version of the manuscript.

Informed Consent

Participants provided informed consent prior to completing the survey. They were assured that their names and personal survey results would be kept confidential and only used in the aggregate for data analysis and research findings.

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Data Availability Statement

The tabulated data that support this study's findings are available upon reasonable request from the corresponding author. Raw data with identifiable information are not shared to maintain participant confidentiality.