

STRATEGIC UTILIZATION AND FACTORS INFLUENCING FINANCIAL DERIVATIVES IN PAKISTAN'S FINANCIAL LANDSCAPE

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ABSTRACT

The purpose of this study was to investigate the derivatives usage available in Pakistan. The investigation encompassed an in-depth analysis of the diverse services offered by Pakistani financial institutions, with a focused assessment aimed at understanding the impact of these services on derivative usage. The data was gathered using a customized questionnaire. Several banks' statistical tools were used to examine the data after different users of derivatives filled out questionnaires. The research employed cross-sectional data, drawn from diverse demographic categories within a single locality, facilitating the potential replication of the model in other countries through longitudinal financial institution data. The study has several practical consequences for financial service providers that aim to grow the derivative market in Pakistan by providing high-quality services for the derivatives. This research contributes to the existing literature by delineating the determinants and patterns of derivative usage in the Pakistani context, thereby establishing a cognitive motivation relationship. It uses a cognitive motivation relationship. This study is useful in the financial institutions/banking industry for a better understanding of this concept.

Keywords: *Hedging; Banking Sector; Pakistan; Derivatives; Risk Management; AMC.*

INTRODUCTION

Corporate governance communicates to the market that an organization is managed and performing well, as well as successful alignment of management's interests with those of other stakeholders (Rustam & Narsa, 2021). Borderless economies have raised organizational risks and return exposure while also making the world a more integrated place (Asghar Butt, Nazir,

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Arshad, & Shahzad, 2018). Futures, forwards, swaps, and options are examples of derivatives. Financial derivatives have rapidly become more popular in recent decades, and as a result, the accounting for these instruments has changed dramatically as a result of this expansion. The importance of derivatives in capital markets has increased as a result of this rise a lot of attention from scholars, regulators, and people who read financial statements. "Whether you love or hate derivatives, you can't ignore them!" Hull et al. (2005). Derivatives have been chastised for what appears to be their destabilizing influence on financial markets, as well as the real-world repercussions of this spillage (Sharma, 2011). Derivatives are financial contracts with one or more underlying assets or indexes that determine their value (Adams & Runkle, 2000).

Pakistani businesses rarely employ derivatives to protect themselves against interest rates and currency risk. Multinational corporations frequently employ derivatives for hedging purposes, i.e. to reduce financial risk. Changes in the firm's demographic parameters, deflation, price rises, interest rate changes, and the political situation of a country are all domestic hazards.

The objective of this study was to evaluate the relationship between independent variables on the dependent use of financial derivatives, explore different categories, assess the ways where are in the present time and what will be next, and describe the concept of derivatives. The goal of this study is to figure out how well derivatives are being used and their determinants in the financial institutions of Pakistan. The financial institutions of Pakistan will receive assistance with the usage of derivatives as a result of this report, as well as the importance of understanding how they function and what is needed to improve it. I can find some interesting findings that can be applied to the financial institutions system in domestic systematically important banks/institutions of Pakistan. The study will take into account the point of view of derivatives in Pakistan as to how they carried out whether it was helpful/useful for them or not.

The most popular uses of derivatives are risk hedging, speculation, price arbitrage, and portfolio adjustments (Wahid et al., 2017). Derivatives markets are responsible for a considerable percentage of financial innovation, the majority of economists feel that derivatives are a useful creation of the previous 30 years (Cochran, 2007; Acharya et al., 2009)—the derivatives market's basic social and economic functions. (Power & Castelino, 1991; Parignon & Smith, 2010).

According to Bartram et al. (2009), enterprises adopting interest rate derivatives in particular see better company value when they use derivatives. Risk management and price discovery are the two key advantages of using derivatives. Derivatives have come under heavy fire for

allegedly having the power to destabilize financial markets and the knock-on impacts this has on the real economy (Hussain et al., 2019; Sharma, 2011). Since the introduction of derivatives markets has contributed significantly to financial innovation over the past 30 years, the majority of economists worldwide generally hold that derivatives are a good innovation. (Cochran, 2007).

Institutions struggle to control risk when there are no derivatives firms. The findings of the financial derivatives usage and determinants factors influencing the use of derivatives in Pakistan and evaluate the selection criteria. Determining the approximate answers and qualitative qualities for the business to employ derivatives for hedging. (Vo et al., 2019). The factors that encourage the use of derivatives and also, evaluate/determine effects and services provided by different financial institutions i.e. banks and AMCs in Pakistan. Find the factors and propose marketing implications of the study to practitioners for influencing the usage of derivatives in Pakistan. This research is mainly concerned with knowing the determinants and use of derivatives whether their impact is positive or negative and whether basic things are maintained or not. (Li, 2023; Grima et al., 2020). Firms operating in Pakistan are exposed to a variety of hazards, including fluctuations in foreign exchange, interest rates, and commodity prices. Due to their complexity, the prevailing perception is that these are solely speculative instruments that are highly leveraged. The purpose of this research is to look into the relationship between derivative use and a company's value. This study's findings suggest that corporations use derivatives for speculative purposes, lowering the firm's worth. (Butt et al., 2021).

LITERATURE REVIEW

This paper conducts an empirical review of the literature focused on derivatives and their characteristics, particularly on Prospect Theory. Prospect Theory, a concept originating from behavioral economics and behavioral finance in 1979 by Daniel Kahneman and Amos Tversky, gained significant recognition when Kahneman was awarded the Nobel Memorial Prize in Economics in 2002. According to Prospect Theory, individuals exhibit distinct decision-making patterns and behaviors when confronted with probabilistic alternatives.

The theory posits that investors assign different values to gains and losses, giving greater weight to anticipated benefits compared to perceived losses. In situations involving a choice between two options, investors are inclined to select the option with the most favorable likelihood of success. Additionally, Prospect Theory is synonymous with the concept of loss

aversion, underscoring the tendency of individuals to be more sensitive to potential losses than equivalent gains.

Alternative to probability theory, a mathematical framework for dealing with specific types of uncertainty is known as possibility theory. It employs a scale of 0 to 1 for both probability and necessity, ranging from impossible to probable and unnecessary to necessary, respectively. In 1978, Professor Lotfi Zadeh proposed possibility as an extension of his theory of fuzzy sets and fuzzy logic theory. Theoretical justifications for the usage of derivative instruments, notably options, are investigated. At its most fundamental level, financial theory advises that derivative instruments should be chosen for hedging purposes if and when they are utilized based on the company's exposure profile and the reward characteristics instrument.

Adam Smith is usually regarded as the creator of rational choice theory, having proposed the idea of an "invisible hand" guiding free-market economies in his book "An Inquiry into the Nature and Causes of the Wealth of Nations," published in 1776. According to rational choice theory, people are motivated by money and the opportunity for profit. People use logical calculations to make reasoned decisions and get results that meet their objectives. Self-interest optimization is also linked to these findings. Given the limited possibilities, rational choice theory is supposed to produce the most beneficial and satisfying outcomes. In rational choice theory, three concepts are investigated: rational agents, self-interest, and the invisible hand. Rationality can be applied to human behavior in a variety of contexts outside of economics. There is a link between cognitive appraisal and emotional reaction, cognitive orientation occurs when people evaluate their surroundings in light of their goals, beliefs, and values, resulting in an emotional reaction to climate change signs.

Hedging

Hedging strategies frequently employ financial items known as derivatives. The most common derivatives are options and futures. Hedging is a risk-management approach for financial assets. Hedging options for both transmission and distribution are examined. The majority of the available literature addressed transmission-level risks from the perspectives of system planners, power providers, and electricity merchants. System stability and security issues were the emphasis of the literature from the standpoint of the system planner (Yinyan Liu et al., 2022). Financial and political volatility, as well as increased transaction and operational complexity, as well as stricter regulatory compliance requirements, have highlighted the importance of implementing a system for risk management that works (Thalassinos & Thalassinos, 2018). However, recent studies refute this concept and provide evidence that

financial hedging in businesses enhances performance and increases the company's value (Ahmed, Azevedo & Guney, 2014; Allayannis & Weston, 2001; Kapitsinas, 2008). Hedging is the technique of reducing the risk involved in maintaining a trading position. Derivative products are now widely used as a primary means for businesses to minimize and manage risk (Casamento, 2010).

H1: Hedging of the risk has no discernible impact on the use of derivatives.

Liquidity

This danger is real to ensure timely payment to creditors, liquid assets are kept in a huge number of creditors. Insolvency risk, credit risk, and competitiveness all have negative effects on Pakistani bank profitability, according to Shair et al. (2021). Liquidity risk has a favorable effect. Bank-specific variables such as liquidity, capital adequacy, bank size, deposit, leverage, asset quality, operating efficiency, asset management, and asset management were determined to be important by Al-Homaidi et al. (2018), among others, had a significant impact on asset management bank profitability is heavily influenced by indebtedness and other factors. To assess the risk of liquidity, investors compare the company's short-term liabilities to its liquid assets. The degree of liquidity is controlled by the type of asset, the size of the asset, and other factors, according to Stange and Kaserer (2009). Increased liquidity, which lowers transaction costs (Acharya et al., 2009); and increases market efficiency for the underlying asset (CFA, 2009).

H2: Liquidity does not positively influence the use of derivatives.

Solvency

The ability of a corporation to pay off long-term obligations and continue operating in the future is referred to as "solvency". Debt levels are compared to equity, assets, and earnings to establish a company's ability to continue operating indefinitely. To put it another way, solvency ratios show issues like going concern and a company's ability to fulfill long-term obligations. Derivative products are now widely used as a primary means for businesses to minimize and manage risk (Casamento, 2010).

H3: Solvency does not have a positive impact on the use of derivatives.

Growth

Researchers are paying close attention to these characteristics, and bank supervisors and regulators are becoming increasingly concerned (Ali & Puah, 2018). The growth of financial derivatives is one of the most notable developments in finance over the past 20 years. Price

volatility, market globalization, technological developments, and innovations in financial theories have all contributed to the explosive growth of derivatives. Companies with great growth potential incur a higher cost of under-investment. Due to a lack of cash flow, they are unable to pursue projects with a positive net present value despite their great growth potential.

H4: Growth does not positively influence the usage of derivatives.

Financial Distress Cost

The distress cost is the higher cost of doing business that a company faces when it is in financial trouble, such as a higher cost of capital. Good practices have an impact on bank risks, according to Permatasari (2020), and banks with diverse governance ratings have varying operational risk, liquidity risk, and credit risk. Companies in financial distress have a tougher time paying their financial obligations, putting them at risk of default. Mselmi et al. (2017). Determining whether businesses with high financial distress costs are more inclined to employ derivatives to manage currency risk is significant. According to hedging theories, businesses with a higher risk of financial hardship spend more. (Aretz et al., 2007). Higher leveraged companies are more prone to face financial difficulties and, therefore have a greater motivation to hedge their currency risk (Bartram et al., 2009).

H5: Financial Distress Cost has no positive impact on the use of derivatives.

CONCEPTUAL FRAMEWORK

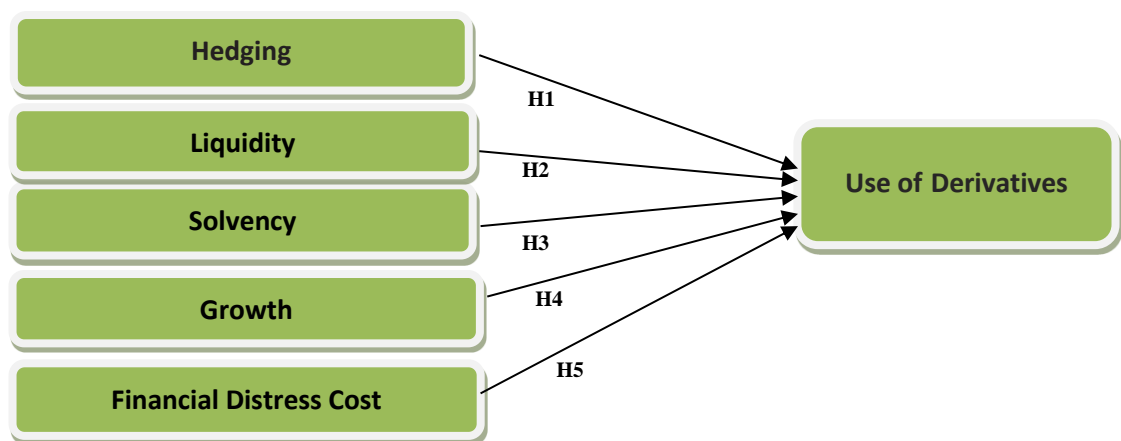


Figure 1. Recapitulated Model

METHODS

By elaborating and describing derivatives use in Pakistan, the current study added to the existing literature. Methodology conveys the structure and details of the procedures that are used in leading the study (Kothari, 2003). This primarily focuses on outlining the research design, methods, and tools used, as well as the procedures used to gather and interpret data, so

the entire chapter discusses in a sort of organized way how this study was successfully carried out, analyzed, and resulted, as well as the design of the questionnaire, data collecting, study software, and analytical strategy. This research is quantitative in nature. A questionnaire was used to collect data from respondents to figure out which of the characteristics has the greatest impact on the usage of derivatives. Primary data was collected in this study using a closed-ended questionnaire.

Population And Sampling

The study's target demographic is all users of derivatives and its determinants in Pakistan, intending to determine the in Pakistan's banking business. It is straightforward and time-saving to transmit the study questionnaire via Google Forms (online). The convenience sampling methodology was used in this study to collect data from financial institutions in Pakistan. To gather information on the use of derivatives, a questionnaire was given to about 410 (four hundred ten) people who work in various organizations, banks, and other departments in Karachi, Pakistan. There have only been 332 (three hundred thirty three) replies to the survey that were submitted via Google Forms (online). The information for 332 users was gathered via sending emails and messaging programs to the account holders of many accounts.

Table 1. Study Variables

| Dependent Variable | Independent Variables |
|---------------------------|----------------------------------|
| Use of Derivatives (UoD) | Hedging |
| | Liquidity |
| | Solvency |
| | Growth |
| | Financial distress of cost (FDC) |

Source: This Study

RESULTS AND ANALYSIS

The objective of this research was to investigate the use of derivatives and related factors in Pakistan's financial institutions sector. Hedging, Liquidity, Solvency, Growth, and Financial Distress of Cost (FDC) were taken as financial derivatives. The data was gathered via a questionnaire, and SPSS software was used for the statistical evaluation. This study's data was gathered using a structured questionnaire and displays the study's important findings. Descriptive statistics, reliability tests, Correlation, and hypothesis testing were conducted to analyze the data.

Table 2. Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|--------------------|-----|---------|---------|--------|----------------|
| Hedging | 332 | 1.00 | 4.00 | 2.2249 | .53632 |
| Liquidity | 332 | 1.00 | 4.00 | 2.4729 | .57086 |
| Solvency | 332 | 1.00 | 4.33 | 2.2982 | .62651 |
| Growth | 332 | 1.00 | 4.50 | 2.2304 | .62820 |
| FDC | 332 | 1.00 | 5.00 | 2.2440 | .64391 |
| UoD | 332 | 1.00 | 4.50 | 2.1627 | .61506 |
| Valid N (listwise) | 332 | | | | |

Source: Study Analysis

Descriptive analysis demonstrates the univariate normality. The mean rate of use of derivatives is 2.1627, with a standard deviation of .61506; hedging is 2.2249, .53632; liquidity is 2.4729, .571086; solvency is 2.2982, .62651; growth is 2.2304, .62820; and FDC is 2.2440, .64391, respectively.

Table 3. Correlations

| | | UoD | Hedging | Liquidity | Solvency | Growth | FDC |
|-----------|---------------------|--------|---------|-----------|----------|--------|--------|
| UoD | Pearson Correlation | 1 | .377** | .317** | .351** | .464** | .350** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 |
| | N | 332 | 332 | 332 | 332 | 332 | 332 |
| Hedging | Pearson Correlation | .377** | 1 | .313** | .408** | .343** | .341** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 | .000 |
| | N | 332 | 332 | 332 | 332 | 332 | 332 |
| Liquidity | Pearson Correlation | .317** | .313** | 1 | .441** | .291** | .319** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 | .000 |
| | N | 332 | 332 | 332 | 332 | 332 | 332 |
| Solvency | Pearson Correlation | .351** | .408** | .441** | 1 | .457** | .462** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 |
| | N | 332 | 332 | 332 | 332 | 332 | 332 |
| Growth | Pearson Correlation | .464** | .343** | .291** | .457** | 1 | .434** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | | .000 |
| | N | 332 | 332 | 332 | 332 | 332 | 332 |
| FDC | Pearson Correlation | .350** | .341** | .319** | .462** | .434** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | |
| | N | 332 | 332 | 332 | 332 | 332 | 332 |

** Correlation is significant at the 0.01 level (2-tailed).

The correlation study revealed a significant association between the variables. Pearson correlation is used to assess the linear relationship between variables. The relationship between the independent variables and the dependent variable use of derivatives was tested using a correlation analysis test. According to the correlation results, there is a positive correlation that indicates that the variables always move in the same percentage and direction. Variables are positively related to one another.

Table 4. ANOVA

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|--------|-------------------|
| Regression | 37.242 | 5 | 7.448 | 27.601 | .000 ^b |
| Residual | 87.975 | 326 | .270 | | |
| Total | 125.217 | 331 | | | |

a. Dependent Variable: UoD

b. Predictors: (Constant), FDC, Liquidity, Hedging, Growth, Solvency

Hypothesis Testing

$$UoD = \beta_0 + \beta_1 \text{ Hedge} + \beta_2 \text{ Liquidity} + \beta_3 \text{ Solvency} + \beta_4 \text{ Growth} + \beta_5 \text{FDC}$$

Table 5. Hypotheses Results

| Variable | Coefficients Beta | Standard Deviation | (t) | (Sig) |
|-----------------|--------------------------|---------------------------|------------|--------------|
| Hedging | .130 | .067 | 2.196 | .029 |
| Liquidity | .154 | .066 | 2.530 | .012 |
| Solvency | .048 | .063 | .731 | .465 |
| Growth | .318 | .060 | 5.194 | .000 |
| FDC | .073 | .058 | 1.185 | .237 |

According to the model's findings, three of the independent variables show significant relationships at the confidence level of 0.05, and two independent variables (Solvency and Financial Distress Cost) are rejected which is not significant at 0.05.

CONCLUSION AND DISCUSSION

The literature review provides support for the choice, evaluation, and explanation of all the dependent and independent variables in the study. The purpose of this study is to ascertain the derivatives utilization by Pakistani financial institutions. The use of derivatives is a dependent variable, whereas hedging; liquidity, solvency, growth, and financial distress of cost (FDC) are independent variables. It is entirely based on original data that was gathered through an online Google form survey that received 332 responses. Following the collection of data from the respondents, various tests were conducted, including those for descriptive statistics, reliability, and hypothesis testing. As a result of the study's conclusions, it has become clear that more derivatives need to be used in Pakistan for future investments and to reduce business risk. Results are related to the base papers "Exploring Factors Affecting the proper use of derivatives An Empirical Study with active users and controllers of derivatives" and "Determinants of Financial Derivatives Use: A Case Study of Pakistan's Financial Sector" for checking the validity of results, this study's findings also showed that using derivatives as a tool has a favorable, considerable impact on hedging. Furthermore, it has come to light that there is a strong correlation between liquidity and the use of derivatives in Pakistan's commercial and public sectors. It is crucial for the financial institution sector to develop and put into effect stronger policies addressing the use of derivatives in order to strengthen the nation's economy. It is crucial for Pakistan's organization.

RECOMMENDATIONS, IMPLICATIONS AND FUTURE RESEARCH

The survey has shown that the demand for financial services has been significantly impacted by the current state of affairs. However, when using traditional banking, one can observe a

fascinating shift in the use of derivatives systems and customer support, as well as goals linked to trust, usability, and the use of prior literature. Service providers and other elements that make services more comfortable and dependable for clients should also be aware of customer experiences. As a result, the study suggests the following. Further research into the derivatives market, as well as the use of derivatives, can empirically support the initial trust relationship. Banks may accept data from several banks in different nations. Comparing Asians to people from different regions might be fruitful research. Future research should be considered in future studies.

Findings are interesting and contribute significantly to the entire literature on derivatives and service marketing, particularly as it relates to marketing financial services, for academics who seek to foresee their intuitions knowledge, my findings are especially helpful.

The study's findings show that Growth, Solvency, and hedging are important factors in the management of financial institutions. Personal identification numbers and addresses that are both dependable and distinctive are required for all service providers. Customers' transactions are secure, and skimming and fraudulent activities are avoided, financial institutions should send messages or emails to their clients regarding their transactions. It will increase client trust by ensuring transaction confirmation and addressing their safety concerns. To fulfill the liquidity concerns of investors, all financial institutions must provide exact and timely services within the specified timeframe to please and play a key part in maintaining the use of derivatives. One of the most important factors is financial distress cost, thus financial institutions should keep their systems up to date and simple to use for the benefit of their customers, which will satisfy them and make them loyal to their systems it is important to be aware of the findings' limitations. First, it was expected that the limits and current findings add to the ongoing discussion about the appropriate use of derivatives and might lead to further research projects to produce more information than is already available presently accessible. The proper usage of derivatives may be impacted by additional factors that have not been addressed in this study and that may be empirically and inductively researched in subsequent studies.

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