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THE INFLUENCE OF FINANCIAL LITERACY ON COLLECTIBLES AS AN ALTERNATIVE INVESTMENT AVENUE: EFFECTS OF FINANCIAL SKILL, FINANCIAL BEHAVIOUR AND PERCEIVED KNOWLEDGE ON INVESTORS' FINANCIAL WELLBEING

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ABSTRACT
This paper analyzes the influence of financial literacy in relation to investment decisions in collectibles. The focus is on assessing the influence of financial literacy on the preparedness of individual investors to make complex financial decisions with respect to investment in collectibles. This paper also evaluates the effect of financial literacy among investors on the financial behavior, financial skill, and perceived knowledge dimensions with respect to collectibles. The paper attempts to the influence of financial literacy among investors opting collectibles as an alternative investment option.

Keywords: Financial Literacy, Alternative Investment, Financial Skill, Financial Behaviour, Perceived Knowledge, Financial Wellbeing

1. INTRODUCTION

Financial markets have evolved over the years with increase offerings of complex financial products. These complex products have inherent risk and return which can be analyzed by an investor with rudimentary level of financial literacy. A financial literate individual remains more tuned to risk and can be more cautious with respect to fraudster in the market. Financial literacy also helps in overall development of economy and thereby improving the quality of financial services **(Bhushan and Medury 2013).**

Instability of global markets has forced the necessity of Financial knowledge as essential and characterized by increasing complexity of financial products **(Riitsalu 2019, Ademola 2019).** Due to the volatility in the global economy, retail investors had to take complex financial decisions with choice of multiple financial products and challenges, which necessitated significance of finance skills in an investor's investment choice. The international financial crisis of 2008 emphasized the need for financial literacy and financial knowledge among investors. The crisis also highlighted that financial literacy among investors results financial wellbeing**. (Nikolaos et al. 2019; Hastings et al. 2018 and Osman et al. 2018).**

The financial crisis of 2008 encouraged investors to explore unique asset classes to get the benefit of diversification of risk in their portfolios and ensure regular returns (**Areppim, 2008**). With an erosion of asset value due to the financial crisis, investors started to move away from conventional investment avenues which had a below average performance. Given this background, alternative investments options such as hedge funds, private equity, gold ETF and investment in collectibles yielded beneficial returns to shield against market volatility.

Campbell (2007) emphasized that art investments diversified the portfolio during sluggish markets. Campbell's research threw light on the diversification benefits of portfolios with significantly less relationship of art with other classes. To assess the return on collectibles, **Dimson and Spaenjers (2013)** paper highlights that in a long term, collectibles yielded superior returns than the returns from bonds or bills. The authors also investigated option of inclusion of emotional assets in a diversified portfolio and concluded that there is a positive correlation between equity returns and collectible prices resulting in wealth creation. In this study, researcher will include art and antiques, stamps, vintage cars, and wine as asset class under collectibles as an alternative investment option.

1.1 Motivation for Research

Literature review on alternative investments have identified need for an investor to look beyond traditional investments but the research lacks a connect to financial literacy as a motivating factor for investment in risky assets. Furthermore, there are few research studies in collectibles as an alternative investment option in risky assets **(Andrej Cupak et al. 2020, JinglinJiang et al. 2020)**. It is also observed that the research literature is voluminous in terms of both theoretical as well empirical studies on Financial Literacy and its influence on traditional investment options, personal finance, Financial Skill, Financial Behavior, **(Lusardi. A 2019, Nicolini et al. 2019 and Suresh Kumar et al. 2017 etc.)** It is found that while studies on financial literacy have predominantly researched on the above-mentioned areas, there is little evidence in the extant literature on behavioral studies to show investment in collectibles as an alternative investment option. **(Warmth et al. 2019 and Dr. Mukesh Mishra 2019).**

The paper aims to address this lacuna in research - a critical gap in emerging research in this domain. The paper focuses on a relatively unexplored area of research in behavioral finance and assesses the influence of financial literacy on investment in collectibles as an alternative investment option. The scope of the paper includes investment in collectibles such as stamps, vintage wines, vintage cars, valuable art, and antiques as alternative investment options.

2. LITERATURE REVIEW AND HISTORICAL BACKGROUND

2.1. The influence of Financial Literacy on investment decisions

The influence of financial literacy on wealth accumulation is documented in several empirical studies pioneered by authors such as Annamaria Lusardi and her co-authors are credited with pioneer studies in the field of financial literacy.

The paper investigates this aspect while reviewing the extant works in the area. **Lusardi A (2009)** states stated that "Financial Literacy has positive causal impact on wealth holdings and saving behaviour". Furthermore, "financial literacy increases the awareness for importance of savings and planning for retirement". Further, **Lusardi A (2011)** through a household survey found that "financial literacy affects financial decision-making and people with low financial literacy are less likely to invest in stock". **Von Gaudecker (2015)** established that "households in The Netherlands that score high on financial literacy or rely on professional financial advice achieve better investment outcomes and more diversified portfolios". Several studies have also verified the "positive impact of financial literacy on pension savings and retirement planning" **(Van Rooij et al. 2012; Cupák et al. 2019).**

Reviewing further, researcher explored **Cupák et al. (2020)** paper documented through a survey "that objective financial literacy is positively related to investment in risky assets as well as debt securities". Current literature documented by **Jinglin Jiang et al. (2020)** analyses that **"**Investors with a higher level of education and richer investment experience have higher financial literacy". The authors also found "that advanced literacy has a significantly larger impact on investment performance than basic literacy". Evidence of financial literacy on investments is also reviewed by **Suresh Kumar et al. (2017),** who evidenced that "there is a significant relationship between financial literacy to financial behavior and from financial behavior to financial decision".

2.2 Influence of the financial literacy on financial wellbeing

Previous research emphasizes on the importance of influence financial literacy to realize financial wellbeing. **Shim et al. (2009) and Hogarth (2006)** indicate that "financial knowledge, financial fragility, and financial behavior affect financial well-being". "Financial literacy creates a financial attitude that leads to financial wellbeing". The research also establishes a "strong positive relation between financial literacy and financial well-being". Furthermore, **Philippas, N et al. (2019**) in their study on university students evaluated the relationship between financial literacy, financial wellbeing, and financial fragility. Authors concluded that "Financial literacy can be a key driver of financial well-being". Similarly, in another influential study, **Marzieh. K**, **et al. (2013)** paper analyzed "the relation between financial literacy, financial wellbeing, and financial concerns". The findings of the study indicated, "age and education are positively correlated with financial literacy and financial wellbeing".

2.3 Influence of financial literacy on financial behaviour

Personal finances not handled well can have significant societal and community consequences. Influential study by **Lusardi. A (2019),** the author substantiates her study with conclusion that "there is evidence of the impact of financial literacy on people's decisions and financial behavior". Lusardi asserts that "financial literacy has been proven to affect both saving and investment behavior and debt management and borrowing practices". **Lusardi and Mitchell (2014)** empirically propagate that, "financially savvy people are more likely to accumulate wealth"**.**

Empirical evidence found by **Niccolini et al. (2019)**, "people with more financial literacy make better financial decisions and show positive financial behaviors". The authors also emphasize on the "deeper understanding of the connection between financial literacy and financial behaviors".

In another research by **Hung A. et al. (2009**) ascertained that "there is a positive impact of financial literacy on financial attitude, behaviour and financial well-being" by designing a Financial Literacy Model. Financially literate people do well at handling their personal finances, such as "budgeting, saving money and spending, handling mortgages, and participating in other financial markets. Financially literate investors do better at retirement planning and successfully accumulate wealth".

Zakaria R. et al. (2012) have analyzed the factors that affect 'financial position or financial well-being of the Malaysians" and established that "positive financial behavior is most dominant factor of having good financial position". Also, "financial behavior is strongly related to sound financial knowledge or financial literacy".

2.4 The influence of financial literacy on financial skill

Beal and Delpachitra, 2003) state that **"**as financial markets have been deregulated there is pressing need for financial skills and with financial institutions competing for the market share, credit has become easier to obtain" In other path breaking studies, **(CBF, 2005b, p. 4), (Kinnunen and Pulkkinen, 1998; Yeung and Hofferth, 1998; Cleek and Pearson, 1985)** have stressed **"**having financial skills is an essential basis for both avoiding and solving financial problems, which, in turn, are vital to living a prosperous, healthy, and happy life".

Warmath and Zimmerman (2019), applied " Bloom's domains of knowledge and redefine financial literacy as the combination of indicators reflecting three domains of knowledge: financial skill, self-efficacy, and explicit knowledge".

2.5 Influence of financial literacy on perceived knowledge (Financial knowledge)

Puneet and Medury (2014) in their paper examined and suggested that "it is not only financial knowledge which shapes overall financial literacy of an individual but financial attitudes and financial behaviour of the individual has a considerable effect on overall financial literacy of an individual". Furthermore**, Riitsalu and Murakas (2018)** authors have analyzed "how subjective and objective knowledge of finance, behaviour in managing personal finances and socio-economic status affect financial well-being".

In another study by **Rai et al. (2019)** findings revealed that "financial attitude and financial behaviour have strong association with financial literacy of working women than financial knowledge".

2.6 Evidence of investment in collectibles

Literature on investments in collectibles are very few as it is not a much-researched topic. Literature on collectibles is discussed in the following order: stamps, wine, vintage cars, art and antiques and collectibles as an asset class.

2.6.1 Art and Antique as an investment

Art as an investment market is characterized by economic conditions which favor alternative investment vis a vis to owning money or conventional assets. **Goetzmann et al. (2011)** found "that high net worth individuals have a significant influence on art price". **Chanel (1995)** has evidenced "a growth in income or wealth from favorable surprises in the stock market tends to positively affect art prices as they boost the buying power of investors".

Mandel (2009) investigated "art as a form of luxury good rather than a real financial instrument". The study also "assumes that demand factors fully determine equilibrium art prices and possess special features unique to luxury goods and specifically, the value of art directly factors into utility directly".

Dimson and Spaenjers (2014) extensively worked on collectibles**,** they emphasized "the importance of changes in taste and the benefits from utility dividends that affect the long run performance of art".

The paper investigates art as an investment in the recent literature and examined papers of authors **Ana – Corina et al. (2020), Sarah J (2019)** have stressed on the fact that investment in the art market requires special skills and knowledge.

David, Dimson and Spaenjers (2020) have established "the long-run buy-and-hold performance of an actual portfolio, namely, the collection of John Maynard Keynes". This study also established that its "performance has substantially exceeded existing estimates of art market return".

A study by **Urbi Garay (2019)** by analyzing art price and its movements author has concluded Art has become an increasingly important asset in the portfolios of investors.

2.6.2 Wine Investments

Research substantiates, wine investments are consistently outperforming traditional investments with superior returns compared to stocks/shares and commodities. Wine as an investment with its unique characteristics has traditionally been associated with low levels of risk and stable returns.

Dimson, E., et al. (2015) examined "historical price records for Bordeaux Premiers Crus and the impact of aging on wine prices and the long-term investment performance of fine wine". The study concluded, "young maturing wines from high-quality vintages provide the highest financial returns and returns to wine and equities are positively correlated".

Barbora Wilczková (2015) concluded "wine creates an alternative asset class, however there are differences in risks and returns among individual types of fine wines".

Hartig.C and Lennon. C (2018) examined "bourbon wine as a collectible (such as sports memorabilia) or as a type of financial asset that can help diversify an investment portfolio". The findings suggested "bourbon has been appreciating somewhere between 30 and 40% per year since 2014".

Jari Sara (2019) indicated "fine wine could be beneficial for portfolio diversification due to low correlation with traditional asset classes and lower standard deviation compared to stocks". The study provided "information to individual and institutional investors on how alternative investments can increase portfolio performance". **Beysül et.al (2015)** examined the **"**role of wine investments in the diversification of French portfolios". The authors included "stocks, bonds, and a risk-free asset to constitute different French portfolios based on the risk-aversion degree of investors".

2.6.3 Classic/vintage car investments

While most other collectible asset classes have been studied in terms of investment performance, there are few studies on the risk and return characteristics of classic car investments.

Dries Laurs (2017) examined "the price determinants and investment performance of classic cars". The author during January 1998 to July 2017 investigated" a sample of over 29,000 classic car auction sales and using a hedonic regression methodology constructed several constant-quality classic car price indices".

Sebastian Hoffmann (2018) brought Classic Car Banking Concept, which validates the capability "to integrate the investment in classic cars into an existing wealth management concept". The author concluded that "further diversification of an investor's portfolio by adding classic cars offers an interesting earning potential in the current situation of historically low interest rates in many parts of the world".

2.6.4 Stamp investments (Philately)

Investment in stamps have attracted very less attention as an asset class. **Taylor (1983)** analyzed whether stamp portfolio returns will yield excess over "New York Stock Exchange Index (NYSE)". The study "calculated mean returns on stamps to be 14.5% using five frequently traded US stamps".

Shaomin Huang (2010) has analyzed "that the value of newly issued stamps appreciates faster than the value of older issued stamps". The author posits that this "is caused by the asymmetric participation in stamp collection between hobbyists and investors".

Dimson et al. (2011) in their study used "Stanley Gibbons catalogue prices to construct a periodically rebalanced index" and could arrive at "average annual nominal returns to be 6.7%". The return estimated by them was "higher than returns on bonds and bills, but lower than returns on equity". The authors also concluded that "equity and stamp returns are found to have a positive correlation".

2.6.5 Coins investments (numismatics)

Kane (1984) and Dickie et al. (1994) analyzed "the investment performance of rare coins, even though they investigated a small sample". Both the authors "differ significantly, with Kane finding annual inflation adjusted returns of 13.7%, while Dickie et al, find a real annual return of -3.7%".

2.6.6 Returns on investments in other collectibles

Renneboog and Spaenjers (2012) assess "that investments in white and colored diamonds generated an annual real return of 6.4% and 2.9% respectively over the period from 1999 to 2010". **Graddy and Margolis (2011)**

cite that "annual returns in investments in violins over the periods 1850-2006 and 1980-2006 are equal to respectively 3.3% and 4.0% (in real terms)".

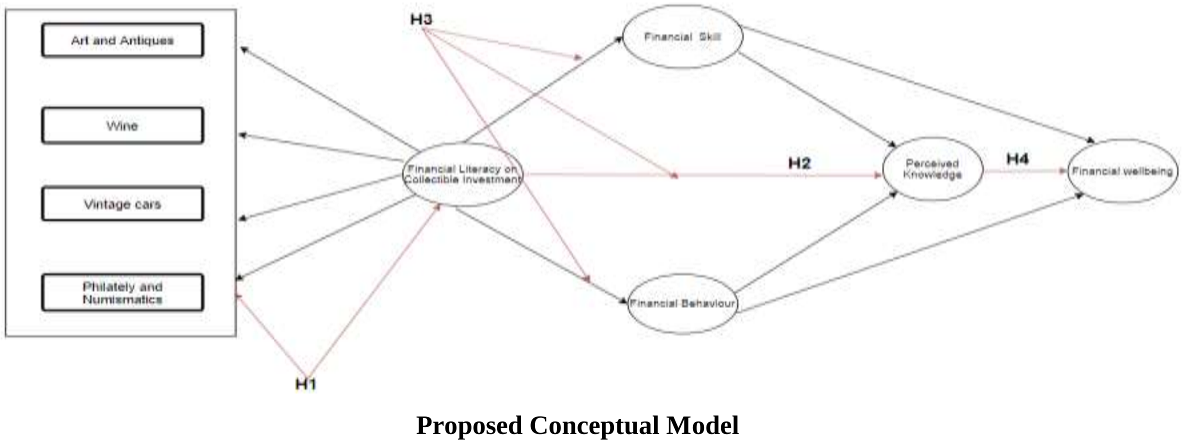
2.6.7 Collectibles as an investment motive

Mohammed Z, et al. (2011), have identified 16 different motives that inspire the purchase of artwork, collectibles, and antiques. **Elroy Dimson and Christophe Spaenjers (2014),** by reviewed "the long-term asset performance of collectibles". The study found that "emotional assets have outperformed government bonds, Treasury bills, and gold over the long run". Nevertheless, "the costs of trading in these markets are high and an investor faces many dangers and drawback". "Emotional assets are particularly alluring to some high-net-worth investors". **Petterson and di Torcello (2017)** document that investors are seeking investment exposure to collectibles and are pressuring wealth managers to incorporate collectibles into their wealth management offering.

3. RESEARCH GAPS

1. **Andrej Cupak et. al (2020), JinglinJiang et. al (2020)**, their findings indicate that "financial literacy is positively related to investment in risky assets" and, "level of education and richer investment experience have higher financial literacy". There is no evidence in these studies of the inclusion of collectible as an asset class.
2. **Lusardi (2019); Nicolini et.al (2019); Kumar et.al (2017)** have presented the evidence on "the impact of financial literacy on people's decisions and financial behavior". These scholars have focused on "financial literacy and its association with financial behaviour leading to higher return in more complex assets such as stocks and leading to wealth accumulation". These researchers are silent on the relationship between financial literacy and financial behaviour related to alternative investments.
3. **Warmth et.al (2019) and Mishra (2019)** stress "role of financial literacy in improving the financial skill of investors leading to better understanding of investment risk in diverse asset classes".
4. **Nikolas et.al (2019) and Kalantarie et.al (2013)** investigate "the relationship between financial literacy and financial wellbeing specifically for – investment using determinants of financial literacy". The scholars have not explored the influence of financial literacy on financial wellbeing for other asset classes such as collectibles.
5. **Rai et.al (2019), Riitsalu (2018), Puneet (2014)** examined the association between financial knowledge (Perceived Knowledge) and financial literacy. Their findings "indicate that financial knowledge shapes overall financial literacy of an investors". These scholars have also not explored the relationship between financial literacy and financial knowledge in the context of investment in collectibles.
6. **Dimitriu et.al (2020), Chambers, Dimson and Spaenjers (2020), UriGaray (2020), Skinner (2019) are** the most recent studies exclusively on analysing the performance art market and their findings indicate that art market outperform equity market. **Fur et.al (2019), Beysul et. al (2015)** investigate the diversification benefits of wine investments, Sebastian Hoffmann **(2018)**, Dries Laurs **(2017)** study the benefits of investing in vintage cars, **Dimson et.al (2010), Maslar et.al (2020)** identified the benefits of investment in stamps and coins. It is observed that in the most recent research there is an absence of evidence of the influence of financial literacy on investments in collectibles as well its effect on financial skill, financial behaviour, and perceived knowledge. The paper proposes a new empirical model – extended financial literacy model (mediation model)- since there is no existing model that helps explain the influence of financial literacy on investment in collectibles as an alternative investment option leading to financial well-being.

3. CONCEPTUAL MODEL:



Proposed Conceptual Model

5. SCOPE OF STUDY

1. The paper has selected respondents who are in the age group of 18 - 85 years having an average income of more than 20-24 lakh.
2. Research is confined to respondents of Bangalore and its cosmopolitan group of people with diverse population and hence it represents sample population.
3. The research constitutes basic financial literacy model **(Hugh et.al 2009**) as one the base theory and works upon the model to develop a proposed mediation model.
4. Research dimension constitutes independent variables as investment Art and antiques, Vintage cars, wine and Philately and Numismatics as collectibles. The Proposed mediating model constitutes Financial literacy on collectible investment as Latent variable and financial skill, financial behavior as mediating variable and perceived knowledge as moderating variable and financial wellbeing as the dependent variable.

6. RESEARCH QUESTION

What is the influence financial literacy on investing in collectible as an alternative investment option leading to financial wellbeing?

7. NEED FOR STUDY

Investors in India lost faith in financial system after the financial crisis of 2008 and explored opportunities which reduced the risk in their investments. Investors looked for investment options beyond traditional investments such as alternatives investment avenues. Due to Volatility and nonperformance of the public markets, new forms of investment emerged. Alternative investment asset class became a relevant option for investors due to its resilient nature in times of economic turmoil. **(World Economic Forum, 2015)**. **Veena (2015)** states that “art market as a separate alternative to traditional asset classes, exhibits a low correlation with other traditional asset classes, such as shares and bonds. This makes art as an appropriate asset for diversifying an investment portfolio”. **(Burton and Jacobson, (1999), David, Dimson and Spaenjers (2020), Beysul et.al (2015)** states that “the investment behavior and opportunities are drastically changing over few decades, Financial dynamics has made alternative investment as mainstream investment”. Many independent studies suggest that investment in art and antiques, wine, vintage cars and bikes, philately and numismatics are one of the significant investment avenues and opportunities.

8. OBJECTIVES OF RESEARCH

1. To explore the influence of financial literacy on investing in art and antiques, wine, vintage cars, philately, and numismatics through a proposed mediation model.
2. To ascertain the influence of financial literacy on perceived knowledge of the investor.
3. To analyze the mediating effect of financial literacy on financial skill, financial behavior on perceived knowledge.
4. To identify the influence of financial literacy on perceived knowledge and financial wellbeing.

9. HYPOTHESES

The dependent and independent variables was contributed by the conceptual framework. This study’s dependent variable is financial wellbeing, with moderating variable as perceived knowledge and the independent variables are investments in Art and antiques, Wine, Vintage cars and bikes, and Philately and Numismatics. The influence of financial literacy on collectible investment will be taken as latent variable. The variables, financial skill, financial behaviour will be mediating variables in the study. Based on all the variables and research objectives, there are 4 hypotheses had been developed which has been shown below:

1. Hypothesis 1: H_0: There no significant relationship between financial literacy on investing in art and antiques, wine, vintage cars, philately, and numismatics.

   H_1: There is a significant relationship between financial literacy on investing in art and antiques, wine, vintage cars, philately, and numismatics.
2. Hypothesis 2: H_0: There no significant influence of financial literacy on perceive knowledge of the investors. H_2: There is a significant relationship between financial literacy on perceive knowledge of the investors.
3. Hypothesis 3: H_0: There no significant mediating effect of financial literacy on financial skill, financial behavior on perceived knowledge. H_3: There is a significant mediating effect of financial literacy on financial skill, financial behavior on perceived knowledge.

4. Hypothesis 4: H_0: There no significant influence of financial literacy on perceived knowledge and financial wellbeing. H_4: There is a significant influence of financial literacy on perceived knowledge and financial wellbeing.

10. METHODOLOGY

10.1 Research Design

This study focuses on the investors who are seeking higher returns and are ready to assume higher risk and wealth management advisors/ Investment bankers who are creating value for customers in day-to-day transactions.

The study followed exploratory research approach. The study aims to answer how Financial Literacy influences the investors and to invest in collectibles as an alternative investment option leading to financial wellbeing? Survey research strategy or method is employed, in which data is collected in the form of structured questionnaire using primary data.

10.2 Data Collection Techniques

10.2.1 – Primary Data

It is an exploratory research. To this research, and to achieve the objectives primary data will be collected by a structured questionnaire survey to measure and examine the relationship among variables. The study involves observing, measuring, and describing the phenomena of influence of financial literacy on collectible investments as an alternative investment option. Survey questionnaire will be used for quantitative analysis.

Researcher will keep the time gap while analyzing the data so that quality response can be collected. The respondents will be of the age group 18 to 85 years of age from the cosmopolitan city of Bangalore.

Judgmental/Purposive sampling technique will be used to identify, select, and survey the respondents.

10.2.2- Secondary Data

Secondary data will be gathered from various Journals (online and offline), Indices on collectibles, books, and newspaper. The secondary data helps to understand the specific domain area much better.

10.3. Tools for data analysis

The proposed study will use statistical techniques which include univariate, bivariate and multivariate data analysis.

Exploratory factor analysis (EFA) will be used to explore the underlying relationship between stated variables of study. Confirmatory factor Analysis (CFA) will be used to test the stated hypothesis along with T Test and ANOVA. To assess the consistency of the construct, Cronbach alpha test is will be conducted for every construct and variable. KMO-Bartlett test will be used to verify the sampling adequacy. Software such as MS Excel will be used for basic analysis and data preparation and IBM SPSS will be is used for model testing such as EFA, CFA.

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