

Does Prospect Theory explain Bowman's Paradox in Asian Emerging Markets?

Abstract

Purpose:

This study aims to extend Bowman's risk-return paradox to Asian emerging markets and explain its causes under Prospect theory.

Design/methodology/approach

The study is conducted on a cross sectional sample of 4609 firms across nine Asian emerging countries. The 2SLS estimation technique is used to evaluate the three objectives of the study i.e. Bowman's risk-return paradox, significance of firm-specific risk and Prospect theory explanation of Bowman's paradox.

Findings

We challenge the two basic financial-economics arguments that higher risk is rewarded with higher return and firm-specific risk is diversifiable. Our empirical findings confirm negative impact of firm-specific and systematic risk on firm return. Thus, corroborates the Bowman's explanation of risk-return tradeoff. However, we didn't find empirical evidence to support prospect theory's explanations of Bowman's paradox in Asian emerging markets.

Originality

A holistic approach is adopted to analyze the various aspects of Bowman's paradox and its causes for the same time period, variables and sample. We also rectified several methodological limitations observed in previous studies i.e. the use of same proxies for firm return and risk, endogeneity and survivorship issues. Furthermore, the findings of this study will enable managers to formulate critical viewpoint on firm-specific risk and systematic risk and take informed strategic decisions regarding optimum utilization of their firm's key resources in Asian emerging markets.

Keywords: Risk and Return, Residual Risk, Market Risk, Stakeholders, Prospect Theory, CAPM

1 Introduction

The risk-return relationship initially came under the microscope in the context of expected utility theory, where investor's decisions are examined (Von Neumann & Morgenstern, 1944). The expected utility theory classify investors and managers as risk-averse, thus suggests a positive risk-return association (Gupta & Pathak, 2018). Hence, both of the firm's key stakeholders (principal and agents) prefer only those choices in firm's strategic endeavors that optimize their worth (Díez, García-Gómez, López-Iturriaga, & Santamaría-Mariscal, 2017). For decades this mantra of risk-averse conduct is consistently hold and extended by the researcher from the field of financial-economics especially in capital markets (Chari, David, Duru, & Zhao, 2019). They argue that, lower return can only be accepted with

nominal risk, if risk is high, it must be compensated with higher return (Brick, Palmon, & Venezia, 2012, 2015; Cootner & Holland, 1970; Fisher & Hall, 1969; Hurdle, 1974; Lintner, 1965b; Markowitz, 1952; Sharpe, 1964; Winn, 1977). However, this conventional logic of positive impact of risk on return (risk-averse) is challenged by Bowman (1980) and termed it as a “paradox” at [firm level](#). This basic contradiction between financial-economics and strategy school of thought is the first objective of this study to investigate the direction of risk-return association.

Apart from direction of risk-return association, the significance of different parts of risk (i.e firm-specific risk and systematic risk) is also a debate among financial-economics and strategy researchers (Patel, Li, & Park, 2018). According to financial-economists the firm-specific risk is diversifiable (Lintner, 1965a; Sharpe, 1964; Treynor, 1961). Hence, it shall not be a concern of firm’s management (Brown & Warner, 1985; Hull & Basu, 2016; Salter & Weinhold, 1979). They further argue that, the management of systematic risk must be the only priority, since it can’t be diversified. On the other hand, strategy researchers consider positive risk-return association and diversification of firm-specific risk as a denial of the essence of corporate strategy (Amit & Wernerfelt, 1990; Bettis, 1983; S. Chatterjee, Wiseman, Fiegenbaum, & Devers, 2003; Miller & Chen, 2003). They argue that, the management of firm-specific risk is one of the most important aspects of organizational strategy. Therefore, we investigated this empirical void as a second objective of the study.

Inspired by the Bowman’s seminal work (Bowman, 1980, 1982) the strategy researchers put forward [several](#) explanation to justify this paradox (Bettis, 1983; Fiegenbaum & Thomas, 1986). Among these one the most significant is prospect theory (Kahneman & Tversky, 1979) proposition, which combines the point of view of both financial-economics and strategy school of thought (Nickel & Rodriguez, 2002). According to Prospect Theory (PT), continuous adherence to risk-revere or risk-seeking behavior by the firm is unrealistic and unsustainable. In fact businesses have dissimilar behavioral response to different circumstances, environment and markets challenges. Often the response to these market dynamics is influenced by firm performance (Fiegenbaum, 1990; Fiegenbaum & Thomas, 1988). If firm performance is above preconceived target (e.g average industry performance) firm will exhibit risk-averse behavior, but resort to risk-seeking behavior if performance is below target. These theoretical arguments based on firm behavior are considered as the most intriguing empirical contribution to the extension and explanation of risk-return paradox. Hence, we investigated the causes of bowman’s paradox under the explanation of PT as third objective of the study.

Although, above stated theoretical views are predominantly developed and tested on firms operating in developed market and still an unsettled debate. However, Asian emerging markets (AEM) provide a completely novel platform to test these inconclusive empirical views. First, the structural background, cultural orientations, target markets and objectives of AEM firms differs significantly from that of developed economies firms. Second, in AEM the technological base is weak, institutions are evolving and government agencies play a dominant role in economic activities (Wright, Filatotchev, Hoskisson, & Peng, 2005). Third, the operations and management philosophies of AEM firms also vary substantially from their contemporaries in developed economies (Khanna, Palepu, & Sinha, 2005; Wright et al., 2005). Fourth, the AEM firms are comparatively small, weaker to their western counterparts, but are more vibrant and growth oriented businesses (Oehmichen, 2018). Fifth, these firms have limited

access to capital markets and mostly dependent on government and private equity providers for their future investments (Saez, 2014). Finally, the professional and managerial skills are comparatively constrained, mainly due to the appointment of family members, politicians, government and military officials on key management positions (Kondo, 2014; Shen & Lin, 2009). Therefore, the scarcity of empirical research and unique market dynamics in AEM will bring a new insight to our pre-established theory.

As a whole the aim of this study is to investigate Bowman's risk-return paradox and its causes in the AEM. Thus, it contributes in multiple ways to the existing knowledge on risk-return research in general and particularly in AEM. First, we provide a holistic analysis of Bowman's paradox by investigating different aspect of this puzzle at one place, with same parameters, time frame and sample. Although these aspects of Bowman's paradox is partially investigated in developed countries, but the nature of AEM firms, business dynamics and institutional framework is completely different and have a significant implications for firm risk-return association (Li, Griffin, Yue, & Zhao, 2013). Second, we departed from a statistical and methodological void that exist in previous studies for using firm return ratios as proxy of firm return as well as risk (Becerra & Markarian, 2013; Henkel, 2009; Ruefli, 1990). Third, using cross sectional data estimation technique we controlled the time effects of year-on-year variations in key variables (Torben Juul Andersen, 2008; Torben J Andersen, 2009; Becerra & Markarian, 2013; Deephouse & Wiseman, 2000; Gupta & Guha, 2019; Gupta & Pathak, 2018; Holder, Petkevich, & Moore, 2016; Miller & Leiblein, 1996). Fourth, we controlled the endogeneity concerns (Torben J Andersen, 2009; Henkel, 2009; Oviatt & Bauerschmidt, 1991) by introducing 2SLS as estimation technique. Fifth, we also addressed the survivorship issues (Chou, Chou, & Ko, 2009) by including only those firms which survived during the sample time period. Sixth, by splitting firm risk into firm-specific risk and systematic risk we unfolded a very significant theoretical disagreement between financial-economists and strategy researchers (Bettis, 1983; Bromiley, 2009; Patel et al., 2018). Finally, the findings of this research will advise managers to make well thought decisions about firm risks based on firm existing resources and market dynamics in AEM.

The remaining paper is presented as follow. In next section, we provide the theoretical grounds to develop hypotheses for risk-return association and its causes. In section three, we elaborated the methodology of the study. The analysis of empirical results and discussion are covered in section four. Finally the conclusion of the study is given in last section.

2 Theory and hypotheses building

For decades and especially after the seminal work of Markowitz (1952) on portfolio selection, it is indisputably believed that investors are rational, they are risk averse, and risk and return are positively associated. Thus, it became a preconceived notion that, risks have some sort of incentive, which is supplemented by high return. This notion is further upheld by the empirical finding of Modigliani and Miller (1958) irrelevance and relevance of capital structure, Sharpe (1964) Capital Asset Pricing Model and Ross (1977) Arbitrage pricing theory, which laid down the foundation for positive risk-return association preposition. The advocates of financial school of thought hold that, there is a risk differential in every investment decision that shapes the expected return. For example, if there are two investments opportunities (i) high rated fixed income security and (ii) high rated company stock. In most of the cases the return on

stocks will be higher than fixed income security, mainly due to its inherent higher risk. Hence, the risk-averse investors will only invest in a company stock, if the high risk of a stock is compensated with additional return (Berk & Demarzo, 2013). To explore this basic proposition and associated complications, volume of empirical research is conducted in capital market dynamics (Hodoshima, Garza-Gómez, & Kunimura, 2000; Hung, Shackleton, & Xu, 2004; Jagannathan & Wang, 1996) and reported positive association between risk and return (Brick et al., 2012, 2015; Cootner & Holland, 1970; Fisher & Hall, 1969; Hurdle, 1974; Lintner, 1965b; Markowitz, 1952; Sharpe, 1964; Winn, 1977). However, this impeccable notion of positive risk-return association was first challenged by a strategy researcher Bowman (1980) and presented an alternative explanation. He termed risk-return association as paradoxical at firm level and by outlining negative implications of firm risk. Since then it remained a constant quest among the strategy researchers to delineate the theoretical rationale of risk and return association and its associated implications (Nickel & Rodriguez, 2002). One very fine explanation of risk-return paradox is provided by Bromiley, Miller, and Rau (2001) that, the properties of firms are very different from assets traded in capital market. They argue that firm's strategies and capabilities are neither traded nor accessible. Even if these strategies are revealed to the market, it carries no significance to other firms. Therefore, strategy researchers whose prime emphasis remain on firm's risk management and operational performance, consistently reported negative risk-return association (Fiegenbaum & Thomas, 1986, 1988, 2004; Miller & Bromiley, 1990; Miller & Chen, 2003).

Another important dimension of risk-return association is the proxies used for calculation of risk. The nature of firm risk is very complex and dynamic phenomena (Santacruz, 2020). That's why it is very difficult to operationalize it for academic research. To explore risk-return association in various contexts, the empirical studies often relied on total risk (Bromiley, 1991). Furthermore, the variance and standard of firm returns (i.e ROE and ROA) is taken as a measure of firm risk (Ruefli, 1990; Ruefli, Collins, & Lacugna, 1999). However, the validity of variance and standard based risk measures and its subsequent association with firm performance is disputed by various researchers (Becerra & Markarian, 2013; Henkel, 2009). Additionally, the dependence on total risk as a proxy of firm risk has also overlooked the impact of different parts of risk (i.e systematic risk and firm-specific risk) on return. Especially, in case of diverse stakeholders of the firm (Aaker & Jacobson, 1990; Amit & Wernerfelt, 1990). Strategy researchers have always signified the importance of diverse stakeholders for the success of the firm. They argue that, the stakeholders such as managers, employees, suppliers, distributors and communities etc are affected in their own way as result of variation in firm-specific risk and systematic risk (Benn, Dunphy, & Martin, 2009; Bromiley, 2009; Freeman, 2010; Mitchell, Agle, & Wood, 1997). Moreover, the interest and future prospects of these stakeholders are largely dependent on the success of the firm. Hence, the financial-economists in general and particularly CAPM's proposition of firm-specific risk diversification is not possible at firm level (Bromiley, 2009). Further, it is also widely documented that the mantra of firm-specific risk diversification is founded on some very idealistic suppositions. Especially, in the context of semi-strong to weak form of capital market in emerging countries (Basu & Chawla, 2010). Among these, the well diversification of investor's portfolio is one the most critical assumption (S. Chatterjee, Lubatkin, Lyon, & Schulze, 1999; Laghi & Di Marcantonio, 2016). It is also argued that, most of the emerging market investor's portfolios are poorly diversified (Basu & Chawla, 2010; S. Chatterjee et al., 1999; Goetzmann & Kumar, 2008; Laghi & Di Marcantonio, 2016). Other key assumptions are trading of stocks at market prices, no taxes, no transaction

and bankruptcy cost, lending and borrowing at risk free rate, maintenance of efficient portfolio, symmetry of information and risk anticipation by investors (Berk & Demarzo, 2013; C. F. Lee & Finnerty, 1990). Therefore, non consideration of firm-specific risk result in miss allocation of scarce organizational resources, increases firm costs and reduces the return the firm (Amit & Wernerfelt, 1990).

Apart from diversification and non diversification debate, firm-specific risk remains a major concern of firm's management. According to VanHorne (2002) the firm-specific risk arises due to various factors such as, technological advancements, workers disruptions, fraudulent activities, wrong strategies, operating and procedure failings and market level changes such as entry of a new competitor. In fact firm-specific risk is not only restricted to these factors, but other aspects of the firm operations also have a significant effect on firm-specific risk. Such as budgetary mismanagement, bankruptcy challenges, raising raw material cost, working capital issues, liquidity challenges, decrease in sales, product diversification, and lack of innovation (Hull, 2012). Interestingly, most of these aspects remained the basic sources of value creation and critical attributes in strategic management (Freeman, 2010). Therefore, by putting all these arguments in context, it shows that the disentangling the risk into firm-specific and systematic risk lies in the heart of firm's strategic policy, and its effective management is considered as a major factors of competitive advantage and company's success (Mintzberg, 1978; Porter, 1980). Different organizational theorists' (Freeman, 2010; Mintzberg, 1978) have also indirectly highlighted the consequence of firm-specific risk. They contend that all stakeholders, including owners, buyers, staff, managers, executives, vendors, retailers and creditors etc. have vital role in organizational success. Therefore isolating and prioritizing the owner's interest would impede the overall corporate synergy. Although it is a fact that, the assertions of these key scholars about the value of diverse stakeholders didn't specifically pertain to firm-specific risk. However, referring to various stakeholder priorities and their potential to influence a firm's performance is probably what firm-specific risk is in reality (Lubatkin & Chatterjee, 1994). Therefore we hypothesize that;

H1: Firm-specific risk has a negative effect on firm return

The second and most commonly referred part of total risk is the systematic risk, which is also coined as non-diversifiable risk in financial-economics literature. The basic reason for its non-diversifications is the illusive nature of contributing factors, which are constantly unfolding across the sectors, markets and even across the whole economic system. [These key macroeconomic and geopolitical factors are the changes in interest rate and exchange rates, sovereign risk, liquidity risk, political risk, global or regional recessions, government laws, war and natural calamities etc which are constantly unfolding and have a significant impact across all businesses.](#) Hence, firm's management is no position to control these random geopolitical events and macro-economic challenges. What is more intriguing that, variations in these factors are very common across AEM. Hence, firms operating in these markets are constantly exposed to these systematic risks. Among these the most significant is the country-specific structural challenges which are directly linked to poor institutional setup. In AEM government institutions and regulatory bodies are constantly evolving due to rapid legislative and procedural changes (Hoskisson, Wright, Filatotchev, & Peng, 2013). These institutional developments have also a domino effect on other key aspects of the firm as well as markets. Therefore, the volatile government policies pose consistent systematic challenges to the firms operating in AEM. At

the same time market efficiencies and control are also a major concern across various businesses and can trigger multiple challenges that directly affect systematic risk (Khanna et al., 2005). Such as, stock market volatilities, exchange rate fluctuations and supply chain disruptions. It is also important to clarify that, weak institutional setup doesn't mean nonexistence of rules and regulations, but rather the implementation of law is bigger challenge in AEM (Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Although, AEM have improved in number domains e.g. [accounting standards are significantly improved in China](#) (Witt & Redding, 2013), Philippine have instituted a more progressive corporate governance rules (Kondo, 2014) and similarly the better market governance mechanisms are introduced in Thailand (Suehiro & Yabushita, 2014). However, there is still a general suspicion, that various rules and regulations will not be implemented across the board (Rajagopalan & Zhang, 2008). Further, the judicial and governance system at large is corrupt and slow to reciprocate to business needs (Kondo, 2014). This is a major reason of systematic delay, inefficiencies and opportunities loss. Beside this the derivative market are still not well structured, efficient and easily accessible, so the traditional hedging tools available to mitigate various systematic risks can't be utilized as frequently as firm do in developed economies (Upper & Valli, 2016; Vo, Van, Nguyen, Vo, & Nguyen, 2020). Putting all those factors in context, we believe that, the contributing factors to firm systematic risk in AEM are more diverse, dynamic, hostile and unmanageable. Thus, we hypothesize that;

H2: Systematic risk has a negative effect on firm return

2.1 Bowman's risk-return paradox under prospect theory

It is of paramount importance for future research and practitioners to understand the logic behind Bowman's risk-return paradox at firm level. Even, if it is assumed for a purpose of discussion that risk has positive association with return. Then every manager of the firm will be tempted to take high risk in order to increase the return of the firm. But, this is not how firms are managed in reality. In fact the basic objective of the firm's management is to avoid, control and manage all types of risks in every aspect of firm's operation (A. Chatterjee & Hambrick, 2011). That is why all those management practices, strategic planning and execution controls exist to support this very basic objective (Teece, Peteraf, & Leih, 2016). [To that extent, Prospect theory \(Kahneman & Tversky, 1979\) provide a very logical explanation to Bowman's paradox, by bridging the rational of both financial-economics view \(i.e positive risk-return association\) and strategy view \(i.e. negative risk-return association\) on the basis of firm risk behavior in a particular situation.](#)

The empirical studies based on PT argue that, firm risk taking is based on their expectations or the level of achievement of predefined performance benchmark (Becerra & Markarian, 2013; Cheng, 2010; Chou et al., 2009; Fiegenbaum & Thomas, 1988; Gooding, Goel, & Wiseman, 1996; Gupta & Guha, 2019; Gupta & Pathak, 2018; Holder et al., 2016; Jegers, 1991; Kliger & Tsur, 2011; D. Y. Lee, 1997; Marzo, 2010). If a firm is well performing and consistently meeting its performance target, it won't be tempted to take higher risk in order to increase its returns. However, if firm is performing below its expectation, it will take higher risk to increase its return. Therefore, we can divide firms in two groups, based on their success to achieve their performance targets. According to PT, firms which consistently achieve their performance targets are categorized as well-performing firms and such firms exhibit positive risk-return association. The basic reason of positive risk-return (risk-averse conduct) of well-

performing firm is their success to achieve those targets. Such firms are not desperate to take extra risk, unless they are assured of high return. Therefore, their every action is properly planned and managed. Contrary to that, the firms performing below their expectations are termed as under-performing firms. According to PT, such firms show negative risk-return association. These under-performing firms are desperate to meet its expectation. Further, the management of such firms is also under pressure to attain its existing performance targets and to compensate for missed targets over certain time period. Therefore, desperate situation demand desperate measures, such as risky project and aggressive managerial actions to fix performance targets. These circumstances also lead to unplanned and optimistic decisions. Ignoring the fact that, such actions exposes firms to high risk or even uncertainty, thus eventually result into even lower return. Therefore, these under-performing firms show negative risk-return (risk-seeking) association. **Both of these PT propositions have significant empirical and managerial implications in AEM for reasons discussed above.** Hence, in order to empirically check the potential cause for Bowman's paradox, we expand our previously developed risk-return hypotheses to the domain of PT and hypothesized that.

***H3:** Firm-specific risk negatively affects the return of under-performing firms*

***H4:** Systematic risk negatively affects the return of under-performing firms*

***H5:** Firm-specific risk positively affects the return of well-performing firms*

***H6:** Systematic risk positively affects the return of well-performing firms*

3 Methodology

3.1 Sample

We used Morgan Stanley Capital International (MSCI) for selection of nine Asian emerging countries. The MSCI is a widely used standard for defining and qualifying emerging countries throughout the world (Jin & Kim, 2019; Kenourgios & Padhi, 2012; Lingaraja, Mohan, Selvam, Raja, & Kathiravan, 2020; Öztürk, 2018). These countries are South Korea, Philippines, Malaysia, China, Indonesia, Pakistan, India, Taiwan and Thailand, which have 17,589 listed firms on various stock markets. Table I shows the distribution of firm across each sample country.

Insert Table I Country Wise Number of Firms

We applied multiple filters to obtain the most reliable sample for final analysis. Among these, 1,223 financial institutions are removed because of its unique risk exposures, business operations, financial reporting and regulatory requirements as compared to non-financial firms (Alessandri & Khan, 2006; Torben Juul Andersen, 2008). Similarly, 5987 cross listed firms on multiple stock markets are also removed. Third, we sampled only those firms which have consistent accounting and market data available for all variables. Fourth, we also address the survivorship issues by including only those firms which survived during the sample time period (Chou et al., 2009). Fifth, in order to decrease the interval impact of occasionally traded equities, we used primarily frequently traded equities for calculation of risk variables (Hawawini, 1983; Lubatkin & Chatterjee, 1994; Shahzad, Zakaria, & Raza, 2014). Finally, a sample of 4609 firms from nine countries and eleven sectors is chosen. The data is collected from DataStream for a period of 5 years from 2013 to 2017.

3.2 Variables

3.2.1 Firm return

To establish the convergent validity of our tests we employed two most commonly used two proxies, i.e. return on assets and return on equity (Torben Juul Andersen, 2008; Gupta & Pathak, 2018; Holder et al., 2016; Jegers, 1991). The return on assets (ROA) is measured as net income divided by total assets, whereas, return on equity (ROE) of the firm is calculated by net income divided by total equity (Torben Juul Andersen, 2008; Becerra & Markarian, 2013; Deephouse & Wiseman, 2000; Gupta & Guha, 2019; Gupta & Pathak, 2018; Holder et al., 2016; Miller & Leiblein, 1996).

3.2.2 Firm risk

The proxies for firm risk always remind a point of academic divergence in risk-return research (Bettis & Hall, 1982). Despite of heavy reliance on accounting based risk measures, the use of firm return ratios as measures of firm performance and its variance and standard deviation as measure of firm risk is consistently highlighted as statistical bias (Becerra & Markarian, 2013; Henkel, 2009; Ruefli, 1990). Recently some accounting based alternative measures are suggested by Santacruz (2020), however, results were insignificant across different measures. Therefore, we relied on market based risk proxies (Amit & Wernerfelt, 1990; Bromiley, Rau, & Zhang, 2017; Dalbor, Hua, & Andrew, 2014; Miller & Reuer, 1996; Narang & Kaur, 2014; Quijano, 2013). These market based risk measure, removed the inherent statistical bias that exist while using means and variance as proxies of firm return and risk (Coskun & Kulali, 2016). Moreover, the division of firm risk into firm-specific risk (FSRisk) and systematic risk (SRisk) provide an opportunity to explore the significance of each part of the risk to various stakeholders, a very important but controversial area between financial-economists and strategy researchers (Bettis, 1983; Bromiley, 2009; Patel et al., 2018). The stock's beta (β_{it}) obtained from CAPM equation ($R_{it} - R_{ft} = \alpha_{it} + \beta_{it} (R_{mt} - R_{ft}) + \varepsilon_{it}$) is used for systematic risk (Bromiley et al., 2017; Lubatkin & Chatterjee, 1994; Miller & Bromiley, 1990; Miller & Reuer, 1996; Narang & Kaur, 2014). Whereas, standard deviation of the error term σ (ε_{it}) of CAPM equation is used as proxy of firm-specific risk (Aaker & Jacobson, 1990; Amit & Wernerfelt, 1990; Bromiley et al., 2017; Dalbor et al., 2014; Lubatkin & Chatterjee, 1994; Miller & Bromiley, 1990; Quijano, 2013).

3.2.3 Control Variables

This study is based on a large sample of firms operating across nine AEM. Hence it also necessitates the need to control some of the indigenous firm's aspect. Among this firm size and financial leverage are the most significant factors that affects businesses across various countries (Arrfelt, Mannor, Nahrgang, & Christensen, 2018; Gupta & Pathak, 2018). For firm size (FSize) we use the natural logarithm of firm sales (Aldrich, 1999; Brick et al., 2015; Narang & Kaur, 2014; Pagach & Warr, 2011; Sharfman, Wolf, Chase, & Tansik, 1988) and financial leverage (FLev) is measured as long term debt divided total equity as a second control variable (Becerra & Markarian, 2013; Miller & Bromiley, 1990; Narang & Kaur, 2014; Saunders, Strock, & Travlos, 1990).

For PT analysis we divided the sampled 4609 firms into under-performing firms and well-performing firms on the basis of sector performance in respective country. Firm performing below sector average (mean ROA) are assigned to the group of under-performing firms and above sector average are added to well-performing firms. Finally, following the practice adopted in previous studies (Torben Juul Andersen, 2008; Torben J Andersen, 2009; Becerra & Markarian, 2013; Deephouse & Wiseman, 2000; Gupta & Guha, 2019; Gupta & Pathak, 2018; Holder et al., 2016; Miller & Leiblein, 1996) the proxies of firm return, financial leverage and firm size are averaged over period of five years, to control the effects of year-on-year variations in these key measures.

3.3 *Estimation method*

We employed descriptive, correlation, and regression tools to explain and verify the hypothesized associations. We began our regression analysis with OLS estimation, but endogeneity issues unfolded in our models. As a result, 2SLS estimation is used to correct the variables endogeneity (Torben Juul Andersen, 2008; Hair, Black, Babin, & Anderson, 2014; Wooldridge, 2010, 2016). To verify the stability of 2SLS technique we used three tests. The Cragg-Donald Wald F statistic test is used to check the strength of instruments, Hansen J statistic for over identification and Kleibergen-Paap LM test is used for under identification test. Furthermore, the Variance Inflation Factor (VIF) values for all variables are less than 2, hence there is no multicollinearity issue (Wooldridge, 2016). Finally, the heteroskedasticity robust standard errors are used to address the issue of heteroskedasticity (Gujarati, 2009; Wooldridge, 2016).

4 Results

4.1 *Descriptive and correlation statistics*

Table II shows the results of descriptive statistics of sample firms. The average ROA of the firms across 9 countries is 5.33 and average ROE of the firms are 7.68. The variability of return is shown by the standard deviation of 5.14 for ROA and 7.50 for ROE. The average systematic risk of the sampled firms is 0.96 with variability of 0.25 standard deviation. Similarly the mean value of firm-specific risk is 0.06 and standard deviation of 0.02. The firm SRMC has mean value of 0.45 and standard deviation of 0.73.

Insert Table II Descriptive Statistics

The correlation statistics are given in Table III. The negative correlation coefficient of systematic risk with firm ROA and ROE shows that raise in systematic risk lowers the return of the firms. However the coefficient is very small and also insignificant. The correlation coefficient of firm-specific risk (FSRisk) is comparatively large, negative and significantly affecting the firm ROA and ROE.

Insert Table III Correlation Statistics

4.2 *Regression results*

4.2.1 *Firm risk-return relationship*

The impact of firm-specific risk and systematic risk on firm return is shown in Table IV. In Model 1, the regression coefficients of SRisk and FSRisk are highly significant and negative. Similarly results of Model II reports negative and significant effect of firm-specific and systematic risk on ROE. This indicates that the firm's return is adversely influenced by the rise of firm-specific risk and systematic risk. Therefore, both H1 and H2 are accepted. Furthermore, the two distinct return measures employed for firm performance in Models 1 and 2 also verify the convergent validity of the test used in the studies (Torben Juul Andersen, 2008; Gupta & Pathak, 2018; Jegers, 1991).

Insert Table IV Impact of Firm Risk on Return

In above analyses the negative impact of firm risk on return establishes the Bowman's risk-return paradox in AEM. Therefore, it is of great significance to examine the cause of this negative relationship. The result in Table V shows the risk-return association for both well-performing and under-performing firm. The results of model 3 and Model 4 show the effect of firm risk on return for under-performing firms. Both Model 3 and Model 4 show positive and significant impact of FSRisk on ROA and ROE of the under-performing firms. Thus we reject H3. Contrary to that, the impact of SRisk is significant and negative on both proxies of return for under-performing firms. Therefore, we accept H4.

The empirical results of the relationship between firm risk and return of well-performing firms are also documented in Table V. The results of Model 5 and Model 6 confirm significant and negative association for both systematic and firm-specific risk on return of the firm. These results demonstrate that in emerging markets, well-performing firms also show risk-seeking behavior instead of anticipated risk-averse behavior documented in developed markets. Thus the PT notion of positive risk-return (risk-averse) behavior for well-performing is completely rejected in AEM. Hence, we reject our proposed hypotheses H5 and H6.

Insert Table V Risk-Return Association under PT

4.3 Discussion

The first objective of this study is to settle the direction of risk-return association in AEM. After addressing the methodological issues cited above, the empirical results of this study clearly dismissed the financial-economics argument that firm risk and return are positively associated and established negative risk-return association. Our empirical finding also confirm our second objective of the study, that at organizational level the firm-specific risk is equally vital as systematic risk and increase in both types of risk will diminish the firm's returns (Amit & Wernerfelt, 1990; Torben J Andersen, Denrell, & Bettis, 2007; Bettis, 1983; Bowman, 1980, 1982; Bromiley, 1991; Fiegenbaum & Thomas, 1986; Henkel, 2009; Holder et al., 2016; Patel et al., 2018; Wiseman & Bromiley, 1996). Thus, the widely held view based on diversification of firm-specific risk is also rejected. As a whole, our results support the strategy opinion that firm risk and return is negatively associated and there must be a well-structured strategy to control and manage firm risk. These results support the recent empirical evidences recorded in emerging market by Becerra and Markarian (2013); Kliger and Tsur (2011); Kliger and Tsur (2011); Gupta and Pathak (2018) and Gupta and Guha (2019).

The results also substantiate that, the business prospects as well as the perceptions of firm's key stakeholder (such as customer, employees, vendors, distributors and suppliers etc) about firm stability are negatively affected by both firm-specific and systematic risk (Khanna et al., 2005; Miller & Chen, 2003). Subsequently, these uncertainties in the minds of stakeholders create demand and supply volatilities for the firms and also increases insolvency costs (Aybar & Thirunavukkarasu, 2005). The firm risks are also taken into account as negative phenomena by financial lenders and equity financiers while committing their funds (Miller, 1998). If firm risks are escalating, in such circumstances the stakeholders will ask for more tough and costly contractual agreements with firm. This might also lead to withdrawal of essential credit lines and support incentives extended at times of lower firm risks. In short, the increase in firm risks will negatively affect the firm's stakeholder perception and stability prospects, which results into increase in the cost of business and operations (Campbell & Taksler, 2003; Fu, 2009; Quijano, 2013).

After establishing Bowman's paradox in AEM, the causes of this paradox is investigated under the explanation of PT. The risk-return relationship of under-performing firms partially supported the interpretation of the PT hypothesis of risk-seeking behavior (Lehner, 2000). Such as, in case of firm-specific risk it shows risk-averse behavior. However, the risk-seeking behavior of under-performing firm is only established in case of systematic risk (Fiegenbaum & Thomas, 1988; Gooding et al., 1996; Gupta & Pathak, 2018; Holder et al., 2016; Jegers, 1991). It shows that, below aspiration performances have compelled or motivated those under-performing firms to take extra strives to indulge in market innovation and experimentation which is often considered as high cost and risky activities (March & Shapira, 1987, 1992). These compelling endeavors have consequently resulted into even higher exposure to systematic risk with subsequent lower return. (Kliger & Tsur, 2011). However, in case of well-performing firms of AEM, the results are completely opposite to our hypothesized risk-averse behavior based on developed countries. Both types of firm risks confirmed risk-seeking behavior for well-performing firm. Thus, it illustrates negative risk-return association in case of well-performing firms which support the empirical results of Jegers (1991); Gooding et al. (1996); D. Y. Lee (1997); Chou et al. (2009); Marzo (2010); Kliger and Tsur (2011); Becerra and Markarian (2013); Holder et al. (2016); Gupta and Pathak (2018) and Gupta and Guha (2019). These results demonstrate the aggressive nature of well-performing firms operating in AEM. Even though, these strategies are not producing their desired results but these well-performing firm do not shy away from indulging in high risk activities in contrary their counterparts in developed economies. Hence, our risk-averse hypothesis developed on the basis of the PT theory is also not confirmed for well-performing firms. However, it also suggests that due to comparatively better performance, these firms risk-averse agent do get indulge in more aggressive organizational endeavors (Bourgeois & Singh, 1983; Singh, 1986). As a whole the negative risk-return relationship in AEM arguably is not due to low-performing firm's readiness to take higher risk in quest for higher return and well-performing firm's avoidance of risk until higher returns are realistic. But it seems more likely due to the underlying resilience of these firms, which is presumably based on their risk management capabilities obtained over the years that motivate these firms to take higher risks.

5 Conclusion

This study investigated Bowman's risk-return paradox and its causes in AEM. We expanded the conventional and narrow shareholders centric risk proxy (variance and standard deviation of return) to a more border market and stakeholder based measure of firm-specific risk and systematic risks. We proposed that, isolating and signifying only the interest of shareholder will hinder the firm performance. Therefore, a more comprehensive approach must be taken, as both systematic and firm-specific risks equally affect the firm return. To analyze this basic contention we used 2SLS estimation technique to establish the impact of firm risk on return. The empirical results verified that both systematic and firm-specific risks negatively affect the firm return, thus upheld the Bowman's paradox and reject the modern financial-economics argument of positive risk-return association.

We further scrutinize the causes of Bowman's paradox by utilizing PT relational provided in developed countries. However, the AEM firms don't follow the PT explanation of firm risk-return association i.e. risk-seeking for under-performing firms and risk-averse for well-performing firms. As whole, we found risk-seeking behavior for both types of firm. At this stage we assume that, this negative risk-return relationship is not due to under-performing firm's readiness to take higher risk or their inferior risk management capabilities to adjust to changing market dynamics. But it is more probable that it exist due to the resilience of these firms, which is based on their risk management capabilities developed over the year and underlying dynamics of AEM. Therefore, for future research it will be more interesting to develop a clear understanding of the degree to which variations of risk-return association exists in each country and industry. Further, it will be also exciting to explore differences in culture, accounting practices, industry dynamics and corporate governance of these countries.

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