4-2018

# ON IDENTIFYING SUCCESSFUL FINANCIAL STRATEGIES FOR THE LISTED COMPANIES IN THE UNITED ARAB EMIRATES: AN EMPIRICAL APPROACH

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This dissertation is submitted in partial fulfilment of the requirements for the degree of Doctorate of Business Administration

Under the Supervision of Professor Abdulnasser Hatemi Jarabad

April 2018

## Declaration of Original Work

I, Abdulla Mohammed Abdulghafoor Ahmed Alawadhi, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this dissertation, entitled "*On Identifying Successful Financial Strategies for the Listed Companies in the United Arab Emirates: An Empirical Approach*", hereby, solemnly declare that this dissertation is my own original research work that has been done and prepared by me under the supervision of Professor Abdulnasser Hatemi Jarabad, in the College of Business and Economics at the UAEU. This work has not previously been presented or published, or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my dissertation have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this dissertation.

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## Abstract

Financial profile mirrors the performance of a company regarding its competitive market abilities, sustainability and capacity. Thus, it is a crucial matter for a firm to seek appropriate financial strategies to furnish a positive influence on boosting the target outcomes of its entire business performance. This study investigates how the adopted financial strategies are associated with short/mid/long-term performance of the UAE Public Joint Stock Companies (PJSCs) that work in ten different business and industrial sectors, The quarterly based ten-year (2006-2015) Panel Data Set of the 92 PJSCs has been used in measuring the performance of each PJSC. Consequently, the researcher extracted eleven variables from the refereed finance literature to be viewed in this study as financial strategy-related factors; four out of them could be tested for the first time. These variables went into two themes, these are: i) six variables as a proxy for capital structure, and ii) five variables as a proxy for cash flow management. These variables were subject to further investigation for determining which of them have a direct influence on the financial and market performance of the PJSCs. We combined four measures of financial performance with two measures of market performance as influential variables to measure the success of the PJSCs regarding their financial performance. The model of panel data analysis was performed to make sure that the desirable statistical assumptions are fulfilled correctly, whereas the estimations were determined by using the *Generalized Method of Moments* (GMM) as an estimation technique by the econometric software package *EViews*. Both, the analysis of the dataset, and validity of the influential variables have defined a mix of appropriate dynamic financial strategies for the PJSCs to be stable in averting unfavourable different economic conditions. This dissertation argues that establishing a mutual relationship between the financial strategy of a PJSC and its market performance would be leading it to be successful. Thus, the findings confirmed the primary assumption of this dissertation that states "*Different financial strategies under different economic conditions would be leading to different results* (*performance*)". From a professional viewpoint, this dissertation represents a reliable reference source for the financial management practitioners.

**Keywords**: Stock market, Public joint stock firms, Market performance, Firm performance, Financial strategy, Global financial crisis, the UAE.

## Title and Abstract (in Arabic)

### نحو تحديد الاستراتيجيات المالية الناجحة للشركات المساهمة العامة في الإمارات العربية المتحدة: نهج تجريبي

***الملخص***

البيانات المالية تعكس أداء الشركة من حيث قدراتها التنافسية في السوق واستدامتها للأعمال. لذلك، فإن من الأمور الحاسمة للشركات هي أن تحدد الشركة الاستراتيجيات المالية المناسبة التي يكون لها مردود إيجابي على نتائج وأداء أعمالها بأكمله. تقوم هذه الدراسة بقياس تأثير الاستراتيجيات المالية المعتمدة في أداء الشركة على المدى القصير، والمتوسط، والطويل. أستخدمت 92 شركة مساهمة عامة تعمل في عشر قطاعات أعمال وصناعية مختلفة ا العامة في دولة الإمارات العربية المتحدة لقياس تأثير الاستراتيجيات المالية المعتمدة على أداء كل شركة. تم استخدام حزمة البيانات المالية الفصلية للسنوات العشر (2006-2015) للشركات المختاره. تم استخلاص عدد أحد عشر عامل مؤثر محتمل كمرجع للسياسات المالية التي سيتم اختبارها وفق الأبحاث العلمية السابقة في مجال المالية، منها أربع عوامل يتم اختبارها للمرة الأولى. تم تصنيف هذه العوامل المؤثرة في مجموعتين: ستة عوامل تمثل هيكلية رأس المال، وخمسة عوامل تمثل إدارة التدفق النقدي. وقد تم إخضاع هذه العوامل المؤثرة لمزيد من التحقيق لقياس التأثير مباشر المحتمل على الأداء المالي والسوقي للشركات المساهمة العامة. تم اختيار مجموعة من أربعة مقاييس للأداء المالي، إلى جانب مقياسين للأداء السوقي كمؤشرات لقياس نجاح الشركات. كذلك، لقد تم استخدام نموذج تحليل حزمة البيانات (Panel Data) لاختبارات التشخيص والفحص المطلوبة إحصائيا، وذلك للتأكد من تلبية متطلبات الافتراضات الإحصائية البيانية المستهدفة، كما تم اختبار التأثيرات باستخدام أسلوب (GMM- *Generalized Method of Moments*) عن طريق برنامج الإحصاء الاقتصادي (*EViews*). وبناء على تحليل البيانات وعلاقة العوامل المؤثرة، فقد تم استخلاص وتحديد مزيج من الاستراتيجيات المالية الديناميكية المناسبة التي تساعد في استقرار وتخطي الشركات المساهمة العامة للأزمات والظروف الاقتصادية المتقلبة. بناء على النتائج المستخلصة، فإن هذه الدراسة تبين أن نجاح الشركات المساهمة العامة يتعلق بوجود علاقة وثيقة متبادلة بين الاستراتيجيات المالية المعتمدة وتأثيرها في الأداء المؤسسي للشركة. الخلاصة، النتائج المستخلصة من الدراسة تؤكد الافتراض الرئيسي لهذه الأطروحة، "*أن الاستراتيجيات المالية المختلفة، تحت الظروف الاقتصادية المختلفة، تؤدي إلى نتائج أداء مختلفة*". من ناحية أخرى، من وجهة نظر أكاديمية، تمثل هذه الدراسة مرجعاً موثوقاً به في مجال ممارسات الإدارة المالية، والتي تؤسس لمزيد من الدراسات المستقبلية في هذا المجال.

**مفاهيم البحث الرئيسية**: سوق الأوراق المالية، الشركات المساهمة العامة، الاستراتيجية المالية، أداء السوق المالي، الأزمة المالية العالمية، الإمارات العربية المتحدة.

## Acknowledgements

Primarily, my sincere thanks are due to the *Mighty* ALLAH for giving me the willpower and persistence to accomplish this unique research study from which I gained a better understanding and advanced knowledge of a complex economic system with providing significant contributions to the field of my research interest.

This dissertation would not have come to light without the careful and precise supervision and guidance of my dissertation advisor Professor Abdulnasser Hatemi Jarabad , to pave me the way to become a professional researcher. My thanks extended to the advisory committee members Dr Abdulrahman Al-Shayeb and Dr Youssef El-Khatib for their effort. I am also truly grateful to Prof. Mohammed Madi, Dr. Rihab Khalifa, and Dr. Amani El-Anshasy for every particular effort they have furnished to develop such successful postgraduate programme. I devoted special thanks to Ahmed Taha (Library Research Desk) for furnishing the required research resources. My sincere thanks are due to Mr. Assil El-Mahmah (statistician in the UAE Central Bank) for his substantial efforts in the data analysis and interpretation of the results.

Many professionals in the financial issues have cordially provided me with valuable data, which sufficiently enriched the research material. Thus, my sincere appreciation is due to Tawazun Holding for granting me the scholarship for the DBA study. Likewise, my grateful gratitude is due to Dr. Obaid Al-Zaabi (CEO of SCA) who eagerly took part in making this study possible. My humble gratitude is for the Abu Dhabi Securities Exchange (ADX), Dubai Financial Market (DFM), and the Central Bank of the UAE for their effort in facilitating the data and information availability.

Two conference papers based on the preliminary findings of this dissertation, these were i) "Financial strategies and firms' performance: the interrelationship; at *The first HDR Colloquium,* May 2017, the University of Wollongong in Dubai", and ii) "Financial strategy and firm performance under different economic conditions; accepted by *The 4th UAE Graduate Students Research Conference* (UAEGSRC2018), 21st April 2018, the American University of Sharjah. Finally, the usual disclaimer applies.

# Dedication

*To my late beloved mother (may Allah forgive her and grant her the merciful), who raised me with respect and loved all people regardless the differences.*

*To my late father (may Allah forgive her and grant her the merciful), who built on me the passion of learning and foraging knowledge, from the cradle to the grave.*

*To my unique country the UAE whose founders, leaders, and people paved the way to the summit and whom I am proud to belong.*

*To my beloved family (wife, sons and daughters), whose patience and smiles were enough to make peaceful oasis during the journey of my DBA study.*

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## List of Abbreviations

| | |
|---|---|
| ABC | Activity-based Costing |
| ADX | Abu Dhabi Securities Exchange |
| AED | Arab Emirates Dirham |
| CAP | Capitalisation |
| CAPEX | Capital Expenditure |
| CCC | Cash Conversion Cycle |
| CCP | Central Counterparty Processing |
| COGS | Cost of Goods Sold |
| CSA | Cash Structure Analysis |
| DFM | Dubai Financial Market |
| D/E | debt-to-equity ratio |
| ECI | Economic Composite Indicator |
| EPS | Earnings per Share |
| ES&CA | Emirates Securities and Commodities Authority |
| ESM | Emirates Securities Market |
| EVA | Economic Value-Added |
| FBD&M | Firm's Board of Directors and Management |
| FDI | Foreign Direct Investment |
| FEM | Fixed Effect Model |
| G&A | General and Administration Expenses |
| GCC | Gulf Cooperation Council Countries |
| GDP | Gross Domestic Production |
| GM | Growth Margin |
| GMM | Generalised Method of Moments |
| GPM | Gross Profit Margin |
| GR | Growth Rate |
| GRS | Growth Rate in Sales |
| ICI | Istanbul Chamber of Industry |
| IFRS | International Financial Reporting Standards |
| IGR | Internal Growth Rate |
| IMF | International Monetary Fund |
| IPO | Initial Public Offering |
| JV | Joint Venture |
| LPE | Law of proportionate effect |
| MENA | Middle Eastern and North African Countries |
| MNC | Multi-National Companies |
| MOE | Ministry of Economy |
| MSCI | Morgan Stanley Capital International |
| MVA | Market Value-Added |
| MVBV | Market-to-Book Value |

| | |
|---|---|
| NP | Net Profit |
| NPV | Net Present Value |
| OLS | Ordinary Least Squares |
| OPEC | Oil-Producing and Exporting Countries |
| PCA | Principal Component Analysis |
| PJSC | Public Joint Stock Companies in the UAE |
| PLS | Panel Least Squares |
| REM | Random Effect Model |
| ROA | Return-On-Assets |
| ROCE | Return-On-Capital Employed |
| ROE | Return-On-Equity |
| ROI | Return-On-Investment |
| RBV | Resource-Based View |
| S&P | Standard and Poor's |
| SCA | Securities and Commodity Authority |
| SGR | Sustainable Growth Rate |
| SRO | Self-Regulatory Organization |
| UK | United Kingdom |
| UAE | United Arab Emirates, The |
| VAT | Value-Added Tax |
| WACC | Weighted Average Cost of Capital (WACC) |
| WEF | World Economic Forum, The |
| WTO | World Trade Organisation, The |

# Chapter 1: Introduction

## 1.1 Preamble

There has been a continuing debate continues amongst the academics and financial practitioners about the ability of a business firm to overcoming various unfavourable economic conditions and business market fluctuations regarding its financial performance. Hence, many financial firms are striving to find suitable approaches for managing their financial revenues from various business sources and activities, such as contracts, trading, supply and outsource services.

Development and adoption of an efficient approach are significantly needed for the firm to managing its existing financial assets with snack risks. In this case, while the financial firm planning for achieving sustainable business growth and stability, it should adopt a suitable *financial strategy* as a driving force for assessing its own financial needs and sources, which could enable it to meet its proposed business objectives conveniently, and likewise to fulfil the ultimate mission. Therefore, the *financial strategy* is considered a company-specific strategy. On the other side, the Firm's Board of Directors and Management (FBD&M) is eventually responsible for structuring and adopting this strategy, which could potentially be derived from the company own business activities and missions.

The steady progress in the financial, as well as economic studies, and their interdisciplinary association with other business areas has promoted the elements of concern of many academics and researchers in business strategy to recognise *finance* as an interesting subject of study, such like management, operations research, accounting, and the like. Likewise, many business scholars attempted to find logical

annexation between the firm's strategy for its financial performance (Barton & Gordon, 1987).

Many theories developed, and empirical research conducted to find decisive solutions to the finance-related problems. Some of such relentless research activities aimed purposely to find a standard page of agreement on the factors that possess direct effects on making decisions regarding the financial strategies; in other words, the way and pattern of efficiency with which the factor can influence the firm performance (Myers, 1984). Nonetheless, the *concept of strategy* from business management aspect and *theory of firm* from financial aspect were overlapping for developing a firm-specific financial strategy.

The firm-specific financial strategy is based on a sound justification and definition of the term of its business plan that aims to maintain the business mission and competitiveness in the domains of relevant markets. Therefore, the financial firm should scan the surrounding business environments, and forecast the financial trends in similar markets. This preparedness can be assisting the firm to be more responsive to predictable and unpredictable changes and uncertainties of the local and global market regarding identifying its priorities and modifying financial strategy to cope with these changes (Cibin & Grant, 1996; Pickernell & Hermyt, 1999). In connection to this, Slater and Zwilein (1996) indicated that "*The firm's financial strategy has significant potential in influencing shareholder value creation*; *therefore, it is a product of firm's investment, financing, and dividend decisions*".

The adoption of an appropriate financial strategy could largely influence the business performance of the firm over both short-term and long-term, this on the one hand. On

the other hand, the adopted financial strategy might deviate the business sustainability of the firm since it is considered as a driving force that paves the way for the firm for its future business directions. Pickernell and Hermyt (1999) stated the theories that concerned with the definition of a successful company are incorporating specific criteria, such as *annual turnover, profitability, growth rate, return-on-capital-employed* (ROCE), and *size of the asset (or firm size)*. Likewise, the researcher took on some of these standards in measuring financial success of the UAE PJSCs.

Thompson (1998) conceived the business firm as a healthy governing body when it has developed distinctive advantages over its challengers and competitor in many business domains. These exciting activities are underpinned by corporate synergy, successful transfer of professional accomplishments, sharing business activities, and creating effective linkages between its several departments that required in the different output lines. In this regard, Antcliff, Higgins, Toms, and Wilson (2007) determined the successful firm as an entity, which i) works independently with high productivity; ii) overtakes its peer group regarding the median yield-to-capital within the firm's business field; and iii) outpaces another peer group regarding return-on-capital to industry norms.

The firm size has long been focusing on the financial and microeconomic studies, because of its potential application as a criterion to assess the business/financial performance. In connection to this, Peter and Waterman (1982) indicated that there is an apparent relationship between the firm size and its productivity; in other words, the big firm is potentially more favourable regarding its mass production, financial capability, and reaching foreign markets over broad geographical coverage. Moreover, it was found proven evidence that the best practices of a business firm can maintain a

superior execution of its business success (Yusuff, 2004). Consequently, the business firm should put into action an effective business strategy to enhance sufficiently the sustainability of its success regarding developing the ability to gain some advantages over its competitors in the same business domains (Ohmae, 1982).

Many research studies attempted to identify the potential factors that potentially involved in striking the target success of the execution of the firm's business strategy. Grienitz and Schmidt (2012) defined some factors associated with the successful business strategy of some German automotive supply firms. Among these factors were market scanning, flexible operations, standard knowledge management, and hiring skilled personnel. Thus, the successful business firm could run a broad range of innovative technologies, providing consistent outsourcing, and developing various reaction scenarios for meeting uncertainties in its surrounding business environments.

The existing body of the relevant financial literature revealed that a business firm that progressively reached a point above the average of its financial performance is branded by having thorough managerial outcomes. Thus, such a business firm usually produces its specific values as a critical component of success to keeping its focused commitments to customers and suppliers, as well as promoting business innovation and seeking continuous advancement, along with building mutual relationships with its employees. Hence, the created values could support the firm to be successful via the enhanced competition racing with its peers.

Many scholars who are interested in firm's success are still in dispute over which factor is more potent in bringing the firm to be successful. The scholars in the financial fields are in searching of settling such disputes through reaching agreed-upon criteria for

identifying and determining that could be used in the evaluation of the firm's performance regarding the success or failure causes. Some criteria have been extracted from the relevant existing literature that focused on market behaviour, managerial autonomy, business capability, technology involvement, product design quality and monopoly (Pickernell & Hermyt, 1999).

The potential factors are frequently facing various socioeconomic and political stresses that could alter their effectiveness. Therefore, the business firm often proposes a specific strategy to deal with a bundle of economic issues, such as market trends, competitor behaviour, stakeholders' interest, and ability to gain governmental support. Thus, the ultimate purpose of the developed strategy would be acting as an immunity barrier against financial crises and unfavourable economic conditions.

Inquiry about this topical theme has revolved around the assumption that specific financial strategies should either boost or hinder the competitive performance of the business firm. This research study is exploratory and empirically driven to examine the potential relationship and impact of various financial strategies on both short-term and long-term organisational performance of the UAE PJSCs within ten years (2006-2015) including potential effects of the 2008 global financial crisis and its post consequences. The investigation of the crisis and its consequences has given vital importance to the empirical findings generated from this dissertation.

This dissertation aims at focusing on defining a possible connection between the achievement of significant financial performance and identifying and adoption of an appropriate financial strategy to consider as a successful approach. Also, the study highlights the significance of the PJSCs and the Financial Market to the UAE national

economy, as well as, at the macro level, it considers the UAE as a suitable case study. Thus, the dissertation's findings would furnish applicable criteria for the evaluation of the effectiveness of the adopted financial strategy on the financial performance and capacity of the business firms in the business context of the UAE.

We are looking at achieving the aim of this study through inquiring about how the existence of the financial markets has efficiently enhanced with the development of financial activities of the UAE PJSCs, as well as absorbing the shocks of local and global financial turbulence and instability. Consequently, particular emphasis is given to testing the firm's performance statistically within the realm of adopting a successful financial strategy.

### 1.2 Research Intention

Over the past three decades, the global economic order has undergone rapid changes and diversification in the core business activities, which had provided the business firms suitable capacities for a persistent growth. The pioneering work of Modigliani and Merton (1963) "*The theory of potential relationships between efficiency and capital structure*" regarding firm's performance. This theory has been subject to intensive investigations conducted by many researchers in the corporate finance domains (e.g., Stattman, 1980; Basu, 1983; Rosenberg, Reid, and Lanstein, 1985; Chan, Hamao, and Lakonishok, 1991; Fama & French, 1992; Johnson & Soenen, 2003; Höbarth, 2006) using different measures of financial and market performance.

The research intention of this study considers the firm's financial strategy as a *critical factor* in reaching a satisfactory performance. Doubtless, different financial strategies might generate different results regarding formulating financial performance. Therefore, the business firm is required to develop various management approaches in

response to such interrupting financial conditions, taking into consideration the interests and expectations of various stakeholders, such as the Firm's Board of Directors, policy-makers, shareholders, fund providers, stock marketers, and firm's employees. Nevertheless, it is crucial for the upper management to adopt appropriate financial policies and strategic basis for making the right decisions that could positively affect the financial and market performance of a business firm.

The global financial crisis in 2008 was considered a demarked economic event whose adverse effects have profoundly interrupted great number of PJSCs, worldwide. However, the UAE PJSCs was not an exception. The concerned global crisis represents a typical financial case for scholarly investigation to inquire about the behaviour and responses of a business firm towards such hazardous economic conditions. Also, the UAE capital markets were also severely affected by 2008 global financial crisis; on the other hand, most of the studies investigated the consequences of the 2008 crisis on the UAE PJSCs in the business context were about the impact of the corporate governance on the firm's performance.

Moreover, the 2008 global crisis unveiled the dis-efficiency of some corporation management in financial and investment decisions to sustain the business growth of the firms for securing desirable future efficiently. Therefore, the primary aim of this study is finding decisive factors for measuring both the financial and market performance of the UAE PJSCs before, during, and post the 2008 global financial crisis. Moreover, it investigates the roles of the financial management and investment decisions in the organisational performance to facing such crisis and the like.

In this dissertation, the required financial data have been collected from the Securities and Commodities Authority (SCA) about local companies listed in both Abu Dhabi

Securities Exchange (ADX) and Dubai Financial Market (DFM) covering the period from the 1st quarter of 2006 till 4th quarter of 2015. The interesting PJSC-related data drawn from a quarterly panel dataset of 92 PJSCs listed in the UAE stock market covering different sectors and industries. The relevant scholarly literature provides a pool of various financial models and strategies. Thus, the different financial strategies could be applied in various ways by the Firm's Board.

This research study employs four measurements of *financial performance* with two measurements of *market performance*. One of the striking findings of this study is defining, at least, four variable factors that are believed to have significant influences on such concerned relationships within the context of the regional business environment. The further investigation also covers the investment and financing decisions from operation perspective.

The issue of the potential influences on the relationship between financial strategies and the performance of the UAE PJSCs under hazardous economic conditions has not been tackled or investigated by any scholarly study in the UAE, hitherto. However, this work could be considered as the first scholarly research investigating the performance of a company regarding financial strategy to pass successfully over unstable economic conditions to the best knowledge.

### 1.3 Performance Measures- An Overview

The previously conducted studies revealed that neither a single performance measure could be regarded as an appropriate approach, nor could a single method be considered as the best way to estimate the firm's value despite the accessibility of various scientific methods to act thus. Consequently, performance measures and firm valuation

could defer among studies, and thus, different results are expected. Nevertheless, the performance measures that could be useful for all firms in this context, according to the underpinning assumptions, are selected to consider in further analysis tasks.

Hassan and Halbouni (2013) mentioned, "*Due to uncontrollable factors of the market-based measures, executives prefer accounting-based performance since these measures are easier to control. However, market-based measures are more objective since it is out of company's control, and can be affected by different economic conditions*". This study employs both dimensions of measurements to validate the impact of various financial strategies on the firm's financial performance.

The dissertation chose six different measures from the reviewed literature for evaluating the performance and deciding the success of companies. These measures are categorised into two broad dimensions i) financial performance (i.e., ROI, net profit (NP), Earnings per share (EPS), and growth rate in sales (GR)], and ii) market performance (i.e., share price, and Tobin's Q (Market-to-Book-value). These two dimensions are crucial for any listed company to evaluate the performance and achieving success in the way to reach their optimal goal of maximising the shareholder value. As part of performance analysis, it is assumed that these measures will have interactions and interdependent relationships as discussed in many scholarly works.

## 1.4 Research Issues

### 1.4.1 Research Statement

This dissertation investigated how the adopted financial strategies by the firms' Management and Board of Directors are associated to the various period-terms of the UAE Public Joint Stock Companies (PJSC) performance through focusing on the

corporate finance and performance of the firm. Such adopted strategies are concerned mostly with the performance of a firm listed among the UAE PJS companies. In this dissertation, the financial strategies are categorised into two main dimensions i) capital structure and ii) cash flow management. While the performance measurements cover two different approaches; these are financial performance and market performance.

The adopted strategies should be viable for such stakeholders as the Board of Directors, shareholders, investors, fund providers, stock market brokers, policy-makers, along with the firm's management to achieve desirable results. The study covers forty quarterly-based periods extended through ten years (2006-2015) to develop a reliable reference to measure the firms' performance under different economic conditions (i.e. before, during, and after the 2008 global financial crisis).

### 1.4.2 Research Assumption and Aim

The primary research assumption is "*The different financial strategies under different economic conditions are leading to different performance*". Thus, the study aims at:

1) Determining the potential effects of financial strategies on firm' performance.
2) Providing evidence-based results of the possible connection between financial strategy and firm's performance.
3) Recommending proper dynamic financial strategies to business firms to meet economic crisis to enhance their desirable performance continuously.
4) Outlining the implications, recommendations, and suggestions for further studies based on the dissertation findings.

### 1.4.3 Research Objectives

The core research objectives of this dissertation study are focusing on:

- Consolidating the capital structure and cash flow management as paramount components of the financial strategies adopted by various companies.
- Defining factors affecting the financial strategy regarding firm's performance.
- Investigating the relationship between the capital structure and performance.
- Investigating the cash flow management-performance relationship.
- Exploiting two sets of performance measures, *namely*, financial measures and market measures to reveal the financial strategy-performance relationship.
- Examining the objectivity and rationalism of relationship between the financial strategies and performance that occurred during different economic conditions.

In this dissertation, eleven different financial strategies as potential factors tested; these strategies divided into two sets. The first set represents the capital structure related financial strategies. The second set represents the cash flow management related financial strategies. This dissertation considers the gained data as homogeneous according to the mentioned categories. Thus, we assume that these potential factors and performance measures are relative measures as they are in the format of either ratios or percentage, which would be facilitating the comparison between different companies and different sectors.

### 1.4.4 Research Questions

1) How could different financial strategies (e.g., capital structure and cash flow management) influence firm's performance in various economic conditions?
2) How could financial-mixed strategies be helping firms to face emerging economic crisis regarding performance sustainability?

### 1.4.5 Research Hypotheses

Based on the research's key assumption, the retrieved literature told about a gap that could help to develop eleven hypotheses of two categories:

#### 1.4.5.1 Capital Structure and Firm Performance

- **$H_1$**: The higher is the leverage level, the lower is the firm's performance
- **$H_2$**: The bigger the company, the better the performance
- **$H_3$**: The higher the capital expenditure, the better the performance.
- **$H_4$**: The higher the Government Ownership, the better the performance.
- **$H_5$**: The higher the sustainable growth rates, the better the performance.
- **$H_6$**: The higher the Investment in Unrelated Assets, the better the performance.

#### 1.4.5.2 Cash Flow Management and Firm Performance

- **$H_7$**: The shorter the Cash Conversion Cycle (CCC), the better the performance.
- **$H_8$**: The higher the cash from operating activities, the better the performance.
- **$H_9$**: The higher negative cash of investment, the better the performance.
- **$H_{10}$**: Positive cash from financing activities lead to better firm's performance.
- **$H_{11}$**: The higher some cash holdings, the better the firm's performance.

## 1.5 Research Strategy

This study will use the deductive research approach "Top-to-Down" through an empirical study of the UAE listed companies to examine how related financial strategies (factors) influence the firms' performance (dependent variables). Financial strategies are of two dimensions: capital structure and cash flow management, whereas the performance measurements cover two different approaches: financial performance and market performance.

Based on previous studies, most of the nominated factors were tested in different business contexts and market regions worldwide. However, the extant literature revealed that no relevant scholarly studies had investigated four of these selected factors hitherto. Also, according to the researcher's best knowledge, most of the performance measurements used in the ongoing study (dependent variables) have not been examined in the context of the GCC or UAE market. Therefore, we shall filtrate the existing related theories to select the one that could help us in the validity of the proposed model and argument of this study.

Many researchers have not yielded to the failure of their investigative attempts for reaching acceptable findings; however, they could get the most benefit from the lessons learned from the previous related research endeavours. As a result, the adopted research paradigm would be critical rationalism, whereas the ontology (social reality) would be a cautious realist, and the epistemology (reality study) would be falsifying theories/hypotheses via new data that created for the observations. Furthermore, neo-realism will be followed for new testing factors; by discovering structures (variables relationship) and mechanism that cause observed phenomena (firm's performance).

The problem investigation and data interpretation enhanced by merging my professional expertise with academic elaboration. The research approach achieved via:

1) Start with identifying a regularity (theories and hypotheses) to be explained or examined to falsify or corroborate (validate); the regularity would be "*related financial strategies affect firm's performance*".
2) Construct a theory and deduce hypothesis for new Factors.
3) Examine (selected theories) and developed hypotheses from collected data.

4) Suggest solutions: recommend an appropriate mix of dynamic financial strategies for companies to be prepared for the economic crisis and to sustain its desirable performance continuously.

## 1.6 Research Ethics and Integrity

The stock markets in Abu Dhabi and Dubai, as major players in the UAE financial market in which release their respective reports annually. This means that the actual financial data of the Dubai JPSCs are accessible (i.e., unclassified). Thus, the most critical ethic in this regard is avoidance of any biases that might come from the data analysis and interpretation of the findings.

The below research integrity and ethical principles would help to conduct the study:

- **Objectivity/Unbiasedness**: Avoiding bias in the data collection, empirical design, data analysis, personal opinion/self-experiment, or any other part of the study where objectivity could negatively affect the results and aim.
- **Cautiousness**: Avoiding error or conversion mistakes while collecting the data from the original resources, to build on reliable data.
- **Respect for Intellectual Property**: Appreciating the effort of others and the copyrights; especially the other researchers, by avoiding using or reproducing their findings without citing the real resource or getting an authorisation.
- **Honesty**: Supporting all data, findings, methods, followed procedures, and publication free of any misrepresentation, falsification, or fabrication.
- **Openness**: Finalising the study and sharing the findings with the stated stakeholders where it is applicable. The Security and Commodity Authority (SCA) is expecting to share the findings, as they are the primary resource of the data will be used in this dissertation.

- **Responsible Publication**: Publishing the studies/articles' findings with following the rules of the UAEU, scholarly resources, and other related parties with avoiding any possible breach the rights of others.

## 1.7 Dissertation Structure

This dissertation is set in conformity with the standard template designed by the College of Graduate Studies at the United Arab Emirates University (UAEU). Figure 1 illustrates the scheme of the physical structure of the dissertation body, which is divided into seven chapters; each chapter is concerned with specific coverage.

**Chapter 1- *Introduction***: This chapter presents an original background about the functional relationship between the financial strategies and firm performance measures, which gives overall coverage of the research topic of this study. The chapter also covers i) research issues (e.g., statement, assumption and aim, objectives, questions, and hypotheses), ii) the research strategy, iii) research ethics and integrity, and iv) a summary.

**Chapter 2- *The UAE National Economy and Financial Markets***: This chapter presents the milestone of the financial market in the UAE, which is based on the World Bank and Emirates Stock Market coverage. The focused details are concerned with the status of the UAE national economy since the turn of the 21$^{st}$ century and its mutual relations with financial market activities. Such interrelationship between the two entities can give a clear interpretation of various economic indicators under the umbrella of the UAE national economy and financial market.

**Chapter 3- *Literature Review***: This chapter reviews the existing body of scholarly finance literature to highlight a possible gap in the research domain concerning firm performance and financial strategy firm performance from theoretical and applied

perspectives. It also covers related topics, such as criteria for the successful business firm, stock price, market competitive advantages, resource-based view (RBV), and corporate finance. It defines the terms of interest as net profit (NP), return-on-investment (ROI), growth rate (GR).

**Chapter 4- *Research Methodology- Data Collection***: Describes the data collection and discuss the Model specification to investigate the relationship between the proposed variables and the *firm's performance measures*. The quantitative research method adopted to analyse the collected data employing *Generalized Method of Moments* (GMM) as estimation technique by *EViews*™ econometric analytic software to develop functional mathematical models.

**Chapter 5: *Empirical Results and Discussion***: This chapter discusses the *EViews* generated findings, which concerned with the data that cover the entire 40 periods and the three consecutive periods of financial market performance, where considering 2008 global financial crisis as a significant year. Thus, the findings represented pre-, during, post-financial crisis, and the entire period.

**Chapter 6- *Policy Implications and Recommendations***: This chapter furnishes policies and implications of the dissertation's findings for the policy/decision-makers who are interested or indulged in the financial issues pertinent to the UAE national economy; notably, during the financial crisis or unfavourable economic conditions (e.g., consequences of the 2008 global financial crisis) through emphasising the significance of key economic indicators. Also, recommends some dynamic financial strategies to overcome the similar economic crisis and to sustain its desirable performance continuously.

**Chapter 7- *Conclusion***: This chapter sheds light on the whole results and findings of the empirical investigations. It attempts likewise to link the generated results with the

raised research questions and proposed hypotheses, as well as it mentions the significant contributions of the findings to firm's financial strategy to meet unfavourable economic conditions. This study faced certain limitations concerned with sample size, methodology and data analysis instrument, along with prevailed economic condition when the study conducted. The conclusion summarises the critiques about the significance of the findings that could fill the knowledge gap in the domain of the mutual relation between the financial strategy and firm's performance.

The dissertation acknowledges the relevant scholarly works that borrowed from other refereed information resources; moreover, it relied on the fundamental financial theories, which proposed by eminent authors, such as Nobel laureates (see 7.2). These citations were helpful references to supporting the researcher in analysing the collected data and conducting critical analyses to compare the study findings against previously published works on the topic to fill the existing knowledge gap in this domain since there are six proposed variables have not tackled by the financial studies.

## 1.8 Summary

Many countries are striving to make their financial system reaching the best level of stability to play an essential role in their socio-economic development and welfare. The financial crisis of 2008 took place in different parts of the world leaving a wide range of post-crisis consequences, which possess the same pattern of worries among the investors, traders, and government financial institutions, such as central banks. Therefore, the implications of the 2008 global financial crisis have national, regional and international relevance. The primary objective of this empirical study is to highlight the importance of recovering the post-crisis consequences for attaining stability and functionalities of the UAE financial system. The diagnosis of the

consequences of financial crisis achieved by analysing the financial dataset of the selected PJS listed companies. The findings generated from this study proposed relevant policies and implications for meeting similar financial conditions.

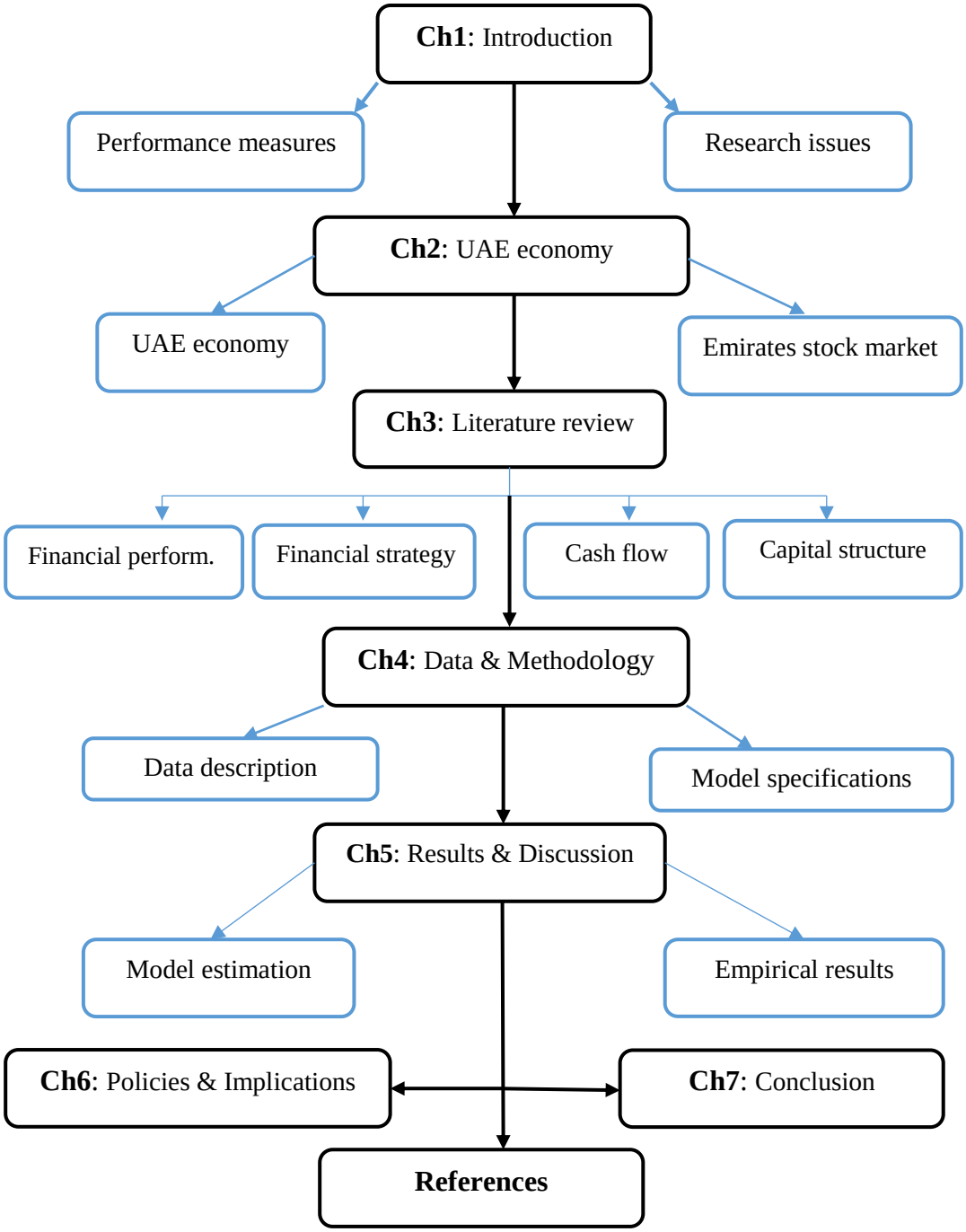


Figure 1: Flowchart of dissertation structure

# Chapter 2: The UAE National Economy and Financial Markets

## 2.1 Synopsis

This chapter discusses the development of the financial market activities in the UAE through highlighting the milestones of significant phases that made the finance business as a hallmark of the UAE national economy and financial market since the onset of the federation. The chapter consists of four main sections; some sections are further divided into related subsections:

- Section 2.2 is an introductory note on the mutual relationship between the UAE national economic conditions and the financial market activities.
- Section 2.3 sheds light on the UAE economic conditions since the turn of the 21st century. Subsection 2.3.1 furnishes some statistical data about the growth of the UAE gross domestic production (GDP) within the period 2001-2014. Subsection 2.3.2 gives a brief history of the evolution of the UAE financial market since the 1970s. Subsection 2.3.3 discusses the critical role of the ADX and DFM from 2001- present. Subsection 2.3.4 illustrates the performance of the Emirates Securities Market (ESM) in 2001-2015.
- Section 2.4 explores the possible significant importance and interrelationship between various economic indicators under the umbrella of the UAE national economy and financial market.
- Section 2.5 summarises the issues discussed in this chapter.

## 2.2 The UAE Economy- Characteristics

It is beyond dispute that the dynamic growth and maturity of the financial market in any free economy is an interface of a healthy and stable economic system. However, the establishment of a financial market within an emerging economy in developing

countries is an attempt to integrate a national economy and local business activities with the global financial markets and world business stream (Al-Shayeb, 1999). Therefore, those emerging financial markets had received intensive academic research and investigations since the early 1990s, when the Berlin wall demolished to pave the way for the cascading fever of open economic policies worldwide. Accordingly, many economies were started restructuring their strategic plans and priorities.

The UAE established on 2 December 1971 as a federal state as a result of a union of seven emirates previously known as *the Trucial States*. Since its establishment, the UAE has modelled its national economy on a liberal economic system with a free tax income and trade openness. The UAE national economy has long been depending on the oil-based industries, services, and free-zone business (e.g., active export/import activities). Such fast-growing foreign trade and financial transactions of the UAE with the international industrial centres and financial markets has enabled the UAE to be a key player in today's business world.

Although it is a young emerging economy, the UAE has achieved an impressive national economic growth and performance, along with proven records in furnishing secure financial and investment opportunities, expansion of foreign trade, social welfare, community safety, and recently invading tourism marketing and conference events business. Such attractive business environment of the UAE is a result of the political and economic stability, along with enforcement of laws to maintain such stability and economic diversity, as well as introduced tourism as a new business genre in the UAE national economy (Al-Shayeb & Hatemi-J, 2016).

The World Bank (WB) categorises the UAE among the countries that achieved a significant highest income per capita to assume the 29th country of the WB ranking (WB Indicators, 2016). Moreover, UAE well-protects the various economic activities (business, financial, investment, trading, industries, and the like) with legislation and laws that aimed at enhancing the business and investment environment for providing opportunities to the UAE financial markets to play a strategic role in maintaining the sustainability of the national economy.

The UAE economy has enjoyed relatively large surpluses on current accounts and foreign trade over ten years from 2005 to 2014 despite adverse consequences of the 2008 global financial crisis. Such surpluses were maintained by intensive earnings of re-export and high oil prices, along with non-oil exports. However, the current regional tensions had caused a drastic decline in oil prices and cautiousness of the traders to invest in widening their business. Al-Adwani (2016) indicated that such unfavourable economic conditions had affected the current account that decreased from US$322 billion in 2013 to US$266 billion in 2014 (i.e., -17.40%). The broad connectivity of the national economy with the global one through rapid expansion of import/export business has sparked a deep interest in the financial communities to establish a securities market for sustaining the momentum of the national economy grows.

Euler Hermes (2015), a financial consultant company, released a report detailed the findings of a SWOT analysis of the *status quo* of the UAE economic conditions over seven years later the 2008 global financial crisis; the analysis revealed that:

- **The UAE national economy enjoys the following strengths**:
  - Socioeconomic and political stability with an established pattern of power succession.

- The abundance of hydrocarbon and mineral resources.
- Diversification in the national economy and income.
- Relatively liberal business and trading environment.
- Large asset holdings and investments held overseas.
- Fiscal and current accounts sound, despite some short-term effects of current low oil prices.
- Reclassified to emerging market status within the *Morgan Stanley Capital International* (MSCI) Index.
- Intensive regional economic co-operation through the GCC.
- Its Credit Rating is BB1 classified by Standard and Poor's (S&P) as a country with low investment risk.

❖ **The UAE national economy suffers from some weakness**, such as:

- Speculative flows (stock market, real estate, etc.) provides some concern of asset bubbles.
- Data provided is sparse for a high-income economy.

❖ **There are reliable factors to sustain the economic opportunities**, such as:

- Sound foreign bilateral relations and cooperation with international agencies.
- Furnished secured business environment to attract foreign investors.
- Well-established infrastructure that favourable to overseas organisations.
- Its multi-ethnic society is providing a sense of security to live and work.
- Increasing the foreign investments of the UAE in advanced technology.

❖ **In contrast, the UAE economy might face some threats**, such as:

- The surrounding region is facing severe socio-political tensions and civil wars, which impact directly on the stability of the national economy.
- Unpredictable fluctuations in the energy market and raw material prices.

- High dependence on expatriates increased unemployment among the nationals.
- The high sensitivity of the UAE national economy towards global/regional financial crises.

## 2.3 The UAE Economic Conditions in the New Millennium

The UAE economic environments have attracted scholarly investigations on the various aspects and factors that might play crucial roles in enhacing the sustainability of the national economy; prticularly, the trend towards business heterogenicity and diversification (Jensen, 2018). Moreover, the small and medium enterprises and family business have become the driving force establishing an attractive business hub in the Arab Peninsula (Bodolica, Spraggon, & Zaidi, 2015).

Since its establishment, the UAE was a liberal economic country tried to get the most benefits from the economic experiences generated by the advanced developed in the Western and Asian countries. The UAE inclined to the adoption of the liberal economy as a suitable economic paradigm to engine its growth in association with similar advanced and emerging economies, at the same time, providing sufficient social security and welfare to its citizens (i.e., a mixture of liberalism and socialism). However, the UAE has been receiving many merit recognition from international agencies and organisations for its attractive business environment, economic performance, and citizen-focused government services.

The financial sector is considered the driving force of sustainable economic growth and development of the global and local business conditions. The financial market had been developed from the womb of the liberal economic system to play vital roles in flourishing the macroeconomic growth and business promotion. The stock markets are

regarded as inessential entities for the economic growth since no corporate investment funded through the issuance of equity existed (Mayer, 1998). However, the founding of a financial market has a substantial impact on economic growth of a country, which is still a controversial issue (Demirguc-Kunt & Levine, 1996b; Banerjee & Majumdar, 2018)

Many financial analysts weighed the *pros* versus *the cons* of the stock markets, particularly in the developing countries, where these markets have not been regarded as a marker of the economic development (Al-Shayeb, 1999). However, the realisation of the potential importance of a securities market to emerging economy has prompted elements of concern of the UAE leaders to take on serious efforts to establish their financial markets (Al-Mohana, 2016). The UAE financial enterprises sector is often able to absorb the consequences of a broad spectrum of financial crises because the Federal Government is superintending the imposed financial policies and regulations through its monetary authorities, such as the Central Bank and the like. With these imposed policies, the financial sector is capable of providing the financial requirements of the other business domains (Otman, 2014).

The impact the consequences of the 2008 global financial crisis on the UAE financial market and related sectors had promoted the element of intensive research interests. For instance, focusing on assessing the global financial crisis its consequences on the Dubai Financial Market performance (Al-Jarouf, Al Mansoori, Nooraddin, and Elshareif, 2017), Dubai stock market volatility (Salameh & Alzubi, 2018), and the real estate and construction sector (Renaud, 2012; Al-Malkawi & Pillai, 2013).

In the years 2014-2015, many international economic organisations reported on the economic performance of the UAE, which has been ranked as the follows:

- The World Economic Forum (WEF) ranked the UAE in the *Global Competitiveness Index* (2015/2016) as the 17th attributed to its foremost position as the first country in inflation annual % change; the first in effect of taxation on incentives to work; the second in effect of taxation on incentives to invest. The 16th in *WEF Enabling Trade Index* as it is the first in ease of hiring foreign labour; the third in ease of access to loans.
- The WB ranked the UAE as the 31st country in doing business in 2015.
- The World Trade Organization (WTO) ranked the UAE in *World Trade Report* 2015 as the 16th country in commodity exports and the 19th in imports.

### 2.3.1 The Gross Domestic Product (GDP)

The UAE is currently among the first ten oil-producing countries; therefore, the prices of the oil and gas in the international energy markets influence the national income directly and, in turn, on the GDP. On the other hand, the UAE proposed a long-term economic plan, *namely* UAE 2030. The core strategic objective is to diversify the economic activities, instead of dependent upon hydrocarbon resources merely, which are assumed as non-renewable natural resources.

It is worth to illustrate a comparison of GDP (in current US$) among the developing countries in MENA region, Europe and Central Asia based on the data released by World Bank. However, Over the examined period (2001-2014), the average of the UAE's GDP worth more than 21% over other developing countries in Europe and Central Asia, and 24% over the developing countries in the MENA region, despite that we compare a single country to the entire region. Figure 2 shows how the

UAE national economy (GDP in current US$ as a proxy) has achieved remarkable value compared to the MENA regional scale.

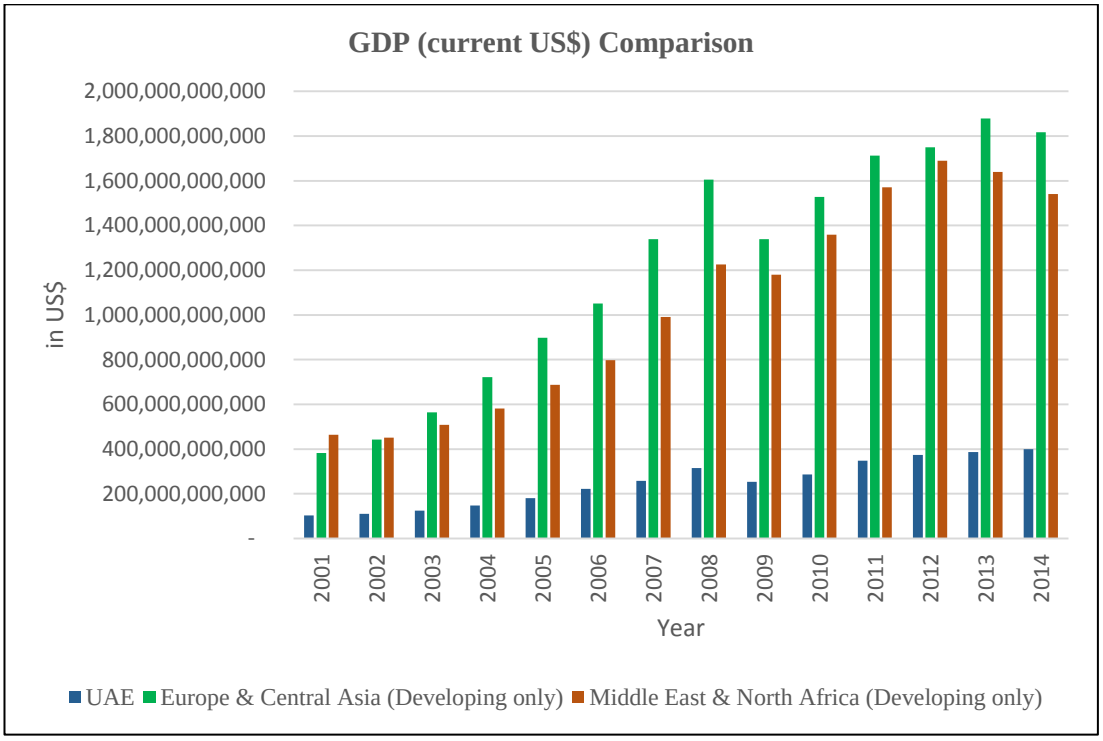


Figure 2: The UAE national economy (GDP) in current US$
(Source: Word bank country report, 2016)

In term of GDP growth rate, the UAE economy performs well compared to the regional scale. However, over the examined period (2001-2014), the average of the UAE's GDP Growth rate was 4.33%, almost similar to both Arab World and developing countries in Europe and Central Asia, which were 4.66% and 4.48%, respectively. Moreover, the average GDP Growth rate of the UAE was higher than the MENA and other developing countries, which were 3.6% and 2.56%, respectively. Figure 3 presents the UAE's GDP Growth rate (annual %) for the period (2001-2014), whereas Figure 4 presents a comparison of the UAE's GDP Growth rate (annual %) to other regions, for the same period.

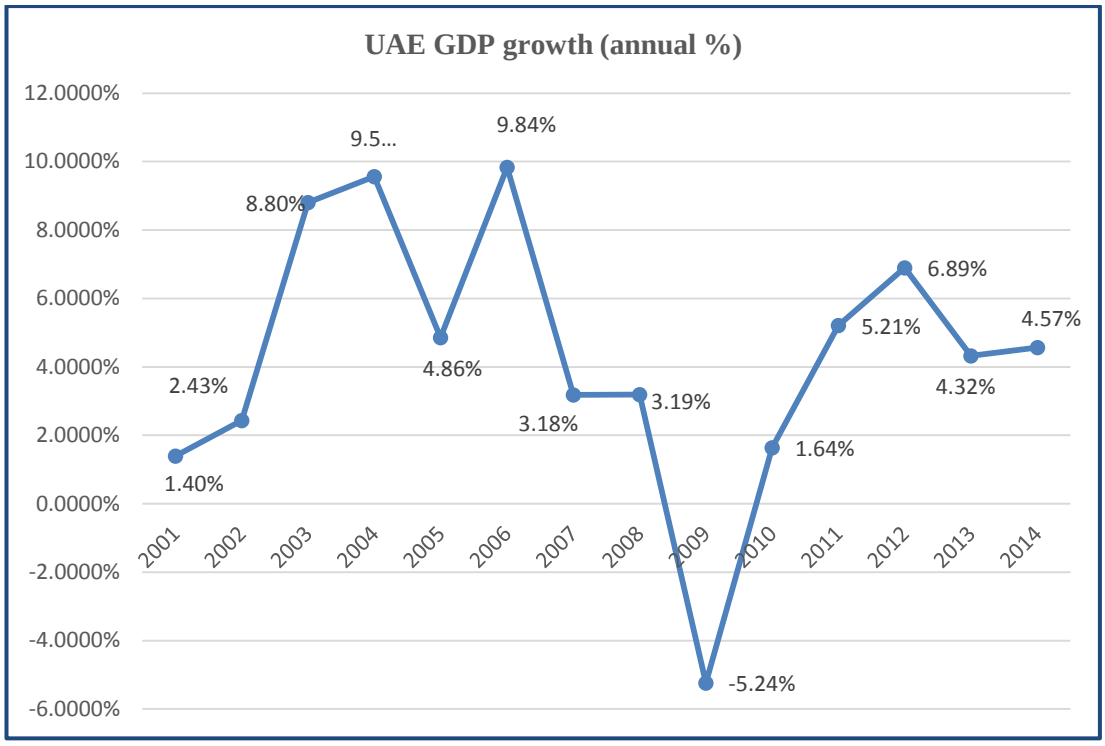


Figure 3: Annual GDP growth rate of the UAE
(Source: Word bank country report, 2016)

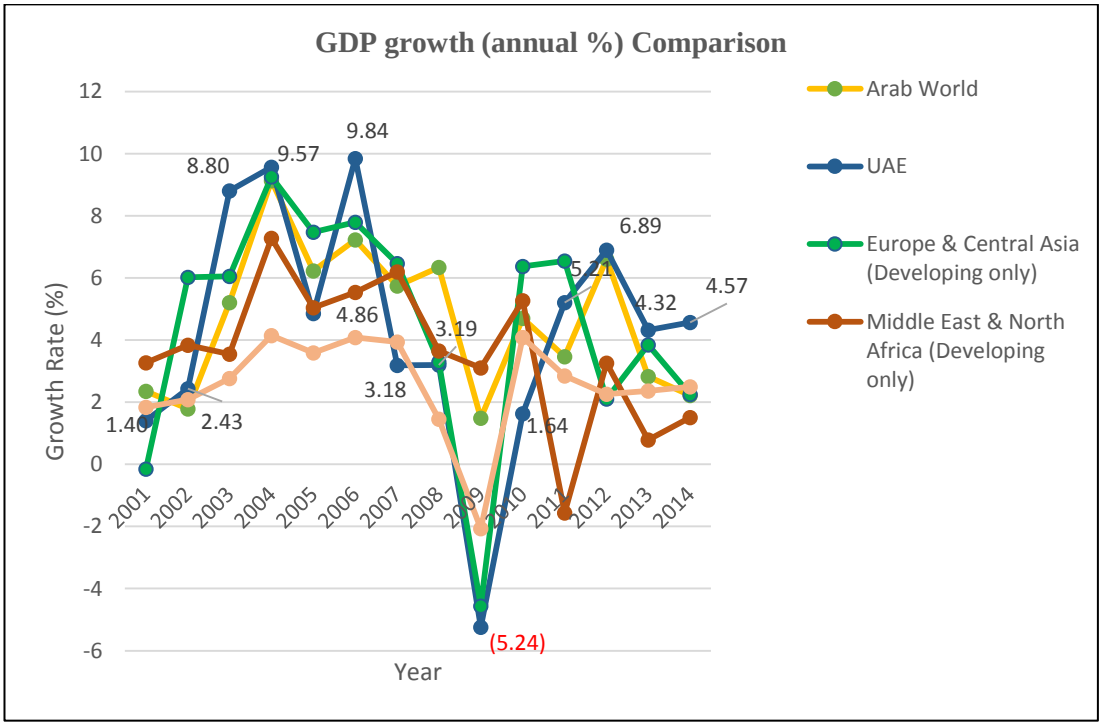


Figure 4: Comparison of the UAE's GDP growth rate to other regions
(Source: Word bank country report, 2016)

### 2.3.2 The UAE Financial Markets: A Brief History

The financial markets in emerging economies constitute an essential part of their development. They allow a means of diversification for the investor asset classes and redistribution of the risks associated. If the companies in a country are seeking investments from the public, this indicates that they plan to grow bigger and thereby contribute more towards the growth of the national income (Suetin, 2011).

The UAE stock market is relatively young and growth-oriented containing both official and unofficial markets. On 29 January 2000, the late President of the UAE, HH Sheikh Zayed bin Sultan Al Nahyan, has issued a Federal Decree under the Federal Law No. (4/2000) to establish the Emirates Securities and Commodities Authority (ES&CA), which overseen by Ministry of Economy. The Federal Law determines the administration system of the Authority of Securities and Commodities, as well as describes its goals, power, authorities and structure of the board of directors.

The ES&CA represents and supervises the two government-owned stock markets, namely Abu Dhabi Securities Exchange (ADX) founded in November 2000, and Dubai Financial Market (DFM) founded in March 2000. The ADX is authorized by the local law number 3/2000 to establish branches and centres within the Abu Dhabi emirate territory, whereas DFM was changed to a corporate (i.e., corporatization) on December 2005, then it had been gone public partially through an *Initial Public Offering* (IPO) of 20% of its value in November 2006. Finally, its stocks listed on DFM on March 2007 (Moustafa, 2013).

The primary task of ES&CA is ensuring an adequate regulatory and monitoring the UAE securities market in order to protect investors' interests from volatility and the handling of their stocks, at the same time, to prevent a struggle of interests by breaking up the responsibilities related to oversight, and by organizing trading in the markets for goods and securities, based on equal policies and a regulatory structure (Al-Shayeb and Hatemi-J, 2013). These regulations had forced out the long-time of unregulated stock market operations. However, a parallel unofficial financial market, or OTC, works through several brokerage firms, which most of them affiliated with the commercial banks (Moustafa, 2013).

The current UAE financial market had initially produced from the brokerage business of private market, which emerged in the late 1970s. The financial market has witnessed and experienced many volatile periods regarding share trading activities and fluctuation of price levels, as described by Bin-Sabit (as cited in Moustafa, 2013):

- **1975-1982**: The UAE had witnessed the establishment of many companies and business organisation in both private and public sectors due to rising oil prices. Moreover, the increasing income and reserve from the petrodollars sparked a deep interest in the Federal Government to build a strong economy.
- **1983-1986**: The drastic collapse of the Kuwaiti stock market, which known as the 1983 crisis of Al-Manakh market, which later compounded with the falling of oil prices in 1986 with a continuation of Iraq-Iran military conflicts. Such conditions had exerted a negative impact on the UAE capital market.

- **1993-1998**: The UAE capital market rose again due to the establishment of many new companies and free-zones (e.g., Jebel Ali, and the like) to attract many international companies to run their commercial and business operations near rich oil-producing countries in the Middle East.
- **1998-1999**: Once again, the UAE capital market experienced a broad decline in the mid-1998; that might be attributed to; for instance, lack of regularity, manipulation of the market by block traders and professional investors, negative speculative trading by all the participants, lack of financial disclosure, and the drop-in oil prices. Since the summer of 1998, the market has suffered sharp declines in both trading volume and trading value to such an extent that the market prices of most-traded stocks have decreased under their par values.

Since their official inception in 2000, both the primary UAE stock markets have been experiencing snacks fluctuations and recoverable financial situations until the unpredictable global financial crisis in 2008. However, both financial markets have severely suffered from the 2008 global financial crisis regarding the drastic reversal of asset prices, and long-term financial consequences of post-crisis. Nevertheless, the capital markets are agreeing to be stable and secure sources of funds for various economic activities to make them more resilient to any shocks or limitations within their listed companies to such as those who have contented themselves with minority shares due to lack of capital (AICPA, 1991).

It is worth to explain further the behaviour of the UAE financial markets through the professional lens. For this purpose, the author of this study has approached the UAE Securities and Commodities Authority (ES&CA) to discuss with its CEO Obaid

Al-Zaabi the possible mutual effects between the financial markets and the national economy in the context of the ES&CA involvements. In this personal communication (25 Aug. 2016), Al-Zaabi shed light on various aspects concerned the ES&CA roles.

On the impacts of speculative flows, Al-Zaabi appreciated the significant role of the speculative flows (stock market, real estate, and the like) as the spirit of the financial market behaviour, but to be under control of the ES&CA through imposing daily supervision and accountability. Also, the ES&CA has proposed a practical prescription to include essentially enforced regulations and disclosure policy. This prescription could avert the adverse consequences of financial crises (e.g., assets bubbles).

To minimise the impact of such speculation, the ES&CA introduced two main approaches: i) surveillance and monitor the limit up/down of every security or each listed company, and ii) recruitment of professional investigators having a broad authority to carry out the necessary action plans and parameters for monitoring the transactions and the securities trading of the all involved stakeholders. Al-Zaabi added, in an advanced step towards increasing the efficiency of market functions, the ES&CA has introduced in 2015 some liquidity enhancement products and techniques, which are available to different types of traders (individuals, governments, institutions, and the like). The liquidity strategy would be encouraging many investors and traders to maximise their business activities, as well as reducing the negative impacts of the speculation that the market possibly to face.

### 2.3.3 Core Roles of the Financial Markets (2001- Present)

The UAE monetary system is based on the Federal Law of 1980 to be independent of any intervention of the federal government in running its organisation and profitability. In 2015, the IMF reported that the UAE possesses a robust financial position despite the surrounding regional tensions. However, the strength of the UAE economy comes from strong fundamentals in prudent financial policies and development strategies, which incorporate the opportunities in the global financial markets (Al-Zarouni, 2008).

In 2004, the ES&CA adopted new laws to ensure that every shareholding company in UAE listed its shares either in ADX or DFM, and ensure compliance with the internationally accepted standards related to the professional securities markets. Since 2004, there has been significant development of the securities market, and the volume of capital and listing has increased considerably. The number of public shareholdings companies had steadily grown from 27 in 2000 to 128 in 2015. Rao (2008) highlighted that the genuine intention behind establishing both ADX and DFM was furnishing a sound guarantee to the foreign investors find a suitable platform where they could invest and receive a return based on the financial performance of the local companies. The Rao argued both DFM and ADX serving these needs successfully and efficiently.

Securities of the listed companies are traded only in those markets, which are licensed by the ES&CA under strict rules and regulations. However, the terms and conditions of the stock market allow any listed firm to change ownership for facilitating its business development. Therefore, the listed companies do not have to rely on financial intermediaries to raise the funding needed for their new ventures; thus, they are able to sell shares directly to the public when they feel the need to raise capital.

This flexibility in the stock market ensures that the required funds are available to the public upon their need (Ben-Naceur, Ghazouani, & Omran, 2007).

Both ADX and DFM have taken on the initiative to get more companies to be listed with them and to diversify the financial instruments they are offering to the public. This initiative can increase the public interest in the stock exchanges activities. There are 60 companies listed with DFM, whereas ADX lists a separate set of 68 companies, and this is currently the largest of the financial markets in the UAE regarding market capitalisation and traded value. The main advantage of having two stock exchanges is that companies can choose where they are listed (Al-Mohana, 2016). The records indicate that the DFM has higher trading volumes than the ADX (SCA, 2014).

### 2.3.4 Performance of the Emirates Securities Market (2001-2015)

The Emirates Securities Market (ESM) witnessed several genuine improvements, along with its leading indicators since its launch in 2001. The ESM currently serves as a typical case of the newly emerging stock market with notable growth potential (Marashdeh & Shrestha, 2008). The historical performance of the ESM has passed over fifteen years through three distinctive periods and fixed 2008 (global financial crisis) as a significant year:

- **Pre-crisis** (2001 to 2007) within which the markets showing an apparent dynamic growth (Uprising period)
- **During the crisis** (Q3-2008 to Q4-2012) when the markets witnessed severe collapse in the market value of many listed companies (Declining period)
- **Post-crisis** (Q1-2013 to the present) in which, the markets almost recovered from the 2008 crisis consequences (Recovery period).

The financial performance of the ESM (2001-2015) by highlighting the records of

the three periods. However, the indicators including the market value, trading volume, trades numbers, and the companies listed, as demonstrated in Table 1.

Table 1: Financial performance of the ESM (2001-2015)

| Year | ESM Index | Market Cap (AED) | Traded Volume (Share) | Traded Value (AED) | No. of Trades | No. of Listed Co. |
|---|---|---|---|---|---|---|
| 2001 | 1,116.68 | 50,130,930,613 | 77,253,923 | 1,515,071,809 | 19,334 | 27 |
| 2002 | 1,253.36 | 109,784,090,882 | 209,230,202 | 3,861,378,020 | 36,341 | 37 |
| 2003 | 1,657.24 | 145,631,820,623 | 561,439,842 | 7,457,778,820 | 50,712 | 44 |
| 2004 | 3,251.57 | 305,803,235,070 | 6,069,276,451 | 66,786,465,772 | 299,280 | 53 |
| **2005** | **6,839.97** | **839,683,136,512** | 33,811,933,303 | 509,868,016,048 | 2,300,452 | 89 |
| 2006 | 4,031.01 | 514,697,464,200 | 50,939,871,239 | 418,149,306,407 | 3,138,749 | 106 |
| **2007** | 6,016.21 | 824,629,199,856 | 157,318,141,814 | **554,333,583,214** | **3,354,617** | 120 |
| 2008 | 2,552.23 | 363,872,030,000 | 126,439,280,603 | 537,134,415,081 | 3,257,450 | 130 |
| **2009** | 2,771.56 | 404,702,513,093 | 148,297,352,509 | 243,489,889,472 | 2,728,964 | **133** |
| 2010 | 2,655.32 | 385,429,934,198 | 56,003,360,875 | 103,804,933,675 | 1,158,505 | 129 |
| **2011** | **2,341.42** | **346,135,787,877** | 40,995,866,992 | **56,819,194,126** | 728,097 | 128 |
| 2012 | 2,561.21 | 379,062,031,092 | 56,858,376,402 | 70,705,517,247 | 880,087 | 123 |
| **2013** | **4,313.56** | **646,270,799,980** | 178,682,361,983 | 244,504,710,417 | 1,894,030 | 120 |
| 2014 | 4,580.13 | 728,367,040,778 | 217,895,212,945 | 525,955,281,277 | 3,272,329 | 125 |
| 2015 | 4,279.81 | 693,887,594,192 | 125,641,574,359 | 209,421,081,708 | 2,025,711 | **128** |

**Index**: Uprising Declining Recovery

(Source: ES&CA annual report, 2015; www.sca.ae)

(also, http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS)

The year 2005 had recorded the highest results in market CAP and Index when the ESM Index reached 6,839.97 points, and the market capitalisation/value reached 839 billion AED, despite that the total of the listed companies were only 89. Such significant rising might be attributed to the ESM regulations that allow the foreigners to invest in the UAE markets. The involvement of the foreign investments in the UAE financial markets has contributed significantly to increasing the prices of many listed securities above the fair value as they used to be before 2005. Such rises in the prices have occurred against the background of the continuous growth of the

GDP, along with the remarkable sustainable economic performance of the UAE, which led to improvements in corporate distribution and annual profitability.

The year 2007 was the highest in traded shares (value and number of trades) coincident with the sharp rising of the oil prices worldwide, booming in the real estate and infrastructure development sectors (Al-Mohana, 2016). In 2007, about 157 billion shares were traded to value about 554 billion AED where more than 3,354,000 trading transactions have been performed. These market conditions have encouraged more companies to become PJSC, which increased from 120 in 2007 to 130 in 2008 and to be highest in 2009 as listed 133 companies despite the continuation of the crisis's consequences. Such unexpected increase might be attributed to lack of fund because of the 2008 financial crisis. That funding situation triggered off a keen interest in the companies to get fund by going to be PJSC issuing an initial public offer (IPO).

The year 2011 was the lowest in ESM Index to record 2,341.42 points, Market Capitalization was 346 billion AED, and Traded Value was 56 Billion AED. This can be seen as the most substantial impact of the global financial crisis consequences on the UAE economic activities and financial market situation. In 2013, both ADX and DFM experienced gradual recovery from the consequences of the post-2008 crisis, which illustrated in return to be higher than the level of 2008 regarding ESM Index and Market Capitalization but did not reach the levels that performed in 2005-2007, hitherto.

On this issue, Al-Zaabi further explained the reasons behind this market behaviour. He indicated that during 2005-2007, the UAE financial markets were immature regarding

inflation, shortage ineffective rules and regulations, and a gap in balancing mechanism. Therefore, the speculation was highly unrealistic, which later resulted in a dramatic drop in the market higher than the world average (60-70% decline in the market cap and Index). However, ES&CA has not considered the financial performance of the markets in the 2005-2007 as a benchmark, while the 2008 global financial crisis has dramatically helped in initiating a severe correction to the global financial markets; particularly in the UAE growing markets.

Regarding ESM Index, it increased almost by 68%; from 2,561 points by the end of 2012 to 4,313 points by the end of 2013. At the same time, the Market CAP has jumped by 70%; from 379 billion AED by the end of 2012 to 646 billion AED by the end of 2013 to represent the highest market value gained by the UAE listed companies on the market since 2008, i.e., post the crisis year. This amount exhibits that the worth of these companies had increased by 70.45% above the value of the same companies at the end of 2012, one year before. The ESM however, has seen total trading of 178.68 billion shares performed throughout 2013 to value about 244.50 billion AED, whereas the shares traded during 2012 were 56.85 million valued 70.70 billion AED.

Most of the business sectors were striking an overall improvement in their performance during 2013. Al-Zaabi illustrated the current experience of the UAE markets, where the growth (Index and Market Cap) in the financial markets depends on new Initial Public Offers (IPOs), volume and value of trading, numbers of the transaction, investors motivation and preference, and Institutions' entry and trading, where the ROI could be better than alternative investments. In this case, the institutions should play

an intensive role in the market stability. It is worth to mention that the UAE markets are enjoying high accessibility to many securities and portfolios.

Al-Zaabi also cast some light on the severe drawback of the UAE financial markets, which suffer from the unavailability or limitation of products, such as bonds, and other hedging tools/products, such as options and futures. To avert such weaknesses, introducing new products will motivate some additional systematic entry of local and global institutions. However, ES&CA is currently working intimately with both ADX and DFM to develop a strategy for introducing new products shortly.

## 2.4 ESM Interrelationship with GDP

### 2.4.1 Traded Value and GDP

In 2005, the value of the traded shares of the ESM had reached the highest margin of GDP at 76.9% to gain value of 138.8 billion US$. While 2007 witnessed the highest amount traded with 150.9 billion US$, which represents 58.5% of GDP. Even with the initial shock of the global crisis in Q3 and Q4 of 2008, the traded shares value in 2008 was quite significant at 146.3 billion US$. Nevertheless, consequences of the global crisis in 2008 severely affected the total traded value to have dropped dramatically to less than 70 billion AED p.a. during the years from 2009 to 2015. The only exception was the year 2014 with a traded value of 143.2 billion US$.

It would be, thus, quite impressive to see how the ESM generates a vital business stream that can be considered as a significant element of the UAE economy. Over the entire examined period (2001-2015), the average of the traded value p.a. to exceed 25% of the UAE GDP, despite the dramatic drop from 2009 to 2013. Moreover, the values counted in AED have been converted into US$ purposely to perform a

comparison with the GDP. Figure 5 indicates how the traded value of ESM was performed in 2001-2015, along with its interrelation with the GDP movement as (percentage of GDP).

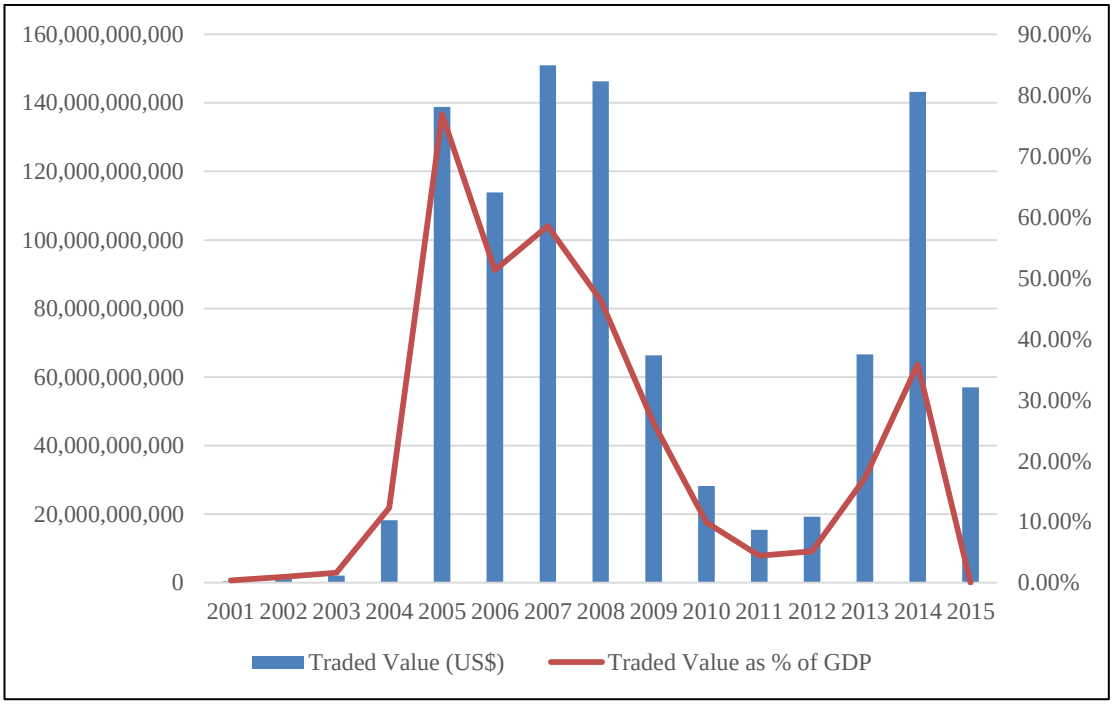


Figure 5: Traded value as a percentage of GDP
(Source: WB country report, 2016)

### 2.4.2 Market Capitalisation and GDP

Reporting on the market capitalisation by many economic organisations, such as the World Bank usually provides different calculations other than those released by ES&CA about the performance of the two markets ADX and DFM. Therefore, unifying the calculation method for market capitalisation becomes an urgent necessity. Al-Zaabi commented on finding an appropriate method for calculating market capitalisation accurately. He added "*ES&CA has realised this issue, but the main reason beyond not applying a unified source of calculation is that the ESM Index is virtual. Therefore, starting from 2016, ES&CA cancelled the ESM consolidated Index*

*to let each ADX and DFM develop and use its Index separately*. *In an advanced step, the World Bank Group agreed on using a unified mechanism to calculate the Markets' Indexes and Market Capitalisation*".

Referring to the available data compiled by WB Group to cover period 2001-2014, there is no sufficient data to compare the UAE records with other developing countries in the different continents. Regional wise, the average margins of the UAE Market Capitalization of listed domestic companies (% of GDP) performs better to record 38% than those developing countries in Europe and Central Asia, which recorded only 23.7%. Figure 6 represents a comparison of Market Capitalization of listed domestic companies (% GDP) between the UAE and other developing countries worldwide.

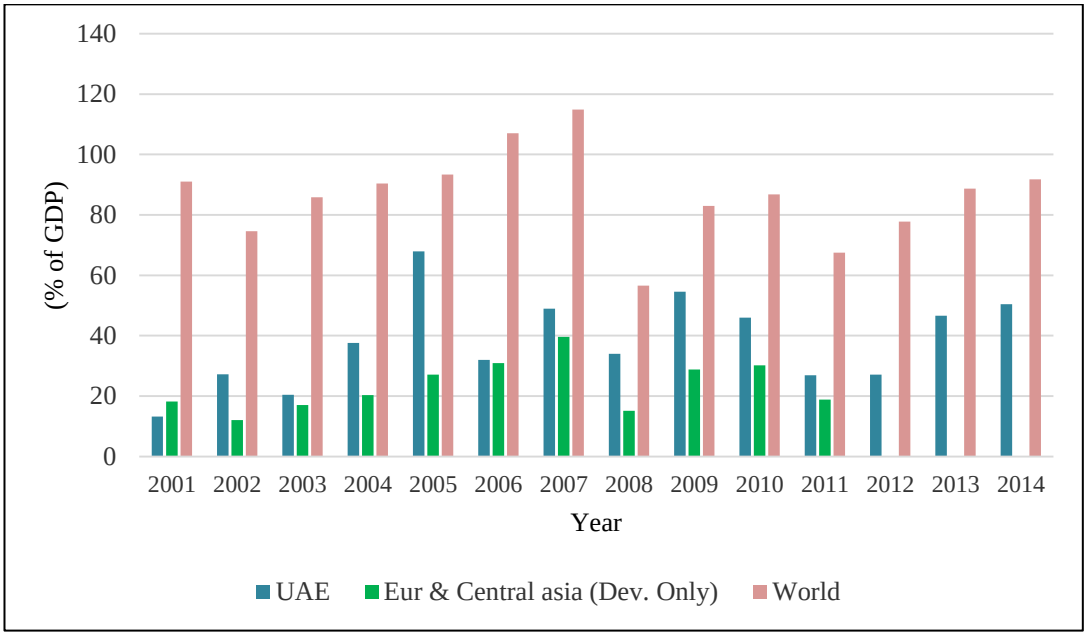


Figure 6: Market capitalisation of UAE and other developing countries
(Source: ES&CA annual report, 2015; www.sca.ae)
(also, http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS)

The interpretation of Figure.5 illustrations indicates the Market Value of the ESM as a percentage of the GDP has improved notably over the concerned period 2005-2014.

The highest margin recorded was 67.9% in 2005, and lowest one recorded in 2011 representing 26.9% of the GDP (93.7 billion AED), while it reached 50.47% in 2014, while in 2015 the Market Value still worth more than 50% of the GDP (in current US$). Thus, the graph indicates the UAE Market Value of the listed domestic firms (as a percentage of GDP) was a significant element of the national economy, and the ESM sometimes exceeds the country's economic performance, as shown in Figure 7.

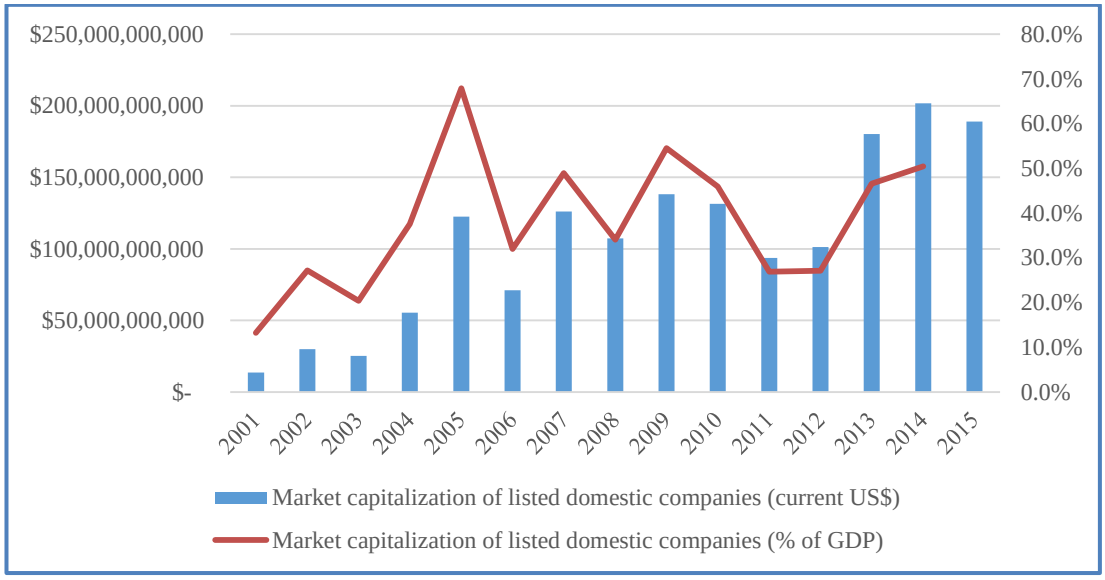


Figure 7: ESM *vs* the UAE economy performance (2001-2015)
(Source: ES&CA annual report, 2015; www.sca.ae)
(also, http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS)

The descriptive analysis that presented in the subsection 2.4 explains the significant importance of the UAE financial markets to its national economy (some years exceeded +50% of the GDP). It seems that there is an imposing mutual relationship between the financial markets and the national economy within which ES&CA could contribute in developing federal policies that can get the most benefits of such interrelationship.

Al-Zaabi added the ES&CA strategic plan (2014-2016) focuses on some dimensions to make the financial markets more attractive to encourage more corporates and individuals to increase their investments in the financial markets through:

- Introducing added-value services for variant customers include tools and new investment products to support the stability and attractiveness of financial markets. Developing focused studies and researchers to support the strategic directions for the development of the market.
- Applying efficient corporate governance systems that lead to adequate resources and expenditures.
- Providing updated, sufficient, adequate and reliable information support the investors in making the right decision.
- Enhancing ES&CA's identity and roles in developing the UAE financial markets sector.
- Raising the efficiency and effectiveness of control, licensing, implementation, and follow-up procedures.
- Developing effective coordination with all stakeholders in the financial markets and the commodities sector.
- Coordinating with partners to pass laws affecting the financial markets sector.

Thus, the possible mutual impact of the financial markets and the national economic performance in the UAE is the research topic of this study. Thence, the expected findings would be a significant reference source for the researchers, scholars, and policy-makers who are interested in the UAE economy and related financial issues.

### 2.4.3 ESM and Economic Growth

The relationship between economic growth and stock market performance is a recurring question amongst economists and financial analyst alike. In fact, according to the existing literature, some studies have established a positive correlation between economic growth and stock market development. Bencivenga, Smith, and Starr (1996), and Levine (1991) reported that stock market liquidity is crucial for economic growth, while Greenwood and Jovanovic (1990), as well as King and Levine (1993), showed that the stock markets provide timely and accurate information about the economic activity. Moreover, North (1991) showed that the developing stock exchange might lower the cost of transferring the ownership, which gains the investor's attention to investing in equity markets and, therefore, can increase the economic growth.

According to Sigel (2002) and Ritter (2012), there has been a negative correlation in the long run between economic growth and stock market return in both developed markets and emerging markets. This is also consistent with the work of Demirguc-Kunt (1994), which indicate that the ease with which shares can be sold on the stock market weakens corporate governance and it may decelerate economic growth. Another group of views believe that there is no correlation at all, given that the financial market is mainly affected by the speculation and reactions of the investors towards the results published by listed companies.

Estrada (2012) found no significant relationship between economic growth and stock returns and also the lack of correlation between the fundamental condition of a company and rate of return on its stocks. In this subsection, we examine the link between GDP growth and the ESM index development, under tight constraints of data

availability, to provide an adequate analysis of the relationship between the financial market and the Real Sector in the UAE.

In fact, since the GDP of the UAE, the leading measure of the economic activity, is available only on an annual basis with a considerable publication delay, there has been little attention to this relationship. To this end, in the absence of a quarterly GDP, we use in this dissertation the Economic Composite Indicator (ECI)[1], constructed by the Central Bank of the UAE, as a proxy for quarterly GDP growth. The ECI is constructed by synthesising a large number of macroeconomic variables reflecting the economic activity, using the Principal Component Analysis (PCA). These macroeconomic variables are collected from different sources, to obtain a dataset that covers a wide range of economic activity, such as global economy, sectoral activity, financial markets and price trends.

This index has proven to be a useful tool for the policymakers since it tracks the economic activity of the UAE closely on a quarterly basis and offers a timely clear picture about the current economic situation, in the absence of official data for quarterly GDP. Thus, the ECI has three significant advantages: first, it takes into account all critical policy issues, both at the national and international levels. Secondly, it captures economic fluctuations for the UAE at a relatively high frequency, compared to the available information. Finally, it could be used to give an early indication of turning points.

[1] Central Bank of UAE, Constructing an Economic Composite Indicator for the UAE, June 2017 https://www.centralbank.ae/en/pdf/dataroom/WP19062017.pdf

Thus, the preliminary analysis indicates a correlation of around 41% between the ESM periodic growth in percentage and the ECI year-on-year (YOY) change, as illustrated in Figure 8. Both indicators share most of the same turning points of the economic activity, which means that there is a significant and positive statistical relationship. Such relationship of the two indicators yields extensive information, which might reflect the UAE economic activity. A close analysis reveals that the one-quarter lag of the ESM is also correlated with the ECI, based on that many prior researchers assume that the stock market should reflect precisely the health of the economy. It found that this relationship is much stronger, with a correlation coefficient above 50%, as illustrated in Figure 9. This means that ESM is a leading indicator of UAE economic activity. Thus, substantial decreases in stock prices are reflective of a future recession, whereas significant increases in stock prices suggest future economic growth.

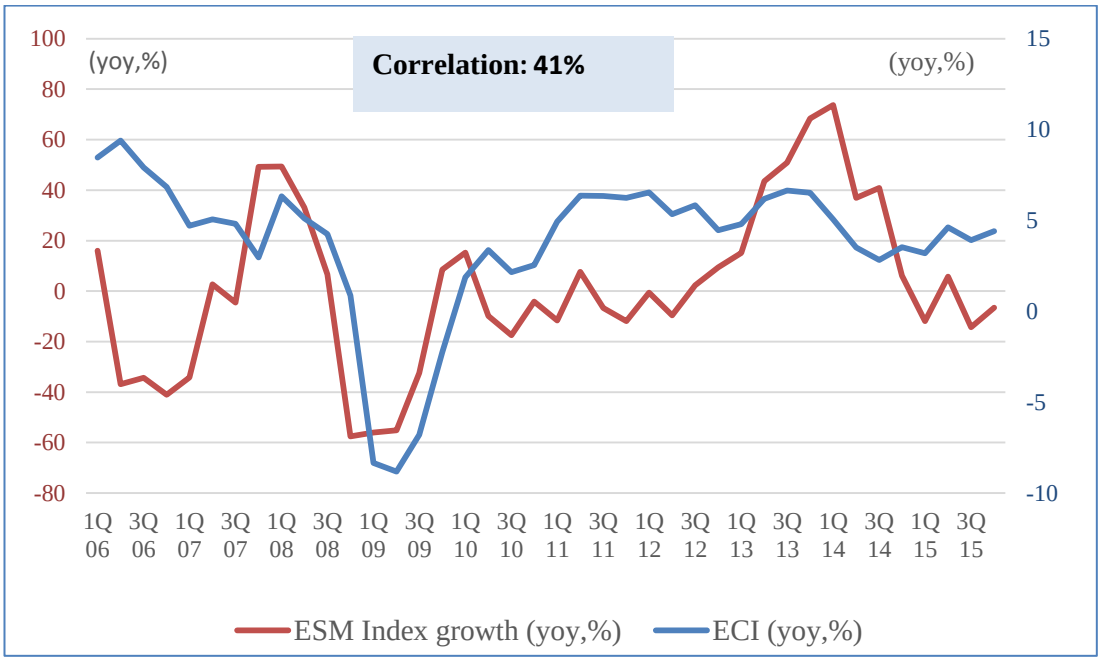


Figure 8: ECI and ESM developments
(Source: ES&CA annual report, 2015; www.sca.ae)

(also, http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS)

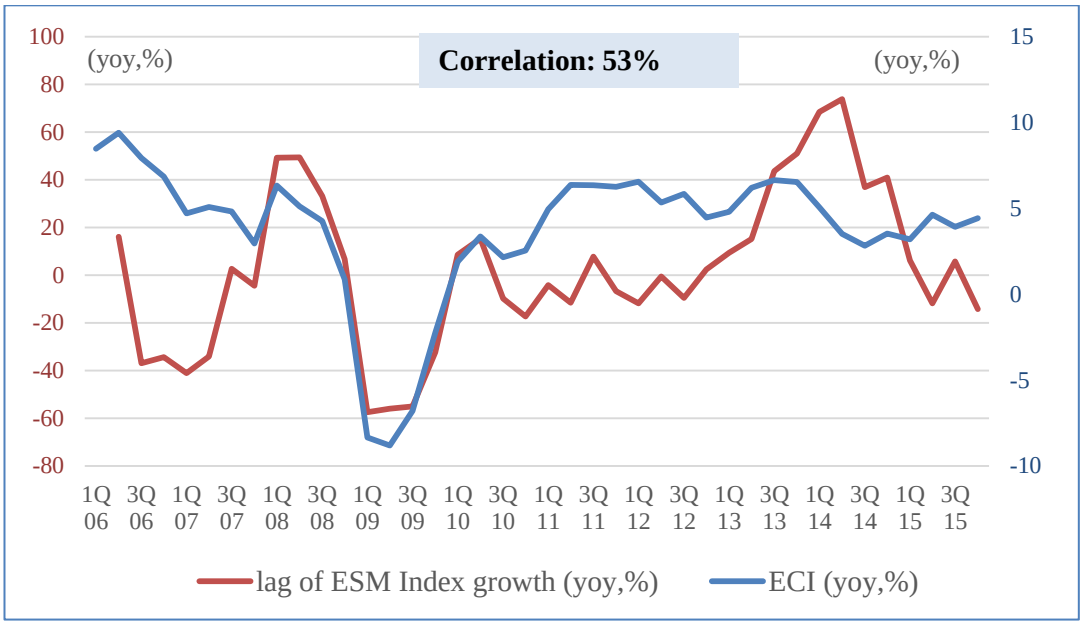


Figure 9: ECI and lag of ESM developments
(Source: ES&CA annual report, 2015; www.sca.ae)
(also, http://data.worldbank.org/indicator/CM.MKT.LCAP.GD.ZS)

Both figures show clearly that the ESM tracks the movements of the GDP growth rates strictly on a quarterly basis and picks up the major turning points in the series reasonably well. However, it is clear that this relationship is weak during some specific periods. This leads to other factors that could affect the stock market performance, such as the Oil price fluctuation. In our case, the Oil price is considered as a master element of the ECI. Hence, any fluctuation in the Oil price could explain the fluctuation of the proposed relation. As the UAE economy is oil-based, any significant change in the oil price could affect the investors' decisions immediately and impact on the listed companies' performance directly.

For this reason, we analyse the correlation between the ECI, the ESM and the Oil Brent price (as illustrated in Table 2), taking into consideration the specific periods described in the subsection 2.3.4. Therefore, the table below confirmed our assumption about the

between economic growth and stock market performance. In fact, the correlation between the lag of the ESM and the ECI is stable during the crisis and weak otherwise. Meanwhile, the oil Brent price is highly correlated with the ESM, especially during pre-crisis and the post-crisis periods.

Table 2: Correlation between ESM, ECI & Brent price growth in 3 periods (%)

| | **ECI & ESM** | **ECI & ESM (-1)** | **ESM & Brent price growth** | **ESM (-1) & Brent price growth** |
|---|---|---|---|---|
| **Pre-crisis**: Q1 06 - Q2 08 | -46.8 | 3.4 | 73.6 | 89.9 |
| **During crisis:** Q3 08 - Q4 12 | 68.9 | 80 | 83.6 | 68.6 |
| **Post-crisis**: Q1 13 - Q4 15 | 56.7 | 10.3 | 86.2 | 74.6 |

According to this simplified approach, based on correlation analysis, the UAE stock market could be considered as a leading economic indicator, but still affected by the oil market development.

## 2.5 Summary

Over the past two decades, the UAE economy has emerged as a growth-oriented and diversified economic paradigm. This economic paradigm has enabled the UAE to establish itself as a strategic and stable business and trade hub at regional and international levels. Nevertheless, the UAE enjoys with abundant hydrocarbon resources, which represent about 10% of the proven world reserves. The hydrocarbon-based industries for a long time have been the essential fuel of the UAE national economy and a significant contributor to the GDP, but the business diversity of today's UAE economy has contributed significantly to reducing reliance upon hydrocarbon revenues (Al-Shayeb & Hatemi-J, 2016).

Before the 1990s wrapping, most of the stock exchanges all over the world used to operate as mutual organisations. Historically, these stock exchanges began initially as individual clubs that eventually took a conventional construction. While their rules were evolved, the setting of a time and place of trading, the priority of trades, and monetary value-setting mechanisms were settled. In contrast, the consequences of the post-2008 global financial crisis remarkably slowed down the growth of the UAE financial markets. One significant feature of such adverse effects was illustrated in declining significant financial indicators, such as market capitalisation, trading value, and the number of listed companies. Thus, the effect on the UAE domestic financial markets by the global fluctuations and crises gives proven evidence that the UAE economy could pace with accelerated world economy development (Kern, 2012).

The two financial markets of the ADX and DFM have facilitated the growth of many business organisations significantly without causing any interruption due to the 2008 crisis consequences. Moreover, both markets help the foreign shareholders to play key roles in improving the financial situation of the post-crisis (Madura & Richie, 2007). The UAE has been striving to be a financial hub in both regional and global context. Therefore, the UAE developed its infrastructure, facilities, laws, regulations, and security environment, which are collectively representing encouraging factors to attract the international companies and foreign investors to run their business effectively (Al-Tamimi & Kalli, 2009; Al-Tamimi, Alwan, and Abdel Rahman 2011).

The UAE government looks forward to finding the best business and financial practices for improving its national economy. Therefore, it is necessary for the Government to propose a strategic plan purposely for mobilising the available resources (human and physical) to pave the way for migrating the traditional market

practices into smart one. Also, the companies that are interested to be listed should build its trust and reputation to avoid furnishing any false information or data to the customers, likewise to the market authorities. Such trust and transparency would set up an incentive financial environment.

Recently, some economic analyses highlighted an apparent sensitivity of the national economy towards global financial crises and even toward regional ones. Al-Zaabi indicated an initiative led to establishing a collaborative committee included ES&CA and other federal parties involved in the financial policies and strategy, such as the Federal Central Bank, Ministry of Finance, and Insurance Authority. This collaboration is needed purposely to set up and review the federal financial policies and strategies for developing effective rules, regulations, predictive tools, and preventive procedures to avoid or even reduce the consequences of any future crisis. Therefore, the primary purpose of the committee is securing the financial stability, especially for the financial sector and financial market.

Al-Zaabi summarised the unyielding effort of the ES&CA in making the local financial markets more attractive internationally. In 2016, ES&CA introduced the Self-Regulatory Organisation (SRO) project in collaboration with ADX and DFM. The SRO project allows the financial markets to organise their products, monitor the disclosures, and introduce further market/trading enhancement products. Also, ES&CA established an independent authority called Central Counterparty Processing (CCP) to monitor all types of potential risks.

The primary purpose of this independent authority is to establish a secure financial environment for the investors and traders against any crisis by maintaining the

exceptional level of security to avoid or minimise the possible negative impact of an upcoming crisis. Their central role is to predict possible risks and provide/propose hedging techniques. To exercise this control power, the CCP has the authority to interfere to stabilise the financial market.

Overall, the financial and business development in the UAE has represented an appropriate case for conducting this study in terms the security and stability of its business environment and financial performance despite that by the UAE is surrounded by a catalogue of political tensions. The ability of the UAE economy to recover rapidly from the consequences of the 2008 global financial crisis is evidence of the flexibility of the UAE national economy to absorb these financial shocks whether internally or at the global level. Such sound stability has attracted both local and foreign investors.

# Chapter 3: Literature Review

## 3.1 Introduction

The scholarly literature on the economic studies appeared over the last few decades reflects a steadily increasing concern with the dissertation of *finance* as a discrete discipline in the business and management studies like management, operations research. Likewise, scholars in the financial studies have relentless tried to define the *performance* of a firm in the financial strategy context, as well as explaining decisions that could be made in its favour. This concern is both the consequences of and responses to growing interest from within the business firm to adopt the tools of the financial management and strategy. The interest was sparked by many factors, among these were the successful employment, and increasing complexity and critical nature of decisions being created by technology in the financial market networks (Barton & Gordon, 1987).

Many financial firms are striving to achieve their business mission and market competitiveness using building an appropriate financial strategy through a precise definition of their respective business plans. Thus, the business firm is needed to prioritise its business activities as a responsiveness policy to meet the rapid changes in the local and global market environments, which might result in yielding new business conditions (Cibin & Grant, 1996; Pickernell & Hermyt, 1999).

Supporting this argument, Slater and Zwilein (1996) stated: "*The firm's financial strategy possesses a significant potential for influencing shareholder value creation*; *therefore, it is a product of firm's investment, financing, and dividend decisions*". This statement could be considered as a critical driver for establishing the underlying study.

Based on the possibility of having an impact on the firm's performance that might be resulted in the creation of shareholder value, we are examining empirically the firm's financial strategies from two dimensions, i.e. capital structure and cash flow management, within the context of the UAE, which has not been done before to our best knowledge.

In this context, Myers (1984) noted that many theoretical and empirical research studies on the financial issues had not developed a sufficient consensus about which factors are affecting the decision-making processes concerning the financial strategies directly, or how these factors, if any, could influence the firm performance, as well. Thus, both *concepts of strategy* and *theory of firm* have been used to establish a link between the strategy as a management tool and the firm's financial performance as an enabler for developing a firm-specific financial strategy.

Many financial strategists assumed that the impact of different financial strategies usually defers among various financial and market performance measures. Therefore, the management should pay careful attention to the trade-off relationship between these performance measures when considering different financial strategies. The selection of variant financial strategies to be examined, as well as, the definition of the proposed hypotheses is mainly based on the existing relevant literature. However, four of these strategies' proxies are being scholarly examined for the first time, where the existing financial literature did not trace any research work supported these unique proxies.

Yusuff (2004) linked the firm's best practices that contribute to superior execution with its business success. Accordingly, the business firm should propose an effective

strategy devoted purposely to enhance the sustainability of the firm success regarding enabling the business firm to gain, as efficiently as possible, an advantage edge over competitors in the same business domains (Ohmae, 1982). In general, the factors that could identify and determine a business firm as a successful entity have still been controversial and debatable. Still, all the business firms, whether successful or unsuccessful, are subject to stresses of finding an appropriate strategy to be adopted, such as flexibility in responding to unexpected alterations in the job market.

This dissertation initially attempts to bridge the gap in the performance of financial strategies through reviewing the existing related literature. So, introducing additional new suggested variables can fill the current knowledge gap. The comprehensive literature search probed the relevant previous financial studies that empirically tackled the dissertation theme; notably, the suggested research variables. Thus, the dissertation considers a literature gap relevant to its research problem by focusing on:

a) Examining the possible connection between the financial strategies and firm's business performance in the UAE context.
b) Examining the 2008 financial crisis consequences in the UAE's PJSC context.
c) Studying the interrelationship between the UAE National Economy and the Financial Market activities.
d) Employing six performance measures (dependent variables) together (4 financial plus two markets), and introducing four new factors (independent variables).
e) Examining the behaviour of the proposed interrelationships under different economic conditions (pre-, during-, and post-crisis).

The newly defined variables are going to examine, for the first time, the financial strategy-performance relationship under different economic conditions (i.e. before, within, and after the global financial crisis started in 2008) within the context of the UAE capital market. Likewise, this empirical dissertation takes on some of these standards in measuring the financial success of the UAE PJSCs. Accordingly, the primary assumption of this dissertation is that "*Different financial strategies under different economic conditions are leading to different performance*".

### 3.2 Theoretical Debates

Fama (1976) argues finance, among the diverse fields of economics, is a unique research domain, which balances between the theoretical views and practical grounds, which is the domain of the ongoing dissertation. Such mutual correspondence appears in the current globalisation of business activities and capital markets, which provoked many firms to pursue development of their management and business strategies to make out better performance in their respective business lines to surpass other competitors.

In their pioneer work, Fama and French (1992) explained the stock returned pattern and defined the actual driving forces of the stock returns through testing different factors/indicators. Consequently, the proposed hypotheses of this dissertation emphasise *theory of the firm* as suggested by Jensen and Meckling (1976), as considerably as the *concept of the strategy* developed by Andrews (1980), to expressing the management style. Once the management defines, some vital factors concerned with achieving its success; therefore, could reach sustainable competitive advantages to perform better than its peers, and above the market average performance.

Many firms, therefore, seeking usually the best and proper strategies for achieving their desirable performance and outcomes. However, the sound performance of a firm is considered as a vital factor for attracting the investments in its various business activities, whereas different firm-specific characteristics could explain different driving factors of success to exceed over the peer firms regarding the average performance of both sector and market.

Johnson and Soenen (2003) studied the indicators of successful firms to identify the factors and unique characteristics of firms that are significant to distinguish between successful and failed firms by testing the impact of potential indicators of the firm's financial performance. They agreed with Fama and French in defining the substantial financial success as an only market-related measure. In contrast, Höbarth (2006) conducted a dissertation to detect the critical factors involved in the superior performance for examining both profitability and cash flow measures. Differently, Erdamar, Adiloglu, and Gürsoy (2013) explain the successful firms as *"those were listed in the Istanbul Chamber of Industry's (ICI) top 500 firms list for ten years continuously"* without linking the variables to any other performance measure.

Based on the argument of Peter and Waterman (1982), which connected the firm size with its business success "*the big firms be potentially more successful due to their mass production, financial capability, and geographical coverage*", Pickernell and Hermyt (1999) stated that the definition of a successful firm had incorporated such specific criteria as *annual turnover, profitability, growth rate, return-on-capital-employed* (ROCE), and *size of the asset*. Moreover, they derived from the existing literature some such factors for figuring out fruitful and unsuccessful firms as strategic leadership, autonomy, market orientation, business capacity, integrity perception,

quality control, merchandise design, and evolution of core technologies and installations.

## 3.3 Performance Measurements

### 3.3.1 Historical Review

Organisation theory and strategic management representing the main twin drivers for studying the firm performance (Jensen & Murphy, 1990). On the other side, the financial, operational or market aspects can be performance measures, which represents the firm's effectiveness, and operational measures merely affect the financial performance. The market performance measures are the reaction of the investors and market to the firm's business results (i.e. earnings per share, share price, and market-to-book-value). Thus, this dissertation defines the performance measures in two dimensions, i.e. financial and market.

The financial performance measurement has sparked a keen interest in many researchers for investigating the firm's performance using a variety of profitability measures, such as return-on-investment (ROI), return-on-equity (ROE), return-on-assets (ROA), and gross profit margin measure (GPM) in studying financial performance (e.g., Zajac, Kraatz, & Bresser, 2000; Hassan & Halbouni, 2013; Ebaid, 2009; Majumdar & Chhibber,1999; Delios & Beamish, 1999).

The ROI can be measuring the financial performance of different approaches (e.g., Busija, O'Neill, & Zeithaml, 1997; Dess, Lumpkin, & Covin, 1997; Johansson & Yip, 1994). The main reason for using these measures to calculate easily by abstracting accounting numbers from firm's financial report (i.e., balance sheet and income statement). Other financial researchers have used more complicated

portfolio measures, such frontier efficiency, as Sharpe's ratio, and Jensen's alpha (e.g., Johnson & Soenen, 2003; Berger & Patti, 2006). However, Johnson and Soenen (2003) contributed significantly by adding the advanced and sophisticated method, namely economic value-added (EVA), which requires robust adjustments of reported figures to avoid any distortion of financial data.

Regarding market performance measurement, many researchers determined the value stock performance of a firm by employing share price, earnings per share, or dividends cash payout (e.g., Stattman, 1980; Basu, 1983; Chan et al., 1991); Fama & French, 1992). In contrast, other financial researchers used market-to-book-value or Tobin's Q in determining the firm's value (Keats & Hitt, 1988; Woo, Willard, & Daellenbach, 1992; Farjoun, 1998; Combs & Ketchen, 1999). Some researchers have started recently using a combination of financial and market measures to examine the firm's performance, so, this dissertation does.

For instance, Marquardt and Wiedman (2004) reviewed the mix of stock returns and volatility, whereas Zeitun and Tian (2007) used Tobin's q, which mixes market and accounting values. Abor (2007) applied two performance variables; these were accounting-based and Tobin's q measures. Hassan and Halbouni (2013) incorporated two sets of variables to measure the firms' performance, i) ROE and ROA as accounting-based measures, and ii) the market-based measure (Tobin's q) to measure the market-to-book value (MVBV) ratio.

### 3.3.2 Current Studies

The previous studies revealed that neither a single performance measure could be an appropriate approach, nor could a single method be considered as the best way to

estimate the firm's value despite the accessibility of various scientific methods to act thus. Consequently, the performance measures and firm valuation could defer among studies to expect different results. Based on a literature review conducted on the topic, the performance measures that could be useful for all firms in this context, according to the underlying assumptions, are selected to consider in further analysis tasks.

The study chose six different measures from the reviewed literature for evaluating the performance and determining the success of firms by testing each hypothesis empirically against each performance measure. These measures categorised into two broad dimensions **i)** financial performance (i.e., ROI, net profit (NP), Earnings per share (EPS), and growth rate in sales (GR_Sale)], and ii- market performance (i.e., share price, and Tobin's Q (Market-to-Book-value). These two dimensions are crucial for any listed firm to evaluate the performance and achieving success in the way to reach their optimal goal of maximising the shareholder value.

As part of performance analysis, it is assumed that these measures will have interactions and interdependent relationships as discussed in many scholarly works. Hassan and Halbouni (2013) mentioned, "*Due to uncontrollable factors of the market-based measures, executives prefer accounting-based performance since these measures are easier to control. However, market-based measures are more objective since it is out of firm's control, and can be affected by different economic conditions*". Therefore, this dissertation will employ both dimensions of measurements to validate the impact of various financial strategies on firms' performance.

### 3.3.3 Financial Performance

Most of the previous empirical studies reviewed have largely adopted the financial measures for proper firm's valuation (Kaplan & Ruback, 1995; Gilson, Hotchkiss, &

Ruback, 2000; Johnson & Soenen, 2003). The advantages of using such measures are the accessibility of data, simplicity of calculation, and the comparability among peer firms. Hassan and Halbouni (2013) argued, "*The market-based performance measures are objective ones under normal economic circumstances while the accounting-based performance measures are better ones in the years where unstable* economic conditions exist".

Many empirical studies have investigated the impact of the various factors on the firm performance that might be affected by the consequences of the global financial crisis in 2008 within different business environments worldwide. However, the financial scholars paid little attention to investigating such consequences on the firm performance in the GCC countries and other MENA countries. Consequently, there is an apparent scarcity of scholarly research concerned with this issue. The differences in accounting and financial reporting standards, however, could affect the financial performance patterns. In connection to this, Hitt, Hoskisson et al. (1997) argued, "*Despite differences in accounting standards overall trends and analysis should not be affected too much by them*".

As the financial performance as a concern of this research, four measures (as detailed below), namely *Return-On-Investment* (ROI), *Net Profit* (NP), *Growth Rate* (GR) in sales, and Earnings per Share (EPS), are primarily involved in the evaluation of the firm's financial performance. The four nominated measures have been a subject of intensive research investigations. Thus, it is worth to present definition of the previously mentioned evaluative factors to gain a better understanding of firm's financial performance in the domains of investment, profitability, and asset growth.

#### 3.3.3.1 Return-On-Investment (ROI)

ROI is well recognised, by financials and management practitioners, as a critical ratio to evaluate different investment opportunities between the firms of similar business activities. It explains how much money a firm need to invest to generate specific income, and what would be the profit of such investments. Thus, among an essential firm-specific characteristic for all shareholders is how their firm does employ the available money efficiently in the various investments, particularly when a comparison between different groups of companies is adequately exercised. Therefore, ROI was the first method used in measuring how management is efficient in operating the firm. As it is easy to compare among many companies using the ROI, it indicates the efficiency of the investment money among those companies.

The ROI is a master ratio widely being used rather than profitability measure because the ROI considers all possible internal factors. Therefore, the ROI has a direct positive impact on the firm's profitability (Johansson & Yip, 1994; Busija et al., 1997; Dess et al., 1997; Höbarth, 2006). The ROI, which is a key financial performance measure used in this dissertation, has some drawbacks, such as the differences in accounting standards used by different firms could create challenges when comparing a group of the firms, although no other single measure could be considered unbiased. Moreover, the ROI is calculated in this ongoing dissertation as net income divided by invested capital including long-term debt plus all shares and then multiplied by 100.

#### 3.3.3.2 Net Profit (NP)

Net profit, synonymously as net income or net earnings, measures the profitability after subtracting all firm's costs. i.e., it is the money remain over for shareholders after paying all expenses. NP is a thus useful instrument for comparing how firms are

successful. It is also a measure of how the assets are efficiently employed and how much profit a firm can generate by every Dirham earned.

NP either in rectilinear figure or as the margin is expected to vary by firm and by sector. However, a successful firm is that generates a high net profit than its peers do, or above the average of its sector. The main reason for including the NP is because easily calculated, and a reliable method for comparing various firms. In this study, we will use NP as a financial performance measure instead of *Gross Profit Margin* (GPM) that appeared in other works (e.g. Ebaid, 2009; Majumdar & Chhibber, 1999).

#### 3.3.3.3 Growth Rate (GR) in Sales

Growth is literarily defined as the key driving factor for sustainable success and continuous development. Many scholarly studies have proved the importance of long-term growth as a notion of business success and market competition (e.g. Woo et al., 1992; Nohria, Joyce, & Roberson, 2003; Mass, 2005; Höbarth, 2006). Different Internal Growth Rates (IGR) have incorporated in investigating the gross production, sales, income, assets, and human capital as performance measure (e.g., Woo et al., 1992; Nohria & Ghoshal, 1994; Margarethe & Liebeskind, 1995; Simmonds & Lamont, 1996; Davidsson et al., 2002; Höbarth, 2006).

The work of Davidsson et al. (2002) shows that "*Business age, beginning size, ownership form, industrial sector/market, ownership, and legal form are the most important factors related to growth*". According to Evans (1987), the firm size and growth rate has a significant negative relationship; consequently, the industry sector is considered as an essential factor to impact on the firm growth. In our dissertation, the industry sector could be designated as a control variable. In this dissertation, the GR in sales is used as a performance measure to present its change of the annual total sales.

The dissertation also assumes that the financial strategy-sales growth rate is an existing positive relationship as reported by Woo et al. (1992) and Höbart 2006).

Almost all the UAE PJS firms faced dramatic downturns and severe challenges in recovering their financial status, as well as sustaining their growth post-2008 global crisis. This situation gives a good reason to determine which-of-which financial strategies could potentially impact the growth rate as performance measure across all sectors of the UAE capital market. However, there is an apparent scarcity of scholarly research works concerned with this issue.

#### 3.3.3.4 Earnings Per Share (EPS)

The earnings per share are the amount of money that allocated to each share if a firm distributes all of its profits to the outstanding shares at every fiscal period end. Despite that some of the previous studies considered EPS as a market performance measure (e.g., Stattman,1980; Basu, 1983; Chan et al., 1991), most of the academics, like Fama and French (1992), defined it as a *financial measure* since EPS is seen as a firm's profitability indicator to explain how profitable a firm is from the shareholders' view.

The employed EPS in this dissertation is considered as "*financial performance measure*", similar to Fama and French. Also, it is easy to use this measure to compare among a group of the firms. Investors always prefer a firm with higher earnings per share (EPS); it is expected to distribute more money against each share. EPS is a key variable used to determine a share's price/value as it presents the history of profits distributed to shareholders, as well as can be considered to predict future earnings. When a firm generates income by using its capital efficiently, this will lead to higher EPS, and will consequently impact positively the share's price/value. The

EPS is = (Net Income-Dividends) divided by Average Outstanding Shares (Instead of "average outstanding shares", some practitioners use the number of shares outstanding at the end of the period).

Practically, the fund providers, financials, analysts, and investors use EPS ratio to compare different shares or firm performance. However, the context of financial strategy-EPS relationship has drawn little attention and rarely conducted in empirical studies. Höbarth (2006) used what was so-called "cash dividend" instead, which is the sum of all paid dividends. However, this EPS measure has a significant disadvantage, which the accounting standards and valuation methods used can show a significant variance either over an extended period within a firm or among a group of the firms. Therefore, it cannot rely on a single performance measure; thus, there is no other single measure can be considered unbiased or without disadvantage.

### 3.3.4 Market Performance

The top managers usually possess privileges of administrative control and authority power on accounting-based performance. However, different economic conditions can affect the adopted measures of the firm devoted market performance while the market-based measures are out of the senior managers' control, (Hassan and Halbouni, 2013). Moreover, the market performance measures have received increasing attention in the major financial studies (e.g. Stattman, 1980; Basu, 1983; Rosenberg, Reid, & Lanstein, 1985; Chan et al., 1991; Fama & French, 1992).

Other approaches employed in measuring the market performance; nevertheless, two measures are involved predominantly in measuring the performance, these are: i) Share Price, and ii) Tobin's Q or Market-to-Book-Value. Hence, in this dissertation, both

financial and market performance measures were used in the test of the relationships between the financial strategy and the market performance. Thus, investigating this relationship is for bridging the knowledge gap through verifying the impact of different adopted financial strategies on the market performance of the firm of various dimensions and some related factors.

#### 3.3.4.1 Return of the Share Price (Return)

The return of the share price (movement) is an important common instrument used frequently in many empirical studies to measure the firm's market performance (e.g. Stattman,1980; Basu, 1983; Keats & Hitt, 1988; Jensen & Murphy, 1990; Chan et al., 1991; Fama & French, 1992; Woo et al., 1992; Farjoun, 1998; Combs & Ketchen, 1999; Höbarth, 2006). Share price presents the current market value (market capitalisation) of a firm compared to its book or ultimate share price; thus, it affects the investors' decision to buy, keep, or sell the share.

A firm with higher share price than its book or maximum price shows above expectation performance and indicates the future expectations of investors. According to Höbarth (2006), a stock can be affected by speculation for maximum a period of three to five years. To avoid the possible influence of speculation in the short term, I shall measure the share price movements over almost 40-quarters (average of ten years) to reflect the firm's real value for the prudent investors. The assumption beyond that is: when the share price is positive, the market reacts to increase firm's value.

#### 3.3.4.2 Tobin's Q (Market-to-Book Ratio)

The second market measure used in this dissertation is Tobin's q measures the ratio of stock price to book value per share. It is used as an instrument for market performance

to measure the firm's debt and equity market value to the assets' current replacement cost (Aljifri & Moustafa, 2007; Hassan & Halbouni, 2013). Therefore, Tobin's Q is the "market-to-book value (MVBV) ratio". Moreover, Tobin's Q is considered in many scholarly studies as an important and widely accepted measure of corporate performance (e.g. Chung & Pruitt, 1994; Dogan & Smyth, 2002; Ang & Ding, 2006). The reason behind the frequent uses of this measure is attributed to the stability of firm's assets compared to the volatility of share price.

Chung and Pruitt (1994) state, "*Tobin's Q has been employed to explain some various corporate phenomena, such as cross-sectional differences in investment and diversification decisions. The relationship between managerial equity ownership and firm value, the relationship between managerial performance and tender offer gains, investment opportunities and tender offer responses, and financing, dividend, and compensation policies*".

Therefore, Tobin's Q, as a reliable measure, provides conscious perception in how financial strategies are essential for business vitality. In contrast to another complicated measure such as EVA, MVA, Sharpe's ratio and Frontier efficiency, Tobin's q is free of scale bias measure (Chung & Pruitt, 1994). Tobin's Q ratio, as MVBV, is "the market value of the firm divided by book value of total assets at the end of each financial period". Thus, Q is easy to be calculated as all of the inputs can be directly abstracted from the firm interim financial reports, and is calculated as:

$$Q = \frac{\text{Total Firm's Market Value}}{\text{Total Firm's Assets Value}}$$

The ratio figure is an essential indicator of investors' decision, which if a q value equal or less than (≤1), it means that the share is undervalued. *Vis-a-vis*, if a q value bigger (>1), it means that the share is overvalued. In this study, we will examine the impact of variant financial strategies on Tobi's Q value to predict the investors' approach.

### 3.3.5 Theoretical Framework

This section aims at connecting scholarly work of strategy as *per se* with those works tackling firm's financial performance to address a set of assumptions suggesting an interpretation the strategic financial decision in the context of strategy perspectives. I used the *theory of the firm* as proposed by Jensen and Meckling (1976), and the *concept of the strategy* developed by Andrews (1980), as main theories, to establish a linkage between firm's financial performance and *strategy concept* through the capital structure and cash flow management to create a type of financial strategy.

The idea of the strategy serves as a theoretical framework within which additional elements or variables can be incorporated to define the strategy-specific issue. Considering establishing this link, Bettis (1983) suggested that the interdisciplinary research between strategy concept and financial performance would be useful in defining the formulation of corporate strategy. Also, such theories as *Corporate Finance*, *Resource-based View* (RBV), and *Pecking-Order* have been used parallel to explain the relationships between firm's performance and various potential variables.

## 3.4 Financial Strategy

A growing body of financial literature examines the strategic decision of the firms on models for managing their financial assets. In this case, while firm planning for achieving sustainable business growth and stability, it must adopt the right financial

strategy to be a driving force for enabling the assessment of its financial needs and sources. Such assessment is required to meet the firm's proposed business objectives conveniently, and likewise to fulfil the concerned financial mission; therefore, the *financial strategy* is considered a firm-specific tool. Hence, the Firm's Board of Directors and Management (FBD&M) is eventually responsible for re-structuring this strategy that derived from the firm's business and market involvements.

The recent trends in the strategic business management research adhere to the dissertation of *finance* as a discrete discipline within the classic theories of economics, business management, econometrics, and public administration. Many scholarly works tried to identify the financial performance of a firm in the management strategy context. Thus, many existing theoretical and empirical research in financial studies have not developed a consensus about which factors can develop a direct effect on the decision of financial strategies, or how these factors, if any, could influence the firm performance (Barton & Gordon, 1987; Myers, 1984). Thus, the conceptual approach of this dissertation would be by merging the *financial strategy concept*, and *firm's theory* has bridged the *strategy* as a management approach with the implementation of the budget to give birth to the *financial strategy of the firm*.

Deploying a financial strategy thus needs a precise definition of a business plan (Short/Mid/Long-term) for achieving the firm business mission that merely devoted to sustaining its competitiveness in various marketing domains. Consequently, the firm is needed to prioritise its business activities based on the mission and objectives of its strategic plan as a responsiveness policy to meet the rapid changes in the financial market environments (Cibin & Grant, 1996; Pickernell & Hermyt, 1999). However, Slater and Zwilein (1996) indicated that "*The firm's financial strategy has significant*

*potential in influencing the creation of shareholder values*; *therefore, it is a product of firm's investment, financing, and dividend decisions*".

Some factors, as *capital structure*, are significantly affecting the firm's performance (i.e., financial and marketing). Much attention paid to probing any relationship whether as positive, negative or none that could be set up to the firm's performance and capital structure (Salim & Yadav, 2012). Recently, the finance scholars are striving to identify the factors that could be related to the successful firm strategy.

Grienitz and Schmidt (2012) identified some strategic success factors that involved in reversing some of the German firms working in the automotive supply industry into successful companies. These factors were including an active market investigation, efficient operations, project management, knowledge management, and admission to skilled employees. In summary, these successful firms are well-positioned concerning a broad range of engineering innovations, like outsourcing, and developing a significantly immediate reaction towards the changes in their business surroundings.

The migration of a firm from failure to the successful entity is paced with the generation of *business values*. This issue has received proper attention from related financial studies to suggest that the business firms that reached consistently above the average of financial performance are frequently being characterised by having sound managerial values. So, each of these firms usually produces its specific values as a portion of its success to preserving its commitments to focusing on the customers and suppliers, promoting innovation and pursuing improvement; also, establishing fruitful relationships with their employees. These values can support the business success of the firm through the compactness of the competition racing with their peers.

In general, the factors that could identify and determine a business firm as a successful entity have still been controversial and debatable. Still, all the business firms, whether satisfactory and unsuccessful, are subject to stresses of the importance of adopting appropriate strategies, such as flexibility in responding to unexpected alterations in the job market. However, some of the researchers have agreed upon common factors be used in identifying the degree of firm's success. Pickernell and Hermyt (1999) enumerated some such factors determining success and failure of firms as strategic leadership, autonomy, market orientation, line capability, integrity perception, character control, merchandise design, and evolution of core technology and facilities.

Inquiry about this topical theme has revolved around the assumption that specific financial strategies should either boost or hinder the competitive performance of the business firm. This research dissertation is exploratory and empirically driven; it examines the potential relationship and its impact of various financial strategies on both short-term and long-term organisational performance of the UAE PJSCs in a period span of ten years (2006-2015), with which the 2008 global financial crisis has happened, with its post consequences., which developed the research intention of this dissertation study.

### 3.4.1 Financial Strategies as Potential Factors

The financial strategies standing for the possible factors in the performance of a firm *above the average* usually reflects the creation of the shareholders' value. This superior performance could be measured against either peer, sector, or the entire market, although, many researchers in strategy-related domains consider management techniques and applications within the strategic studies (Hofer, Murray, Charon, & Pitts, 1984).

As long as the financial strategies are the concern of this dissertation, there is still disagreement among the community of financial economists upon what possible factors affect the right selection of specific types of financial strategies to maximise the wealth of the shareholders, regardless such selected strategies exert any effect on the firm-specific value. Within this disagreement context, therefore any proposed financial strategy seems “economically defensible". Concerning the corporate strategy, many scholars dealt corporate studies under the umbrella of financial research, such as marketing, manufacturing, and financial research domains; therefore, the financial strategy study is scholarly accepted as a functional research field in the economics (Barton & Gordon, 1987).

Some specific indicators explain how some firms achieve a superior performance leading therefore to creating the shareholders’ value. Other stakeholders, such as policy-makers, fund providers, suppliers, customers, management, and employees are also having a profound interest in monitoring and tracking successful firms. The process of making the right decision is considered a fundamental aspect of corporate strategy. In contrast, both corporate strategy and financial, economic theories have not furnished sufficient information or useful guidelines for financial practitioners or academics. Thus, both financial scholars and practitioners are still suffering from scarcity of needed information for making better financial decisions, along with realising to what extent the importance of the involved factor would be.

This dissertation considers the role of financial strategy- performance relationship since little has been written about financial strategy as a potential driving factor for success. It is believed that different indicators and ratios reflect the result of the strategies’ implementation have explained the existence of various financial strategies.

Thus, this dissertation assumes different financial strategies possibly influence the performance measures differently. The primary role of the financial strategy in measuring the performance of the business firm is catalysing the applications of the related theories and concepts to financial strategies as capital structure and cash flow management. These applications of the concerned theories are expected to cast much light over the connection between financial strategies and firm's performance as an organic part of its target goals.

### 3.5 Capital Structure

The capital structure is defined in the financial practices as "*how a firm finances its overall operations and growth by using different sources of funds*". The firm's capital structure can be a mixture of long-term *debt*, short-term debt, common *equity* and preferred equity. A firm's proportion of short- and long-term debt is considered when analysing the capital structure. When analysts refer to capital structure, they are referring to a firm's debt-to-equity (D/E) ratio, which provides insight into how to risk a firm is. Usually, a firm that is heavily financed by debt has a more aggressive capital structure and therefore poses a higher risk to investors. This risk, however, may be the primary source of the firm's growth.

The financial studies have witnessed an ascendancy of research in the capital structure and its impact on firm performance. For instance, the co-founder of the *Google*™ Patrick Pichette has described this issue in 2009 as a central matter of the business firms at all levels. Thus, the emphasised the role of the open market and free trade in the efficiency of the capital structure in the context flexibility theory "*If we could predict the strategic flexibility, we would need it for such conditions as uncertain*

*business environments, and market saleability; thus, we could optimise the balance sheet seamlessly for keeping the amount of debt low*".

The genuine interest in tackling various aspects of the capital structure might be attributed to many reasons; Firstly, there is a significant gap existing between the capital structure-related theories and its professional practices in the financial domains. Secondly, the differences in the viewpoints of the financial researchers on how to take on the capital structure concept. For example, Frank and Goyal (2008, 2009) and Singh and Kumar (2008) inclined towards the *theory of trade-off* in describing the driving force behind the decision processes regarding capital structure functionality. In contrast, the *pecking-order theory* was the ideal approach of many other researchers (e.g., Shyam-Sunder & Myers, 1999; Lemmon & Zender, 2010; Văidean, 2014) in investigating the driving forces of the capital structure in various contexts.

Graham and Leary (2011) debated whether the key associated problems in the financial research field are due to the lack of convincing theories or complications with empirical estimations of the facts that might be associated with the capital structure. *The agency theory* (Jensen & Meckling, 1976; Fama, 1980) has paved the way for deciding the optimal capital structure within the framework of the total agency costs while minimising amongst the involved agents, shareholders, and bondholders. On the other hand, it has been observed that the increase in dividend payouts causes the free cash flow to reduce. Such counteractive relationship enforces the business firm to extend its activities into the external markets and subject to monitoring. This, in turn, may result in a significant reduction in the related agency costs (Easterbrook, 1983; Jensen,1986).

Debt-to-Equity Ratio is a key measure of capital structure. Debt is one of the two most important ways firms can raise capital in the financial markets. Firms like to issue debt because of the tax advantages. Interest payments are tax-deductible. Debt also allows a firm or business to retain ownership, unlike equity. Additionally, in times of low-interest rates, debt is abundant and easy to access. Both debt and equity can be found on the balance sheet. The assets listed on the balance sheet are purchased with this debt and equity. Firms that use more debt than equity to finance assets have a high leverage ratio and an aggressive capital structure.

A firm that pays for assets with more equity than debt has a low leverage ratio and a conservative capital structure. That said, a high leverage ratio and an aggressive capital structure can also lead to higher growth rates, whereas a conservative capital structure can result in lower growth rates. It is the goal of firm management to find the optimal mix of debt and equity, also referred to as the optimal capital structure. Debt comes in the form of bond issues or long-term notes payable, while equity is classified as common stock, preferred stock or retained earnings. Short-term debt, such as operating capital requirements is likewise believed to be part of the capital construction.

Equity is more expensive than debt, especially when interest rates are low. However, unlike debt, equity does not need to be paid back if earnings decline. In contrast, equity represents a claim on the future earnings of the firm as a part owner. Analysts use the D/E ratio to compare capital structure. It is calculated by dividing debt by equity. Practical understanding, the financial firms have learned to incorporate both debt and equity into their corporate strategies. At times, however, firms may rely too heavily on

external funding and debt. Investors can monitor a firm's capital structure by tracking the D/E ratio and comparing it against the firm's peers.

Many empirical studies in the field of corporate finance noted the existence of the capital structure-performance relationship. Patel and Bhatt (2013) argue that the *"capital structure decisions affect the liquidity and profitability of a firm"*. Similarly, they examined the capital structure decision-performance relationship through testing six proxies represent decisions of financing and investing in assets against six performance measures. Capital structure formulation defines how a firm could finance and invest in its assets. Despite there is no perfect formula for the equity-debt ratio, in reality, management usually exercise different options to improve the efficiency to reach a superior firm performance.

Modigliani and Miller (1958) introduced the *theory of corporate finance* and modified in 1963 by incorporating the tax effects. The modified theory and its model postulates that the actual value of a firm increases as more leverage (*the ratio of the debt to a firm's loan capital to the equity as a value of its common stock*) is utilised because the subtraction of payment interest (after-tax debt) allows further operating income to circulate among the investors. Modigliani and Miller (M&M) proved their theory assumption in the real-world of the capital markets. In other words, if the lower cost of post-tax debt is more significant than offsets, the equity cost increases parallel the growth in firm's leverage, causing the *Weighted Average Cost of Capital* (WACC) to decline continuously whereas, the firm value increases steadily. Consequently, the UAE does not impose taxes on doing business hitherto; we do not expect any advantage of using more debt to reduce the WACC. Therefore, we hypothesise that higher debt would be leading to lower performance.

Andrews (1980) focused on the firm's financial status (debt vs equity) from a corporate strategy perspective. According to him, this status represents a necessary functional decision of financial strategy, which is expected to be consistent with the long-term strategy of the firm. However, the previous thirty years witnessed a boom of empirical studies conducted globally to examine the capital structure-performance correlation (e.g. Banz, 1981; Basu, 1983; Chand, 1988; Fama & French, 1992, 1998; Zajac et al., 2000; Johnson & Soenen, 2003; Höbarth, 2006; Berger & Patti, 2006; Aljifri & Moustafa, 2007; Ebaid, 2009; Patel & Bhatt, 2013; Hassan & Halbouni, 2013; Văidean, 2014).

Among the list mentioned above of studies, further studies conducted in the GCC region, which covered such specific factors as government ownership, advantage level, and firm's size to be used as control variables. For example, Kamal Hassan and Saadi Halbouni (2013) and Ebaid (2009) investigated governance-performance relationship by using the firm's size as a control variable. Further, most of these studies in the region covered a short period that does not reflect the market fluctuation under different economic conditions, which is the research problem of this dissertation. They also suggested that these research areas yielded interesting findings including the supply side of capital, capital structure-labour contracts connections, financial contracting, dynamic *trade-off theory* and capital adjustment mechanisms.

Regarding the local causes of the 2008/2009 financial crisis, some investigations on this issue have accused the nature of the capital structure to initiate the crisis, even at local level. Moreover, the different availability and accessibility of information, along with misconduct behaviour of the stockbrokers have collectively compounded the crisis. The perfect market is a conceptual financial term that assumes a financial market

with no asymmetric information, moral commitments, benefits yield, and the like. This concept predicts findings of classical finance theories as follows:

a) The capital structure does not matter to a firm (Modigliani & Miller, 1958).
b) Prices of securities are equal to the expected value of the future earnings.
c) Investment and capital structure decisions are independent (Fisher separation theorem, 1930) and all the investment projects with positive Net Present Value (NPV) should be undertaken.

In the real world, we found empirical evidence that contradicts the predictions mentioned above of a perfect market. For instance, the assumed empirical evidence supports the following:

a) The capital structure does matter to the firm.
b) The newly issued shares are quite low-priced.
c) The firms with positive NPV projects may gain different levels and routes of access to the credit.

The *trade-off theory* has been recalled in the current research on the capital structure to explain does matter where the firm possesses vast amounts of tangible assets tending to be financed with more debts rather than the firm with large amounts of intangible assets. In deciding on the proper capital structure for a firm, shareholders and top management must balance the potential risks before repaying the debt with the availability of equity capital to pursue steady growth of market opportunities. The reviewed theories in the previous studies can help in the validity of the aim of this dissertation "*different capital structure determines the firm's performance*".

Most of the existing financial models presuming that the demand of the firm for debt or equity exclusively determines its capital structure. This implies the flexibility of the capital supply in these concerned models; therefore, the business behaviour and the availability of capital supply are entirely relying on the firm-specific characteristics. In this case, we suppose that the existing assets of a firm can sustain continuous cash flows. Thus, the firm would gain some taxation privilege by averting its debt with the profits. Nevertheless, its leverage would be restricted due to the specific cost of the debt financing (Fisher, Heinkel, & Zechner, 1989; Leland, 1998).

The relationship between the firm characteristics and the debt-to-equity ratio has received much attention from scholars and professionals of the financial community. The substantial growth is a mirror of the firm's characteristics regarding capital intensity, investment ratio, business size, return-on-total assets, and export ratio. Moreover, debt-to-equity ratio characteristics impact significantly on the firm growth; for instance, its high value is often associated with the lower growth, whereas, the high gained profitability of the total assets is associated with higher growth. Therefore, much scholarly proved that a firm having a significant financial structure would be an enabler of a dynamic growth (Forss, 2006).

The capital structure theories have opened a new track for intensive research in firm's financial business. Thus, the vital importance of studying the capital structure is giving a predictive tool for achieving greater financial success for the firm (Ross, Cox, & Ingersoll., 2005). As the capital structure is still being a central financial concern, defining an ideal firm' capital structure is a financial research challenge facing a theory of finance during the past quarter century (Bradley et al., 1984; Mikkelson, 1984). Since the capital structure is an intriguing area of financial research studies, it may

attract other disciplines, such as econometrics, to share in finding results for unanswerable questions raised in capital structure functions. Ross et al. (2005) considered prescribing an exact formula for computing the optimal rate of the firm's leverage is a central issue, whereas an attractive link between the leverage and firm profitability looks to exist. Thus, this dissertation attempts to confirm such relationship between leverage level strategy and firm performance.

The *trade-off theory* of the capital structure involves using the real debt as a tool to drive of generating returns. Thus, this theory highlights the advantages of the tax over the debt and other leverage-associated costs both directly or indirectly, also indicates that the peak level of debt is a firm-specific to be chased by the financial directors (Bradley et al., 1984; Mikkelson, 1984). Myers (1984) unveiled the gap in the *trade-off theory*, which is the leverage target level for the business firm does not exist to enable a successful firm uses less debt. Therefore, Myers proposed the *pecking-order theory* to fill the revealed gap. Thus, the stable relationship between leverage target level and profitability, as hypothesised in this dissertation, could be described as negative.

Ross et al. (2005) presumed that the profitable firms are capable of producing sufficient internal funds to be utilised or invested in financing their business projects. Such plenty financial resources of the company would be sustaining its ranking in the financial market to obey the *pecking-order theory*. Therefore, such mutual relationship between leverage and profitability can take on the best way to determining the optimal capital structure. The capital structure of a firm is a mix of its equity and debt. In other words, it is the amount of equity and debt, and the types of debt and equity used to fund the operations of the firm. "*Although this article is not intended to test capital*

*structure theories in an international environment, we need first to understand the role of various factors in the capital structure decision*" (Öztekin, 2015).

This dissertation was trying to explain how the structure of capital can impact on the firm's performance; its conceptual interpretation/philosophy is that there are many items could define how the capital is structured, which are those affecting the management of decision on capital structure, and what the types and proportion of each component.

The investigation on the research problem has been made possible through incorporating six variables as *proxies* for the capital structure to explore the relationship between the capital structure and firm performance. This dissertation has determined six common financial strategies, namely leverage level, unrelated assets, firm's size, capital expenditure, government ownership, and sustainable growth rate. Moreover, any management approach can use one of them in examining the capital structure-performance relationship. A keen concern on investigating various aspects of capital structure determinants and the institutional characteristics across many countries has found the way to scholarly literature (e.g., Rajan & Zingales, 1995; Booth, Aivazian, Demirguc-Kunt, & Maksimovic, 2001; Antoniou, Guney, & Paudyal, 2008; Fan, Titman, & Twite, 2012). The following are details of each strategy.

### 3.5.1 Leverage Level

Our Definition: *How much the firm borrow (debt) as a percentage of total assets, such as money to operate and expand the business*.

According to Modigliani and Merton (1963), the main reason for a firm to borrow money (increasing leverage level) is to gain the tax deduction benefit. Many financial studies (e.g., Chand, 1988; Fama & French, 1998; Johnson & Soenen, 2003; Berger & di Patti, 2006; Höbarth, 2006) have proven that the increasing leverage level is a cheaper fund than the equity. The arguments of these studies that to borrow money can raise the return-on-equity (ROE) and stock return, which means better performance. However, borrowing money may increase the firm's cost and financial stress (Merton, 1977). Nevertheless, a firm can employ different funding strategies to define its proper debt-equity ratio, which depends on the firm's specific characteristics, by considering a trade-off benefit-cost relationship between debt and equity (Höbarth, 2006).

The early studies in this field reported different results of the leverage-performance relationship. Chand (1988) and Berger and Patti (2006) found a positive relationship between the firm's performance (stock return) and debt level. Despite Fama and French (1998) reached a negative relation between debt and performance (i.e., firm's value), they also found no enough evidence of the tax benefits from borrowing money.

In contrast, Johnson and Soenen (2003) not accepted any correlation between the capital structure and performance, whereas, a weak-to-no impact between capital structure and firm's performance including the ROE, the return-on-assets (ROA), and the gross profit margin (GPM) existed (Ebaid, 2009). Hassan and Halbouni (2013) used the leverage level, which is measured by the amount of total long-term debt to total assets considered as a control variable; find that the leverage-performance relationship is not significant.

The generating findings revealed that the leverage was negatively related to the stock market performance. However, the more levered a firm is, the more likely the firm would not able to fulfil its contractual commitments. In other words, a massive debt can be leading to a higher probability of bankruptcy and financial recession. Thus, the firm with a higher level of leverage can associate with weak financial performance, but this relation would be reciprocal for the firm with a sizeable debt-to-asset ratio. The Theory of *Corporate Finance* could also be an approach to explaining why more leverage is being used? The reason might be attributed to the deductibility of interest payments that allows more of the operating incomes to flow through to the investors.

In this dissertation, despite the different findings of previous research, we will follow Fama and French (1998) assuming a negative relationship between debt and performance. Therefore, this dissertation will assume that the higher is the leverage level, the lower is the firm's performance. Nevertheless, this dissertation examines the impact of leverage level on the six suggested measures of the firm's performance.

### 3.5.2 Firm's Size

Our Definition: *The total assets that could be represented by the tangible value of a firm*.

The size of the firm is a standard variable used in measuring the firm performance through employing different methods, such as market value/capitalisation, total assets, sales, or number of employees (e.g., Banz, 1981; Basu, 1983; Fama & French, 1992); Barber & Lyon, 1997; Rouwenhorst, 1999; Zajac et al., 2000; Johnson & Soenen, 2003; Höbarth, 2006; Fagiolo & Luzzi, 2006; Ang & Ding, 2006; Zeitun & Tian, 2007; Ebaid, 2009; Hassan & Halbouni, 2013).

The early years of empirical studies on the relationship between firm size and growth had employed the cross-sectional analysis in which logarithmic *firm growth* is regressed on logarithmic *firm size* at the initial period including lagged growth. The debate over the relationship between both is still vivid. Some empirical studies showed mixed evidence about the relationship between firm size and growth; whereas, some studies gave evidence of no existing relationship, others have found a positive correlation (Mansfield, 1962; Utton, 1971; Singh & Whittington, 1975).

The recent studies on manufacturing industries found that an inverse size-growth relationship at either the firm's level or the plant level predominates (Evans, 1987; Hall, 1987; Dunne & Hughes, 1994; Blonigen & Tomlin, 2001). More recently, studies have favoured using panel data to examine the growth size relationship, as panel data analysis makes it possible to control for time-invariant individual effects. Nakano and Donghun (2011) investigated the interaction between substantial growth and profitability. These findings also exhibit a high inverse growth-size relationship to suggest that the small firms grow faster than large firms; also indicates the mean-reversion of growth rates over the long-run. The larger firms become more competent over time, and there is less room for further improvement in these firms regarding profitability and growth, in turn, leading to a random process for growth, especially among larger firms (Kiani, Chen, & Madjd-Sadjadi, 2012).

Robson and Bennett (2000) examined the growth of the British small and medium-sized firms to find a positive relationship between both profitability and sales growth but also profitability and number of employees (firm size). However, the growth of the sales is considered to be a statistically significant result. Kung et al. (2002) surveyed 672 registered members of the British Institute of the Entrepreneur to find a positive

relation between sales growth rate and profit growth rate. Liu and Hsu (2006) found a significant positive effect on the growth of the firm, as well.

Asimakopoulos, Samitas, and Papadogonas (2009) investigated the determinants of firm profitability of non-financial Greek firms listed in Athens Exchange. Their findings showed that the firm profitability is positively affected by size, sales growth and investment; whereas, negatively by leverage and current assets. Frank and Goyal (2009) documented the critical factors for the American firms are industry leverage, market-to-book assets ratio, tangibility, profits, inflation, and firm size. Rajan and Zingales (1995) examined the size of the business firms and its impact on the performance across the G-7 countries to find that the dominant factors were the market-to-book assets ratio, tangibility, profits, and firm size. However, what is unknown yet is whether the results from primary industrial countries extend to a much larger panel of countries.

Hamilton, Shapiro, & Vining (2002) used a sample of Hi-Tech Canadian firms to test the Gibrat's Law to conclude the firm size has a significant impact on firm's growth, causing smaller companies to grow faster than larger ones. Likewise, Lotti and Santarelli (2001) noted that different industries have different patterns of growth and that the size of firms can change significantly over the time. Jovanovic (1982) set up a theoretical model to analyse the survival of firms. The model showed that both the age and size of the firm were essential factors in determining its market survivability; it also revealed that the small firm could grow faster but likely fails earlier than large one does.

The empirical findings show that profitability measures, especially ROA and firm size have a positive and significant effect on firm's financial success whereas leverage is

negatively related to stock market performance. In contrast, as the firm grows, the financial performance improves but after a certain size, this relationship appears to reverse. In some empirical studies, the firm's size was used as control variables (e.g., Zajac et al., 2000; Ebaid, 2009; Hassan & Halbouni, 2013) to find the firm's size-performance relationship was positive and significant. Other studies reported a positive and meaningful mutual impact on the firm size and performance (e.g., Johnson & Soenen, 2003; Höbarth, 2006; Zeitun & Tian, 2007).

Despite the weakness of using total assets measure, as the total assets can dramatically be affected by the valuation method and different accounting standards, it can be easily obtained from the financial reports. Furthermore, it is assumed that the extended period covered by this empirical dissertation will be improving the reliability of this figure. The literature search revealed different findings of the firm's size-performance relationship where a negative correlation was frequently reported in many studies (e.g., Banz, 1981; Basu, 1983; Fama & French, 1992; Barber & Lyon, 1997; Rouwenhorst, 1999).

In contrast, due to specific characteristics of the UAE business environment, this dissertation assumes the firm's size-performance relationship is positive, and therefore, the more prominent firm will perform better than peers, sector, and market. Thus, all the previously reviewed work in this section agreed upon "*A firm's size is an important determinant of firm performance*".

### 3.5.3 Capital Expenditure

Our Definition: *A sort of expenses used to purchase or upgrade the firm's assets those are important to generate income or future business*.

According to accounting standard is capitalised expense, capital expenditure is "*money paid, in particular, period, to acquire additional assets to the existing Fixed Assets list, or to upgrade the existing ones*". Depends on generating additional income and future business, proper employment of property is a success factor of superior firms. Johnson and Soenen (2003)) and Höbarth (2006)) both used ROA as a performance measure to assess how assets can generate income and how efficient the management is in utilising these assets; their findings were similar in reaching a positive relationship between ROA and firm's performance. However, this finding did not exist with most of the performance measures used (e.g., financial and market).

A higher ROA means more profit to increase the overall business profitability to eventually push the share price to increase and lead to higher market value. In this dissertation, examined the relationship between capital expenditure and six performance measures (i.e. financial performance and market performance). Similar to previous studies, in this empirical dissertation, the assumption will be, *the higher the capital expenditure, the higher the income will be, the better the performance is*.

Despite that, in the short-term, capital expenditure led to lesser profits and cash flow when a firm spends the money, in the long-term, it is expected to have a positive relationship. The Resource-Based View (RBV) theory could be used to explain the investment in related assets; in other words, the firms can earn superior returns if they can obtain sufficient resources. A literature review revealed that, to the researcher's best knowledge, this variable had not been tested within the context of the UAE capital market or the GCC region.

### 3.5.4 Government Ownership

Our Definition: *Government ownership may add value to firms, as they can provide variant support and protection, and therefore, they may define how the capital structure is*?

In principle, government ownership will add value to firms, as they can provide variant support and protection. The government-owned firms operate more efficiently by controlling their expenses. However, this is maybe applicable to the domestic market not when a firm operating in the international market.

Most of the previous studies, using data before the global financial crisis in 2008, examined the impact of government ownership on firm's performance. For example, Ang and Ding (2006) compared this relationship between government-owned and non-government owned firms. He finds that government ownership provides remarkable support that helps in achieving superior financial and market performance summarised in high value and more significant return. Aljifri and Moustafa (2007) evaluated the governance mechanisms to examine the impact of government ownership of firm's performance and find a significant positive relationship.

Nevertheless, to the researcher's best knowledge, this variable has not been tested under different economic conditions in the region. Especially, with considering the government support provided to certain firms after the global economic crisis started in 2008. Similar to previous studies, in this empirical dissertation, we will examine the government ownership-performance relationship to determine the possible influence on different performance measurements of the firm (i.e. financial and market). Similar to the studies mentioned above, it is assumed that government-owned firms will perform better than non-government owned firms.

### 3.5.5 Sustainable Growth Rate (SGR)

Our Definition: *The SGR* is *the money that remains internally from profits and is not paid out to shareholders (i.e., a maximum growth rate that a firm could maintain without borrowing more money; it, therefore, impacts the capital structure decision.*

It defines how much a firm can grow with self-funding. A firm can increase its sustainable growth rate either by increasing its profits and generates more cash or minimising the payment of dividends. The *Pecking-order theory* states that when a firm prefers private financing (retained earnings) that the external one. Thus, the business firm maximises the value at the point where the marginal benefits are in the balance against the marginal cost of increasing debt. Therefore, the decision on the capital structure is a fundamental element in the overall corporate strategy of the firm. Myers (1990) debated over a well-defined ratio of debt to equity in the context of the *pecking-order theory* of capital structure.

Andrews (1980) indicated the capital structure decision be a crucial element of the overall corporate strategy of the firm. The collective evidence on the capital structure shows that the moderate use of debt increases the firm's value and lowers the cost of capital. The firm can increase its value when the debt costs are in the balance of the leverage and marginal benefits. Therefore, the firms may adapt their capital structure to minimise the total agency costs and the negative signals that may be sent out as a result of information asymmetries. Thus, the investment and dividend decisions do play a significant role in setting the optimal capital structure. Thus, firm's growth through retained earnings and skilful use of financial derivatives can presumably ready to mitigate the future financial crises.

The business firm growth and profitability have drawn lots of attention since the early years of the twentieth century. Gibrat (1931) proposed the first law to investigate the patterns of the business firm growth, namely (Law of proportionate effect *LPE*) as an alternative to neoclassical theory. The *Gibrat's Law* employs both firm's growth and size as dependent and independent variables, respectively. The law defines the growth of a business firm as "*The firm tends to change the distributed proportions of its size randomly to set forth an equilibrium firm size to which all business firms meet*". In other words, the small firm having the same growth opportunity equally to that of the large firm, if the small one operates in the same industrial sector.

The LPE sparked a deep interest in many financial community researchers to investigate it in the various industrial/business environment. Geroski, Lazarova, Urga, & Walters (2003) examined the LPE using panel data on 147 United Kingdom (UK) firms over a 30-year span to find the growth rates varied over time. Moreover, these firms showed no tendency to the converge on either a standard size or a pattern of stable size differences over time, which is consistent with the LPE. In the same context, Oliveira and Fortunato (2006) investigated the LPE using panel data on Portuguese manufacturing firms to find an inverse growth-size relationship and, hence, rejected the LPE. Goddard, Wilson, and Blandon (2002) examined the LPE using panel data on 443 Japanese manufacturing firms for 1980-1996 to find an inverse growth-size relationship and a mean-reversion of log firm size thus rejecting the LPE.

Çoban (2014) investigated the interaction between the firm growth and profitability using panel data on 137 Turkish listed manufacturing firms over the period 1997-2012. According to results, there is a statistically significant positive relationship between current profits and current growth. The impact of current profits on current growth is

much stronger than the impact of current growth on current profits. These results appear to contradict the theories of industrial organisation, which suggest a negative relationship. With such a range of findings, it is not surprising that the debate remains on whether the LPE holds or not.

Penrose (1959) indicated that there is an inverse relationship between the current growth and the future profits to yield "*Penrose effect*", which states that "*As the business firm grows, it tends to spend more on administrative costs due to inefficient management, and rates of profit decrease accordingly*". Likewise, Marris (1964) suggested if the motivation of the firm's managers by increasing salaries, power, non-financial benefits, and prestige would increase the loyalty and commitment of the employees to the employer. However, this incentive policy might be associated with size rather than with the profit. So, if the managers are interested in striving to pursue the achievement of their objectives, they could blend firm's objectives into theirs.

The various limits on the market size may constrain the growth in demand, which can be removed by diversification; however, there are some limits to the rate at which firms can diversify successfully without suffering the profitability, where the growth and profit compete interdependently. Therefore, the firm needs to opt a proper position to meet the continuum of inverse profitability-growth relationships. In other words, firms face trade-offs between growth and profit. Thus, the current profits are a crucial factor when predicting future growth (Goddard et al., 2004).

Coad (2007) performed a similar analysis on French manufacturing firms and concluded on the contrary that profit rate and subsequent growth are independent. Coad also found that lagged growth has a positive effect on subsequent rates of profit,

also contrary to Goddard et al. (2004). Coad (2010) states a negative correlation between growth and profitability based on his findings. Moreover, Bottazi et al. (2008) reported that there is not a remarkable relationship between growth trend and the differential profitability. Roper (1999) indicated that the high profitability is not persistent above-average growth rates for Irish firms, while Gschwandtner (2005) argues that there not a statistically significant relationship between firm growth and profitability for the American firms.

Serrasqueiro, Nunes, and Sequeira (2007) employed different panel estimators to have found the relationship between growth opportunities, and profitability is nonlinear. These findings suggested that the *agency* problems between managers and owners are especially relevant to firms with average growth opportunities, as managers seem to act to grow while decrease profitability, simultaneously. In their later study, Serrasqueiro et al. (2009) revealed the actual effect of growth on persistent profitability is positive.

Capon, Farley, and Hoenig (1990) had an opposite finding to the view of growing more than their rivals become more profitable as a result; these results would imply that business firms having low and high growth opportunities usually tending to catch an advantage for high profitability, and the other firms have small profitability. The SGR calculation formula is "*Multiplying the Earnings Retention Rate by the Return on Equity*". Therefore, a high SGR is not always a good sign for investors; a firm should pay particular attention to the *trade-off* relationship between a high earnings retention rate (money not distributed to shareholders) and high dividend payout.

Johnson and Soenen (2003), and Höbarth (2006) concluded that sustain the growth rate is a critical indicator for successful business firms. Thus, this conclusion reported a positive relationship between sustainable growth rate and firm's financial and market performance. Thus, this dissertation hypothesises similarly as Johnson and Soenen (2003) and Höbarth (2006) stated that the higher the SGR, the better the performance.

### 3.5.6 Unrelated Assets

Our Definition: *When the firm uses its capital, external funds, and returned earnings to invest in non-core business investment for acquiring assets purposely for generating more incomes and future expansion of the business*.

It is apparent that utilising available assets is a critical factor in success and superior performance. Many business firms usually invest in developing new functions and activities or acquire assets unrelated to their core business (such as financial assets, properties, investments in other enterprises and joint venture) as a strategy to diversify their businesses. Many such factors as surplus liquidity, expected return, a new phenomenon, market trend, and some executives' experience or preference are the drivers that can support a decision on how and where to invest. The key common measure to evaluate the assets' performance is the ROA, which is usually used to assess the performance of the entire assets.

*Resource-Based View* (RBV) theory could explain the investment pattern in unrelated assets. The financial firms can earn superior returns if they can obtain exceptional resources, which cannot be easily copied by their competitors; therefore, not diffused throughout the business markets. Therefore, it can produce more economically to

satisfy the needs of the customers efficiently. A resource is an absolute asset that could be a strength or weakness of a firm and tied semi-permanently with it (Caves, 1980).

The RBV focuses on the strategic choice for identifying, developing and deploying the critical resources for maximising their returns. Thus, achieving a sustainable competitive advantage is the conventional RBV of the firm (e.g., Penrose, 1959; Wernerfelt, 1984), while Porter considered the competitive advantage concept as the main starting point for the RBV (especially Porter's five forces model). According to Peteraf (1992), the heterogeneity in assets implies that the different capabilities can assist the firms in competing well in the marketplace while achieving different results. Barney (1991) indicated that heterogeneity among firms allows some of them to gain some competitive advantages.

The increasing opportunities in the financial markets for firms received little attention from the financial community, where it could be a proper approach for the explanation of performance. If the firms' managers tend to maximise their utilities and not to current profits, they will sacrifice to increase growth, investing in projects with excellent growth opportunities to sustain their firms' performance. This argument received much attention and further developed the *agency theory* context (e.g. Fama & Jensen, 1983; Jensen, 1986).

Regarding the startegy of business diversity, Montgomery (1994) found the firm that adopts business diversity would be less profitable. In some cases, diversification is closely related to a firms' core product leading to increasing profits (Rumelt, 1997; Teece, Pisano, & Shuen, 1997). Gemba and Kodama (2001) analysed the dynamics of diversification in the Japanese manufacturing industries to conclude what the business

diversification was not related to a firm's core field that tends to decrease profitability, even contributes to high growth. Thus, the firm can achieve high rates of profit by exercising market power through restricting production levels for obtaining high-profit margins per item sold. Such relationship between profitability and business diversity implies that the current growth correlates with future profit negatively.

The existing body of financial literature revelated severe scarcity of empirical studies regarding that the impact of the investment in unrelated assets or irrelevant business domains on the relationship between financial strategies and firm's performance. However, based on the RBV theory and the study of Peteraf (1992) on "*the heterogeneity in assets*", this dissertation puts much concern on examining the impact of the firm's investment in unrelated assets on its different performance measures. Thus, the study assumes that a firm that tends to invest its surplus cash in unrelated assets would perform better than peers in the same sector.

One can disclose that, due to the variance in accounting standards, the unrelated assets were difficult to define and hard to be extracted directly from the financial statements due to the unique characteristics of each sector/industry (Zuca, 2013). Therefore, in this dissertation, the unrelated assets consist of all figures categorised in the balance sheet/financial position as investments (any investment), financial assets, and any other property, which are unrelated to the firm's/sector business nature.

### 3.6 Cash Flow Management

Over different business life cycle and accounting periods, a business firm can either generate positive or negative net cash flow temporarily. The net decrease/increase cycle in cash and cash equivalent position in a single period is a result of the three

activities presented in the cash flow statement; these are operating activities, investing activities, and financing activities. By merging all these activities' net cash contribution, the available cash and cash equivalent stand for the opening cash balance available to be used in financing these activities in the next period.

Concerning the works of Ping and Zuguang (2009), the main concern of running an enterprise is not its business boundary, but the efficiency of upper management. If the effectiveness of the directorate is improved, the border of the firm will expand naturally. Accordingly, the firm's performance does not come only from the unique products and services, but also from the management's performance. Management activities may consist of planning, organising, leading, and controlling including liquidity control. Management of cash flow and working capital play a master role in the firm's management to maintain optimal business performance and satisfy various stakeholders' interest and expectation.

Thus, it is evident that both superior performance and shareholders' value creation are a matter of leading management practices. Hence, measuring management practices and efficiency regarding managing the cash flow and working capital is a critical factor in firm's performance. So, each decision would affect the cost and financial results of running a business either directly or indirectly. In this dissertation, defining the relationship between managing the cash, including working capital, financial strategies and the firm's performance is assumed that a firm that is generating positive net cash of the period will gain a better liquidity position, and consequently a better firm's performance than other peers.

The correlation between different activities management and variant performance measures will be examined to evaluate how these factors are significant characteristics of successful firms. We determined five common financial related strategies usually adopt any management to consider the cash flow management-performance relationship. These strategies are known as i) Cash Conversion Cycle-CCC (as a proxy for working capital management), ii) Cash generated from operating activities, iii) Cash generated from investing activities, iv) Cash generated from financing activities, and v) Cash holding position.

In general, the primary networks of any access to cash sources money are more likely to be used for:

1) Increasing distributions to equity via dividend payments or share repurchases.
2) Decreasing the cash amount, which is necessary to raise it in the financial markets, which based on the firm's capital market accessibility.
3) Efficient recovering from the existing debt or other liabilities of the firm.

The argument is that under any of these scenarios, the nominal cash value might think that the punishment needs signs tend to increase. The reason behind existing this relationship is that as the firm’s cash status recovers, the firm would become more expected to give out funds and less liable to raise cash. However, we claim that the firm that encounters significant financing obstacles; mainly, when valuable investment opportunities are coming across, the marginal value of cash should be higher for the firm, which can easily raise additional capital.

The preference of the firm’s upper management is the crucial factor making financial decisions, for instance, of investment options, capital structure, and dividend policy.

Therefore, the financial economics must furnish applicable guidelines to enhance the upper management in the selection of preferable financial strategies. Andrews (1980) stated, "*The nature of the firm may cause variation in the preferable goals of top management; therefore, the strategic financial decision should be inconsistent with such goals*". However, the final decision must properly balance the business interest of the firm against what was economically defensible. The investigation on the cash flow and working capital management issue is applicable through incorporating five variables, as *proxies*, to examine the relationship between the cash flow management and firm performance. This dissertation has defined five common financial strategies, namely cash conversion cycle "CCC", Operating activities management, investing activities management, Financing activities management, and Cash holding position. The following are details of each strategy.

### 3.6.1 Cash Conversion Cycle (CCC)

Efficient working capital management is a crucial characteristic of any successful firm. Richards and Laughlin (1980) introduced the cash conversion cycle (*CCC*) approach, which defines the analysis method of working capital management efficiency. Thus, the *CCC* is the time interval between the cash outflow paying suppliers to cash in-flow from customer. In other meaning, it is the total days of the cycle between the cash outflow for purchase to receive sales in-flow money.

Many financial scientists based their research on the *CCC* model (e.g., Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014) to conclude that the business firm with efficient working capital management is the most successful firms. Gill et al. (2010) concluded that a significant negative relationship existed between the CCC (as a proxy for working capital management)

and profitability. They added improving profitability is possible by reducing the credit period granted to their customers to exist a connection between CCC and cash sufficiency. Nevertheless, reducing the time between suppliers' invoices payments and cash collection from customers/sales can maintain the firm's credit rating, as well as creating shareholders' value (Johnson & Soenen, 2003; Ukaegbu, 2014). In this dissertation, we are following revealed literature and assume a negative relationship, that, the shorter the *CCC*, the better the performance.

### 3.6.2 Operating Activities Management

Operating activities represent all the main activities and transactions that a firm is involved in operating the business for generating profits. In other words, they cover all the core business activities needed for generating money using purchase products or raw materials, sales income, services income, General and Admin expenses (G&A), marketing expenses, and any other related factor. The operating activities should then be the leading resource of firm's generated cash flow. Therefore, the operating activities are indicating the profitability of a business firm.

The literature review revealed that, to the researcher's best knowledge, this factor has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance. It is necessary to consider what would be the contribution of operating activities (as short-term actions) to the overall change in cash. Thus, it is assumed that a firm that generates sufficient cash from operating activities higher than the net changes in the cash flow and cash equivalent during the concerned period will be performing well than its peers in the same sector or market.

### 3.6.3 Investing Activities Management

Cash flow from investing activities is an essential aspect of growth and capital, as it means the company is investing in future operations. Investing activities represent all activities involved in buying or selling long-term fixed assets and investments in related domains. It shows that how a firm does manage the money used to acquire long-term assets or investments as (outflow), or received from selling these items during the specific period as (inflow). These assets and investments are considered by the firm as necessary transactions to generate long-term business and income.

Accordingly, the normal direction of the investing cash flow should be "negative", as sometimes, firms need to spend money on making more money. In this dissertation, we assume that a firm with negative cash from investing activities will have better performance. However, the literature review revealed that, up to our best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

### 3.6.4 Financial Activities Management

This section discusses the liquidity and efficiency of a financial firm in using the available cash for generating more fund (either internally or externally) to run or expand the business activities. It is worth to note that, the financing activities, operating activities and investing activities, to the researcher's best knowledge, have not been studied empirically, nor tested for defining the relationship between financial strategies and firm's performance.

Financing activities are all the activities and transactions that represent long-term liabilities (creditors), as well as the equity (investors). It shows how a firm manage the provided money (internally and externally) using in operating or expanding the business during the specific period. These transactions include paying loans, dividends, new loans and financing, new stocks, and stocks buyback. Moreover, financing activities of the cash contribution could be either positive through bank borrowing, loans, and raising additional capital/equity, or, negative through loan repayment, finance/interest cost, and paying dividends. Nevertheless, the business firm needs to utilise available cash and raise additional fund to operate its activities and expand its operations to create a sustainable business.

Measuring the contribution of financing activities to the overall changes in cash is an indicator of the efficiency regarding the utilisation of the available cash by the firm to denote the extent to which the cash utilisation impacts on the firm's performance and liquidity. Therefore, the business firm needs to allocate a sufficient fund to sustain and broaden its business. So, the assumption is that the firm with positive cash that generated from financing activities will be performing a better business. The literature search revealed that, up to our best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

### 3.6.5 Cash Holding Position

The corporate liquidity reduces the likelihood of incurring inconvenient financial costs if the firm's operations do not generate a sufficient cash flow to service required payments to cover the debt. The corporate liquidity can come at a cost, where the interest earned on corporate cash reserves is frequently subject to tax at a higher rate

than interest earned by individuals. Furthermore, the cash may provide more funds for the financial managers to invest in desirable projects, which do not provide financial benefits but may spoil the value of the shareholders (Jensen & Meckling, 1976).

It is surprising that the related studies have not explored the implications of potential value for holding cash in the existence of these frictions. Hanson (1992) and Smith and Kim (1994) estimated the consequences of excess cash flow value to find that the bidding firms that possess high excess free cash flow would exhibit low excess stock returns during merger notices, while their estimated coefficients interpreted when the value destruction linked with the high level of excess free cash flow.

Since the existing financial constraints often related to inequality of information between the firm and the capital providers, the firm would suffer from higher transactions costs in accessing external capital. In such a context, the additional money of internal funds could enable a constrained firm to avoid these increased costs of raising funds, thereby, rendering additional internal funds more valuable. Faulkender and Wang (2006) found that the marginal value of cash declines when the cash holdings became larger and gained leverage higher, along with efficient access to capital markets. Therefore, the firm has to opt superior cash distribution through the dividends rather than does repurchase. Consequently, what would be the value that the shareholders can place on the cash held by the firm? Moreover, what would be the difference of value between the firms?

The existing body of financial literature reveals that the approximation of the actual value of adding debt to the capital structure of the business firm is not well-investigated; in contrast, the value of adding more cash to the capital not well studied, hitherto. Thus, it is not a misunderstanding of the ability of firm’s liquidity in making

wise investments without approaching the external financial markets. Such access would let the firm to avoid the costs of both transactions (either on the debt or equity) and different information. Thus, the relationship between debt, cash and capital structure could determine the feature of cash hold of the business firm.

The cross-sectional variations in the cash holdings level may be related to the theoretical benefits, and costs have investigated extensively over the past three decades. Consistent with the hypothesised effects, many authors found that the business firms with stronger growth opportunities, low cash flows risk, and restricted accessed to the capital markets hold higher cash balances (Kim et al., 1998; Opler et al. 1999; Harford; 1999; Pinkowitz & Williamson, 2001; Billett & Garfinkle, 2004; Faulkner, 2004; Ozkan & Ozkan, 2002; Mikkelson & Partch, 2003; Hartzell et al., 2005; Dittmar et al., 2003). Pinkowitz and Williamson (2004) also examined the marginal value of cash with a particular focus on the cross-sectional variations that may relate to the set of the firm's investment opportunity.

Based on the work of Fama and French (1998), they unveiled that the shareholders of a business firm with sound growth options, along with added opportunities of volatile investment can place higher values on its cash than a firm with fewer, more stable growth opportunities. Pinkowitz, Stulz, and Williamson (2006) extended the examination of cross-country differences in the marginal value of cash. Faulkender and Wang (2006) suggested that the market perceives the presence of market frictions to make raising outside the capital quite costly. The market, therefore, rewards the firm that retains liquidity with higher valuations and able to create more value than a comparable firm with less internal cash.

In contrast to the findings generated by both Hanson (1992) and Smith and Kim (1994), Pinkowitz and Williamson (2004) connected the higher value of cash holdings with the firm performance in their hypothesis "*the higher some cash holdings, the better is the firm's performance*". In this dissertation, the hypothesis is in agreement with work of Pinkowitz and Williamson (2004), which found "*the higher some cash holdings (cash balance), the better is the firm's performance*".

### 3.7 Summary

This chapter covers the topical theme of this dissertation on examining the impact of variant financial strategies on the firm performance. The majority of the UAE PJS firms faced dramatic downturns and common challenges in recovering their financial status, as well as sustaining their growth post-2008 global crisis. This situation gives an actual reason to determine which financial strategies could potentially affect the performance measure across all sectors of the UAE capital market. Financial strategy influences to some extent the performance of the firm. Therefore, different indicators and ratios that reflect the results of the strategies' implementation explain the various financial strategies. Therefore, it is crucial for management to adopt financial policies and strategic decisions that can positively influence the firm's financial performance.

Based on some previous studies, the findings of any empirical dissertation are possibly varied depending on the employed measures. The main reason for using these measures is that, with considering the reliability, they can be easily obtained directly from firm's financial quarterly reports (i.e., balance sheet, income statement, and cash flow statement) without introducing any further adjustments.

This dissertation is examining the impact of eleven different potential financial strategies (factors) on six of the firm's financial and economic performance from two dimensions (i.e. financial performance and market performance). To the researcher's best knowledge, four variables are newly incorporated in studying the Financial strategies about the firm's performance (i.e. Unrelated Assets, cash generated from Operating Activities, cash generated from Investing Activities, and Cash generated from financing activities).

In conclusion, the literature search concentrated on retrieval of the fundamental theories and hypotheses in this field (i.e. the *theory of the firm* as suggested by Jensen and Meckling (1976), as considerably as the *concept of the strategy* developed by Andrews (1980) in addition, we have talked other related interpreting theories like: *pecking-order theory, trade-off theory, agency theory, the theory of corporate finance, and the Resource-Based View Theory*, along with reviewing the classical papers in the financial issues that related to this dissertation. The proposed financial strategy-performance relationship is expected to take different directions; it is supposed to vary among different variables and the various sectors and to have a different influence. Additionally, accounting standards issue may cause interference and explain some of those different correlations.

# Chapter 4: Data and Methodology

## 4.1 Introduction

This dissertation investigates empirically the influence of adopting different financial strategies on the firm's performance using a panel dataset of quarterly audited published financial data of 92 listed companies, collected from the companies' quarterly reports and the UAE stock market database. This sample covers different sectors and industries, from 2006 to 2015. Thus, using panel data results in increasing the degrees of freedom significantly. In fact, our sample data consists of 3,680 observations per variable in the Capital Structure section, and 3,589 observations per variable in the Cash Management section.

The choice of what type of model to develop is based on the UAE's economy characteristics, data limitation, and the intended objectives. In this dissertation, we adopt econometric methods for panel data analysis, and we conduct diagnostic tests to make sure that the underlying assumptions for a good model are fulfilled. Moreover, a suitable tool to measure each strategy is defined, along with conducting all required tests to assure the reliability of data and suitability of using the various accurate models. Then, we test each related financial strategy to six measures of the firm's performance. Due to natural weaknesses when each performance measure is tested individually, we segregate the six performance measures into two groups (i.e. three financial measures and another three market measures).

## 4.2 Data Description

To test the relationship between firm's specific characteristics and performance in the UAE, a significant effort was made to identify the needed data and the reliable sources,

given the importance of collecting pertinent variables, with a long enough time series for econometric purposes. The 112 companies sorted out to build a homogeneity between listed companies that inline with the requirements of this study. Twenty companies declined due to: i) founded after 2007, ii) had inaccurate of non-available data, iii) were de-listed during the tested period (2006-2015), and iv) non-Emirati / non-local companies. Despite, the final number of the included companies reduced from 128 listed companies, by the end of 2015, to only 92 companies represents 72% of the total listed companies. Nevertheless, it still covers the ten different sectors listed in the UAE financial market.

Further, we deleted all the observations that did not have a complete record of the variables included in our analysis. Likewise, we deleted a small number of observations with non-reliable values. Furthermore, we also eliminated firms, for which not all data are available. After all, above mentioned adjustments, the companies included in our sample are 92 with 3,680 observations per variable, on a quarterly basis. However, given the availability of cash flow management variables' data, the number of observations used in the second model reached 3,589 during the same tested period. Therefore, the panel data covers at least 40 time-periods from 2006 to 2015, which means the covered period will measure the firms' performance before, within, and after the global financial crisis that started in 2008.

These firms represent the entire UAE stock market since 56 companies are listed in Abu Dhabi Exchange Market (ADX), and 36 companies are listed in Dubai Financial Market (DFM). These 92 listed companies are distributed over ten different industries and sectors, as detailed in Table 3.

Table 3: Listed companies in the UAE stock market, by sectors

| Sector | ADX | DFM | Total |
|---|---|---|---|
| Insurance | 13 | 9 | 23 |
| Finance and Investment | 1 | 4 | 5 |
| Services | 6 | 2 | 8 |
| Bank | 14 | 7 | 21 |
| Industrial | 13 | 1 | 14 |
| Transportation | 0 | 3 | 3 |
| Consumer Staples | 4 | 1 | 9 |
| Real estate | 2 | 5 | 7 |
| Energy | 2 | 0 | 2 |
| Telecommunication | 1 | 1 | 2 |
| **Total** | **56** | **36** | **92** |

Concerning the primary sources of the data, it was primarily collected from the companies' quarterly reports and the UAE stock-market database (i.e. Emirates Security & Commodity Authority (ES&CA), Abu Dhabi Exchange Market (ADX), and Dubai Financial Market (DFM)). Most of these quarterly audited reports are available in PDF format in the ADX and DFM websites or databases, while it was available in excel format in the ES&CA database, which we relied on to start building our database. However, using data from various sources and different formats might create mistakes and potential duplicates, especially when converting the gained data into *EViews* format (econometric software) to avoid "Conversion Errors".

To re-organise the data in a proper format that can be easily used in *EViews*, we had to create an Excel file, to re-tabulate the whole data (more than 63,000 final figures), and also to transform the data in either ratio or percentage format to build a relative measure among all variables. So, we created a separate Excel worksheet to conduct the whole calculation by applying the related equations (see Tables 4 and 5). Each equation calculation contains two to four figures leading to deal with massive numbers.

Further, we had to repeat some of our calculation equations because we found different formulas were used in previous literature to calculate the performance measures. For example, Tobin's Q has more than one equation to calculate (depends on different hypothesis), and Firm Size has been calculated used different methods like market value/ capitalisation, total assets, sales, or some employees. Thus, we decided to change our assumptions and use the suitable equation depends on the available data.

Another remarkable effort that we have contributed that, we have collected and tabulated other variables those were examined previously in the literature like depreciation expenses, General and Admin (G&A) expenses, market capital, total liabilities, total revenue, returned earnings, and accumulated profit. However, due to either impacting of robustness, unavailability of data, or non-significant or not-relevant relationship, we decided to eliminate them from this dissertation. Fortunately, ignoring these variables might not be problematic, since our selected variables describe well the firm's performance in the UAE.

In a conclusion, the most prominent challenge we faced is the accuracy of the data, because initially it was entered manually either by ES&CA's employees or third party's/agent's employees. It took us a very long time (more than 13 months) to be confident about the accuracy and reliability of the tested data; the data was carefully entered and organised by a research assistant, then audited by the researcher, and finally verified by an independent statistician.

Another reason for this long time was that part of the required data was not ready with ES&CA, ADX and DFM; they had to customise their reporting system to provide the raw data in Excel format. For an instant, it took ADX more than eight months to

provide the data of government ownership variables. Another significant example is that share (closing) price data varied between ES&CA's index (ESM), and both ADX and DFM. Therefore, we had to conduct dual cross-databases auditing effort among provided data, published information, and historical reports. Then, we approach the data source (ES&CA, ADX, or DFM) to get confirmation against any uncertainty.

For being sure that the gained data are accurate, the acquisition of the required data was made from available firm's quarterly audited financial reports to warrant the quality and reliability of the generated financial results. Because the auditors revise the financial figures and approved by the regulator before being published. According to the diagnostic tests that have been conducted, the data could be considered homogeneous regarding firms' characteristics because i) the firms were compliant with financial results disclosure regulations, and ii) all of them are listed in the UAE stock market pre-2008 financial crisis, and its consequences continued for a while. Taking into account that the UAE firms specificities and data availability, we selected the primary variables, which reflect the firm's performance, in line with the purpose of this dissertation and the adopted model. Therefore, the definitions of dependent and independent variables, as well as the associated measurement, are discussed below.

### 4.2.1 Dependent Variable

According to the literature, there are several ways to quantify the performance of the company. In this section, Table 4 describes the six selected measures of the firm's performance used in the proposed model to examine and identify the primary determinants of the firm's financial activities by analysing the capital structure variables; after that, by cash flows management indicators

Table 4: Dependent variables' (Performance Measures) definitions

| Indicator | Code | Definition |
|---|---|---|
| **Return-On-Investment** | **ROI** | A performance measure used to evaluate the efficiency of an investment or to compare the efficiency of some different investments. The equation measures the amount of return on investment (ROI) relative to the investment's cost, calculated as: $$ROI = \frac{Net\ Profit}{Investment\ (Capital + L.T.Loans)}$$ |
| **Net Profit Ratio** | **NP** | NP either in straight figure or as the margin is expected to vary by company and by sector. However, a successful company is the one that generates a high net profit than its peers do, or above the average of its sector. The main reason for including the NP is because is a reliable method for comparing various companies, as well as easy to be calculated: $$Net\ Profit\ Ratio\ = \frac{\text{Net Income}}{\text{Total Sales}}$$ |
| **Growth Rate in Sales** | **Gr_Sale** | In this study, the GR in sales is used as a performance measure to present its change of the annual total sales. Moreover, we assume that the financial strategy-sales growth rate is existing positive relationship as similar to the findings of Woo et al. (1992) and Höbarth (2006). $$Growth\ Rate\ in\ Sales = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}}$$ |
| **Earnings Per Share** | **EPS** | In this study, Earnings per share (EPS) is used as a performance measure to present how much each share gain (earn in Dirham) in every tested period. EPS is the portion of a company's profit allocated to each outstanding share of common stock. It is assumed a positive relationship between variant financial strategies and EPS. Earnings per share serve as an indicator of a company's profitability, calculated as: $$EPS = \frac{\text{Net Income} - \text{Dividends on Preferred Shares}}{\text{Average Outstanding Shares}}$$ |

Table 4: Dependent variables' (Performance Measures) definitions (continued)

| Indicator | Code | Definition |
|---|---|---|
| **Return of the Share Price** | **Return** | A share price is the price of a single share of some saleable stocks of a company, derivative or another financial asset. In this dissertation, it is used as a variation: $$Return = \frac{P_t - P_{t-1}}{P_{t-1}}$$ Where $P_t$ represents the share price at time *t*. |
| **Tobin's Q:** **(Market-to-Book Ratio)** | **Q** | The Tobin's Q ratio is a ratio devised by James Tobin of Yale University, Nobel laureate in economics, who hypothesised that the combined market value of all the companies on the stock market should be about equal to their replacement costs. The Q ratio is calculated as the market value of a company divided by the replacement value of the firm's assets. $$Q = \frac{\text{Total Firm's Market Value}}{\text{Total Firm's Assets Value}}$$ |

### 4.2.2 Independent Variables

#### 4.2.2.1 Capital Structure

Decision-making on capital structure is one of the most challenging issues facing the companies, given that the capital structure of a firm is defined as "*a combination of sales, debt and expenditure as well as other measures*". Thus, determining the capital structure for optimum performance depends on how much debt and how much equity there should be, in line with other company measures, such as firm's size and government ownership. Table 5 summarise all the selected variable used in our different analysis and our adopted model.

Table 5: Capital structure variables' definitions

| Indicator | Code | Definition |
|---|---|---|
| **Leverage Level** | **Debt** | This indicator is measured by the amount of total long-term debt to total assets. Therefore, this dissertation will assume that the higher is the leverage level, the lower is the firm's performance. $$Debt = \frac{\text{Total L. T. Liabilities}}{\text{Total Assets}}$$ |
| **Unrelated Assets Ratio** | **Unr_asset** | In this dissertation, the unrelated assets consist of all figures categorised in the balance sheet/financial position as investments (any investment), financial assets, and any other assets those are unrelated to the company's/sector business nature. The unrelated assets are measured as a percentage of Total Assets. $$Unr\_asset = \frac{\text{Unrelated Assets}}{\text{Total Assets}}$$ |
| **Firm's Size** | **Size** | Firm's size is measured by different such methods as market value/ capitalisation, total assets, sales, or some employees. In this dissertation, we are using total assets measure. $$Size = Total\ Assets$$ |
| **Capital Expenditure** | **Capex** | The Capital Expenditure (CAPEX) is the amount spent to acquire additional assets and is calculated as the changes of Total Fixed assets amount (property, plant and equipment) between two periods. In this dissertation, the assumption will be, the higher the capital expenditure, the higher the income will be, and therefore, the better the performance. $$CAPEX = F.Assets_t - F.Assets_{t-1}$$ |
| **Government Ownership** | **Gov_own** | The percentage of government ownership measures the factor to total equity/capital. This dissertation assumed that government-owned companies would perform better than non-government owned companies. $$Gov\_own = \frac{\text{Government Shares}}{\text{Total Shares}}$$ |

Table 5: Capital structure variables' definitions (continued)

| Indicator | Code | Definition |
|---|---|---|
| **Sustainable Growth Rate** | **SGR** | The sustainable growth rate (SGR) is the maximum rate of growth that a firm can sustain without having to increase financial leverage or look for outside financing. In this empirical dissertation, the assumption will be, the higher the sustainable growth rates, the more significant future growth would be, and therefore, the better the performance is. The SGR is calculated as: $$SGR = ROE \times (1 - Dividend\ Payout\ Ratio)$$ |

#### 4.2.2.2 Cash Flow Management

Cash flow generation can either positive or negative in different periods depends on the firm's responses to the different economic situation. The net decrease/increase cycle in cash and cash equivalent is a summary of the three activities transactions (operating activities, investing activities, and financing activities). By consolidation all these activities' contribution, the reported net cash is what can be used in financing these activities in the next period. For this reason, there is a requirement to control the financial resources to obtain better results for the firm. Therefore, Table 6 presents the selected variables, related to the Cash Flow Management, used in our dissertation.

Table 6: Cash Flow Management variables' definitions

| Indicator | Code | Definition |
|---|---|---|
| **Cash Conversion Cycle** | **CCC** | The Cash Conversion Cycle (CCC) is a combination of several activity ratios involving accounts receivable, accounts payable and inventory turnover. Thus, the CCC is a significant variable for all performance measures; the shorter is the cash cycle, the better is the performance, and consequently, the better the working capital is managed, the higher profitability is expected. The CCC is calculated as: $$CCC = \frac{(\text{Inventories} + \text{accounts receivables} - \text{accounts payable}) \times 90}{\text{Sales}}$$ |

Table 6: Cash Flow Management variables' definitions (continued)

| Indicator | Code | Definition |
|---|---|---|
| **Cash from Operating Activities** | **OPR_Cash** | This dissertation will assume that a company, which is generating cash from operating activities higher than the net change in cash and cash equivalent of the period will perform better than peers, the sector or the market. Cash from Operating Activities is calculated as: $$OPR\_Cash = \frac{Net\ cash\ generated\ from\ operating\ activities}{Net\ change\ in\ cash\ \&\ cash\ equivalent}$$ |
| **Cash from Investing Activities** | **Inv_Cash** | The investing activities contribute to overall cash flow is an indicator of efficiency in managing a company's available cash to create a future business, and how it impacts the company's performance. It is assumed that the higher the negative cash generated from investing activities, the better the performance is. Cash from Investing Activities is calculated as: $$Inv\_Cash = \frac{Net\ cash\ generated\ from\ investing\ activities}{Net\ change\ in\ cash\ \&\ cash\ equivalent}$$ |
| **Cash from Financing Activities** | **Fin_Cash** | Financing activities cash contribution could be either positive through bank borrowing, loans, and raising additional capital/equity, or, contrary through loan repayment, finance/interest cost, and paying dividends, as a company needs to utilize available cash and raise additional fund to operate its activities and/or expand its business in order to create a sustainable business. In this dissertation, it is assumed that a firm with positive cash generated from financing activities will have better performance. Thus, Cash from Financing Activities is calculated as: $$Fin\_Cash = \frac{Net\ cash\ generated\ from\ financing\ activities}{Net\ change\ in\ cash\ \&\ cash\ equivalent}$$ |
| **Cash holding position** | **Cash_hold** | Cash holding position has calculated the way of capturing the movement of closing cash holding position or balance in every period. Therefore, the higher the amount of cash holdings, the better is the firm's performance. $$Cash_{hold} = Cash\ balance\ at\ t$$ |

### 4.2.3 Control Variables

To take into consideration, the effect of some controlled sectors in the performance of the company, such the banking and insurance firms. We created a dummy variable that

takes the value 1 to indicate that the firm is a bank or an insurance company, and 0 otherwise. Finally, to perform all statistical tests and data analysis, we used, in this dissertation, one of the most developed software (i.e. the econometric software package - *EViews*). Therefore, the *EViews* 9.5 can deal efficiently with panel data and, help in increasing the robustness of our model and the quality of our results.

### 4.3 Model Specifications

In this section, we examine the determinants of firm performance, by conducting econometric methods for panel data analysis and diagnostic tests to make sure that the underlying assumptions for a good model are fulfilled and depends on which is useful for the collected data. Thus, our dynamic model specified in equation (1) below is characterised by the presence of a lagged dependent variable among the other explanatory variables. This empirical model could be expressed as follows:

$$Y_{it} = \propto +\lambda Y_{it-1} + \beta X_{it} + \tau_i + \varepsilon_{it} \quad (1)$$

Where $Y_{it}$ is the dependent variable of the firm i (the cross-sectional dimension), for the period t (the time-series dimension) that could represent its financial performance, as well as its market performance. Moreover, $X_{it}$ is the vector of explanatory variables described above, capturing firm-specific characteristics, such as capital structure variables or cash flow management indicators, where $\propto$ , $\boldsymbol{\lambda}$ and $\beta$ are coefficients, while $\boldsymbol{\tau_i}$ is unobserved firm-specific fixed effect and $\boldsymbol{\varepsilon_{it}}$ is error terms. Since the variables may be endogenous, the estimation of this equation by Ordinary Least Squares (OLS) could generate biased and inconsistent estimator.

To tackle the heteroscedasticity and autocorrelation problems, along with the indigeneity problem of the lagged dependent variable, we use *the Generalized Method*

*of Moments* (GMM) estimation technique, which employs orthogonality moment conditions to obtain valid instruments. GMM technique was developed by a Nobel laureate in economics Hansen (2013), who proposed in 1982 GMM as the "method of moments", which was initially introduced by Pearson in 1894.

The primary intuition behind GMM is to establish the population moment conditions and then to use their sample analogues to compute parameter estimates. More specifically, we estimate our model using the System GMM estimator proposed by Arellano and Bond (1991) and Blundell and Bond (1998) which combines, within a system, the regression in levels and the regression in differences. For the regression in levels, the instruments used are the lagged differences of the endogenous and exogenous variables. The instruments for the regression in differences are lagged levels of the endogenous and exogenous variables previous or equal to (t-2). Thus, to eliminate the firm-specific effect that might cause the biases of estimators, we estimate first-differences of our equation (2):

$$\Delta Y_{it} = \lambda \Delta Y_{it-1} + \beta \Delta X_{it} + \Delta \varepsilon_{it} \qquad (2)$$

It should be noted that the validity of the System GMM estimator depends on two fundamental assumptions. The error terms are not serially correlated, and the instruments used in the regression in levels and differences are valid. To test both hypotheses, we run two specification tests proposed by Arellano and Bond (1991) and Arellano and Bover (1995).

The first test examines the null hypothesis that the differenced error term $\boldsymbol{\Delta \varepsilon_{it}}$ has no second order serial autocorrelation, which means $E(\Delta \varepsilon_{it} \Delta \varepsilon_{it-2}) = 0$. The non-rejection of the null hypothesis provides support to our model estimations. The second is Sargan–Hansen test (J-Stat) of over-identifying restrictions, which tests the overall

validity of the instruments by analysing the sample of the moment conditions used in the estimation procedure. The hypothesis tested is that the instrumental variables are uncorrelated to some set of residuals, and therefore they are acceptable instruments. Thus, our model specification is valid if we cannot reject the null hypothesis of over-identifying restrictions.

Blundell and Bond (1998; 2000) show that the standard errors of the two-step system GMM estimator are biased downward in finite samples. We tackle this problem by employing a lower number of instruments than the number of sample firms to mitigate the over-fitting problem of the endogenous variable and improve the efficiency of the two-step estimator[2]. Finally, failure to reject the null hypotheses of both tests gives support to our estimation procedure. In the next chapter, we estimate our proposed model using the GMM procedure for our sample. The estimation tool is the econometric software package *EViews* 9.5.

[2] For more details, see Roodman (2009).

# Chapter 5: Results and Discussions

## 5.1 Synopsis

The estimation model of the generated findings is concerned with analysing the datasets accumulated over ten years (quarter data) of financial market activities, where considering 2008 global financial crisis as a significant year. Thus, the primary findings represented the entire period. Moreover, a sensitivity test to examine the potential impact of 2008 crisis has been exercised. To this end, in the first version of our Model, we included three dummy variables, reflecting the three mentioned periods (pre-, during-, and post-financial crisis) to evaluate its impact on the selected dependent variables.

Although these dummy variables were significant, this approach did not allow us to evaluate its impact on the independent variables, and consequently, to identify the adopted strategy for each period. For this reason, we segregated our sample by period into three group and applied the econometric model, to compare the significance and the sign of each parameter of the explanatory variables during the three periods. Accordingly, the additional findings represent the three consecutive periods; pre-, during, post-financial crisis.

Based on the generated findings, argues about the different financial strategies that would be leading to different results and policies. Concerning the effect of some controlled sectors in the performance of the companies, such the banking and insurance firms, the results of the models showed that the control variable, described in section 4.2.3, is not significant in most of the equations, hence the elimination of this variable from our model. Finally, the presented findings are based on dependent

variables (performance measures) to illustrate the impact of the different financial policies (independent variables) on performance measures (dependent variables).

## 5.2 Model Estimation

The package *EViews 9.5* employed for estimating the proposed model, along using the *GMM* procedure for target sample of 92 firms over the period 2006-2015 on a quarterly basis. For each dependent variable, the model tries to explain the performance of these firms by capital structure variables, after that, by cash flows management indicators. The reason behind separating the explanatory variables according to the two groups is that each of the financial strategies (capital structure & cash flow management) have different characteristics, and consequently the decision-making strategies have different approaches & parameters.

Moreover, a combination of all these variables in one model will lead to confusing results, which are difficult to interpret. In fact, having one equation with many variables will cause many statistical problems and will reduce the accuracy of the results. That is why, we adopted in this study a reasonably parsimonious specification, which means that the model should be the simplest with the least assumptions and variables but at the same time with most considerable explanatory power.

### 5.2.1 Capital Structure Analysis (CSA)

Each dependent variable is modelled as a function of the six described capital structure variables according to the following equations:

$$\mathrm{ROI}_{it} = \delta_0 + \delta_1 \mathrm{ROI}_{it-1} + \delta_2 \mathrm{Debt}_{it} + \delta_3 \mathrm{Unr}_{\mathrm{asset}_{it}} + \delta_4 \mathrm{Size}_{it} + \delta_5 \mathrm{Capex}_{it} + \delta_6 \mathrm{Gov}_{\mathrm{own}_{it}} + \delta_7 \mathrm{SG}_{it} + \xi_{it} \quad (1)$$

$$\mathrm{EPS}_{it} = \beta_0 + \beta_1 \mathrm{EPS}_{it-1} + \beta_2 \mathrm{Debt}_{it} + \beta_3 \mathrm{Unr}_{\mathrm{asset}_{it}} + \beta_4 \mathrm{Size}_{it} + \beta_5 \mathrm{Capex}_{it} + \beta_6 \mathrm{Gov}_{\mathrm{own}_{it}} + \beta_7 \mathrm{SG}_{it} + \Omega_{it} \quad (2)$$

$$NP_{it} = \partial_0 + \partial_1 NP_{it-1} + \partial_2 Debt_{it} + \partial_3 Unr_{asset_{it}} + \partial_4 Size_{it} + \partial_5 Capex_{it} + \partial_6 Gov_{own_{it}} + \partial_7 SG_{it} + \theta_{it} \quad (3)$$

$$Share_{p_{it}} = \rho_0 + \rho_1 Share_{p_{it-1}} + \rho_2 Debt_{it} + \rho_3 Unr_{asset_{it}} + \rho_4 Size_{it} + \rho_5 Capex_{it} + \rho_6 Gov_{own_{it}} + \rho_7 SG_{it} + \gamma_{it} \quad (4)$$

$$GR_{sale_{it}} = \mu_0 + \mu_1 GR_{sale_{it-1}} + \mu_2 Debt_{it} + \mu_3 Unr_{asset_{it}} + \mu_4 Size_{it} + \mu_5 Capex_{it} + \mu_6 Gov_{own_{it}} + \mu_7 SG_{it} + \alpha_{it} \quad (5)$$

$$Q_{it} = \pi_0 + \pi_1 Q_{it-1} + \pi_2 Debt_{it} + \pi_3 Unr_{asset_{it}} + \pi_4 Size_{it} + \pi_5 Capex_{it} + \pi_6 Gov_{own_{it}} + \pi_7 SG_{it} + \vartheta_{it} \quad (6)$$

Where $\delta_i$, $\beta_i$, $\partial_i$, $\rho_i$, $\mu_i$ and $\pi_i$ are the coefficients, while $\xi_i$, $\Omega_i$, $\theta_i$, $\gamma_i$, $\alpha_i$, $\vartheta_i$ are the error terms. Table 7 shows the results of estimations of the adopted Model using the Capital Structure Analysis (CSA) during the period 2006-2015.

Table 7: Estimations results of the adopted Model using the CSA (2006-2015)

| Variables | Eq. 1: ROI | Eq. 2 EPS | Eq. 3: NP | Eq. 4: Return | Eq. 5: GR_sale | Eq. 6: Q |
|---|---|---|---|---|---|---|
| Lag of Dependent Variable | 0.161* | 0.23* | 0.018* | -0.012* | -0.055* | 0.762* |
| Leverage Level ($\boldsymbol{Debt_{it}}$) | -0.503* | -0.30* | -4.951* | NS | -12.79* | -0.907* |
| Firm's Size ($\boldsymbol{Size_{it}}$) | 0.660* | 0.403* | 16.13* | 34.49 | 2.875* | -0.668* |
| Capital Expenditure ($\boldsymbol{Capex_{it}}$) | -0.017* | -0.008* | 1.015* | NS | -2.475* | 0.022* |
| Government Ownership ($\boldsymbol{Gov\_own_{it}}$) | 0.340* | 0.375* | 54.26* | -82.48 | -1.438* | 0.899* |
| Sustainable Growth Rate ($\boldsymbol{SG_{it}}$) | 0.054* | 0.072* | 1.900* | NS | -0.061* | 0.036* |
| Unrelated Assets Investment ($\boldsymbol{Unr\_asset_{it}}$) | 0.020* | 0.044* | -2.041* | 9.499 | 2.623* | 0.198* |
| **J-stat. p-values** | 0.61 | 0.50 | 0.43 | 0.448 | 0.43 | 0.24 |

*Index*: The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, whereas (NS) means not significant.

### 5.2.2 Cash Flow Management (CFM) Analysis

Concerning, we tried to explain the firm performance by the Cash flows management variables according to the following equations:

$$\mathrm{ROI}_{it} = \delta_0 + \delta_1 \mathrm{ROI}_{it-1} + \delta_2 \mathrm{OPR}_{\mathrm{Cash}_{it}} + \delta_3 \mathrm{Inv}_{\mathrm{Cash}_{it}} + \delta_4 \mathrm{Fin}_{\mathrm{Cash}_{it}} + \delta_5 \mathrm{Cash}_{\mathrm{hold}_{it}} + \delta_6 \mathrm{ccc}_{it} + \omega_{it} \quad (7)$$

$$\mathrm{EPS}_{it} = \beta_0 + \beta_1 \mathrm{EPS}_{it-1} + \beta_2 \mathrm{OPR}_{\mathrm{Cash}_{it}} + \beta_3 \mathrm{Inv}_{\mathrm{Cash}_{it}} + \beta_4 \mathrm{Fin}_{\mathrm{Cash}_{it}} + \beta_5 \mathrm{Cash}_{\mathrm{hold}_{it}} + \beta_6 \mathrm{ccc}_{it} + \Omega_{it} \quad (8)$$

$$\mathrm{NP}_{it} = \partial_0 + \partial_1 \mathrm{NP}_{it-1} + \partial_2 \mathrm{OPR}_{\mathrm{Cash}_{it}} + \partial_3 \mathrm{Inv}_{\mathrm{Cash}_{it}} + \partial_4 \mathrm{Fin}_{\mathrm{Cash}_{it}} + \partial_5 \mathrm{Cash}_{\mathrm{hold}_{it}} + \partial_6 \mathrm{ccc}_{it} + \theta_{it} \quad (9)$$

$$\mathrm{Share}_{\mathrm{p}_{it}} = \rho_0 + \rho_1 \mathrm{Share}_{\mathrm{p}_{it-1}} + \rho_2 \mathrm{OPR}_{\mathrm{Cash}_{it}} + \rho_3 \mathrm{Inv}_{\mathrm{Cash}_{it}} + \rho_4 \mathrm{Fin}_{\mathrm{Cash}_{it}} + \rho_5 \mathrm{Cash}_{\mathrm{hold}_{it}} + \rho_6 \mathrm{ccc}_{it} + \gamma_{it} \quad (10)$$

$$\mathrm{GR}_{\mathrm{sale}_{it}} = \mu_0 + \mu_1 \mathrm{GR}_{\mathrm{sale}_{it-1}} + \mu_2 \mathrm{OPR}_{\mathrm{Cash}_{it}} + \mu_3 \mathrm{Inv}_{\mathrm{Cash}_{it}} + \mu_4 \mathrm{Fin}_{\mathrm{Cash}_{it}} + \mu_5 \mathrm{Cash}_{\mathrm{hold}_{it}} + \mu_6 \mathrm{ccc}_{it} + \alpha_{it} \quad (11)$$

$$\mathrm{Q}_{it} = \pi_0 + \pi_1 \mathrm{Q}_{it-1} + \pi_2 \mathrm{OPR}_{\mathrm{Cash}_{it}} + \pi_3 \mathrm{Inv}_{\mathrm{Cash}_{it}} + \pi_4 \mathrm{Fin}_{\mathrm{Cash}_{it}} + \pi_5 \mathrm{Cash}_{\mathrm{hold}_{it}} + \pi_6 \mathrm{ccc}_{it} + \vartheta_{it} \quad (12)$$

Where $\delta_i$, $\beta_i$, $\partial_i$, $\rho_i$, $\mu_i$ and $\pi_i$ are the coefficients, while $\xi_i$, $\Omega_i$, $\theta_i$, $\gamma_i$, $\alpha_i$, $\vartheta_i$ are the error term. Table 8 shows the results of estimations of the adopted Model, using Cash Flows Management Analysis during the period 2006-2015.

Table 8: Estimation results of the adopted Model using CFMA (2006-2015)

| Variables | Eq. 7: ROI | Eq. 8: EPS | Eq. 9: NP | Eq. 10: Return | Eq 11: GR_sale | Eq. 12: Tobin Q |
|---|---|---|---|---|---|---|
| Lag of Dependent Variable | 0.246* | 0.246* | 0.027* | -0.0008* | -0.091* | 66.46* |
| Cash generated from Operating Activity ($OPR\_Cash_{it}$) | 0.233* | 0.012* | 0.448* | NS | NS | NS |
| Cash generated from Investing Activity ($Inv\_Cash_{it}$) | -0.157* | -0.015* | -0.228* | NS | NS | NS |
| Cash generated from Financing Activity($Fin\_Cash_{it}$) | 0.160* | 0.008* | 0.108* | NS | NS | NS |
| Cash hold | 1.392* | 0.482* | 96.75* | 20.66* | -83.52* | -6.062* |
| Working Capital-Cash Conversion Cycle $ccc_{it}$) | -0.007* | -0.001* | -0.077* | -0.0007* | -0.001* | -0.001* |
| **J-statistic p-values** | 0.42 | 0.51 | 0.55 | 0.47 | 0.37 | 0.24 |

*Index*: The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively. While (NS) means not significant.

As described above, the Sargan–Hansen test used in the overall validity of the adopted instruments, whereas, the Arellano and Bond (1991) test used in the presence of second-order autocorrelation in the differenced residuals. It was noticed that, for all specifications, the test of Sargan–Hansen could not reject the null hypothesis of the overall validity of the instruments used. Moreover, the Arellano and Bond (1991) test could not reject the null hypothesis of absence of autocorrelation of the second order in the residuals. Furthermore, it was noticed that the coefficients of the lagged dependent variable were highly significant (p-value less than 1%) in all specifications. Therefore, these results are providing support for our use of dynamic panel models to assess the determinants of firm performance in the UAE business context.

## 5.3 Empirical Results

### 5.3.1 Capital Structure and Firm Performance

Applying the developed Equation (1) on page 111, $Y_{it}$ is any of the six dependent variables (performance measures) we are examining in this dissertation. The dependent variables are: *Return-on-Investment* (ROI), *Net Profit* (NP), *Growth-in-Sales* (GR_Sales), *Earnings Per Share* (EPS), *Return of the Share Price* (Return), and *Tobin's Q* (Q), while $X_{it}$ is an independent variable.

#### 5.3.1.1 Return-On-Investment (ROI)

Out of the six proposed hypotheses, only one hypothesis (Capital Expenditure) was rejected; the rest were supported. Table 9 shows results of the estimation of the ROI Equation1 throughout entire period (2006-2015) of the investigation.

Table 9: Estimation results of ROI Eq.1 during (2006-2015)

| Dependent Variable: **ROI** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (balanced) observations: 3680 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| ROI (-1) | 0.161390 | 0.000180 | 894.9548 | 0.0000 | |
| LEVR_LVL | -0.503112 | 0.003042 | -165.3728 | 0.0000 | Support |
| DLOG(FIRM_SZ) | 0.660549 | 0.000328 | 2011.847 | 0.0000 | Support |
| DLOG(CAP_EXP) | -0.017230 | 5.53E-05 | -311.4038 | 0.0000 | Reject |
| GOV_OWN | 0.340273 | 0.028319 | 12.01586 | 0.0000 | Support |
| SG_RATE | 0.054871 | 0.001514 | 36.23112 | 0.0000 | Support |
| UNR_ASST | 0.020832 | 0.000371 | 56.13096 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (*first differences*) | | | | | |
| Mean dependent var. | -0.003378 | S.D. dependent var. | | 0.132410 | |
| S.E. of regression | 0.170162 | Sum sq. Resid. | | 106.3517 | |
| J-statistic | 82.63472 | Instrument rank | | 94 | |
| Prob. (J-statistic) | 0.612504 | | | | |

#### 5.3.1.1.1 Global Period

a) **Leverage level and ROI:** The leverage level showed a significant adverse effect on ROI despite the impact of the crisis consequences throughout the entire tested period (40 quarters; 2006-2015). This finding supports the study hypothesis ($H_1$); it states *the higher the debt, the lower the performance of ROI* (i.e., leverage was negative about the firm performance). Thus, our finding agreed with Fama and French's study (1998), which revealed *a negative*

*relationship between debt and performance* (i.e., firm's value). Thus, the firm with a higher level of leverage could associate with weak financial performance, but this relation would be reciprocal for the firm with a sizeable debt-to-asset ratio.

**b) Firm Size and ROI**: Firm size showed a consistent and significant positive effect on ROI despite the impact of the crisis consequences throughout the entire tested period (40 quarters; 2006-2015). This finding supports the hypothesis ($H_2$); it states *the bigger the company, the better the performance of ROI*. The studies pre-1980s gave evidence of no existing relationship; others have found a positive correlation (e.g., Mansfield, 1962; Utton, 1971; Singh and Whittington, 1975). A positive relationship between profitability and number of employees (firm size) and performance reported by many works (e.g., Robson & Bennett, 2000; Asimakopoulos et al., 2009). Thus, the finding of the hypothesis ($H_2$) is in good agreement with this assumption "*A firm's size is a key determinant of corporate performance*".

**c) Capital Expenditure and ROI**: The capital expenditure showed the significant and adverse effect on ROI throughout the entire tested period (40 quarters; 2006-2015). This finding rejects the hypothesis ($H_3$); it states *the higher the capital expenditure, the lower the performance of ROI*. This rejection is yielded because the capital expenditure is a sort of expenses used to purchase more assets to generate additional income (Johnson & Soenen, 2003; Höbarth, 2006). The findings reject this empirical study assumption *the higher the capital expenditure, the higher the income will be the better the performance* (i.e., the higher capital expenditure, the lesser profits/cash flow).

d) **Government Ownership and ROI:** The analysis of the datasets that covered the entire tested period (40 quarters; 2006-2015) showed that the impact of government ownership on ROI was significant and favourable to support the hypothesis ($H_4$); it says *the higher the government ownership, the better the performance* (ROI). The government ownership often provides exceptional support and protection to government-owned firms through efficient control of their expenses (Ang & Ding, 2006; Aljifri & Moustafa, 2007). The variable's findings confirmed *the government ownership provides exceptional support and impact the firm's performance positively on different economic conditions*.

e) **Sustainable Growth Rate (SGR) and ROI:** The analysis of obtained data of the entire tested crisis period (40 quarters; 2006-2015) revealed that the impact of sustainable growth rate on ROI was significant and positive to support our hypothesis ($H_5$); it says *the higher the sustainable growth rate, the better the performance* (ROI). SGR defines how much a firm could grow with self-funding. Moreover, some studies (Johnson & Soenen, 2003; Höbarth, 2006; Serrasqueiro et al., 2009; Çoban, 2014) reported a directional interaction between firm growth and profitability to support our gained findings *the sustainable growth rate is a critical indicator for successful business firms*.

f) **Unrelated Assets and ROI**: Unrelated assets showed the consistent positive impact on ROI throughout the entire tested period (40 quarters; 2006-2015). This finding supports hypothesis ($H_6$) *"The higher the investment in unrelated assets, the better the performance of ROI*". The unrelated assets may represent such attractive business as financial assets, properties, and joint venture, which might be enhanced though business diversity stratgey (Barney, 1991; Peteraf, 1992).

#### 5.3.1.1.2 Under Different Economic Conditions

*Assumption*: *Different financial strategies would be leading to different results under different economic conditions*. Table 10 illustrates the findings of the examined relationships between the variant financial strategies (independent variables) and the firm performance (ROI as a proxy for the firm performance).

Table 10: Estimation results of the ROI Eq.1 under different periods

| Variables | Pre-crisis (Q1 05 – Q2 08) | Crisis (Q3 08 – Q4 12) | Post-crisis (Q1 13 – Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | 0.056* | 0.069* | 0.092* |
| Leverage Level $(\boldsymbol{Debt_{it}})$ | -0.567* | -0.197* | -0.262* |
| Firm's Size $(\boldsymbol{Size_{it}})$ | 0.350* | 0.306* | 0.495* |
| Capital Expenditure $(\boldsymbol{Capex_{it}})$ | 0.038* | -0.045* | -0.013* |
| Government Ownership $(\boldsymbol{Gov\_own_{it}})$ | 1.412* | 1.610* | -0.155* |
| Sustainable Growth Rate $(\boldsymbol{SG_{it}})$ | 1.997* | 0.799* | 0.037* |
| Unrelated Assets Investment $(\boldsymbol{Unr\_asset_{it}})$ | -0.214* | 0.075* | 0.029* |
| **J-statistic; P-values** | 0.27 | 0.40 | 0.46 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant.

The test of the global period (40 periods; 2006-2015) showed significant relationships among the six test variables to support five proposed hypotheses and rejected one. When segregating the global period in three different economic stages, different results were found in various phases of the financial crisis as follows:

1) **Pre-crisis:** All tested variables have a significant relationship with the ROI; five supported proposed hypotheses; the unrelated assets rejected ROI.
2) **During-crisis:** All tested variables showed a significant relations with the ROI; five supported the proposed hypotheses; capital expenditure showed rejection.

3) **Post-crisis:** All tested variables showed a significant relationship with the ROI; four supported proposed hypotheses; capital expenditure and government ownership showed a negative relationship
4) The gained findings aligned to the assumption *"Different financial strategies would be leading to different results under different economic conditions*".

#### 5.3.1.2 Earnings-Per-Share (EPS)

Table 11 shows five variables supported EPS, while Capital Expenditure rejected EPS.

Table 11: Estimation results of the EPS Eq. 2 during the entire investigation

| Dependent Variable: **EPS** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (balanced) observations: 3680 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variables* | *Coefficient* | *STD error* | *t-Statistics* | *Prob.* | *Theoretical H* |
| LEVR_LVL | -0.397690 | 0.000186 | -2132.420 | 0.0000 | Support |
| DLOG(FIRM_SZ) | 0.501800 | 0.000136 | 3681.312 | 0.0000 | Support |
| DLOG(CAP_EXP) | -0.004145 | 1.37E-05 | -302.6250 | 0.0000 | Reject |
| GOV_OWN | 0.426156 | 0.000151 | 2821.058 | 0.0000 | Support |
| SG_RATE | 0.078263 | 0.000313 | 249.6990 | 0.0000 | Support |
| UNR_ASST | 0.061804 | 4.96E-05 | 1246.392 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (*first differences*) | | | | | |
| Mean dependent var. | -0.004378 | S.D. dependent var. | | 0.156703 | |
| S.E. of regression | 0.167282 | Sum squared Resid. | | 102.8106 | |
| J-statistic | 84.70208 | Instrument rank | | 93 | |
| Prob. (J-statistic) | 0.549771 | | | | |

#### 5.3.1.2.1 Global Period

a) **Leverage level and EPS**: Over the entire tested period (40 quarters; 2006-2015), the leverage level shows the significant adverse effect on EPS to support the hypothesis ($H_1$); it states *the higher the debt, the lower the performance* (EPS). The gained finding agreed with the Fama and French's study (1998), which says *there is an adverse relationship between debt and firm performance*. Thus, the more levered a firm, the more likely the firm would not be able to fulfil its contractual commitments, where a massive debt could be leading to a higher probability of bankruptcy and financial recession (i.e., weak financial performance).

b) **Firm Size and EPS:** Over the entire tested period (40 quarters; 2006-2015), the firm size showed the consistent positive effect on EPS, despite the impact of the crisis consequences. This finding supported the hypothesis ($H_2$); it says *the bigger the company, the better the performance*. Many studies showed mixed evidence regarding the relationship between firm size and growth as negative (e.g., Mansfield, 1962; Utton, 1971; Singh & Whittington, 1975), or positive (Robson & Bennett, 2000; Asimakopoulos et al., 2009). The gained findings agreed on "*A firm's size is a key element of corporate performance*".

c) **Capital Expenditure and EPS:** Over the entire tested period (40 quarters; 2006-2015), the capital expenditure showed the significant and negative impact on EPS. Therefore, the hypothesis ($H_3$) is not in agreement with the assumption *the higher the capital expenditure, the lower the performance* (EPS). Johnson and Soenen (2003) and Höbarth (2006) had used ROI as a performance measure to assess how assets to generate income. In contrast, this finding rejects the assumption; *the higher the capital expenditure, the higher*

*the income will be*, and *the better the performance is*, where the short-term capital expenditure led to lesser profits and cash flow when a firm spends the money. In the long-term, it is expected to have a positive relationship.

d) **Government Ownership and EPS:** Over the entire tested period (40 quarters; 2006-2015), the government ownership showed the significant and positive impact on EPS to support the hypothesis ($H_4$); it says *the higher the Government Ownership, the better the performance* (EPS). The government ownership could add value to firms by providing variant support and protection for controlling its expenses. Referring to the works of Ang and Ding (2006) and Aljifri and Moustafa (2007), our findings confirm that government ownership provides exceptional support to the firm's performance, even, under different economic conditions to consider as a critical factor for these firms.

e) **Sustainable Growth Rate (SGR) and EPS**: The data cover the entire tested period (40 quarters; 2006-2015) revealed that the SGR impacts significantly and positively on EPS, despite crisis consequences, to support the hypothesis ($H_5$); it says *the higher the sustainable growth rate, the better the performance* (EPS). The SGR is to what extent a firm can grow at maximum rate with self-funding. Some studies (e.g., Serrasqueiro et al., 2009; Çoban, 2014) revealed a positive correlation between the firm growth and business profitability to support SGR variable; it says *SGR is a critical indicator for business firms*.

f) **Unrelated Assets and EPS:** The data covered entire tested period (40 quarters; 2006-2015) showed that the unrelated assets had a consistently positive impact on EPS to support the hypothesis ($H_6$) *the higher the investment in unrelated assets the better the performance* (EPS). In today's global business diversity, many firms are interested in investing in different businesses as a strategy to

spread their business and markets (e.g., financial assets, real estates). Thus, this heterogeneity implies the business capabilities of the firm could assist in gaining some competitive advantages (Barney, 1991; Peteraf, 1992); these findings confirm *investing in unrelated assets improves the firm performance*.

#### 5.3.1.2.2 Under Different Economic Conditions

The investigation on the economic conditions during the concerned global financial crisis (2006-2015) produced a different pattern of economic patterns and market behaviour, which recalled different financial strategies to correct the happened market disturbances. Table 12 shows relationships between various financial strategies (six independent variables) and the *EPS* as a proxy for firm performance.

Table 12: Estimation results of the EPS Eq.2 in different periods

| Variables | Pre-crisis (Q1 05-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Leverage Level **($Debt_{it}$)** | -1.122* | 0.062* | -0.175* |
| Firm's Size (**$Size_{it}$**) | 0.065* | 0.370* | 0.209* |
| Capital Expenditure (**$Capex_{it}$**) | 0.069* | -0.042* | -0.014* |
| Government Ownership (**$Gov\_own_{it}$**) | 0.450* | 1.529* | -0.209* |
| Sustainable Growth Rate (**$SG_{it}$**) | 2.680* | 1.113* | 0.549* |
| Unrelated Assets Investment (**$Unr\_asset_{it}$**) | -0.336* | 0.103* | -0.040* |
| **J-statistic p-values** | 0.33 | 0.55 | 0.46 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

Analysis of the financial data of the concerned period (40 periods; 2006-2015) showed substantial relationships among the six tested variables, where five supported hypotheses and one rejected. Data analysis of the three economic conditions revealed:

1) **Pre-crisis:** All tested six variables have significant relationships with the EPS; five supported; unrelated assets rejected the hypotheses.

2) **In crisis:** All tested variables have an essential relationship with the EPS; five supported; capital expenditure rejected the hypotheses.
3) **Post-crisis:** All tested variables had particular relations with the EPS; three supported; capital expenditure, government ownership, and unrelated assets rejected the hypotheses.
4) The gained findings aligned to the assumption: *Different financial strategies would be leading to different results under different economic conditions*].

#### 5.3.1.3 Net Profit (NP)

Table 13 showed five hypotheses were accepted, and unrelated assets rejected the NP.

Table 13: Estimation results of the NP Eq.3 in the whole studied period

| Dependent Variable: **NP** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (balanced) observations: 3680 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| LEVR_LVL | -4.787723 | 0.013017 | -367.8128 | 0.0000 | Support |
| DLOG(FIRM_SZ) | 16.37080 | 0.010279 | 1592.674 | 0.0000 | Support |
| DLOG(CAP_EXP) | 1.017246 | 0.001990 | 511.2977 | 0.0000 | Support |
| GOV_OWN | 54.55749 | 0.315586 | 172.8766 | 0.0000 | Support |
| SG_RATE | 1.920242 | 0.016049 | 119.6496 | 0.0000 | Support |
| UNR_ASST | -2.084632 | 0.001960 | -1063.858 | 0.0000 | Reject |
| Effects Specification | | | | | |
| *Cross-section fixed* (*first differences*) | | | | | |
| Mean dependent var. | 0.003761 | S.D. dependent var. | | 10.12985 | |
| S.E. of regression | 10.51080 | Sum squared Resid. | | 405892.4 | |
| J-statistic | 86.54552 | Instrument rank | | 92 | |
| Prob. (J-statistic) | 0.463213 | | | | |

#### 5.3.1.3.1 Global Period

a) **Leverage level and NP:** Throughout the entire tested period of the concerned crisis period (40 quarters; 2006-2015), the variable leverage level showed particular negative impact on NP, where, *the higher the debt the lower the performance* (NP), which supports the hypothesis ($H_1$) to find consistency in the relationship between leverage level and NP despite the adverse impact of the 2008 financial crisis on the UAE market activities; moreover, it obeys the assumption of Fama and French (1998) *a negative relationship between debt and performance* (i.e., firm's value). This hypothesis revealed that the leverage was negatively related to the firm performance (NP); it means a massive debt could be leading to a higher probability of bankruptcy and financial recession.

b) **Firm Size and NP**: The analysis of financial dataset represents the entire tested period (40 quarters; 2006-2015) unveiled that the firm size shows a positive impact on NP to supports the hypothesis ($H_2$); it says *the bigger the company, the better the performance* (NP). This relationship was controversial in the earlier studies (Mansfield, 1962; Utton, 1971; Singh & Whittington, 1975), which reported no relationship existing both variables. However, recent studies (e.g., Robson & Bennett, 2000; Asimakopoulos et al., 2009) proved the existing relationship between profitability and number of employees. Thus, our finding agrees "*A firm's size is a key determinant of corporate performance*".

c) **Capital Expenditure and NP**: The datasets that dealt with the entire tested crisis period (40 quarters; 2006-2015) showed the positive impact of capital expenditure on NP to support the hypothesis ($H_3$); it states *the higher the capital expenditure, the higher the performance* (NP). Capital expenditure is a sort of expenses used to purchase more related or unrelated assets as income

resources (Johnson & Soenen, 2003; Höbarth, 2006), which confirms our assumption *the higher the capital expenditure, the higher the income will be, and the better the performance*.

**d) Government Ownership and NP:** The gained datasets concerned with the entire tested period (40 quarters; 2006-2015) showed that the government ownership, as an added value to firms, had a significant and positive impact on the NP to support the hypothesis ($H_4$); *it says the higher the government ownership, the better the performance* (NP). In other words, the government-owned firms operate more efficiently by controlling their expenses (Ang & Ding, 2006; Aljifri & Moustafa, 2007). The finding of the hypothesis ($H_4$) confirmed that government ownership gives exceptional support to impact on the firm's performance positively even in different economic conditions; thus, the government ownership is a crucial success factor for these firms.

**e) Sustainable Growth Rate (SGR) and NP**: SGR defines how much a firm can grow with self-funding**.** The entire tested period (40 quarters; 2006-2015) showed the significant and positive effect of sustainable growth rate shows on NP to support the hypothesis ($H_5$); it says *the higher the sustainable growth rate, the better the performance* (NP). Moreover, some studies (e.g., Johnson & Soenen, 2003; Serrasqueiro et al., 2009; Çoban, 2014) found a direct relationship between the firm growth and profitability, which supported our assumption "*sustainable growth rate is a critical indicator for business firms*".

**f) Unrelated Assets and NP**: The global business furnishes interesting opportunities for the firms to invest in unrelated assets (e.g., financial assets, properties, investments in other enterprises and joint venture) as a business strategy. The review of the entire tested period (40 quarters; 2006-2015)

showed the consistent significant negative impact of unrelated assets on NP to reject the hypothesis ($H_6$); it tells *the higher the Investment in unrelated assets, the lower the performance* (NP). The heterogeneity in assets implies that the employment of different business capabilities could help firms to compete in various market while achieving strong profits (Barney, 1991; Peteraf, 1992).

#### 5.3.1.3.2 Under Different Economic Conditions

Table 14 illustrates the various findings of the examined relationship between variant financial strategies (as independent variables) and the firm performance (NP as a proxy for firm performance) confirmed our general assumption.

Table 14: Estimation results of the NP Eq. 3 under various periods

| Variables | Pre-crisis (Q1 05-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Leverage Level **($Debt_{it}$)** | -49.08* | -1.038* | -21.37* |
| Firm's Size (**$Size_{it}$**) | 3.647* | 6.830* | 32.50* |
| Capital Expenditure (**$Capex_{it}$**) | 2.691* | -0.226* | 0.831* |
| Government Ownership (**$Gov\_own_{it}$**) | 153.1* | -20.91* | -16.92* |
| Sustainable Growth Rate (**$SG_{it}$**) | 13.74* | 7.198* | 1.903* |
| Unrelated Assets Investment (**$Unr\_asset_{it}$**) | 4.744* | -6.037* | -2.266* |
| **J-statistic p-values** | 0.60 | 0.45 | 0.62 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while NS means not significant

The analysis results of the 2008 crisis tested period (40 quarters; 2006-2015) showed significant relationships amongst all variables; five supported proposed hypotheses and one rejected. If the crisis periods segregated into three discrete economic stages, they yielded particular results, as detailed below:

1) **Pre-crisis:** All six tested variables showed a significant relationship with the NP to support the hypotheses.

2) **During-crisis:** All tested variables had a significant relationship with the NP. Three supported; capital expenditure, SGR, and unrelated assets rejected the hypotheses.
3) **Post-crisis:** all tested variables had a significant relationship; four supported; government ownership and unrelated assets rejected the hypotheses.
4) The gained findings agreed our main assumption: *Different financial strategies would be leading to different results under different economic conditions.*

#### 5.3.1.4 Return of Share Price (Return)

Table 15 shows two hypotheses *firm size* and *unrelated assets* supported *Return*; four reported, which was unexpected result.

Table 15: Estimation results of Return Eq.4 over the entire studied period

| Dependent Variable: @PC (**Return**) | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (balanced) observations: 3680 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| @PC (RETURN (-1) | -0.012011 | 0.000775 | -15.49549 | 0.0000 | |
| LEVR_LVL | -0.093393 | 1.735658 | -0.053808 | 0.9571 | Reject |
| DLOG(FIRM_SZ) | 34.49677 | 1.192347 | 28.93183 | 0.0000 | Support |
| DLOG(CAP_EXP) | -0.015173 | 0.321064 | -0.047259 | 0.9623 | Reject |
| GOV_OWN | -82.48768 | 5.124007 | -16.09828 | 0.0000 | Reject |
| SG_RATE | -2.725471 | 4.550046 | -0.598999 | 0.5492 | Reject |
| UNR_ASST | 9.499663 | 1.338773 | 7.095800 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (*first differences*) | | | | | |
| Mean dependent var. | -0.055359 | S.D. dependent var. | | 35.27029 | |
| S.E. of regression | 35.73547 | Sum squared Resid. | | 4690507 | |
| J-statistic | 86.01629 | Instrument rank | | 92 | |
| Prob. (J-statistic) | 0.448779 | | | | |

#### 5.3.1.4.1 Global Period

a) **Leverage level and Return:** The data concerned with the entire tested period (40 quarters; 2006-2015) showed that leverage level did not impact significantly on the Return to reject the hypothesis ($H_1$): "*The higher the debt, the lower the performance* (Return)". This finding contradicts the finding of Fama and French (1998) who reported a negative relationship between leverage and firm's performance (i.e., firm's value). This study revealed that "*the leverage level does not affect the firm performance over long-term"*.

b) **Firm Size and Return**: Over the entire tested period (40 quarters; 2006-2015), the data showed that the firm size had a consistent significant and positive impact on Return, despite the impact of the crisis consequences to supports our hypothesis ($H_2$): *The bigger the company, the better the firm performance* (Return)". The relationship between the firm's size and the return of the share price was debated across many financial studies. Some earlier studies gave no evidence of such existing relationship (e.g., Mansfield, 1962; Utton, 1971; Singh & Whittington, 1975). Recent key studies reported a positive relationship existed between profitability and number of employees as firm size (e.g., Robson & Bennett, 2000; Asimakopoulos et al., 2009). Nevertheless, this study showed a positive firm's size-performance relationship to fit the hypothesis "A firm's size is a key determinant of corporate performance".

c) **Capital Expenditure and Return**: The data analysis of entire tested period (40 quarters; 2006-2015) revealed that the capital expenditure showed an insignificant relationship with Return to reject the hypothesis ($H_3$) "*the higher the capital expenditure, the lower the performance* (Return)". Capital expenditure is a sort of expenses used to spread the firm's assets that would

increase its income. Thus, the ROA used as a performance measure to assess how acquired assets could generate additional incomes (Johnson & Soenen, 2003; Höbarth, 2006). However, this study rejects this assumption *"The higher the capital expenditure, the higher the income would be, so, the better the performance is"*.

d) **Government Ownership and Return**: The data dealing with the entire tested period (40 quarters; 2006-2015) indicated that the government ownership showed the significant adverse impact on Return to rejects the hypothesis ($H_4$) "*The higher the Government Ownership, the better the performance* (Return)". Government ownership often adds capability value to enable firms to operate more efficiently by controlling their expenses and government protection. Some studies reported a positive relationship between government-ownership and the return of the share price (e.g., Ang & Ding, 2006; Aljifri & Moustafa, 2007). In contrast, this study found that government ownership has a negative impact on the firm's performance (Return).

e) **Sustainable Growth Rate (SGR) and Return:** The SGR showed an insignificant relationship with Return over the entire tested period (40 quarters; 2006-2015), despite the crisis consequences, to reject the hypothesis ($H_5$) "*The higher the sustainable growth rate, the better the performance* (RETURN)". SGR defines how much a firm could grow with self-funding regarding the positive connection between the firm growth and profitability (Serrasqueiro et al., 2009; Çoban, 2014). However, the produced results from this study revealed that the SGR does not affect the firm's performance (Return), which contradict some literature that reported a positive relation (e.g., Johnson & Soenen, 2003; Höbarth, 2006; Serrasqueiro et al., 2009; Çoban, 2014).

f) **Unrelated Assets and Return:** The data related to the entire tested period (40 quarters; 2006-2015) showed that unrelated assets showed the consistent positive impact on Return to support the hypothesis ($H_6$) "*The higher the Investment in Unrelated Assets, the better the performance* (Return)". The firm usually invests in unrelated business areas purposely to increase its acquired assets and, in turn, the returned income. Thus, heterogeneity in assets would be supporting its market competitiveness (Barney, 1991; Peteraf, 1992). The findings of this study confirm that "*the investment in unrelated assets improves the firm's performance over long-run"*.

#### 5.3.1.4.2 Under Different Economic Conditions

Table 16 illustrates different findings of the examined relationships between financial strategies (as independent variables) and the firm performance (Return of the Share Price "Return" as a proxy for firm performance) to confirm the proposed assumption.

Table 16: Estimation results of the Return Eq. 4 under different periods

| Variables | Pre-crisis (Q1 05 – Q2 08) | Crisis (Q3 08 – Q4 12) | Post-crisis (Q1 13 – Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | -0.095* | -0.041* | -0.12* |
| Leverage Level $(\boldsymbol{Debt_{it}})$ | 99.77* | 7.996* | -46.15* |
| Firm's Size $(\boldsymbol{Size_{it}})$ | 23.87* | 18.86* | 18.77* |
| Capital Expenditure $(\boldsymbol{Capex_{it}})$ | 13.59* | -4.777* | 4.737* |
| Government Ownership $(\boldsymbol{Gov\_own_{it}})$ | 498.8* | -142.2** | -138.8* |
| Sustainable Growth Rate $(\boldsymbol{SG_{it}})$ | 369.5* | 12.83* | NS |
| Unrelated Assets Investment $(\boldsymbol{Unr\_asset_{it}})$ | NS | 11.05*** | NS |
| **J-statistic p-values** | 0.32 | 0.42 | 0.47 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The gained results from the analysis of the global tested period (40 quarters; 2006-2015) data revealed that different relationships were existing among all tested variables, where three variables supported two proposed hypotheses. However, when separating the global period into three distinct economic phases, different results were found as follows:

1) **Pre-crisis:** During the pre-crisis period, four measured variables showed a negative relationship with the Return; while *leverage level* showed opposite (positive relationship) to support our hypotheses, and *unrelated assets* were insignificant.
2) **During-crisis:** All tested variables have a significant relationship with the Return at different levels; however, three tested variables supported our hypotheses, while *leverage level, capital expenditure* and *government ownership* showed negative relationships.
3) **Post-crisis:** Only four tested variables have a significant relationship with the Return; three tested variables support our hypotheses; while *leverage level, firm size* and *capital expenditure. In contrast, government ownership* showed a negative relationship, while *sustainable growth rate* and *unrelated assets* were insignificance.
4) Despite the findings of the global period (2006-2015), the study proved "*Different financial strategies led to different results under different economic conditions*".

#### 5.3.1.5 Sales Growth (GR_Sale)

The three proposed hypotheses, namely *capital expenditure, government ownership,* and *sustainable growth rate* showed the negative relationship (impact) with the variable GR_Sale, as shown in Table 17.

Table 17: Estimation results of the GR_Sale Eq.5 during the entire studied period

| Dependent Variable: **GR_SALE** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006 Q1-2015 Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (balanced) observations: 3680 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| GR_SALE (-1) | -0.055587 | 0.000352 | -158.1203 | 0.0000 | |
| LEVR_LVL | -12.79024 | 0.077379 | -165.2939 | 0.0000 | Support |
| DLOG (FIRM_SZ) | 2.875915 | 0.006725 | 427.6646 | 0.0000 | Support |
| DLOG (CAP_EXP) | -2.475847 | 0.007481 | -330.9341 | 0.0000 | Reject |
| GOV_OWN | -1.438195 | 0.177441 | -8.105202 | 0.0000 | Reject |
| SG_RATE | -0.061863 | 0.018893 | -3.274433 | 0.0011 | Reject |
| UNR_ASST | 2.623964 | 0.027307 | 96.09099 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -0.011247 | S.D. dependent var. | | 7.693661 | |
| S.E. of regression | 7.577645 | Sum squared Resid. | | 210906.2 | |
| J-statistic | 88.44863 | Instrument rank | | 94 | |
| Prob. (J-statistic) | 0.436553 | | | | |

#### 5.3.1.5.1 Global Periods

a) **Leverage level and GR_Sale**: The variable leverage level exhibited negative impact on GR_Sale over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_1$) "*The higher the debt, the lower the performance* (GR_Sale)" to agree with Fama and French (1998) assumption "*There is a reverse relationship between debt and performance* (i.e., firm's value)". In other words, a massive debt would be leading to a higher probability of bankruptcy and financial recession. Thus, the firm with a higher level of leverage could be associated with weak financial performance; however, this relation would be reciprocal for the firm with a sizeable debt-to-asset ratio.

b) **Firm Size and GR_Sale**: The variable firm size displayed a positive impact on GR_Sale over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_2$) "*The bigger the firm, the better the performance* (GR_Sale)". The existence of such directional relationship was not reported in the earlier related literature (e.g., Mansfield, 1962; Utton, 1971; Singh & Whittington, 1975). However, the advanced mutual relationship of the finance and microeconomics fruited in defining a positive relationship between profitability and firm size (e.g., Robson & Bennett, 2000; Asimakopoulos et al., 2009). Therefore, the bigger firm will perform better than peers in the business sector and market to agree upon "*A firm's size is an important determinant of corporate performance*".

c) **Capital Expenditure and GR_Sale**: The variable capital expenditure exhibited a significant and negative impact on GR_Sale over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_3$) "*The higher the capital expenditure, the lower the performance* (GR_Sale)". Capital

expenditure is used to expand the firm's business by purchasing more assets. Some studies (e.g., Johnson & Soenen, 2003; Höbarth, 2006) incorporated ROA in assessing how assets can generate additional income. In contrast, empirical study rejected the assumption; *the higher the capital expenditure, the higher the income will be; so, the better the performance is*. Despite the capital expenditure is leading in short-term to fewer profits and cash flow; however, it is expected to have a positive relationship in long-term.

d) **Government Ownership and GR_Sale**: The variable government ownership displayed a significant and negative impact on GR_Sale over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis (H4) "*The higher the government ownership, the lower the performance* (GR_Sale)". In principle, government ownership adds value to firms through providing variant support and protection. Thus, the government-owned firms operate more efficiently by controlling their expenses (Ang & Ding, 2006; Aljifri & Moustafa, 2007). In contrast, our gained findings indicated that government ownership impacts negatively on the firm's performance and does not support the growth in sales.

e) **Sustainable Growth Rate (SGR) and GR_Sale**: The variable SGR showed a negative impact on GR_Sale over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_5$) "*The higher the sustainable growth rate, the lower the performance* (GR_Sale)". The SGR indicates to what extent could a firm grow with self-funding to establish a mutual relationship between firm's growth and profitability (Serrasqueiro et al., 2009; Çoban, 2014). This study found that *the higher the sustainable growth rate, the lower the performance* (GR_Sale) to contradict some reviewed citations (e.g., Johnson & Soenen, 2003; Höbarth, 2006; Serrasqueiro et al., 2009; Çoban, 2014).

f) **Unrelated Assets and GR_Sale**: The unrelated variable assets exhibited a consistent positive impact on GR_Sale over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_6$) "*The higher the Investment in Unrelated Assets, the lower the performance* (GR_Sale)". Peteraf (1992) argued that the heterogeneity in assets imply that the different capabilities could assist the firms in competing well in the marketplace while achieving different results and allowing firms to gain some competitive advantages (Barney, 1991). These works supported ours "*The investment in unrelated assets could improve the firm's performance*".

#### 5.3.1.5.2 Under Different Economic Conditions

Table 18 illustrates the different findings of the examined relationship between variant financial strategies (as independent variables) and the firm performance (GR_Sale as a proxy for firm performance), which confirmed our general assumption.

Table 18: Estimation results of the GR_Sale Eq.5 under different periods

| Variables | Pre-crisis (Q1 05-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | 0.173* | -0.161* | -0.107* |
| Leverage Level ($\boldsymbol{Debt_{it}}$) | -15.36* | -27.73* | -23.73* |
| Firm's Size ($\boldsymbol{Size_{it}}$) | 4.850* | 5.273* | -4.202* |
| Capital Expenditure ($\boldsymbol{Capex_{it}}$) | -2.542* | -5.743* | -2.482* |
| Government Ownership ($\boldsymbol{Gov\_own_{it}}$) | 6.775* | -109.9* | -0.861* |
| Sustainable Growth Rate ($\boldsymbol{SG_{it}}$) | 26.38* | -0.725* | NS |
| Unrelated Assets Investment ($\boldsymbol{Unr\_asset_{it}}$) | -6.711* | 20.35* | 0.492* |
| **J-statistic p-values** | 0.34 | 0.49 | 0.77 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The result of the global tested period (40 quarters; 2006-2015) exhibited significant relationship among all variables; however, three variables were supportive of the proposed hypotheses. The segregation of the global period into three distinct economic phases of 2008 crisis, different results were found as follows:

1) **Pre-crisis:** All tested variables had a significant relationship with the GR_Sale. However, four tested variables supported the proposed hypotheses; while *capital expenditure* and *unrelated assets* displayed negative relationships.
2) **During-crisis:** All tested variables had a significant relationship with the GR_Sale; however, three tested variables supported the proposed hypotheses; while *capital expenditure, government ownership* and *sustainable growth rate*, produced negative relationships.
3) **Post-crisis:** Five tested variables had a significant relationship with the GR_Sale; the SGR's was insignificant. Two tested variables supported the proposed hypotheses, namely *leverage level* and *unrelated assets*.
4) Thus, the gained findings supported our assumption "*Different financial strategies led to different results under different economic circumstances*".

### 5.3.1.6 Tobin's Q (Q)

All the six proposed hypotheses supported this variable Q, as displayed in Table 19.

Table 19: Estimation results of the Q Eq.6 during the entire studied period

| Dependent Variable: **Q** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (balanced) observations: 3680 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| LEVR_LVL | -4.214453 | 0.040396 | -104.3286 | 0.0000 | Support |
| DLOG(FIRM_SZ) | 2.068745 | 0.009946 | 207.9906 | 0.0000 | Support |
| DLOG(CAP_EXP) | 0.154663 | 0.000482 | 321.1064 | 0.0000 | Support |
| GOV_OWN | 9.374228 | 0.127656 | 73.43366 | 0.0000 | Support |
| SG_RATE | 0.121864 | 0.017351 | 7.023523 | 0.0000 | Support |
| UNR_ASST | 0.670090 | 0.010526 | 63.65984 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -0.032011 | S.D. dependent var. | | 0.283154 | |
| S.E. of regression | 0.590279 | Sum squared Resid. | | 1280.131 | |
| J-statistic | 86.74772 | Instrument rank | | 92 | |
| Prob. (J-statistic) | 0.457127 | | | | |

#### 5.3.1.6.1 Global Period

a) **Leverage level and Q:** The leverage level exhibited negative impact on Tobin's Q over the entire tested period (40 quarters; 2006-2015) to supports our hypothesis ($H_1$) "*The higher the debt, the lower the performance* (Q)", which meets the assumption of Fama and French (1998), which proved a

negative relationship between debt and performance (i.e., firm's value). Thus, the more levered a firm, the more likely the firm would not be able to fulfil its contractual commitments. In other words, a massive debt can be leading to a higher probability of bankruptcy and financial recession.

**b) Firm Size and Q:** The firm size showed a consistent significant and positive impact on Tobin's Q over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_2$) "*The bigger the company, the better the performance* (Q)", despite the crisis consequences. The relationship between firm size and growth, along with profitability was a debatable topic in the finance literature. However, a positive relationship was reported by some research work (e.g., Mansfield, 1962; Utton, 1971; Singh & Whittington, 1975; Robson & Bennett, 2000; Asimakopoulos et al., 2009) to support our assumption *the bigger firm will perform better than peers in the same sector or market*. Thus, our findings agreed on "*firm's size is a key determinant of firm performance*".

**c) Capital Expenditure and Q:** The capital expenditure exhibited significant and positive impact on Tobin's Q over the entire tested period (40 quarters; 2006-2015) to supports the hypothesis ($H_3$) "*The higher the capital expenditure, the higher the performance* (Q)". Capital expenditure is an essential activity for expanding the firm's assets (Johnson & Soenen, 2003; Höbarth, 2006) to support our assumption *the higher the capital expenditure, the higher the income will be, so, the better the performance*. In the short-term, the capital expenditure leading to lesser profits and cash flow when a firm spends the money, in the long-term, it is expected to have a positive relationship.

d) **Government Ownership and (Q):** The government ownership showed the significant and positive impact on Tobin's Q over the entire tested period (40 quarters; 2006 - 2015) to support our hypothesis ($H_4$) "*The higher the government ownership, the better the performance* (Q)". The government-owned firm operates more efficiently by controlling their expenses through government regulations even, under different economic conditions (Ang & Ding, 2006; Aljifri & Moustafa, 2007). Thus, the government ownership is a success factor for these firms.

e) **Sustainable Growth Rate (SGR) and (Q):** The SGR exhibited significant and positive impact on Tobin's Q over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_5$) "*The higher the sustainable growth rate, the better the performance* (Q)" despite the impact of the crisis consequences. As SGR defines how much a firm could maintain its growth with self-funding, some scholarly work reported a positive relation between profits and growth (e.g., Johnson & Soenen, 2003; Höbarth, 2006; Serrasqueiro et al., 2009; Çoban, 2014); their findings supported our findings that the SGR is a critical indicator for successful business firms.

f) **Unrelated Assets and (Q):** The unrelated assets displayed a significant and positive impact on Tobin's Q over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_6$) "*The higher the investment in unrelated assets, the better the performance* (Q)". This assumption indicates that the firms are entering unrelated business fields to diversify their products and services (Barney, 1991; Peteraf, 1992); our findings confirmed that the investment in unrelated assets improves the performance.

#### 5.3.1.6.2 Under Different Economic Conditions

Table 20 illustrates the gained findings of the examined relationship between variant financial strategies (independent variables) and the firm performance (Tobin's Q as a proxy for firm performance), which, confirmed our general assumption.

Table 20: Estimation results of the Q Eq.6 in different periods

| Variables | Pre-crisis (Q1 05-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Leverage Level ($\boldsymbol{Debt_{it}}$) | 0.726* | -0.765* | -0.255* |
| Firm's Size ($\boldsymbol{Size_{it}}$) | -1.080* | -0.780* | -0.443* |
| Capital Expenditure ($\boldsymbol{Capex_{it}}$) | -0.064* | -0.021* | 0.040* |
| Government Ownership ($\boldsymbol{Gov\_own_{it}}$) | NS | -0.907* | -1.610* |
| Sustainable Growth Rate ($\boldsymbol{SG_{it}}$) | 4.444* | 0.118* | NS |
| Unrelated Assets Investment ($\boldsymbol{Unr\_asset_{it}}$) | -0.310* | 0.099* | 0.182* |
| **J-statistic p-values** | 0.55 | 0.69 | 0.44 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant.

The result of the global tested period (40 quarters; 2006-2015) exhibited consistency in the relationships and support with all tested variables. The segregation of the global period into three distinct economic periods represented the following conditions:

1) **Pre-crisis:** Five measured variables had a significant relationship with Tobin's Q; SGR supported; leverage level, firm size, capital expenditure, and unrelated assets rejected hypotheses; and government ownership was insignificant.
2) **During-crisis:** All tested variables had a significant relationship with Tobin's Q; three tested variables supported the proposed hypotheses. The variables *firm size*, *capital expenditure* and *government ownership* rejected the hypotheses.

3) **Post-crisis:** Five tested variables had a significant relationship with Tobin's Q; leverage level, capital expenditure and unrelated assets supported; firm size and government ownership rejected the hypotheses. SGR was insignificant.
4) the study proved "*Different financial strategies led to different results under different economic conditions*".

### 5.3.2 Cash Flow Management and Firm Performance

Applying the developed Eq.1, $Y_{it}$ is any of the five dependent variables (performance measures). The dependent variables are: Return on Investment (ROI), Net Profit (NP), Growth in Sales (GR_Sales), Earnings per Share (EPS), Return of the Share Price (Return), and Tobin's Q (Q). While, $X_{it}$ is the independent variables listed below.

### 5.3.2.1 Return on Investment (ROI)

Table 21 shows the six proposed hypotheses were supporters.

Table 21: Estimation results of the ROI Eq.7 during the entire studied period

| Dependent Variable: **ROI** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (unbalanced) observations: 3589 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| ROI (-1) | 0.246508 | 2.72E-05 | 9069.382 | 0.0000 | |
| OPR_CASH | 0.233428 | 0.008798 | 26.53108 | 0.0000 | Support |
| INV_CASH | -0.157834 | 0.008451 | -18.67729 | 0.0000 | Support |
| FIN_CASH | 0.160024 | 0.008712 | 18.36837 | 0.0000 | Support |
| LOG(CASH_HOLD) | 1.392456 | 0.008086 | 172.2012 | 0.0000 | Support |
| CCC | -0.007180 | 1.10E-05 | -654.3718 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -2.098077 | S.D. dependent var. | | 129.7116 | |
| S.E. of regression | 148.0854 | Sum squared Resid. | | 78572677 | |
| J-statistic | 88.72624 | Instrument rank | | 93 | |
| Prob. (J-statistic) | 0.428382 | | | | |

#### 5.3.2.1.1 Global Period

a) **Cash Conversion Cycle (CCC) and ROI**: The CCC showed the significant adverse impact on ROI over the entire tested period (40 quarters; 2006-2015) supports our hypothesis ($H_7$) "*The shorter the cash conversion cycle, the better*

*the performance* (ROI)". Gill et al. (2010) reported existing a significant and negative relationship between the CCC (as a proxy for working capital management) and profitability. Richards and Laughlin (1980) introduced the CCC model, which open the door to further investigations on such relationship (e.g., Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014). These scholarly findings supported our findings pertinent this relationship.

b) **Cash from Operating Activities and ROI**: The cash that generated from operating activities (i.e., profitability of a business firm) exhibited significant and positive impact on ROI over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_8$) and related assumption "*The higher* (*sufficient*) *the cash generated from operating activities the better the business performance* (ROI)". In other words, a firm that generates sufficient cash from operating activities higher than the net changes in the cash flow and cash equivalent during the concerned period will have better performance. The literature review revealed that, up to our best knowledge, this variable has neither been detected in any empirical or comparative studies nor been subject to test for defining any relationship between financial strategies and firm's performance.

c) **Cash from Investing Activities and ROI:** The cash that generated from investing activities (as an essential aspect of growth and capital) showed significant and negative impact on ROI over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_9$) and related assumption "*The higher the negative cash generated from investing activities, the better the performance* (ROI)". The business firms need to promote the investment to

expand their products and services. The findings from data analysis pertinent to such relationship supported our assumption "*A firm negative cash from investing activities would have better business performance*". The literature review revealed that, up to our best knowledge, this variable has neither been tackled in any empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

**d) Cash from Financing Activities and ROI:** The cash that generated from financing activities showed significant and positive impact on ROI over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{10}$) and related assumption "*The higher* (*positive*) *the cash generated from financing activities, the better the business performance* (ROI)". The literature review revealed that, up to our best knowledge, this variable has neither been tackled in any significant empirical or comparative studies nor been subject to the test to define any relation between financial strategies and firm's performance.

**e) Cash Holdings and ROI**: The cash holdings showed the significant and positive impact on ROI over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{11}$) and related assumption "*The higher the amount of cash holdings, the better is the firm's performance* (ROI)". The findings produced by Fama and French (1998) and Pinkowitz and Williamson (2004) on adding higher values on its cash have supported our findings pertinent to this hypothesis. Faulkender and Wang (2006), suggested that the market rewards the firm that retains liquidity with higher valuations and able to create more value.

#### 5.3.2.1.2 Under Different Economic Conditions

Table 22 illustrates the different findings of the examined relationship between variant financial strategies (independent variables) and the firm performance (ROI as a proxy for firm performance), confirming our general assumption.

Table 22: Estimation results of the ROI Eq.7 under different periods

| Variables | Pre-crisis (Q1 06-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | 0.063* | 0.142* | 0.116* |
| Cash generated from Operating Activity ($\boldsymbol{OPR\_Cash_{it}}$) | 0.676* | 0.110* | NS |
| Cash generated from Investing Activity ($\boldsymbol{Inv\_Cash_{it}}$) | -0.694* | 0.110* | NS |
| Cash generated from Financing Activity ($\boldsymbol{Fin\_Cash_{it}}$) | 0.685* | 0.110* | NS |
| Cash hold | 0.355* | 0.157* | 0.883* |
| Working Capital-Cash Conversion Cycle ($\boldsymbol{ccc_{it}}$) | 0.000271* | -7.86E-05* | -0.000228* |
| **J-statistic p-values** | 0.46 | 0.47 | 0.45 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The result of the global tested period (40 quarters; 2006-2015) showed the significant relationship among all variables with supporting all proposed hypotheses. However, when segregating the global period in three different economic stages, different results were found as follow:

1) **Pre-crisis:** All tested variables had a significant relationship with the ROI; five tested variables support our hypotheses, while the variable CCC displayed positive relationship.
2) **During-crisis:** All tested variables had a significant relationship with the ROI; five tested variables support our hypotheses; the variable Cash generated from investing activity showed a positive relationship.

3) **Post-crisis:** Two tested variables had a significant relationship with the ROI to support our hypotheses, namely CCC and Cash Hold.
4) The generated findings from data analysis of the global financial crisis (2006-2015) argued "*Different financial strategies led to different results under different economic conditions*".

#### 5.3.2.2 Earnings Per Share (EPS)

The all six proposed hypotheses supported the variable EPS, as shown in Table 23.

Table 23: Estimation results of the EPS Eq.8 during the entire studied period

| Dependent Variable: **EPS** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (unbalanced) observations: 3589 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| EPS (-1) | 0.246883 | 3.16E-05 | 7810.678 | 0.0000 | |
| OPR_CASH | 0.012876 | 0.003444 | 3.738445 | 0.0002 | Support |
| INV_CASH | -0.015431 | 0.003451 | -4.470995 | 0.0000 | Support |
| FIN_CASH | 0.008234 | 0.003413 | 2.412753 | 0.0159 | Support |
| LOG (CASH_HOLD) | 0.482761 | 0.000902 | 535.4318 | 0.0000 | Support |
| CCC | -0.001152 | 4.25E-06 | -271.0158 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -0.291167 | S.D. dependent var. | | 15.38490 | |
| S.E. of regression | 17.61434 | Sum squared Resid. | | 1111680. | |
| J-statistic | 85.81783 | Instrument rank | | 93 | |
| Prob. (J-statistic) | 0.515716 | | | | |

**5.3.2.2.1 Global Period**

a) **Cash Conversion Cycle (CCC) and EPS:** CCC exhibited significant negative impact on EPS over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_7$) "*The shorter the cash conversion cycle, the higher the performance* (EPS)". Gill et al. (2010) concluded that a significant negative relationship existed between the CCC (as a proxy for working capital management) and profitability; thus, the shorter the CCC, the better the performance. Richards and Laughlin (1980) proposed the CCC model and cited by some authors (e.g., Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014) supported our assumption "*A business firm with efficient working capital management is a successful firm*".

b) **Cash from Operating Activities and EPS:** Cash generated from operating activities showed significant and positive impact on EPS over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_8$) and related assumption "*The higher* (*sufficient*) the *cash generated from operating activities, the better the business performance* (EPS)". The literature review revealed that, up to our best knowledge, this variable has neither been detected in any empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

c) **Cash from Investing Activities and EPS:** Cash from Investing Activities displayed significant and negative impact on EPS over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_9$) and the related assumption "*The higher the negative cash generated from Investing Activities, the better the performance* (EPS)". The literature review revealed that, up to our best knowledge, this variable has neither been detected in any significant

empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

d) **Cash from Financing Activities and EPS:** Cash generated from financing activities exhibited significant and positive impact on EPS over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{10}$) and related assumption "*The higher the positive cash generated from financing activities, the better the performance* (EPS)". The literature review revealed that, up to our best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

e) **Cash Holdings and EPS:** Cash holdings showed the significant and positive impact on EPS over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{11}$) and related hypothesis "*The higher the amount of cash holdings, the better is the firm's performance* (EPS)". The findings of both Fama and French (1998) and Pinkowitz and Williamson (2004) supported our assumption regarding the direct relationship between the higher cash holdings and firm's performance. Faulkender and Wang (2006) argued that reward the firm that retains liquidity with higher valuations to create more value.

#### 5.3.2.2.2 Under Different Economic Conditions

Table 24 illustrates the various findings of the examined relationship between financial strategies (as independent variables) and firm performance (EPS as a proxy for firm performance) that confirmed our general assumption.

Table 24: Estimation results of the EPS Eq.8 under different periods

| Variables | Pre-crisis (Q1 06-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | 0.057* | 5.224* | 0.089* |
| Cash generated from Operating Activity **($OPR\_Cash_{it}$)** | 0.040* | 0.621* | NS |
| Cash generated from Investing Activity (**$Inv\_Cash_{it}$**) | -0.040* | -0.639* | NS |
| Cash generated from Financing Activity(**$Fin\_Cash_{it}$**) | 0.042* | 0.627* | NS |
| Cash hold | 0.026* | 0.737* | 0.015* |
| Working Capital-Cash Conversion Cycle (**$ccc_{it}$**) | -3.66E-05* | -0.000351* | -5.35E-06* |
| **J-statistic p-values** | 0.43 | 0.53 | 0.49 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The result of the global tested period (40 quarters; 2006-2015) showed the significant relationship among all variables to support all our hypotheses; when segregating the global period in three economic stages, different results obtained:

1) **Pre-crisis:** All tested variables had a significant relationship with the EPS and supported our hypotheses.
2) **During-crisis:** All tested variables had a significant relationship with the EPS and supported our hypotheses.
3) **Post-crisis:** Only two tested variables had a significant relationship with the EPS to support our hypotheses, namely CCC and Cash Hold.
4) The generated findings from data analysis of the global financial crisis (2006-2015) argued "*Different financial strategies led to different results under different economic conditions*".

#### 5.3.2.3 Net Profit (NP)

All six proposed hypotheses supported dependent variable NP, as shown in Table 25.

Table 25: Estimation results of the NP Eq.9 during the whole studied period

| Dependent Variable: **NET_PROFIT** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (unbalanced) observations: 3589 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| NET_PROFIT (-1) | 0.027059 | 1.10E-05 | 2449.205 | 0.0000 | |
| OPR_CASH | 0.448006 | 0.016649 | 26.90809 | 0.0000 | Support |
| INV_CASH | -0.228744 | 0.016426 | -13.92601 | 0.0000 | Support |
| FIN_CASH | 0.108724 | 0.016561 | 6.565201 | 0.0000 | Support |
| LOG(CASH_HOLD) | 96.75875 | 0.090951 | 1063.853 | 0.0000 | Support |
| CCC | -0.077703 | 9.17E-05 | -847.7701 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -1.578434 | S.D. dependent var. | | 1010.780 | |
| S.E. of regression | 1046.742 | Sum squared Resid. | | 3.93E+09 | |
| J-statistic | 84.65828 | Instrument rank | | 93 | |
| **Prob. (J-statistic)** | 0.551108 | | | | |

##### 5.3.2.3.1 Global Period

a) **Cash Conversion Cycle (CCC) and NP**: The CCC showed the significant and negative impact on NP over the entire tested period (40 quarters; 2006-2015) to supports the hypothesis ($H_7$) and related assumption "*The shorter the cash*

*conversion cycle, the higher the performance* (NP)". Our assumption "*the business firm with efficient working capital management is the most successful firms*" supported by authenticated work on the CCC model of financial scientists (e.g., Richards & Laughlin, 1980; Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014).

b) **Cash from Operating Activities and NP**: Cash generated from operating activities displayed significant and positive impact on NP over the entire tested period (40 quarters; 2006-2015) to supports our hypothesis ($H_8$) and related assumption "*The higher the cash generated from sufficient operating activities, the better the performance* (NP)". The literature review revealed that, according to the best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

c) **Cash from Investing Activities and NP:** Cash from investing activities, as an essential aspect of growth and capital, showed significant and negative impact on NP over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_9$) and related assumption "*The higher the negative cash generated from investing activities, the better the performance* (NP)". The literature review revealed that, on the best knowledge, this variable has neither been detected in any empirical or comparative studies nor been subject to define the relationship between financial strategies and firm's performance.

d) **Cash from Financing Activities and NP**: Cash generated from financing activities shows the significant and positive impact on NP over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{10}$) and related assumption "*The higher the Cash generated from financing activities, the*

*better the performance* (NP)". Moreover, the literature review revealed that, to the best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

e) **Cash Holdings and NP**: Cash holdings exhibited significant and positive impact on NP over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{11}$) and related assumption "*The higher the amount of cash holdings, the better is the firm's performance* (NP)", and agreed on the findings of Fama and French (1998) and Pinkowitz and Williamson (2004) regarding direct relation between higher value of cash holdings and firm's performance.

#### 5.3.2.3.2 Under Different Economic Conditions

Table 26 illustrates the different findings of the examined relationship between variant financial strategies (as independent variables) and the firm performance (NP as a proxy for firm performance), confirming our general assumption.

Table 26: Estimation results of the NP Eq.9 under different periods

| Variables | Pre-crisis (Q1 06 – Q2 08) | Crisis (Q3 08 – Q4 12) | Post-crisis (Q1 13 – Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | -0.069* | -0.072* | -0.075* |
| Cash generated from Operating Activity **($OPR\_Cash_{it}$)** | 0.676* | 1.506* | NS |
| Cash generated from Investing Activity ($Inv\_Cash_{it}$) | -0.696* | -1.653* | NS |
| Cash generated from Financing Activity($Fin\_Cash_{it}$) | 0.741* | 1.652* | NS |
| Cash hold | -0.901* | 0.423* | -1.644* |
| Working Capital-Cash Conversion Cycle ($ccc_{it}$) | -0.004* | 0.901* | -0.0004* |
| **J-statistic p-values** | 0.52 | 0.39 | 0.44 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The result obtained from the global tested period (40 quarters; 2006-2015) showed the significant relationships among all variables to support all proposed hypotheses. Thus, segregating the global period in three distinct economic stages obtained below results:

1) **Pre-crisis:** All tested variables supported the NP to support our hypotheses. In contrast, the variable *cash hold* rejected the hypothesis (negative relationship).
2) **During-crisis:** All tested variables supported the NP. However, the variable CCC rejected the hypotheses (positive relationship).
3) **Post-crisis:** Only two tested variables have a significant relationship with the NP, namely *CCC* and *cash hold*. In contrast, the variable *cash hold* rejects the hypothesis (negative relationships).
4) The generated findings from data analysis of the global financial crisis (2006-2015) argued "*Different financial strategies led to different results under different economic conditions*".

### 5.3.2.4 Return of the Share Price (Return)

Three proposed hypotheses, namely *cash from operating activities, cash from investing activities* and *cash from financing activities* rejected Return, as illustrated in Table 27.

Table 27: Estimation results of Return Eq.10 during the entire studied period

| Dependent Variable: @PC(**RETURN**) | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (unbalanced) observations: 3589 | | | | | |
| White period instrument weighting matrix | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| @PC (RETURN (-1) | -0.000884 | 0.000160 | -5.534149 | 0.0000 | |
| OPR_CASH | 1.790657 | 2.095075 | 0.854698 | 0.3928 | Reject |
| INV_CASH | -2.024631 | 2.093446 | -0.967129 | 0.3335 | Reject |
| FIN_CASH | 1.860019 | 2.105757 | 0.883302 | 0.3771 | Reject |
| D(LOG(CASH_HOLD) | 20.66223 | 0.085429 | 241.8638 | 0.0000 | Support |
| CCC | -0.000767 | 7.03E-05 | -10.91656 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | 4.398084 | S.D. dependent var. | | 345.9807 | |
| S.E. of regression | 353.1048 | Sum squared resid. | | 4.47E+08 | |
| J-statistic | 86.25362 | Instrument rank | | 92 | |
| Prob (J-statistic) | 0.472030 | | | | |

#### 5.3.2.4.1 Global Period

a) **Cash Conversion Cycle and Return**: The CCC model exhibited significant and negative impact on Return over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_7$) and related assumption "*The shorter the period, the better the performance* (Return)". Gill et al. (2010) reported that there is a significant negative relationship existed between the CCC (as a proxy for working capital management) and profitability, where the shorter the CCC, the better the performance. This study found that the business firm with efficient working capital management is the most successful firms, which supported by some relevant citations (e.g., Richards & Laughlin, 1980; Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014).

b) **Cash from Operating Activities and Return**: The cash that generated from operating activities shows not-significant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_8$) and related assumption "*The higher the cash generated sufficiently from operating activities, the higher the performance* (Return)". The literature review revealed that, up to our best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

c) **Cash from Investing Activities and (Return):** The cash that returned from investing activities, as an essential aspect of growth and capital, showed insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_9$) and related assumption "*The higher the higher the negative cash generated from investing activities the higher the performance*

(Return)". The literature review revealed that, to the best knowledge, this variable has neither been tackled in any empirical studies nor been subject to test for defining the potential relationship between financial strategies and firm's business performance.

d) **Cash from Financing Activities and Return**: The cash that generated from financing activities displayed insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_{10}$) and related assumption "*The higher the Positive Cash generated from financing activities, the better the business performance* (Return)". The literature review revealed that, to the best knowledge, this variable has neither been tackled in any empirical studies nor been subject to test for defining any existing relationship between financial strategies and firm's performance.

e) **Cash Holdings and Return**: The cash holdings exhibited significant and positive impact on Return over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_{11}$) "*The higher the amount of cash holdings, the better is the firm's performance* (Return)". The findings introduced by Fama and French (1998) and Pinkowitz and Williamson (2004) supported and in agreement with our proposed hypothesis; it says, "*The higher some cash holdings, the better is the firm's performance*." On the other hand, Faulkender and Wang (2006) indicated that the market could reward the firm that retains liquidity with higher valuations and capable of creating more value.

#### 5.3.2.4.2 Under Different Economic Conditions

Table 28 illustrates different findings of the examined relationship between various financial strategies (independent variables) and the firm performance (Return as a proxy for firm performance) that confirmed the related assumption.

Table 28: Estimation results of the Return Eq.10 under different periods

| Variables | Pre-crisis (Q1 06-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | 0.022* | -0.003* | -0.126* |
| Cash generated from Operating Activity ($\boldsymbol{OPR\_Cash_{it}}$) | 4.883* | NS | NS |
| Cash generated from Investing Activity ($\boldsymbol{Inv\_Cash_{it}}$) | -4.995* | NS | NS |
| Cash generated from Financing Activity($\boldsymbol{Fin\_Cash_{it}}$) | 4.731* | NS | NS |
| Cash hold | 7.260* | 1.873* | NS |
| Working Capital-Cash Conversion Cycle ($\boldsymbol{ccc_{it}}$) | -0.004* | 0.0007* | -0.002** |
| **J-statistic p-values** | 0.23 | 0.37 | 0.23 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The result of the global tested period (40 quarters; 2006-2015) showed that only two variables support our hypotheses. The segregation of the global period of the crisis in three distinct economic stages return different results:

1) **Pre-crisis**: All tested variables had a significant relationship with the Return and supported our hypotheses.
2) **During a crisis**: Only two of the five tested variables, namely *cash hold* and *CCC* showed a significant relationship with the Return; only one variable Cash_hold supported the hypothesis, while CCC showed a positive relationship.
3) **Post-crisis:** Only one tested variable, namely CCC exhibited a significant relationship with the Return to support our hypothesis.
4) The generated findings from data analysis of the global financial crisis (2006-2015) argued "*Different financial strategies led to different results under different economic conditions*.

### 5.3.2.5 Sales Growth (GR_Sale)

This variable exhibited very different approach as four proposed hypotheses rejected; the CCC hypothesis supported the variable, as shown in Table 29.

Table 29: Estimation results of the GR_Sale Eq.11 during the entire period

| Dependent Variable: **GR_SALE** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (unbalanced) observations: 3589 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| GR_SALE (-1) | -0.091342 | 8.74E-05 | -1044.981 | 0.0000 | |
| OPR_CASH | 0.089105 | 0.380798 | 0.233995 | 0.8150 | Reject |
| INV_CASH | -0.114769 | 0.379604 | -0.302339 | 0.7624 | Reject |
| FIN_CASH | 0.462553 | 0.385419 | 1.200131 | 0.2302 | Reject |
| LOG(CASH_HOLD) | -83.52165 | 0.099336 | -840.8031 | 0.0000 | Reject |
| CCC | -0.001324 | 7.66E-05 | -17.27727 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -1.351909 | S.D. dependent var. | | 771.0118 | |
| S.E. of regression | 742.9893 | Sum squared Resid | | 1.98E+09 | |
| J-statistic | 90.60427 | Instrument rank | | 93 | |
| Prob(J-statistic) | 0.374503 | | | | |

#### 5.3.2.5.1 Global Period

a) **Cash Conversion Cycle (CCC) and GR_SALE**: The CCC displayed significant and negative impact on GR_SALE over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_7$) and related assumption "*The shorter the period, the better the business performance* (GR_SALE)". The relationship between the CCC (as a proxy for working capital management) and profitability has been a research focus of several studies (e.g., Richards & Laughlin, 1980; Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014). The findings of these studies supported ours "*The business firm with efficient working capital management is the most successful firms*".

b) **Cash from Operating Activities and GR_SALE**: The cash that generated from operating activities showed insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_8$) and related assumption "*The higher* (*sufficient*) the *cash generated from operating activities, the higher the business performance* (GR_SALE)". The literature review revealed that, to the best knowledge, this variable has neither been detected in any significant empirical studies nor subject to test for defining the relationship between financial strategies and firm's performance.

c) **Cash from Investing Activities and GR_SALE**: The cash that generated from investing activities (as an essential factor of firm's growth and capital) exhibited insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_9$) and related assumption "*The higher the higher the negative cash generated from investing activities, the higher* (*better*) *the business performance* (GR_SALE)". Moreover, the literature

review revealed that, up to our best knowledge, this variable has neither been detected in any relevant empirical studies nor been subject to the test to define the relationship between financial strategies and firm's performance.

**d) Cash from Financing Activities and GR_SALE**: The cash that generated from financing activities showed insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_{10}$) and related assumption "*The higher the positive cash generated from financing activities, the better the firm's business performance* (GR_SALE). The literature review revealed that, up to our best knowledge, this variable has neither been detected in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

**e) Cash Holdings and GR_SALE**: The cash holdings exhibited significant and negative impact on GR_SALE over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_{11}$) and related assumption "*The higher the number of cash holdings, the better is the firm's business performance* (GR_SALE)". Fama and French (1998) and Pinkowitz and Williamson (2004) unveiled that the shareholders could enhance the firm's value through added opportunities for volatile investment. In contrast, Hanson (1992) and Smith and Kim (1994) reported that those bidding firms are possessing a high excess of free cash flow, which would be exhibiting low excess stock returns during merger announcements (i.e., low performance). Therefore, our findings rejected both Fama and French and Pinkowitz and Williamson approached, while agreed Hanson (1992) and Smith and Kim (1994) assumption "*The higher some cash holdings, the lower is the firm's performance*".

#### 5.3.2.5.2 Under Different Economic Conditions

Table 30 illustrates the different findings of the examined relationship between variant financial strategies (as independent variables) and the firm performance (Sales Growth "GR_Sale" as a proxy for firm performance), confirming our general assumption.

Table 30: Estimation results of the GR_Sale Eq.11 under different periods

| Variables | Pre-crisis (Q1 06-Q2 08) | Crisis (Q3 08-Q4 12) | Post-crisis (Q1 13-Q4 15) |
|---|---|---|---|
| Lag of Dependent Variable | -0.104* | -0.136* | -0.209* |
| Cash generated from Operating Activity **($OPR\_Cash_{it}$)** | 0.961* | 0.132* | NS |
| Cash generated from Investing Activity (**$Inv\_Cash_{it}$**) | -0.903* | -0.135* | NS |
| Cash generated from Financing Activity(**$Fin\_Cash_{it}$**) | 0.948* | 0.132* | NS |
| Cash hold | 0.629* | -0.931* | -0.020* |
| Working Capital-Cash Conversion Cycle (**$ccc_{it}$**) | -0.001* | -0.0002* | -8.08E-05* |
| **J-statistic p-values** | 0.28 | 0.49 | 0.45 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant

The result of the global tested period (40 periods; 2006-2015) shows the significant relationship among only two out of the five variables, but with supporting only one hypothesis, as "Cash_Hold" variable show opposite (negative relationships). However, when segregating the global period in three different economic stages, different results were found as follow:

1) **Pre-crisis:** All tested variables had a significant relationship with the GR_Sales.
2) **Crisis:** All tested variables had a significant relationship with the GR_Sales. The variable Cash_Hold rejected the hypotheses to show a negative relationship.
3) **Post-crisis:** Two tested variables had a significant relationship with the GR_Sales, while Cash_Hold rejected the hypothesis (negative relationships).

4) The generated findings from financial data analysis (2006-2015) argued "*Different financial strategies led to different results under different economic conditions*".

### 5.3.2.6 Tobin's Q (Q)

Tobin's Q produced very different approach as four proposed hypotheses rejected, while CCC hypothesis was supporter, as illustrated in Table 31.

Table 31: Estimation results of the Q Eq.12 during the entire studied period

| Dependent Variable: **Q** | | | | | |
|---|---|---|---|---|---|
| Method: Panel Generalized Method of Moments | | | | | |
| Transformation: First Differences | | | | | |
| Sample: 2006Q1 2015Q4 | | | | | |
| Periods included: 40 | | | | | |
| Cross-sections included: 92 | | | | | |
| Total panel (unbalanced) observations: 3589 | | | | | |
| White period instrument weighting matrix | | | | | |
| White period standard errors & covariance (*d.f.* corrected) | | | | | |
| Instrument specification: @DYN (Q, -1) | | | | | |
| Constantly added to instrument list | | | | | |
| *Variable* | *Coefficient* | *Std. Error* | *t-Statistic* | *Prob.* | *Theoretical H* |
| Q(-1) | 66.46282 | 0.029155 | 2279.639 | 0.0000 | |
| OPR_CASH | -0.218591 | 0.344316 | -0.634855 | 0.5256 | Reject |
| INV_CASH | -0.200971 | 0.345581 | -0.581544 | 0.5609 | Reject |
| FIN_CASH | -0.195394 | 0.345506 | -0.565530 | 0.5717 | Reject |
| LOG(CASH_HOLD) | -6.062628 | 0.023387 | -259.2328 | 0.0000 | Reject |
| CCC | -0.001088 | 6.40E-05 | -17.00455 | 0.0000 | Support |
| Effects Specification | | | | | |
| *Cross-section fixed* (first differences) | | | | | |
| Mean dependent var. | -2.142658 | S.D. dependent var. | | 22.66075 | |
| S.E. of regression | 29.85246 | Sum squared Resid. | | 3193059. | |
| J-statistic | 97.80569 | Instrument rank | | 95 | |
| Prob. (J-statistic) | 0.245405 | | | | |

#### 5.3.2.6.1 Global Period

a) **Cash Conversion Cycle (CCC) and Tobin's Q**: The CCC exhibited a significant and negative impact on TOBIN'S Q over the entire tested period (40 quarters; 2006-2015) to support the hypothesis ($H_7$) and related assumption "*The shorter the period, the better the business performance* (Tobin's Q)". The relationship between the CCC (as a proxy for working capital management) and firm's profitability has attracted the research interest of several researchers (e.g., Richards & Laughlin, 1980; Hyun-Han & Soenen, 1998; Johnson & Soenen, 2003; Höbarth, 2006; Gill et al., 2010; Ukaegbu, 2014). The findings of these studies supported ours "*The business firm with efficient working capital management would be successful firm*".

b) **Cash from Operating Activities and Tobin's Q**: The cash that generated from operating activities (the profitability of a business firm) shows insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_8$) and related assumption "*The higher the cash generated from operating activities, the higher* (*sufficient*) *the business performance* (Tobin's Q)". Moreover, our findings rejected the assumption and reported insignificant relationship. The literature review revealed that, up to our best knowledge, this variable has neither been investigated in any significant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

c) **Cash from Investing Activities and Tobin's Q**: The cash that generated from investing activities displayed insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_9$) and related assumption "*The higher, the higher the negative cash generated from investing*

*activities, the higher the performance* (Tobin's Q)". The generated findings rejected the assumption "*A firm negative cash from investing activities will have better business performance and reported insignificant relationship*". The literature review revealed that, up to our best knowledge, this variable has neither been detected in any relevant empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

**d) Cash from Financing Activities and Tobin's Q**: The cash generated from financing activities showed insignificant relationship over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_{10}$) and related assumption "*The higher the positive cash generated from financing activities, the better the business performance* (Tobin's Q)". The literature review revealed that, up to our best knowledge, this variable has neither been detected in any similar empirical or comparative studies nor been subject to test for defining the relationship between financial strategies and firm's performance.

**e) Cash Holdings and Tobin's Q**: The cash holdings showed significant and negative impact on TOBIN'S Q over the entire tested period (40 quarters; 2006-2015) to reject the hypothesis ($H_{11}$) and related assumption "*The higher the amount of cash holdings, the better is the firm's performance* (Tobin's Q)". Fama and French (1998) and Pinkowitz and Williamson (2004) highlighted the role of the shareholders in enhancing the firm's value through adding several opportunities for volatile investment. In contrast, Hanson (1992) and Smith and Kim (1994) reported that the firms possessing a high excess of free cash flow would exhibit low excess stock returns during merger announcements (i.e., low performance). Therefore, our findings rejected both Fama and French and

Pinkowitz and Williamson approached, while agreed Hanson (1992) and Smith and Kim (1994) assumption "*The higher some cash holdings, the lower is the firm's performance*".

#### 5.3.2.6.2 Under Different Economic Conditions

Table 32 illustrates the different findings of the examined relationship between variant financial strategies (as independent variables) and the firm performance (Tobin's Q as a proxy for firm performance) confirmed our general assumption.

Table 32: Estimation results of the Q Eq.12 under different periods

| **Variables** | **Pre-crisis (Q1 05-Q2 08)** | **Crisis (Q3 08-Q4 12)** | **Post-crisis (Q1 13-Q4 15)** |
|---|---|---|---|
| Lag of Dependent Variable | 0.384* | 0.814* | 0.582* |
| Cash generated from Operating Activity **($OPR\_Cash_{it}$)** | 0.465* | 0.109* | NS |
| Cash generated from Investing Activity ($Inv\_Cash_{it}$) | -0.470* | 0.109* | NS |
| Cash generated from Financing Activity ($Fin\_Cash_{it}$) | 0.465* | 0.109* | NS |
| Cash hold | 0.009* | -0.023* | -0.009* |
| Working Capital-Cash Conversion Cycle ($ccc_{it}$) | -2.87E-05* | 1.48E-05* | -7.13E-06* |
| **J-statistic p-values** | 0.66 | 0.56 | 0.50 |

The notations (*, ** and ***) means: significant at 1%, 5%, and 10% level, respectively, while (NS) means not significant.

The produced results pertinent to the global tested period (40 quarters; 2006-2015) exhibited significant relationship among only two variables, but with supporting only one hypothesis, namely Cash_Hold variable showed negative relationships. The segregation of the global crisis period in three distinct economic stages gave various results as follows:

1) **Pre-crisis:** All six tested variables had a significant relationship with Tobin's Q.
2) **During-crisis:** All tested variables had a significant relationship with Tobin's Q; however, only two tested variables supported our hypotheses, while the variables cash generated from investing activity, cash hold and cash conversion cycle showed inverse relationships.
3) **Post-crisis:** Only two tested variables had a significant relationship with Tobin's Q. However, the variable Cash_Hold rejected our hypothesis to show negative relationships.
4) The generated findings from data analysis of the global financial crisis (2006-2015) argued "*Different financial strategies led to different results under different economic conditions.*"

# Chapter 6: Policy Implications and Recommendations

## 6.1 Preamble

This dissertation aims at examining the possible connection between the market performance of the UAE-based PJSCs and the various financial strategies adopted and applied by their upper management and the Board of Directors. The research statement considered that the financial market demonstrates the activities of the listed PJSCs, which are a vital component of the UAE national economy. The scholarly significance of this dissertation is that it investigated the market performance and responses of the PJSCs thoroughly during 2006-2015, which witnessed three distinct economic conditions that the UAE national economy had challenged. Based on the findings generated, the dissertation delivers practical recommendations and policy implications for the professionals in the finance and related business domains.

## 6.2 The UAE Economy: Current Status and Future Visions

Although the UAE is a young state (established on 2 December 1971), it has been achieving proven records in the various aspects of such socioeconomic development, an increase of income per capita, satisfactory financial and market performance of business firms, and secure hub of investments. Such attractive features of the UAE national economy promoted the expansion of foreign trade, social welfare, community safety, schooling quality, and the advent of tourism and events business recently as new economic activities. Therefore, the UAE successfully maintained its attractive business ecosystem using the law enforcement, political stability, economic diversity, transparency, and fighting all forms of corruption (Al-Shayeb & Hatemi-J, 2016).

The UAE national income is generated mainly from the oil-based industries. Therefore, the price fluctuations in the international energy markets are significantly

influencing the economic and business performance and the GDP, as well. Thus, the UAE has put into effect a long-term economic plan that termed as the *UAE Economic Vision 2021* to immunise itself against economic uncertainties and financial risks through economic and business diversification while reducing the dependence on the hydrocarbon resources.

The global financial crisis had promoted the elements of deep concerns amongst the financial community that compelled both the Governments of Abu Dhabi and Dubai emirates to restructure their economic plans, prioritising business activities, and declining non-strategic projects and public expenditures. Therefore, the UAE Federal Government had taken the necessary actions to implement the appropriate recovering plan in 2009 for mitigating the consequences of the post-2008 financial crisis. The plan aimed at initiating a dynamic correction of the two primary local financial markets in Abu Dhabi (ADX) and in Dubai (DFM). In 2013, the recovery plan succeeded the two financial markets geared to erase the post-crisis consequences gradually. Such success of recovery was illustrated in a better return of market performance that higher than the level recorded in 2008.

The UAE Minister of Economy, HE Sultan Mansouri has insisted this new economy as stated "*The Ministry of Economy is working currently on some laws concerned with investment, industrial regulations, patents, industrial property, and commercial arbitration. These laws aim at boosting the contribution of the non-oil sectors to reach 80% of the GDP by the year 2021. During 2011-2016, the contribution of the non-oil sector was the major player, which accounted for 69% of the GDP to top 4.6%*." (The National, 25/8/2017). However, it has been observed that the calculations of the UAE's

GDP in US$, growth rate (annual%), and market capitalisation were apparently varied in the records of the UAE federal organisations versus the World Bank's.

The UAE has been receiving many merit certificates from international agencies and organisations for its attractive business environment, economic performance, and citizen-focused government services. HE Al-Mansouri in the mentioned press interview acknowledged "*The UAE GDP has maintained impressive positive growth and records, which exceeded the global growth rate with an average of real GDP growth during 2011-2016 topping 4.6%. The non-oil sector was the major player, which accounted for 69% of the GDP*". In contrast, the UAE's average GDP growth rate was higher than the developing countries in the MENA region and the world, which were 3.6% and 2.56%, respectively.

Such variations in the actual GDP might impact unfavourably on the market growth and stock's performance. The policy implications for the financial policy-makers of the UAE Federal Government could be: i) unifying the GDP calculation procedures and methods including related economic elements, and ii) unifying their efforts under the umbrella of the Federal Statistics Bureau. These implications would be helping both the macroeconomists and financial experts to measure the GDP components based on recognised standards and reliable sources of statistical data.

The 2008 global financial crisis also unveiled that the UAE economy is susceptible to any financial problem regardless its impact. Thus, the policy implications for the policy-makers of both the UAE Federal Central Bank and the Ministry of Economy to meet and manage the crisis impacts are the development of some predictive tools, such as putting into action proper preventive procedures and analytics system. According

to the ESM and Market Capitalization Indices, the significant risks of the 2008 global crisis were mitigated by the end of 2012.

Since the second half of 2014, the UAE national economy has been suffering from some fluctuations due to conflict issues emerged across the Middle Eastern countries. The policy implication for the Ministry of Economy is the initiation of a public campaign amongst the investors for increasing their financial awareness and stock literacy to equip the stockbrokers and investors with helpful information to avoid possible risks and to differentiate between market crisis symptoms and correction process to do right market transactions rationally.

In 2015, *Euler Hermes* (a financial consultant company) released a SWOT analysis report that probes the status of the UAE economy within 2009-2015 (i.e., the seven years after the 2008 global financial crisis) that coincided with the 2015 IMF country report on the UAE. Both reports revealed retaining sound strength; however, some weaknesses hit some business sectors.

The recommendations of the *Herms's* report provided several implications for various stakeholders, as detailed in Table 33. The Euler Hermes's report indicated that the financial policies and related plans should be reviewed on a regular basis to meet particular economic and financial conditions.

Table 33: SWOT analysis of the post-crisis UAE economy (2009-2015)

| **Strengths** | | | |
|---|---|---|---|
| # | **Stakeholder(s)** | **Finding** | **Recommendations** |
| 1 | Ministry of Economy; Central Bank | Economic, social, and political stability to establish a pattern of power succession | Exploit the stability to attract investors (e.g., Multi-National Companies (MNC); Foreign Direct Investment (FDI). |
| 2 | Ministry of Energy | The abundance of hydrocarbon and mineral resources | Explore new ways of utilising these resources to diversify the economy. |
| 3 | Ministry of Economy | Diversity in the national economy/income; moreover, large investments and asset holdings held overseas. | More diversification is needed to increase the contribution of non-oil sectors to the economy. |
| 4 | Ministry of Economy; Central Bank | Fiscal and current accounts sound, despite some short-term effects of current low oil prices. | Need to support/subsidise the export of local products to enhance its current account. |
| 5 | Ministry of Economy; Central Bank | Reclassified as an emerging market status in the Morgan *Stanley Capital Int. Index* (MSCI). | The business policies need to be re-defined to maintain/ improve the economic status to improve the global ranking. |
| 6 | Ministry of Economy | Intensive regional economic co-operation through the GCC. | UAE can be a GCC business hub. Re-export activities can be boosted. |
| 7 | Ministry of Economy; Central Bank | Its Credit Rating is BB1 classified by Standard and Poor's (S&P) as a country with low investment risk. | Exploit low risk to attract more investors/MNC/FDI to offer added facilities for re-invest / maintaining liquidity/profits in the UAE with new and advanced projects. |

Table 33: SWOT analysis of the post-crisis UAE economy (2009-2015) (continued)

| **Weaknesses** | | | |
|---|---|---|---|
| # | **Stakeholder(s)** | **Finding** | **Recommendations** |
| 1 | Ministry of Economy; Central Bank; ESCA | Speculative flows (as the stock market, real estates) giving some concerns of asset bubbles. | Despite that speculation is a natural characteristic of the stock market, the contrary impact should be controlled introducing added policies and laws to the introduced two main approaches by ES&CA, i) surveillance/monitor the limit up/down of every security or each listed firms, ii) hiring professional auditors having a full authority to carry out the necessary action plans and parameters for monitoring transactions and the securities trading of the all involved stakeholders, are not enough to minimise such impact of speculation. |
| 2 | Ministry of Economy; Central Bank; ESCA | The provided data is insufficient to a high-income economy. | Need to acquire/develop tools for easy access and re-design the data for doing the adequate analysis. |
| | | | |
| **Opportunities** | | | |
| # | **Stakeholder(s)** | **Finding** | **Recommendations** |
| 1 | Ministry of Economy; Ministry of Foreign Affairs and Int. Coop. | Strong foreign bilateral relations to aid cooperation with international agencies. | Invest in unique opportunities in each country. Enforce the reputation of the UAE by marketing the business and investment atmosphere. |
| 2 | Ministry of Economy; Central Bank | Furnished secured business environment for attracting foreign investors. | Support investments through attracting foreign investors and imposing flexible investment laws and policies. |
| 3 | Ministry of Economy; Central Bank | Standard infrastructure and ICT facilities to set up a favourable business hub for the overseas business firms. | Imposing flexible investment laws and regulation for the FDI brought by multinational firms. |
| 4 | Ministry of Economy; Central Bank | The multi-ethnic nature of the UAE would be providing a sense of security for living and work. | Imposing flexible investment laws and regulation for the FDI brought by multinational firms-MNC. |

Table 33: SWOT analysis of the post-crisis UAE economy (2009-2015) (continued)

| Threats | | | |
|---|---|---|---|
| # | **Stakeholder(s)** | **Finding** | **Recommendations** |
| 1 | Ministry of Economy; Ministry of Foreign Affairs and Int. Coop.; Central Bank | The surrounding region is facing severe socio-political tensions and civil wars to impact directly on the stability of the national economic conditions. | Need to develop some economic defensive strategies (finding alternative markets, attract new investors) by marketing the UAE as alternative market or business hub of the region. |
| 2 | Ministry of Economy; Central Bank; ESCA; Academics | The high sensitivity of the UAE national economy towards global/regional financial crises. | It is a double-edged weapon, studying nature and sensitivity of the proposed relation are needed. It can furnish an opportunity to gain from the global/regional economic fluctuation if we can define this relation. Predicting mechanism and tools are needed to plan the preventive procedures properly. |
| 3 | Ministry of Finance; Central Bank; Federal Tax Authority | High dependence on foreign workers. | It could also be seen as necessary for economic development; especially for low-skills jobs. Added policy to control/reduce the monetary outbound transfer is needed to support re-invest the surplus cash in the country. Such policy could consider applying ceiling limit for transferred cash and charge additional fees/tax if exceed the ceiling limit (multi-categories). |
| 4 | Ministry of Economy; Central Bank; ESCA | Unpredictable fluctuation in the energy market and raw material prices. | Reduce the dependency on the oil sector. Explore new raw materials and new markets for current raw material. Introduce and apply hedging strategy and tools on the federal level. |

The strength of the UAE economy, however, is attributed to strong fundamentals in functional financial policies, along with developing rational strategies for enabling the

UAE to be one of the major players in the global business and financial markets (Al-Zarouni, 2008). In accordance, this dissertation recommends setting up a joint committee including the relevant entities drawn from both federal and local governments to assess these existing financial policies. Thus, an independent supreme committee is needed to supervise the joint committee and review their impact on their decisions on the national economy.

### 6.3 Financial Markets and National Economy- A Possible Connection

This section discusses the possible connection between the performance of both financial markets and the UAE national economy under different conditions. The assumption of this part is, therefore, the stability, and well-constructed financial market in the UAE have enabled the stock and the economic system to absorb and resist the consequences of a broad spectrum of any financial crisis, such as the global one happened globally in 2008.

The UAE Federal Government agencies, such as Central Bank and ES&CA were behind the stability of the local financial and securities markets through closely superintending the obligatory financial policies and regulations to protect investors' interests from volatility. With these imposed policies, the financial sector was capable of providing the financial requirements of the other business domains (Otman, 2014), and preventing conflicts by organising trading in the markets for goods and securities, based on similar policies and a regulatory structure (Al-Shayeb & Hatemi-J, 2013).

The ES&CA produces vital statistics about the financial market and national economy; however, the accuracy of data is apparently inadequate, or even incorrect due to the lack of an official databank. Accordingly, there are related implications of recovering

deficiencies of such data for the financial entities. Therefore, the ES&CA should launch an official databank database as an authenticated repository of relevant financial-related documents released by all PJSCs. The organisation of the archived data (i.e., classification, indexing, and retrieval) is recommended to be based on unified recognised standards, such as the International Financial Report Standard (IFRS) scheme for firm valuation (Elkelish, 2017). The end-users of this databank would be the government entities, academic institutions, and business community members as its service run on a commercial basis.

Since the accuracy of data-entry is a critical factor in assuring reliable information, close supervision on the process of data collection, classification and storing is a decisive step in developing efficient database functionalities regarding data search, discovery and retrieval through incorporating ICT-based tools with the artificial intelligence (AI). Thus, the databank would be a decision support entity assisting in proposing proper strategic plans, and measuring the firm performance, along with predicting the market trends efficiently.

The ES&CA released in 2014 its annual record that indicated a paradoxical situation of the two financial markets; the DFM targeted higher trading volumes than the ADX, while ADX had more listed companies with a higher market value (SCA, 2014). To solve such contradictory situation using the both markets' strengths, the related implications are that the ES&CA could differentiate the financial products between the two primary securities markets to furnish a distinction and speciality that might result in attracting the potential traders who are interested in investing in both markets simultaneously. Such policy could be supporting the national economic development sufficiently.

The ES&CA also introduced liquidity strategy in 2015 to enhance diverse types of traders (e.g., individuals, governments, institutions, and investors) through products and techniques for maximising their business activities, while reducing the negative impacts of the speculation that the market might come across. The newly introduced products and techniques perhaps are not enough to spark sufficient incentives to attract new traders. Therefore, the policy implications for the financial entities of the Federal Government could use the ES&CA data for building a robust evaluation mechanism of the impact of liquidity strategy on improving the business and financial ecosystems for the potential traders, along with keeping tracking and reporting. Consequently, such implications could establish a flexible market liquidity enhancement as a necessary strategy to build an attractive financial market.

Al-Zaabi (personal interview; 25 August 2016) diagnosed the behaviour of the UAE markets, where the growth (Index and Market Capital) in the financial markets depends on new Initial Public Offers (IPO). Further, the UAE market value of the listed domestic companies in both securities markets (as a percentage of the GDP) recorded an average of 38% to represent a significant element of the national economy. He mentioned that the fundamental drawbacks of the UAE financial markets are; particularly, unavailability or product limitations of bonds and other hedging tools/products, such as options and futures.

It would be quite impressive to see how the ESM generates a vital business stream that can be considered as a significant element of the UAE economy; however, sometimes, the ESM exceeds the performance, which is a weak indicator of the national economy. Over the entire examined period (2001-2015), the average of the traded value per annum to exceed 25% of the UAE GDP. Nevertheless, this average value indicates

that there is an imposing interrelationship between the UAE national economy and ADX and DFM operations within which the ES&CA could contribute to developing federal policies that would get the most benefits of such interrelationship.

Thus, the policy implication concerned with such connection between the national economy and securities market for the UAE Ministry of Economy is that it is necessary to enhance the ES&CA in developing appropriate economic and financial strategies for introducing new products and opportunities to contributing to the market stability. This policy might result in acceptable the mitigation of these existing weaknesses and motivate the systematic flow of investments from both local and foreign institutions to the stock market.

The analysis of periodic GDP growth and ESM index development were suffering from tight constraints of data availability and accessibility. Therefore, the Economic Composite Indicator (ECI) index has proven to be a useful alternative tool for the policymakers. The ECI could track the economic activity of the UAE closely on a quarterly basis and offers a timely clear picture about the current economic situation, which could be used to give an early indication of economy turning points (i.e., the ESM is a leading indicator of UAE economic activity).

The policy implications of this finding for the UAE Central Bank relied on keeping the continuum of using the ECI index; the UAE Ministry of Economy should enhance the various economic sectors to facing the fluctuations of the oil prices. However, this approach needs further improvement with focusing on other essential components to be added to the macroeconomic variables, such as the oil price as a master element of the ECI, which might affect the investors' decisions immediately and impact the listed

companies' performance directly, and to consider the relationship between ECI and the Stock Market Indicator in making their decision rationally (El-Mahmah, 2017).

The 2008 global financial crisis had caused a series of instabilities in the UAE national economy, which might be attributed to the weak immunity of the domestic financial market to unfavourable economic conditions. However, the lesson learned from the concerned crisis supported the both ADX and DFM in taking the right track for pushing recovery quite fast.

## 6.4 Financial Strategies and Firm's Performance

This section discusses a range of financial strategies and their appropriateness to the financial firms with which could achieve their performance successfully. A bundle of thoughtful recommendations is offered to be conducted on the future financial trends and strategies of interest to apply to unlisted firms facing similar business conditions.

### 6.4.1 Firm's Performance

A large body of relevant empirical literature unveiled lack of a unified standard measure pertaining the firm's performance for estimating the real value of a financial firm satisfactorily. However, there is a broad spectrum of existing scientific methods to do similar functions with different approaches. Consequently, the pattern of procedures for measuring the performance and valuation of a firm financial could yield differences in both the results and models.

This empirical study selected six measures from the relevant scholarly literature for gauging the performance of the listed companies. The dissertation categorised the nominated measures into two groups, these are i) financial performance and ii) market performance. As part of performance analysis, it is assumed that these measures will

have interactions and interdependent relationships as discussed by many scholarly works.

The relevant literature also demonstrated that the use of various performance measures of multi-dimensions (i.e. financial and market) in the ongoing dissertation is a great idea, and led to the following conclusions:

1) Using different measures would be leading to different results. In other words, the examination of the same variables with different measures of performance could produce diverse results. This argument explains why previous relevant studies gave different opinions, even when using various testing methods like *Panel Least Squares* (PLS), and *Generalized Method of Moments* (GMM).
2) Such approach helps to outline the vital importance of employing some valid performance measures rarely employed in the Arab region, such as *Tobin's Q*. Also, pay attention to the non-significance of relying on the overestimated performance measures with intensive usages, such as *Return of Share Price*.
3) The findings of any proposed relationship/correlation, such as the undergoing "financial strategies-performance relation", could be translated inversely from both the firms' management and the investor's perspectives.
4) The *return on investment* (ROI) can be considered as a significant financial performance measure to explain the impact of different factors, whereas *Tobin's Q* could be viewed as a substantial market performance measure to demonstrate the effects of several factors.

The reviewed literature revealed that *Earnings Per Share* (*EPS*), on many occasions, considered as a market performance measure. However, most of the academics define *EPS* as a financial measure since it is seen as a firm's profitability indicator. In this

dissertation, according to the behaviour of the *EPS*, it could confirm that the *EPS* is a financial measure. Therefore, *EPS* and *ROI* had a similar performance over the long-term in response to the measured variables. Thus, each of them is sufficient to explain the proposed hypothesis; however, the dissertation incorporates using both of them to confirm his or her respective characteristics and similarity.

The generated findings of this dissertation indicated that the *Return of share price* could not be considered as a proper market performance measure while lacking a significant relationship with the six out of the eleven variables that the dissertation had tested. The main reason beyond this behaviour might be mainly affected by investor's perception and speculation. Nevertheless, the investors or fund providers are neither experts in financial performance nor market performance measure to decide which-of-which securities portfolio is attractive to invest in considering them. On the other hand, both the investors and fund providers are not considering financial performance measures, nor the market performance measure is enough separately on deciding which the right security is rewarding to invest in. Therefore, both traders should consider the two dimensions of performance as essentials.

The yielded findings recommending the use of a mix of multiple performance measures, such as financial and market, which are essential as performance measures with a noticeable effect of the top management on accounting-based performance, because it is more accessible to be controlled over. Thus, both measures are inseparable as the market measures are out of the company management's control. Moreover, both the measures are primarily driven by the stock markets, and the investor's perception and speculation in the context different economic conditions. However, they do not represent or reflect the firm's real performance.

The financial performance indicators for rational investors are not enough to decide where and when to invest, which depends on the investment strategy as short-, mid-, or long-term. So, the need for keeping monitoring the PJSC's performance, it is necessary to improve the efficiency of shares/stocks trading, as well as know when and how much to be traded in shares. Because the rational investors cannot rely on a single measure to define the firm's evaluation or performance, the dissertation recommends that the performance measures should be composed of multi-dimensions measures (both financial and market) based on the purpose of the assessment.

### 6.4.2 Proposed Financial Strategies

A significant finding of this dissertation is that the test of same performance measure under different economic situations to perform differently. Consequently, no single strategy could be useful for infinite; thus, such financial strategies should be continually reviewed and evaluated. So, the degree of relying on a specific strategy for a long-term depends on the magnitude of the response towards the different economic situations. The firm's top management should well-define their short-term, mid-term, and long-term financial and business strategy.

This dissertation covers three unusual financial circumstances that investigated over ten successive years from Q1-2006 to Q4-2015, i.e., it covers pre-2008 financial crisis, during crisis and post-crisis. This section illustrates how the various financial strategies could be employed and adopted by the financial firm to either maintain or improve its performance under the different economic conditions. The eleven financial strategies

grouped into two dimensions: i) Six variables under the *Capital Structure,* and ii) Five variables under the *Cash Flow Management*.

#### 6.4.2.1 Capital Structure

**a) Leverage level and Performance**

As a long-term strategy, the findings generated showed consistency in the negative relationship between the *leverage* level and variant performance measures despite the stress of the crisis consequences. Thus, the higher the leverage level, the lower the firm's performance; however, it has no significance on the *share price.* On the other hand, the higher debt reduces the *ROI, net profit, growth in sales, earnings per share*, and the company's *market-to-book value (Tobin's Q)*. So, whatever the debt level is, it does not affect the share price in the market. However, the primary assumption is that under varying financial conditions, the higher *leverage* (use the debt to finance an activity) level would lead to different financial performance as explained in chapter 4.

Based on the dissertation findings, the following recommendations proposed for implementing an optimal *debt* level (borrowing) strategy:

1) Under a healthy and stable economic and financial environment, the Management and Board of Directors should consider keeping the *debt* level as low as possible where the results are showing a consistent negative relationship to performance. Thus, the investors and fund providers should pay attention to the leverage level and default risk of the firm when they are planning to invest in it. This strategy is valid before and after any financial crisis.
2) During the economic or financial crisis, the higher *leverage* level would be enhancing the *net profit* and *earning per share*. Thus, the firm might use the

debts in financing its primary operations and, in turn, improving the liquidity, to give a good sign to the investors that the firm is not facing any liquidity problem and does better in the share price performance.

**b) Firm's Size and Performance**

In the long-term, the generated findings revealed that the consistency was in a positive relationship between the firm size and variant performance measures despite the impact of the crisis. Therefore, the bigger the company, the better the firm's performance. Because big firm size would increase and improve the *ROI, net profit, growth in sales, earnings per share, share price*, and the company's *market-to-book value (Tobin's Q).*

From periodical aspect, the big *firm size* could lead to better performance for all measures despite facing different economic situations, except:

- **Pre-crisis**: Significant negative relationship leads to lower *market-to-book value (Tobin's Q)*.
- **During a crisis**: Significant negative relationship leads to lower *market-to-book value (Tobin's Q)*.
- **Post-crisis**: Significant negative relationship leads to lower *market-to-book value (Tobin's Q)* and *sales growth*.

Nevertheless, this dissertation has proven that different strategies under different economic situations lead to different results. This study recommends the following for implementing an optimal *firm size* strategy:

1) Under all economic or financial circumstances, the Management and Board of Directors of the financial firm should consider going big by maximising the

firm size through investing in additional assets. Consequently, the firm could generate more business with a consistent significant positive relationship to performance. Under the specific economic situation of the post-crisis, more leading companies might face real challenges in increasing their sales to be explained by current market saturation of the firm, which may require introducing new products and penetrate new markets.

2) The *market-to-book value* (Tobin's Q) is a market performance measure exposing to the perception and speculation of the investors. Therefore, it may not be considered as an essential indicator for the Management and Board of Directors of the firm in the short-run. However, it is a necessary element of the firm's evaluation, from the perspective of the potential investors and fund providers. Therefore, it is imperative for the rational investors and fund providers to consider this performance measure (*Tobin's Q*) in the long-term.

**c) Capital Expenditure and Performance**

In the long-term, the produced findings unveiled that there was a degree of instability in the relationship between the *capital expenditure* and various performance measures taking place under various economic situations. However, the higher is the *capital expenditure* leading to better *net profits* and *market-to-book value (Tobin's Q)* as assumed. On the other hand, the lower capital expenditure leading to low level of firm's performance in ROI, sales growth, and *earnings per share*, while, it has no significance on *the Return of the share price (Return)*.

The assumption is that under the different economic conditions, the various capital expenditures are leading to different performance patterns in different crisis phases:

- **Pre-crisis**: The higher *capital expenditure*, the higher *ROI*, higher *net profit*, higher *earnings per share*, and higher *Return of the share price (Return)*, while leading to the lower *growth in sales* and lower (*Tobin's Q*).
- **During a crisis**: The higher *capital expenditure* will be leading to lower performance in all tested measures.
- **Post-crisis**: The *Capital Expenditure, net profit, the Return of the share price (Return),* and *Tobin's Q* were high, while *ROI, growth in sales*, and *earnings per share* were low.

The dissertation proposed the following recommendations for executing an optimal *capital expenditure* strategy:

1) No unique permanent strategy could be used in investing in the *capital expenditure*. Thus, it is useful to invest in *capital expenditure* in the long-term to increase the *net profit* and *Tobin's Q* under normal and stable economic and financial circumstances. In contrast, it does not improve other performance measures like *ROI*, *sales growth*, and *earnings per share*, also, it does not affect *the Return of the share price (Return).*
2) Based on the dissertation findings, the higher *capital expenditure* during the crisis will be leading to low level of the firm performance, while all tested performance were impacted negatively. The dissertation explains this phenomenon as the *capital expenditure* during the crisis was unrealistic and did not help to generate more business or enhance the firm's image in the market.

In conclusion, the Management and Board of Directors of the firm should carefully consider their *capital expenditure* when investing in new assets to make sure that such investment would be adding value to the business. Such added-values as imposing suitable criteria for generating new business, improving the *ROI*, increase the *sales growth*, and giving better *earnings per share*. On the other hand, the investors and fund providers need to pay particular attention to the firm's *capital expenditure* strategy when they plan to invest in any company, especially during any financial crisis.

**d) Government Ownership and Performance**

In the long-term, the gained findings showed that *government ownership* of significant shares is significant to the firm's performance. Such significant impact was simplified on the variant performance measures despite the 2008 crisis consequences effect. Accordingly, this study assumes that the higher *government ownership*, the higher are the *ROI*, *net profit*, *earnings per share*, and higher *Tobin's Q*; while, higher *government ownership* can reduce or weaken the *growth-in-sales, the Return of the share price (Return).*

The assumption is that under the different economic situations, the different *government ownership* leading to varying performance. Thus, the higher *government ownership* will lead to:

- **Pre-crisis**: The tested measures showed higher performance, while showed a non-significant relationship with *Tobin's Q*.

- **During a crisis**: The higher *ROI* will lead to higher *earnings per share* and *net profit*, and lower level of *growth in sales, the Return of the share price (Return),* and *Tobin's Q*.
- **Post-crisis**: Surprisingly, the relationship did behave differently, while the turn over swinging from positive to negative for all tested performance measures.

The dissertation proposed the following recommendations for implementing an optimal government ownership strategy:

1) Under normal and stable economic or financial circumstances, the *government ownership* is essential to support the strategic sectors or industries during the crisis, as well as to improve the firm's performance. However, the management and board of the directors of the firm should not rely on this strength and should pay much attention to the growth of the sales. As a result, shows the consistent negative relationship between *government ownership* and *sales growth*. On the other hand, the *government ownership* leading to lower *share price* movement. One way to explain what could be is that these companies with higher *government ownership* are well-structured against uncontrolled speculation. Therefore, the dissertation recommends that the government increase their investment, and also recommends to the rational investors to invest in these companies based on these findings, which confirmed that the *government ownership* improves, in general, firms' performance.
2) Based on the produced findings, during the post-crisis circumstances, it seems that the perception towards the market behaviour is that the higher *government ownership* leads to negative performance, while all tested performance measure was reacting negatively. Perhaps, there are other factors impact or

moderate this negative relationship. Therefore, this dissertation recommends that the government must pay much attention to the performance of these companies either to invest in them or to reshape their investment strategy in these companies. The Governments needs to reconsider their strategy by creating a balance/trade-off between their efforts in supporting the national economy and their *ROI*.

**e) Sustainable Growth Rate (SGR) and Performance**

On the long-term, the generated findings showed significant consistency in the positive relationship between the *SGR* and four (out of six) tested performance measures (e.g., *ROI, net profit, earnings per share* and *Tobin's Q*). Thus, the higher the sustainable growth rate, the better the firm's performance; while the higher *sustainable growth rate* reduces the *growth in sales* without causing an impact on *the Return of the share price (Return)*.

The assumption is that under the different economic situations, the various sustainable growth rate strategies are leading to different performance patterns. Thus, the higher *SGR* strategy will be leading to:

- **Pre-crisis**: Showed positive relationship with all tested performance measures.
- **During a crisis**: Showed positive relationship with all tested performance measures, while *sales growth* showed a negative relation.
- **Post-crisis**: act differently; significant positive relationship with *ROI, net profit* and *earnings per share,* while the relationship was non-significant with *sales growth, the Return of the share price (Return)*and *Tobin's Q*.

The dissertation proposed the following recommendations for implementing an optimal *sustainable growth rate* strategy under different economic conditions:

1) The *Sustainable Growth Rate (SGR)* strategy is the money that remains internally over from the gained profits, which is not paid out to the shareholders. Then, the dissertation recommends that the Management and Board of Directors of the firm need to pick-up a flexible trade-off strategy carefully between re-investing the profits and paying the dividends to the shareholders. The produced findings of this dissertation support this approach.
2) The dissertation recommends retaining earnings in the company to finance operations and future expansion, which positively impact on the firm's performance. Also, the high *sustainable growth rate* means that the firm could maintain a maximum growth rate with self-funding.
3) The dissertation also recommends reducing the firm's default risk. Therefore, the Management and Board of Directors of the company should pay particular attention to the growth of the sales. On the other side, the gained findings showed that a negative relationship established between the *sustainable growth rate* and *sales growth* in most of the performance measures tested within the three periods
4) In the post-crisis, the produced findings showed that the *sustainable growth rate* did not cause any impact on *the Return of the share price (Return)* and *Tobin's Q*. Moreover, as the market performance measure exposed to the investors' perception and speculation, it may not be considered an important indicator for firm's Management and Board of Directors in the short-run. However, it is an important element of firm's evaluation, from the potential investors and fund providers' perspective. Thus, it is necessary for rational

investors and fund providers to pay much attention to the firm's sustainable growth rate and consider *Tobin's Q* as a performance measure in the long term.

**f) Unrelated Assets and Performance**

In the long-term, the generated findings showed significant consistency in the positive relationship between the *unrelated assets* and various tested performance measures. The exception was the net profit that the higher the investments in the *unrelated assets*, the better is the performance. The assumption is that under the different economic situations, the various *unrelated assets* investment strategies leading to different performance patterns. Thus, the higher the investment in *unrelated assets* will be leading to:

- **Pre-crisis**: The lower performance was found to be for all tested measures except the *net profit*, while showed an insignificant relation with *the Return of the share price (Return).*
- **During a crisis**: The higher performance was favourable to all tested measures except *net profit*, while showed an insignificant relationship with *the Return of the share price (Return).*
- **Post-crisis**: The higher performance was found to be for *ROI, sales growth* and *Tobin's Q,* while the lower performance for the *net profit* and *earnings per share*, while shows an insignificant relationship with *the Return of the share price (Return).*

To the best knowledge, this variable is newly incorporated in investigating the financial strategies; so, there is a severe lack of archival information regarding this

variable. Thus, the dissertation proposed the following recommendations for executing an optimal unrelated assets investment strategy:

1) On the long run, it is essential for any business to invest in *unrelated assets* as an enhancing factor for improving the performance of the firm. The existing negative relationship with the *net profits* indicated that the contribution of the profitability of the *unrelated assets* is minor or even negligent. Therefore, the dissertation recommends that the Firm's Management and Board of Directors should choose right projects with feasible profitability for new investments. Based on the gained findings, the higher investments in the *unrelated assets* even during the 2008 crisis had led to a higher performance achieved by the firm in most of the tested measures. This might mean that the investment in *unrelated assets* is an essential strategy during the crisis.
2) Interestingly, the investigation on the pre-crisis relationship revealed that the *unrelated assets* investment strategy had a negative impact on all tested performance measures except the *net profit*. This phenomenon explained that the investment in *unrelated assets* might be unrealistic and did not help to generate more business or to enhance the firm's performance, where the financial crisis was a chance to correct their approach.

In conclusion, The Management and Board of Directors of the firm should carefully consider their diversification strategy when investing in *unrelated assets*. Moreover, the Board must make sure that such investment could add value to the firm's business and provide opportunities for generating new business, improve the *ROI*, increase the *sales growth*, and give better *earnings per share*. On the other hand, investors and fund

providers need to pay particular attention to the firm's *unrelated assets* investment strategy as diversification when they plan to invest in any company.

#### 6.4.2.2 Cash Flow Management

The dissertation unveiled that the relationship between the proxies of *cash flow management* and variant performance measures was instability. Furthermore, under different economic conditions, most of the tested relationships were found to be insignificant. Nevertheless, such finding supports the dissertation's assumption that the various financial strategies are leading to different results, which appeared amongst variant performance measures.

**a) Cash Conversion Cycle and Performance**

On the long-term, the generated findings showed that *Cash Conversion Cycle (CCC),* as a proxy for *working capital management*, is a significant factor to the firm's performance under various economic circumstances, despite the impact of the financial crisis. The positive or negative direction, along with the level of influence could be varying according to the tested performance measure. Thus, the shorter the *CCC,* the better the performance in *ROI, net profit, earnings per share,* and *the Return of the share price (Return).* This finding is in agreement with the dissertation's hypothesis, while the shorter the *CCC,* the lower is the performance of *sales growth* and *Tobin's Q*.

The assumption *under different economic situations*, the *CCC strategy*, as *working capital management*, leading to different performance. So, the shorter *CCC* led to:

- **Pre-crisis**: The lower *ROI*, the lower *growth in sales*, the lower *earnings per share*, and the lower *Tobin's Q*. In contrast, the lower *CCC* leads to higher *net profit* and higher *Return of the share price (Return).*
- **During-crisis**: The higher *ROI* and *earnings per share* were leading to lower *net profit*, lower *growth in sales*, lower *Return of the share price (Return)* and lower *Tobin's Q*.
- **Post-crisis**: All financial performance measures were found to be higher (e.g., *ROI, net profit, growth in sales, earnings per share*), while, both market performances (e.g., *the Return of the share price (Return)* and *Tobin's Q*) were found to be lower.

The dissertation proposed the following recommendations for executing an optimal *Cash Conversion Cycle (CCC)*, as *working capital* strategy:

1) Under healthy and stable economic and financial conditions, The Management & Board of Directors of the company should consider the efficient *working capital management* as a critical factor for firms. Thus, improving financial performance (e.g., *ROI, profitability*, and *EPS*) is possible by reducing the credit period granted to the customers and reducing the time between suppliers' invoices payments and cash collection from customers and sales activities could maintain the firm's credit rating, and creating shareholders' value.
2) During the crisis periods, the higher *Cash Conversion Cycle* is recommended to enhance the *net profit* and *sales growth*. In other words, providing credit facilities to current customers, along with attracting new customers to increase sales, despite that it may hinder the *ROI* and *EPS*. Thus, during crisis companies should focus more on *liquidity* rather than *profitability* to survive.

Such strategy will be improving the *liquidity*, which will give a good indication for the market's investors that the company does not face any *liquidity* issue, and results in better *Return of the share price (Return)* and *Tobin's Q* performance.

Conversely, during the post-crisis, the economic situation starts recovery, and the companies gained fruitful lesson learned to start focusing more on the collection to reduce the *Cash Conversion Cycle*, which leads again to better financial performance (e.g., *ROI, net profit, growth in sales,* and *earnings per share*). This strategy is in the management favour and supports the notion said: "*Due to uncontrollable factors of the market-based measures, executives prefer accounting-based performance since these measures are more accessible to control* (Hassan & Halbouni, 2013). In contrast, the investors need to pay attention to the *working capital* and *treasury strategy* of the firm to know the transactions of the money when they are interested in investing in any firm. So, it is essential to understand how the *cash flow* is captured and tracked owing to its significant role in making businesses financial robust.

**b) Cash from Operating Activities and Performance**

On the long-term, the gained result shows that Cash generated from operating activities is significant factors with a positive relationship to *ROI*, *net profits* and *EPS*, while entirely insignificant to the variables (*Growth in Sales*, *Return of the share price (Return),* and *Tobin's Q*). Periodically, under the different economic situations, confirmed central assumption that different Cash generation strategy leads to different performance that higher Cash generated from operating activities will lead to:

- **Pre-crisis**: significant to all performance measures, with higher performance (*ROI, EPS, sales growth, net profit, Return of the share price (Return)* and *Tobin's Q*).
- **During a crisis**: It is significant leads to higher performance to all performance measures expect *the Return of the share price (Return)*.
- **Post-crisis**: It was not significant at all for all performance measures.

**c) Cash from Investing Activities and Performance**

In the long-term: the results showed that the cash generated from investing activities is among significant factors with a negative relationship to *ROI, net profits* and *EPS*. While, entirely non-significant to other dependent variables (*Growth in Sales, Return of the share price (Return),* and *Tobin's Q*). While, periodically under the different economic situation, confirming our central assumption that different Cash generation strategy leads to different performance that higher Cash generated from investing activities will lead to:

- **Pre-crisis**: significant to all performance measures, with higher performance (*ROI, EPS, sales growth, net profit, Return of the share price (Return)* and *Tobin's Q*).
- **During a crisis**: mixed results; first, it is significant to all performance measures; expect the *Return of the share price (Return)*. Lead to higher performance for measures (*EPS, NP,* and *Growth in Sales*), while leading to lower performance in *ROI* and *Tobin's Q*.
- **Post-crisis**: It was not significant at all for all performance measures.

**d) Cash from Financing Activities and Performance**

Similar to the cash generated from operating activities, on the long term, the generated result showed that the cash that produced from the financing activities is significant factors with a definite relationship to the *ROI, net profits* and *EPS*. While entirely non-significant to other dependent variables (*Growth in Sales, Return of the share price (Return),* and *Tobin's Q*). Periodically, under different economic situations had, confirmed the central assumption "different cash generation strategy leads to different performance". Thus, the higher Cash generated from financing activities will lead to:

- **Pre-crisis**: significant to all performance measures, with higher performance (*ROI, EPS, sales growth, net profit, Return of the share price (Return)* and *Tobin's Q*).
- **During a crisis**: first, it is significant to all performance measures, lead to higher performance for all measures, except for *the Return of the share price (Return); lead to lower performance*.
- **Post-crisis**: It was not significant at all for all performance measures.

**e) Recommendations for Cash Generation**

To the best knowledge, the financial community has not tested the variant activities in the cash generation context. Consequently, there is lack historical of relevant data. Thus, this dissertation proposed following recommendations for cash generated from variant operating, investing, and financing activities:

1) The gained findings showed a typical homogeneous in these three variables, regardless the source of the cash and how much does contribute to the total generated cash. Thus, the critical point to consider by firms is how much amount was brought forth to operate the business and pay dividends.

2) Firms' management may consider that the business activities need the mix of the three functions (operating, investing and financing) to run and generate a new business stream, and therefore, someone could expect they have a similar impact on all tested dependent variables (performance measures). However, it is necessary to examine each of the three variables separately since they were subject to test for the first time.
3) The dissertation's findings confirm that a firm with negative cash generated from investing activities will have better performance, as the companies prefer to invest in their business domains to enhance their growth. Conversely, the high positive cash flow from investing activities does not indicate that the company is in functional status, because it may just be selling off assets.
4) Time-wise, the three variables have a significant relationship with some performance measures in short-to-mid terms during the financial crisis. Surprisingly, during the post-crisis, the cash generated from the three activities have become entirely insignificant. The formulae employed to examine these variables needed to be reconsidered, otherwise, an extended period is needed.
5) The activities that concerned with data collection and tabulating, some unrealistic cash flow within the yearly Quarters, although there was confidence in the data accuracy. However, sometimes the minor financial transactions and substantial amount transactions happened. Thus, the statistical analysis upon which these transactions based was found to be insignificant.

**f) Cash Holdings and Performance**

On the long-term, the obtained findings unveiled that the *cash holding* strategy, as a proxy for *working capital management*, is a significant factor to the firm's potential

performance under varying economic conditions, despite the impact of the crisis consequences. The direction (positive or negative) and level of impact could be varying as per the tested performance measure. Thus, the higher *cash holding*, the better the performance in the *ROI, net profit,* and *Return of the share price (Return).* In contrast, the higher *cash holding*, the lower is the performance for *sales growth, EPS* and *Tobin's Q*.

The assumption *under the different economic conditions, the different cash holdings strategy lead to different performance patterns*. So, the higher *cash holding* leads to:

- Pre-crisis: The higher performance of the majority of the tested performance measures were (e.g., *ROI, growth in sales, earnings per share, Return of the share price (Return),* and *Tobin's Q*), while the *net profit* was lower.
- During-crisis: The higher performance of the majority of the tested performance measures were (e.g., *ROI, net profit, earnings per share, and Return of the share price (Return)*), except *growth in sales* and *Tobin's Q*.
- Post-crisis: The gained results yielded *ROI* and *EPS* to be higher, while, the *net profit, growth in sales,* and *Tobin's Q* were lower, and *the Return of the share price (Return)* was insignificant.

The dissertation proposed the following recommendations for implementing an optimal *cash holding* strategy as *working capital management*:

1) Under healthy and stable economic or financial conditions, the Management and Board of Directors of the firm should consider that efficient *working capital management* is a critical factor in making the successful firm. Furthermore, improving performance (e.g., *ROI, profitability,* and *Return of the share price (Return)*) is possible by maintaining a high level of liquidity

(*cash holding*). Based on dissertation's findings, such strategy does not help to improve the s*ales growth, EPS,* and *Tobin's Q*. The explanation of this phenomenon could be that the management with a prominent level of liquidity does not pay serious attention to *sales growth* through investing the available cash to generate more business. Thus, the investors could criticise the management to invest the available cash feasibly. Accordingly, the firm's board should develop a strategy where *cash holding* level is dynamic and investable rationally when suitable opportunities are available.

2) The dissertation findings revealed that during the crisis, the higher *cash holding* is recommended as a success factor proving that *"Cash is the King"*. This strategy will be enhancing the *ROI, net profit, EPS* and *Return of the share price (Return),* as this means the readiness to create new business and give better negotiation power to the firm's Management, despite that it may hinder the *sales growth* and *Tobin's Q*. The reason beyond that is during the crisis; companies strove to survive through focusing extensively on generating liquidity rather than *sales growth* or enhancing the *market-to-book value*. Such strategy will improve the liquidity, which will give a good indication for the market's investors, as the company does not face any liquidity issue, which would result in a better *Return of the share price (Return)* performance.
3) Conversely, during the post-crisis period, the economic conditions were recovering gradually, whereas the firms' Management Board did not use the available liquidity efficiently to improve the *sales growth* and *net profit*. Therefore, it is recommended that the Management Board should develop a dynamic *treasury* management strategy promptly for offering best returns. On the other hand, the investors and fund providers need to pay much attention to

the contribution of the firm's *working capital* and *treasury* strategy to profitability and business future growth when they are planning to invest in any company.

# Chapter 7: The Conclusions

## 7.1 Revisiting

This section revisits to the coverage of each chapter as a reminder to the reader. Each chapter is concerned with a specific related topic to the dissertation theme. The related topics have collectively covered all aspects of the research problem of this dissertation. The summary of each chapter is not an overlapping of what has been mentioned in the introductory chapter.

1) **Chapter1- The Introduction**: This dissertation focused on defining the potential relationship between various adopted financial strategies by firms' board and management and the performance of these firms in the UAE context, as well as finding the incorporated variables that might affect significantly. To the best of knowledge, this dissertation provided the first investigation on comparing these interrelations under different economic conditions including the 2008 global financial crisis and its post consequences. Moreover, the dissertation covers only the UAE market with the scarcity of published works. Thus, it might be a useful reference source for studying the financial markets and economics of the UAE. This dissertation investigated the relationship between the adopted financial strategies and the firm performance within a limited period of ten years (i.e., 40 financial quarter periods) empirically. Moreover, the investigation of the post-crisis consequences covered only 12 quarters (i.e., three fiscal years); so, this dissertation the post-crisis period as a study limitation. This dissertation also retained only the UAE-based PJSCs whose data during 2006-2015were complete, reliable, and usable in tackling the research problem.

2) **Chapter 2- The UAE National Economy and the Financial Market**: The financial and business development in the UAE has represented an appropriate case for conducting this study in terms the security and stability of its business environment and financial performance. Thus, it was essential to examine the potential impact of the listed companies' performance on the macro level through exploring the possible significant importance and interrelationship between various economic indicators under the umbrella of the UAE national economy, and the financial market. The UAE government looks forward to finding the best business and financial practices for improving its national economy. The financial market of the UAE has facilitated the growth of many business sectors significantly. The consequences of the post-2008 global financial crisis have remarkably slowed down the growth of the UAE financial markets. However, in agreement with (Kern, 2012) statement, our findings endorse that, "*the effect on the UAE domestic financial markets with the global fluctuations and crises gives proven evidence that the UAE economy could pace with the accelerated development of the world economy*". Our study confirms that the ability of the UAE economy to recover rapidly from the consequences of the 2008 global financial crisis is evidence of the flexibility of the UAE national economy to absorb these financial shocks whether internally or at the global level; such sound stability has attracted both local and foreign investors.

3) **Chapter 3- Literature Review**: The literary review aims at discussing the theoretical basis of the topic critically through recalling the scholarly literature that concerned with the *concepts of strategy* and *theory of firm* have been used to establish a link between the strategy as a management tool and the firm's

financial performance as an enabler for developing a firm-specific financial strategy. Fama (1976) argues, among the diverse fields of economics, finance, as a domain of dissertation, is unique about the balance between the theoretical views and practical grounds.

Myers (1984) noted that many theoretical and empirical research studies on the financial issues had not developed a sufficient consensus about which factors are affecting the decision-making processes about the financial strategies, or how these factors, if any, could influence the firm performance, as well.

A particular emphasis is devoted to testing the firm's performance statistically within the realm of adopting a successful financial strategy. Slater and Zwilein (1996) stated that "*The firm's financial strategy possesses a significant potential for influencing shareholder value creation*; *therefore, it is a product of firm's investment, financing, and dividend decisions*". Following Fama and French (1992), in their pioneer work, explaining the stock returned pattern (as firms' performance measure) and defined the actual driving forces of the stock returns through testing different factors and or indicators.

As stated by Jensen and Murphy (1990), the organisation theory and strategic management are also representing the main twin drivers for dissertation the firm performance. Consequently, the proposed hypotheses of this dissertation emphasise *theory of the firm* as suggested by Jensen and Meckling (1976), as considerably as the *concept of the strategy* developed by Andrews (1980) to express the management style. Most of these eleven examined factors (independent variables) and six performance measures (dependent variables) were chosen based on reviewed literature, while four of these factors, to our best knowledge, is being introduced/examined for the first time.

4) **Chapter 4- Data and Methodology**: The econometric package *EViews* was used to estimate the underlying parameters in each model. The generated findings, using *Generalized Method of Moments* (GMM) estimation technique to perform all panel data statistical estimations and data analysis, that concerned with the data representing the ten years (quarterly data) of financial market activities, whereas the 2008 global financial crisis fixed as a significant benchmark event. Therefore, the primary findings generated would represent the entire a ten-year period span. Furthermore, a statistical approach involved in the sensitivity test for examining the potential impacts of 2008 financial crisis. Accordingly, the added findings represent the three consecutive periods; pre-, during, and post-financial crisis. This dissertation also investigated the impact of adopting different financial strategies on the firm's performance empirically. To quantify the performance of the company, six performance measures have been incorporated to examine and identify the key determinants of the firm's activity through analysing the capital structure variables other than by cash flows management variables.

5) **Chapter 5- Empirical Results and Discussion**: Based on the assumptions of this dissertation, as stated: "*Different financial strategies under different economic conditions are leading to different performance*", the gained findings from the global tested period (40 quarters; 2006-2015) analysis unveiled that variance impact on the relationship between the eleven variables and the six performance measures. Under the *capital structure* dimension, six variables have been examined, all of them show a particular relationship with five out the six performance measures, except for the "*Share Price*", which shows fluctuation in the relationship among the six *capital structure* variables. Under

the *cash flow management* dimension, the five variables have been examined; the findings show enormous redundancy in the relationship among the five examined variables with the six performance measures. The segregation of the global period in three different economic stages, as defined earlier (pre, during, and post-crisis), yielded different results, as assumed, found. Accordingly, supporting or rejecting the proposed hypotheses is often based on the case-by-case, as each variable (total is eleven) is examined against six measures four times (i.e. 40 quarters), pre, during, and post-crisis.

6) **Chapter 6- Policy Implications and Recommendations**: The findings gained from the data analysis confirmed the central assumption of this dissertation "*Different financial strategies under different economic conditions are leading to different performance*". Thus, based on this crucial finding, the dissertation recommends that the firm's top management should define their short-term, mid-term, and long-term financial and business strategy, as the performance would defer, accordingly. Moreover, this dissertation paid particular attention to find a potential link that would be existing between the UAE national economy and the financial market. So, a set of recommendations based on this linkage are suggested to enhance the national economy at the macro-level.

## 7.2 Significant Scholarly Reference Publications

The research problem of this empirical study relied on essential theories and published work that represented fundamental breakthroughs in the finance science and applications. These earlier references scholarly work defined the linkage between the strategic financial factors and the firms' performance, which is the research theme of this dissertation's investigation.

Most of the key cited reference publications written by Nobel laureates (e.g., Modigliani & Miller, 1958; 1963; Penrose, 1959; Fama, 1976; Jensen & Meckling, 1976; Andrews, 1980; Hansen, 1982; Fama & French, 1992; 1998) and other eminent finance scientists (e.g., Utton, 1971; Bradley et al., 1984; Booth et al., 2001) supported the findings of this dissertation to contribute remarkably in creating a linkage between the firm's strategies, finance, and performance, along with filling the knowledge gap existing in this relationship.

## 7.3 Contributions

This dissertation contributed significantly to the existing financial literature as:

a) Addressing the knowledge gap regarding: i) using the econometric method for panel data analysis as an innovative approach to research samples obtained from the UAE financial market (PJSC), which, to our best knowledge, has not been incorporated in similar studies, and ii) using GMM estimation technique that employs orthogonality moment conditions to obtain valid instruments for performing all panel data statistical estimations and analysis.

b) Furnishing reliable financial information needed by many stakeholders, such as firm's management and shareholders, government policy-makers, investors, fund providers and the like about: i) what performance is expected from implementing different financial strategies? Moreover, ii) what a mix of financial strategies that could be implemented to meet any financial crisis?

c) Shrinking the knowledge gaps by offering practical perspectives that could be implemented in professional settings by i) economy and financial market policy-makers as government entities, ii) companies' management and Board of Directors (BOD), and iii) investors and fund providers.

d) Providing practical approaches to the PJS companies', and large companies as well, business through incorporating the proposed mix of dynamic financial strategies as a framework for the large firms to adopt suitable applications in the real market and financial practices.

e) The applications of the examined correlations (between various financial strategies & various performance measures) would be offering some factors that could assist the economic entities and companies in improving their financial strategies and, in turn, achieving their vision and mission to show acceptable business performance successfully.

f) This dissertation is the first scholarly investigation on examining the impact of the 2008 global crisis on the listed companies in the UAE context; its significance rests on that the dissertation sheds light on these relationships under different economic conditions including the 2008 global crisis since any scholarly studies did not tackle this issue.

g) This dissertation is the first study that went to actual reasons behind establishing the interrelationship between the UAE national economy and the Financial Market (as discussed in chapter 2). As a consequence, the dissertation proposed several functional policies and implications for many stakeholders like firms management and BOD, investors, fund providers, and economic and financial policies makers to help them in improving the national economy and the global competitiveness.

In summary, the following cases were the first time investigated in the UAE financial literature and are considered as a notable contribution:

a) The impact of the 2008 global crisis on the listed companies in the UAE context.

b) The financial strategies-performance relationships under different economic conditions in the UAE context.

c) The UAE National economy-Financial Market interrelationship.

d) Highlight the significance of the PJSCs/Financial Market to the UAE national economy.

e) The first scholarly Employing 6 dependent variables (performance measures; 4 financial plus two markets) together in one research.

f) Applying/testing the proposed relations under different economic conditions: (pre-crisis, during the crisis, post-crisis).

## 7.4 Limitations of the Study

a) The empirical findings generated from this dissertation provide evidence of wide-ranging practices of various financial strategies, along with their effects on the firm performance. This section notes certain limitations (e.g., business context, number of considered firms, financial strategy, and analysis tool) of this dissertation to be considered. This dissertation investigated the market behaviour and responses of the listed firms in Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM) towards specific economic conditions in the UAE context. Thus, the generated findings are not necessarily representing the financial markets of the countries in the Gulf Cooperation Council Countries (GCC) nor the Middle Eastern and North African Countries (MENA region).

b) The PJS firms that listed in the both of the UAE financial markets were 128 by the end of the tested period in the year 2015. This dissertation considered only 92 PJS firms, which could be considered to represent the entire ten categorised

sectors in both ADX and DFM. Furthermore, the chosen PJS firms were subject to test their performance over the three economic conditions happened in 2006-2015 while the global financial crisis came across in 2008 to take as a benchmark. Therefore, this dissertation investigated the performance of these firms during the pre-crisis, in crisis, and the post-crisis.

c) We focused on examining only eleven financial strategies about the firm's performance from two dimensions: i) capital structure, and ii) cash flow management. In the relevant literature, many authors identified and investigated other financial strategies, which might not support exploring the research problem satisfactorily.

d) Another limitation was that the financial data from various resources and in different formats were collected and subject to analysis carefully to avoid any vital mistake; especially when converting the collected data into *EViews* format to cause what can be called *conversion errors*, such as duplication and inconsistency of tabulation. Thus, the findings produced are based on using the *GMM* as an estimation technique, while using another method might get different findings of similar data.

### 7.5 Suggestion for Further Studies

The suggestions for further studies are based on and findings produced from analysis of the collected financial data that supported the aim and objectives of this dissertation. Among these financial problems that deemed further investigations are:

1) The examination of the link between GDP growth and the ESM index development within the expanded period and more supported data. This

examination could provide an adequate analysis of the relationship between the financial market and the real sector in the UAE.

2) Studying the correlation between the ECI, the ESM, and the Oil Brent price over a more extended period with added variables by this correlation.
3) Incorporating more than one performance measures, along with using both dimensions financial and market measures.
4) Exploring the behaviour and prompt response of the UAE national economy towards the economic or financial instability and uncertainty happened regionally or globally. Such investigation might define the mutual connection and relations between the local market and the foreign ones to employ a smart strategy to gain from such global or regional economic fluctuations.
5) Employing other financial strategies or analytic tools that discussed in the relevant financial literature in studying the UAE financial markets to find other solutions and beneficial results concerning the firm's performance.
6) Applying the approaches of this dissertation to studying the performance of the listed firms in normal economic or financial conditions in different contexts.
7) A particular area of interest is determining the vital importance of the cash flow management strategy in improving the firm's performance.
8) Finally, need to deal with the stand-still unanswerable question: How could the financial crisis be forecasted? Moreover, what would be the possible predicting indicators?

## 7.6 Concluding Remarks

Despite the chosen 92, JPS listed firms had exposed to the consequences of the 2008 global financial crisis, the majority of them have not learned the crisis lessons; this

reflected on the apparent variance in their post-crisis performance since 2013-onwards. Therefore, the findings and related suggestions of this dissertation would be significant reference sources for the researchers, scholars, and policy-makers who are interested in studying the various aspects and reactions of the UAE economy and related financial business issues, in particular, and the fluctuation and responses of the financial markets and the listed companies worldwide. In general, the performance of the listed companies could affect the national economy as the financial market-economy performance gaining a positive correlation.

The academics who are interested in either the finance or the strategic management areas would be finding the dissertation findings as a practical approach for conducting further investigations. Likewise, this dissertation would be of value to improving the firm's performance by helping to bridge the gaps, notably, in the practical perspectives of the financial strategies applications.

Moreover, there a genuine willingness to share the findings of this dissertation with many interesting groups of stakeholders and decision-makers, such as government as policy-maker (Stock markets), the board of directors of the listed and large companies, management leaders, investors, and fund providers. This dissertation argues that the post-crisis financial market not like the pre-crisis one, where the companies behaviour changed due to their responses towards encountering the crisis consequences; therefore, many other factors (e.g., financial and non-financial) could impact on the firm performance. Accordingly, this financial issue deemed further investigation.

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## Appendix: Introducing Taxation System (VAT) in the UAE

While this dissertation turned to close, the Federal UAE Government introduced taxation system, as value-added tax (VAT) on consuming items and services for the first time. The exceptions are those related to health and educational services, along with properties. Taxation as *per se* has not practised within the free economy paradigm that adopted by the UAE since its establishment.

Based on the unavailability of taxation system in that time, in the *Global Competitiveness Index* (2015/2016), the World Economic Forum (WEF) ranked the UAE as i) the first in effect of taxation on incentives to work and ii) the second in effect of taxation on incentives to invest. However, the GCC countries, including the UAE, decided to introduce the Value-added-Tax (VAT) as 5% of the value of the provided services/products starting from January 2018.

This procedure, in principle, could re-rank UAE's position in the *Global Competitiveness Index*. Nevertheless, it is not expected to have a resilient impact on investment or doing business due to the facts that:

1] The VAT is tolerated by the end-users/customers, not the business/companies, despite that companies will pay taxes (as a customer) when they purchase or pay for services and products, most of this amount is reimbursable,

2] The VAT is a well-known tax applied in most of the world countries with a higher rate that the applied in the UAE, which make the VAT introduction in the GCC/UAE is absorbable by the companies, especially for the multi-national companies (MNC),

3] In the UAE the VAT is applicable for specific products and services, while the main living products and services like: education except for higher education, treatment medical services, transportation, residential real-estate, government services, exporting, non-profit organisations and the like are exempted.

The Modigliani and Miller (M&M) modified theory of corporate finance (1963) which incorporate the tax effects, has been proven worldwide for a long time. However, there was no sufficient studied to examine it in the GCC countries since the taxation system is introduced ever in 2018. The potential impact of taxes can be the additional approach of further study. Nevertheless, we do not expect a significant impact of the VAT on the companies since this taxation system does not impose direct taxes on doing business or making profits.