Khatam University

Journal of Risk Modeling and Financial Engineering

Print ISSN: 2538-5372
Online ISSN: 2538- 5364
Spring 2017, Vol. 2, No. 1

Address: P. O. Box: ۱۹۳۹۵-۳٤۸٦
Tehran, Islamic Republic of Iran
WebSite: http://jferm.khatam.ac.ir
E-mail: jferm@khatam.ac.ir

Table of Contents

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 1

Systemic Risk Measures in Financial Markets: Identifying the Systemically Important Companies in TSE

Hossein Dastkhan[1], Naser Shams Gharneh[2]

Abstract: In the recent years, the occurrence of systemic risk events is one of the main issues of the complex financial systems. Identification of the systemically important firms is one of the main issues in order to mitigate and control the systemic risk events. In this paper, different network-based systemic risk measures are introduced and compared to each other to identify systemically important firms. These measures are divided in to the interconnectedness and the size measures. Using cross-holding data of Tehran Stock Exchange and network theory principles, the systemically important firms and sectors are identified and their relations are assessed. The results show that the application of integrated cross-holding network leads to a better understanding of the systemic risk in the considered financial market. Moreover, a combination of interconnectedness and size measures can lead to more reliable results. The statistical analysis of the results indicates that there are few firms which have a dominant role in the occurrence of financial systemic risk according to different measures.

Keywords: ***Network Theory, Interconnectedness, Systemic Risk, Cross-Holding.***

JEL: C6, E44, G10, G18, G32

1. Ph.D Candidate, Department of Industrial Engineering and Management Systems, AmirKabir University of Technology, Tehran, Iran

2. Associate Prof, Department of Industrial Engineering and Management Systems, AmirKabir University of Technology, Tehran, Iran

Submitted: 03 / January / 2017 **Accepted: 12 / March / 2017**
Corresponding Author: Naser Shams Gharneh **Email: nshams@aut.ac.ir**
How to cite this paper: Dastkhan, H., & Shams Gharneh, N. (2017). Systemic Risk Measures in Financial Markets: Identifying the Systemically Important Companies in TSE. Quarterly Journal of Risk Modeling and Financial Engineering, 2(1), 1 –21. (in Persian)

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 2

Impacts of Credit Risk and Liquidity Risk on Performance of Banks

Mehdi Ferdosi[1], Mohammad Hasan Fotros[2]

Abstract: Along with globalization of economy and strengthen competition among the banks, profit margin of traditional banking activities be falled and caused increasing of the banks risk. Risk is one of the effective factors on bank performance that be attended because of fiscal crisis in recent years. This research investigates impacts of credit and liquidity risk on performance of banks in Iran. For this end, 31 banks during 1386-1393 by annual data are investigated. Findings by fixed effect and GLS method represents negative effect of credit and liquidity risk on banks profit margin as performance index. Other results show negative effect of diversification index and positive effect of concentration and cost management on profitability.

Keywords: ***Credit Risk, Liquidity Risk, Profitability, Bank System*.**

JEL: G21, G29, G32

1. Ph.D Condidate, Economics, Bu Ali Sina University, Hamedan, Iran

2. Proffessor, Economics, Bu Ali Sina University, Hamedan, Iran

Submitted: 13 / December / 2016 **Accepted: 26 / February / 2017**

Corresponding Author: Mehdi Ferdosi **Email: m.ferdosi@basu.ac.ir**

How to cite this paper: Ferdosi, M. & Fotros, M,H. (2017). Impacts of Credit Risc and Liquidity Risk on Performance of The Banks. Quarterly Journal of Risk Modeling and Financial Engineering, 2(1), 22–41. (in Persian)

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 3

Deployment of Risk Culture In Financial Institutions

Aryan Gholipour[1], Mohammad Abooyee Ardakan[2], Hassan Ghalibaf Asl[3], Asghar Asadi[4]

Abstract: While quantitative models and governance frameworks for risk management are now well established, but behavioral aspects, which focuses on the concept of risk culture, often are unclear and requires intellectual efforts and develop more theories. Establish and maintain an appropriate risk culture is still one of the major challenges in risk management. In this paper, we attempt has been to clarify the status of the risk culture in risk management, different dimensions described in financial institutions and its status in one of the financial institutions group.

In this regard, as a starting point records of previous research, the available models and frameworks was investigated. During the review of the literature, by comparing the different frameworks, dimensions and cultural elements of risk Financial Stability Board was selected as a base. Then, through interviews and review records and documents, also using survey and questionnaire was tested aspects of risk culture. The findings show that the dimensions of the risk culture in the organization which is the case study, is average. Among the elements of risk culture, succession planning and talent development have obtained the lowest scores and outcomes specified and risk ownership have obtained the highest scores.

Keywords: ***Financial Institutions, Risk Management, Organizational Culture, Risk Culture.***

JEL: G01, G31, G32, M14

1. *Prof. Human Resource Management, University of Tehran, Iran*
2. *Associate Prof. Systems Management, University of Tehran, Iran*
3. *Associate Prof. Financial Management, university of Alzahra, Iran*
4. *Ph.D. candidate, Human Resource Management, Alborz campuse, University of Tehran, Iran*

Submitted: 07 / December / 2016 **Accepted: 17 / March / 2017**
Corresponding Author: AsgharAsadi **Email: asadi.a@ut.ac.ir**
How to cite this paper: Gholipour, A., AbooyeeArdakan, M., GhalibafAsl, H., & Asadi, A. (2017). Deployment of Risk Culture in Financial Institutions. Quarterly Journal of Risk Modeling and Financial Engineering, 42–59. (in Persian)

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 4

The Impact of Intellectual Capital on the Financial Performance of Banks in Iran

Mahmood MahmoodZadeh [1], Farshid Efati Baran [2]

Abstract: The goal of most companies is to earn more profit and this case is reflected in the form of financial performance in banks and financial institutions. One of the factors affecting on financial performance is intellectual capital. The aim of this study was to evaluate the effect of intellectual capital and its components (human capital, physical and structural) on financial performance of banks active in the Tehran Stock Exchange during 2006-2015. Intellectual capital efficiency of banks is measured via the Value Added Intellectual Capital (VAIC). Panel data regression analysis showed a significant positive impact of intellectual capital on return on assets of banks. In particular, human capital and return on assets had a significant positive relationship. This result shows the efficiency coefficient of human capital has a greater impact than structural capital and physical capital efficiency coefficient on bank profitability. The results identify of special incentives of intellectual capital that affect on profitability and business efficiency.

Keywords: ***Value Added, Return on Assets, Intellectual Capital, Leverage Ratio.***

JEL: G11, G21, O34

1. Associate Prof. Department of Economics, Firoozkoh Branch, Islamic Azad University, Firoozkoh, Iran.

2. Ph.D Candidate of Economics, Firoozkoh Branch, Islamic Azad University, Firoozkoh, Iran

Submitted: 17 / November / 2016 **Accepted: 18 / February / 2017**
Corresponding Author: Farshid Efati Baran **Email: farshidefati@iaufb.ac.ir**
How to cite this paper: Mahmoodzadeh, M., & Efati Baran, F. (2017). The Impact of Intellectual Capital on the Financial Performance of Banks in Iran. Quarterly Journal of Risk Modeling and Financial Engineering. 2(1), 60 –79. (in Persian)

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 5

An ANFIS System for High Frequency Trading using Intraday Seasonality Observation Model

Ali Salehabadi[1], Sajad Farazmand[2]

Abstract: The main goal of this article is prediction of gold price time series. An ANFIS and its fuzzy reasoning combined with pattern recognition ability of NN is used for predicting and trading in high frequency. Taking volatility of financial time series into consideration has brought about the development of the Intraday Seasonality Observation Model. Models are examined with data from June 2014 to April 2016. This model allows us to observe specific events and seasonality's in data and subsequently removes any unnecessary data. This volatility based model provides the ANFIS with more accurate inputs. Based profit factor, ROI, and Sharpe ratio the model has increased the overall performance of the system so that winning rate of the system reaches 69 percent.

Keywords: ***ANFIS, Neuro-fuzzy network, Volatility Model, High-frequency trading (HFT).***

JEL: C32, C45, G15, G24

---

1. Assistant Prof., Finance Department, Imam Sadiq University, Tehran, Iran

2. Ph.D. Student. Financial Management, Shahid Beheshti University, Tehran, Iran

---

Submitted: 04 / November / 2016 **Accepted: 10 / March / 2017**

Corresponding Author: Sajad Farazmand **Email: S_farazmand@sbu.ac.ir**

How to cite this paper: Saleh Abadi, A., & Farazmand, S. (2017). An ANFIS system for High Frequency Trading using Intraday Seasonality Observation Model. Quarterly Journal of Risk Modeling and Financial Engineering, 2(1), 80 –97. (in Persian)

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 6

Firm Life Cycle and Stock Price Crash and Jump Risk

Yunes Badavar Nahandi[1], Ghader Dadashzadeh[2]

Abstract: Corporate life cycle represents the evolution of an organization due to changes such as strategy and competitive pressures the corporate is facing, happens.based on the theory of competition and signaling theory, firms during different stages of their life cycle have different characteristics and conditions that may affect stock price crash and jump risk. The aim of this research is to investigate the relationship between firm life cycle and stock price crash and jump risk. In order to achieve this research goal, were selected 144 firms during the 2010 to 2015 we used log it leggresion to test our hypothesis. The results showed that there is not relationship between firm growth and mature stages and stock price crash risk and there is negative and significant relationship between firm decline stage and stock price crash risk. Also, there is not relationship between firm life cycle stages and stock price jump risk in the research.

Keywords: ***Firm Life Cycle, Stock Price Crash Risk, Stock Price Jump Risk.***

JEL: D91, E32

1. Associate Prof. Accounting Department, Islamic Azad University, Tabriz, Iran

2. Ph.D. Candidate Accounting, Islamic Azad University, Marand, Iran

Submitted: 30 / December/ 2016 **Accepted: 16 / March/ 2017**

Corresponding Author: Ghader Dadashzadeh **Email: Ghaderdadashzadeh@gmail.com**

How to cite this paper: Badavar Nahandi, Y., & Dadashzadeh, Gh. (2017). Firm Life Cycle and Stock Price Crash and Jump Risk. Quarterly Journal of Risk Modeling and Financial Engineering, 2(1), 98 –114. (in Persian)

Risk Modeling and Financial Engineering Khatam University
Vol. 2, No. 1
Spring 2017 Page: 7

Funds Flow, Market Return and Retail Investors Risk

***Mohammad Osoolian*[1]*, Moien Nikusokhan*[2]**

Abstract: There are different types of investors in mutual fund market that rely on different information, therefore the relationship between fund flows and market returns is different among various groups of investors. The aim of this study is to explain how the relationship between equity fund flow and market returns of the Tehran Stock Exchange based on the risk-taking of retail and institutional fund investors during the period 1387 to 1396. We used ordinary least squares regression (OLS) and seemingly unrelated regression (SUR) models for a sample of 101 equity mutual fund. The results of the retail fund sample indicate that feedback trading; ie, 1 percent increase in stock market returns led to a 2.84 percent increase in fund flows and this indicates a risk for retail investors in the short-term. In contrast, there is a few evidence of a relation between fund flow and market returns for the institutional funds. Also, no evidence found about the flow to be Inducer price pressure in the stock market.

Keywords: ***Stock market return, Fund flows, Mutual funds, Price pressure, Feedback trading*.**

JEL: G10, G20, G23

1. Assistant Prof., Finance Department, Shahid Beheshti University, Tehran, Iran.

2. MSc. Financial Management, Shahid Beheshti University, Tehran, Iran

Submitted: 02 / December/ 2016 Accepted: 18 / February/ 2017

Corresponding Author: Moien Nikusokhan Email: mnikusokhan@gmail.com

How to cite this paper: Nikusokhan, M., & Osoolian, M. (2017). Funds Flow, Market Return and Retail Investors Risk. Quarterly Journal of Risk Modeling and Financial Engineering, 2(1), 115 –132. (in Persian)