13th MALAYSIAN FINANCE ASSOCIATION CONFERENCE 2011

10th - 12th June 2011

VENUE
Holiday Villa Beach Resort & Spa, Langkawi, Kedah

THEME
"Financial Innovation and Transformation in the 21st Century"

KEYNOTE SPEAKERS

PROF. DR. S. GHON RHEE
K.J. Luke Distinguished Professor of International Finance and Banking, Shidler College of Business, University of Hawai'i

PROF. DR. H.C. VOLKER NIENHAUS
Former President, University of Marburg, Germany
Currently, Visiting Professor, ICMA Centre, Henley Business School, University of Reading (United Kingdom)

DISTINGUISHED SPEAKERS

DR. HUMAYON DAR
Managing Director & CEO of BMB Islamic Advisory Ltd, and Chairman of Edbiz Consulting Limited

DR. AMAT TAAP MANSHOR
Director, Quality Assurance & Accreditation, AIF

Jointly organised by:

AIF ASIAN INSTITUTE OF FINANCE

MFA Malaysian Finance Association

Universiti Kebangsaan Malaysia
Graduate School of Business UKM-GSB
Inspiring futures, nurturing possibilities

Papers presentation will cover from the following main theme or from any of the following sub-themes

FINANCIAL MARKETS :
+ Debt, Equity, Derivatives and Commodity Markets
+ Market Efficiency and Asset Pricing
+ Market Microstructure + Emerging Markets
+ Market Integration + Regulatory Issues + Islamic Finance

MANAGEMENT OF FINANCIAL INSTITUTIONS :
+ Alternative structures and Revenue Models for Banks
+ Mutual Funds, Hedge funds, Private Equity and other intermediaries + Financial Engineering and Innovations
+ Risk Management + Regulatory Issues

CORPORATE FINANCE :
+ Finance Functions in Changing Market Environment
+ Agency Issues and Corporate Governance
+ Financial Modelling + Mergers and Acquisitions
+ Infrastructure Finance

ACCOUNTING :
+ International Accounting and Convergence of Global Accounting Standards + Real Value Accounting
+ Financial Reporting and Financial Analysis

WHO SHOULD PARTICIPATE

+ Professionals from finance and banking institutions
+ Representatives from the Central Banks
+ Government bodies
+ Research institutions
+ Professional associations
+ Academicians
+ Post-graduate students
+ Industrialists
+ Other interested parties

CONFERENCE FEE

	Rate (RM)
MFA Member	650
Non-MFA Member	700
International Participant	USD300
Students	300

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CONTACT

Address:
Secretariat,
MFA Conference 2011
UKM-Graduate School of Business
Level 5, FEP Building, Universiti Kebangsaan Malaysia
43600 UKM Bangi, Selangor, Malaysia

General enquiries :
Tel: + 603 8921 5781/ 4485
Fax: + 603 8921 3161
Email: mfa2011@ukm.my / m_fadzil@ukm.my
Website: www.ukm.my/mfa2011
www.mfa.com.my

13TH MALAYSIAN FINANCE ASSOCIATION CONFERENCE 2011

"FINANCIAL INNOVATION AND TRANSFORMATION IN THE 21ST CENTURY"

10th – 12th June 2011
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PROGRAMME

PRE-CONFERENCE: Friday, 10 June 2011	
1500 - 1700	**PhD Colloquium**
1700 - 1730	**Refreshments**

CONFERENCE DAY 1: Saturday, 11 June 2011	
0800 – 0900	**Registration**
0900 – 1000	**Opening Ceremony** **Keynote Speech** ***Speaker 1 :*** *Prof. Dr. S. Ghon Rhee, K.J. Luke Distinguished Professor of International Finance and Banking, Shidler College of Business, University of Hawai'i.* ***Speaker 2 :*** *Prof. Dr. H.C. Volker Nienhaus, Former President, University of Marburg, Germany*
1000 – 1015	**Refreshments**
1015 – 1300	**Concurrent Session**
1300 – 1400	**Luncheon Talk** *Dr. Amat Taap Manshor, Director, Quality Assurance & Accreditation, Asian Institute of Finance, Malaysia*
1400 – 1530	**Concurrent Session**
1530 – 1600	**Refreshments**
1600 – 1730	**Concurrent Session**
2000 – 2200	**Dinner** ***Special Dinner Address*** *Dr. Humayon Dar, Managing Director & CEO of BMB Islamic Advisory Ltd, and Chairman of Edbiz Consulting Limited*

CONFERENCE DAY 2: Sunday, 12 June 2011	
University – Industry Dialogue : **A Synergistic Model for Interaction between University and Industry**	
0830 - 1000	**Speakers**: ***Speaker 1 :*** *Prof. Dr. H.C. Volker Nienhaus, Former President, University of Marburg, Germany* ***Speaker 2 :*** Dr. Yeah Kim Leng, Group Chief Economist, RAM Holdings Berhad ***Speaker 3 :*** *Dr. Amat Taap Manshor, Director, Quality Assurance & Accreditation, Asian Institute of Finance, Malaysia* ***Speaker 4 :*** *Prof. Dr.* Obiyathulla Ismath Bacha, *Head of Graduate Studies Department and Head of Finance & Accounting Department, INCEIF*
1000 – 1030	**Refreshments**
1030 – 1200	**Concurrent Session**
1200	**Lunch**

FRIDAY 10 JUNE 2011

PhD COLLOQUIUM 1: ROOM 1 [15.00PM-17.00PM]

MFA2011-54 Title: **PhD Colloquium - The Explanation of Psychological Biases on Day-of-the Week Anomaly: Case of Malaysia**
Presenter: Rayenda Khresna Brahmana - USM

MFA2011-10 Title: **Characteristics of Pyramid Structure and Agency Problems Among Malaysian Public Listed Firms**
Presenter: Irfah Najihah Binti Basir Malan - UTM

MFA2011-63 Title: **Leverage, Family Firms and Ethnicity: Evidence of Malaysian Non-Financial Listed Firms**
Presenter: Noorhayati Yusof Ali - UKM-GSB

Panelist:

1. Prof. Datin Dr. Ruhani Ali
2. Prof. Dr. Wan Mansur Wan Mahmood
3. Prof. Dr. Nur Adiana Hiau Abdullah

PhD COLLOQUIUM 2: ROOM 2 [15.00PM-17.00PM]

MFA2011-65 Title: **Risk Management Practices And Bank Governance Structure**
Presenter: Fauziah Abdul Rahman - UKM-GSB

MFA2011-80 Title: **Modeling Sukuk Structure By Using Embedded Options As A Risk Mitigation Technique**
Presenter: Nur Afizah Ariffin - UiTM

MFA2011-80 Title: **Equity Market Timing And Capital Structure Of The Firm**
Presenter: Islam Khalil Odeh Abdeljawad - UKM-GSB

Panelist:

1. Prof . Dr. Izani Ibrahim
2. Prof. Dr. Obiyathullah Ismath Bacha
3. Prof. Dr. Mansor Ibrahim

SATURDAY 11 JUNE 2011

CONCURRENT SESSION I: ROOM 1 [10.30AM – 13.00 NOON]

DIVIDEND AND FINANCIAL ANALYSIS

Session Chair: Prof. Dr. Nur Adiana Hiau Abdullah

MFA2011-11	Title: **Rationalizing the Value Premium under Economic Fundamentals and Political Patronage** Presenter: Muhammed-Shahid Ebrahim *Discussant: Prof. Dr. Nur Adiana Hiau Abdullah*
MFA2011-4	Title: **Moderation Effect of Market Condition on the Relationship between Dividend Yield and Stock Return** Presenter: Meysam Safari *Discussant: Abdorreza Asadi*
MFA2011-58	Title: **Does The Incentive Scheme Of Financial Analysts Coverage Add Any Value? The Malaysian Experience** Presenter: Azian Bin Madun *Discussant: Sina Kheradyar*
MFA2011-23	Title: **Stock Return Predictability: A Study of Price-Level Impact on Predictive power of Financial Ratios** Presenter: Sina Kheradyar *Discussant: Azian Bin Madun*
MFA2011-69	Title: **Signaling Effects of Dividend Announcements, Evidence from Middle Eastern countries** Presenter: Abdorreza Asadi *Discussant: Meysam Safari*

SATURDAY 11 JUNE 2011

CONCURRENT SESSION I: ROOM 2 [10.30AM – 13.00 NOON]

CAPITAL STRUCTURE 1

Session Chair: Prof. Dr. Fauzias Mat Nor

MFA2011-10 Title: **Venture Capital Decision Making Process - A Case Study in Malaysia**
Presenter: Cheedradevi Narayanasamy
Discussant: Islam Khalil Odeh Abdeljawad

MFA2011-13 Title: **Equity Market Timing and Capital Structure: Evidence from Malaysia**
Presenter: Islam Khalil Odeh Abdeljawad
Discussant: Cheedradevi Narayanasamy

MFA2011-43 Title: **Trade-off Theory of Optimal Capital Structure and Adjustment to Long-run Target: Evidence from Dynamic Panel Data**
Presenter: Matemilola Bolaji Tunde
Discussant: Razali Haron

MFA2011-53 Title: **Dynamism of Capital Structure: Evidence from Selected South East Asia Countries Panel Data**
Presenter: Razali Haron
Discussant: Matemilola Bolaji Tunde

SATURDAY 11 JUNE 2011

CONCURRENT SESSION I: ROOM 3 [10.30AM – 13.00 NOON]

BOND AND SUKUK ISSUES

Session Chair: Prof. Dr. Obiyathullah Ismath Bacha

MFA2011-19	Title: **Do External and Internal Factors Explain Emerging Market Sovereign Bond Spreads? Evidence from Indonesia and Philippines** Presenter: Hanandewa *Discussant: Foo Mei Yeen*
MFA2011-21	Title: **The Effect of Corporate Bond Issuance To the Equity Market and Its Determinants** Presenter: Chin Sze Kim *Discussant: Hafizi Ab Majid*
MFA2011-38	Title: **Informational Value Of Corporate Bond Rating Announcements In Malaysian Financial Markets** Presenter: Foo Mei Yeen *Discussant: Hanandewa*
MFA2011-77	Title: **Event Of Default In Malaysian Capital Market: A Case Study** Presenter: Hafizi Ab Majid *Discussant: Chin Sze Kim*

SATURDAY 11 JUNE 2011

CONCURRENT SESSION I: ROOM4 [10.30AM – 13.00 NOON]

ISLAMIC FINANCE AND BANKING 1

Session Chair: Prof. Dr. Abdul Ghafar Ismail

MFA2011-50	Title: **Patronisation Behaviour of Islamic Banks' Customers in Qatar** Presenter: Abdelghani Echchabi *Discussant: Abdul Ghafar Ismail*
MFA2011-70	Title: **Human Capital and Islamic Bank's Operational Risk: An Exploratory Study** Presenter: Aisyah Abdul Rahman *Discussant: Shahida Shahimi*
MFA2011-79	Title: **Earnings Management of Malaysian Islamic Banks through Profit Equalization Reserve: Preliminary Findings** Presenter: Shahida Shahimi *Discussant: Aisyah Abdul Rahman*
MFA2011-84	Title: **What You Sell is What You Learn? Analising Riba and Loan Contract** Presenter: Abdul Ghafar Ismail *Discussant: Abdelghani Echchabi*

SATURDAY 11 JUNE 2011

CONCURRENT SESSION II: ROOM 1 [14.00PM – 15.30PM]

CAPITAL STRUCTURE 2

Session Chair: Prof. Dr. Wan Mansur Wan Mahmood

MFA2011-31	Title: **Capital Market Reaction To Equity Private Placement: The Malaysian Experience 1999 – 2007** Presenter: Norhafiza Nordin *Discussant: Razali Haron*
MFA2011-55	Title: **Determinants of Target Capital Structure: Evidence on South East Asia Countries under Dynamic Framework** Presenter: Razali Haron *Discussant: Norhafiza Nordin*
MFA2011-70	Title: **Corporate Financing Decisions: Malaysia Survey Evidence** Presenter: Khairunisah Ibrahim *Discussant: Rasidah Mohd Rashid*
MFA2011-85	Title: **Innovation in Financing (Practioner's Paper)** Presenter: Sheriffah Noor Khamseah Al-Idid

SATURDAY 11 JUNE 2011

CONCURRENT SESSION II: ROOM 2 [14.00PM – 15.30PM]

INTERNATIONAL FINANCE

Session Chair: Prof. Dr. Prof. Dr. Obiyathullah Ismath Bacha

MFA2011-26	Title: **Do Foreign Equity Flows Increase the Volatility of Stock Returns and Exchange Rates? The Case of the Philippines** Presenter: Joseph J French *Discussant:* Chan Tze-Haw
MFA2011-33	Title: **Malaysia and China in the Liberalization Era: A Long-run Structural Modeling of International Parity Conditions** Presenter: Chan Tze-Haw *Discussant:* Joseph J French
MFA2011-17	Title: **Role of Exchange Rate Channel in Monetary Transmission Mechanism in Indonesia: A Re-Assessment Following the Adoption Inflation Targeting Framework** Presenter: Dimas Bagus Wiranata Kusuma *Discussant:* Yap Voon Choong
MFA2011-30	Title: **Determinants of Corporate Governance and Foreign Investment in Malaysia** Presenter: Yap Voon Choong *Discussant:* Dimas Bagus Wiranata Kusuma

SATURDAY 11 JUNE 2011

CONCURRENT SESSION II: ROOM 3 [14.00PM – 15.30PM]

FINANCIAL ECONOMICS

Session Chair: Prof. Dr. Mansor Ibrahim

MFA2011-57 Title: **The Exploitation of Foreign Denominated Debt (FDD) & Foreign Currency Derivatives (FCD) for hedging against foreign exchange rate fluctuations within the multinational firms of Malaysia**
Presenter: Mohammadali Monshi
Discussant: Darmawati Muchtar

MFA2011-2 Title: **Investigating Relationship Between Coal Price And Petroleum Crude Oil Price - Cointegration Approach**
Presenter: Abdul Razak Abdul Hadi
Discussant: Marlina Widiyanti

MFA2011-20 Title: **Market-based or bank-based financial system drives the economic growth? Evidence from Indonesia**
Presenter: Darmawati Muchtar
Discussant: Mohammadali Monshi

MFA2011-35 Title: **Fiscal Deficit And The Impact Of Macroeconomic Variables On Inflation Rates In Malaysia**
Presenter: Marlina Widiyanti
Discussant: Abdul Razak Abdul Hadi

MFA2011-72 Title: **Financial Integration And International Capital Mobility: Evidence From Asean**
Presenter: A.H.Baharom
Discussant: Prof. Dr. Mansor Ibrahim

SATURDAY 11 JUNE 2011

CONCURRENT SESSION II: ROOM4 [14.00PM – 15.30PM]

FINANCIAL MARKET BEHAVIOUR 1

Session Chair: Prof. Dr. Muhammed-Shahid Ebrahim

MFA2011-12	Title: **Do Holiday Effects Exist in Malaysia?** Presenter: Bakri Abdul Karim *Discussant: Shazali Bin Shaharudin*
MFA2011-29	Title: **Dual Offerings of Asian ETFs** Presenter: Shaista Wasiuzzaman *Discussant: Gilbert V Nartea*
MFA2011-34	Title: **Is there a MAX Effect in the Korean Stock Market?** Presenter: Gilbert V Nartea *Discussant: Shaista Wasiuzzaman*
MFA2011-37	Title: **Share Price Behaviour of Mother Share and Warrant Surrounding Share Buyback Announcement: Evidence from Malaysia** Presenter: Shazali Bin Shaharudin *Discussant: Bakri Abdul Karim*

SATURDAY 11 JUNE 2011

CONCURRENT SESSION III: ROOM 1 [16.00PM – 17.30PM]

ISLAMIC FINANCE AND BANKING 2

Session Chair: Prof. Dr. Saadiah Mohamad

MFA2011-22	Title: **Malaysian Muslims' Perceptions On Wasiyyah: Analysing The Supply Side** Presenter: Suhaili Alma'amun *Discussant:* Saadiah Mohamad
MFA2011-36	Title: **Innovative Islamic Hedging Products: Application of Wa'd in Malaysian Banks** Presenter: Saadiah Mohamad *Discussant:* Suhaili Alma'amun
MFA2011-40	Title: **Making Mudarabah workable: Altering Risk-Return Profiles through Equity Kickers** Presenter: Nazrol kamil Mustaffa *Discussant:* Abdelghani Echchabi
MFA2011-51	Title: **The Implementation Of Gulf Dinar And Its Possible Impacts** Presenter: Abdelghani Echchabi *Discussant:* Nazrol kamil Mustaffa

SATURDAY 11 JUNE 2011

CONCURRENT SESSION III: ROOM 2 [16.00PM – 17.30PM]

DIRECT INVESTMENT AND UNIT TRUST

Session Chair: Assoc. Prof. Dr. Catherine Soke Fun Ho

MFA2011-14	Title: **Financial, Economic and Market Risks on FDI Decisions** Presenter: Catherine S F Ho *Discussant: Nor Faradila Abdul Aziz*
MFA2011-16	Title: **Trade and Investment Liberalization Effects on SME's Development in Enhancing Malaysia's Economic Growth** Presenter: Nor Faradila Abdul Aziz *Discussant: Catherine S F Ho*
MFA2011-58	Title: **Identifying the Factors Influence Unit Trust Purchase Decisions Among the Generation-Y in Malaysia** Presenter: Chong Sin Woon *Discussant: Ahmad Husni Mohd Rashid*
MFA2011-68	Title: **Domestic Risk Characteristics and Foreign Direct Investment** Presenter: Ahmad Husni Mohd Rashid *Discussant: Chong Sin Woon*

SATURDAY 11 JUNE 2011

CONCURRENT SESSION III: ROOM 3 [16.00PM – 17.30PM]

FINANCIAL INSTITUTION AND BANKING

Session Chair: Assoc Prof. Dr. Rubi Ahmad

MFA2011-8	Title: **Situational Analysis of Rural and Micro-Finance Development in Malaysia** Presenter: Jasman Tuyon *Discussant: Al-Azmi Bakar*
MFA2011-32	Title: **Performance of Banks in Indonesia: A Comparison Between Community Development Banks, Government Banks and Private Banks** Presenter: Rohani Md Rus *Discussant: Rubi Ahmad*
MFA2011-67	Title: **Determinant of Bank Profits and Net Interest Margins in East Asia and Latin America** Presenter: Rubi Ahmad *Discussant: Rohani Md Rus*
MFA2011-74	Title: **Pembiayaan Modal Teroka: Kesan Ciri-Ciri FMT dan SPP Terhadap Prestasi Usaha Niaga** Presenter: Al-Azmi Bakar *Discussant: Jasman Tuyon*

SATURDAY 11 JUNE 2011

CONCURRENT SESSION III: ROOM4 [16.00PM – 17.30PM]

FINANCIAL MARKETS BEHAVIOUR 2

Session Chair: Prof. Datin Dr. Ruhani Ali

MFA2011-49	Title: **Does Market Integration Facilitate Information Transmission of Firms in Bursa Malaysia?** Presenter: Tai Kui Guan *Discussant: Teng Kee Tuan*
MFA2011-6	Title: **When China sneezes, will Malaysia get the flu? A DCC-MGARCH Approach** Presenter: Teng Kee Tuan *Discussant: Tai Kui Guan*
MFA2011-15	Title: **Random Walk in Malaysian Initial Public Offering** Presenter: Rasidah Mohd Rashid *Discussant: Assoc Prof. Dr. Norhana Salamuddin*
MFA2011-42	Title: **Information Flow between Return and Trading Volume in Malaysian Futures Market** Presenter: Lau Wee Yeap *Discussant: Ruhani Ali*
MFA2011-46	Title: **Stock Market Overreaction and Trading Volume: Evidence from Malaysia** Presenter: Ruhani Ali *Discussant: Lau Wee Yeap*

SUNDAY 12 JUNE 2011

CONCURRENT SESSION IV: ROOM 1 [10.30AM – 12.00 NOON]

FINANCIAL MARKETS BEHAVIOUR 3

Session Chair: Prof. Dr. Wan Mansur Wan Mahmood

MFA2011-39	Title: **What Does Volume Reveal: A Case Study of Stocks and Single Stock Futures?** Presenter: Sukanto Bhattacharya *Discussant:* Yusuf Ma Pin
MFA2011-44	Title: **Urbun And Options: A Comparative Study** Presenter: Yusuf Ma Pin *Discussant:* Sukanto Bhattacharya
MFA2011-45	Title: **Does Momentum Exist in Asian Stock Markets?** Presenter: Shangkari V.Anusakumar *Discussant:* Norhanim Dewa
MFA2011-71	Title: **Firm Characteristics and Seasoned Equity Offerings: The SEM Approach** Presenter: Norhanim Dewa *Discussant:* Shangkari V.Anusakumar

SUNDAY 12 JUNE 2011

CONCURRENT SESSION IV: ROOM 2 [10.30AM – 12.00 NOON]

CORPORATE GOVERNANCE

Session Chair: Prof. Datin Dr. Ruhani Ali

MFA2011-24	Title: **Corporate Governance, Culture and Analysts' Forecast** Presenter: Ruhani Ali *Discussant: Liew Chee Yoong*
MFA2011-27	Title: **Expropriation-Related Variables And Firm Performance: Evidence From Malaysian Family Firms** Presenter: Liew Chee Yoong *Discussant: Anwar Bin Allah Pitchay*
MFA2011-28	Title: **Family and Government Controlled Firms and their recognition of Goodwill Impairment** Presenter: Noraini binti Omar *Discussant: Nik Intan Norhan Abdul Hamid*
MFA2011-78	Title: **The Implications Of Bidders' Characteristics On Merger And Acquisitions Long-Term Performances** Presenter: Nik Intan Norhan Abdul Hamid *Discussant: Noraini binti Omar*

SUNDAY 12 JUNE 2011

CONCURRENT SESSION IV: ROOM 3 [10.30AM – 12.00 NOON]

DEBT ISSUE AND FINANCIAL MARKET BEHAVIOR

Session Chair: Prof. Dr. Izani Ibrahim

MFA2011-25	Title: **The Test of Fama and French Factor Model and its Variants in Bursa Malaysia** Presenter: Mahdi Mohammadzadeh Monfared *Discussant:* Lee Meng Horng
MFA2011-41	Title: **Firm Characteristics: A Study of Capital Structure in Iran** Presenter: Chan Kok Thim *Discussant:* Md. Mohan Uddin
MFA2011-75	Title: **Firm Characteristics' Influence On The Wealth Effect Of Debt Issue Announcements In Malaysia** Presenter: Md. Mohan Uddin *Discussant:* Chan Kok Thim
MFA2011-47	Title: **Country versus Industry Diversification in ASEAN-5** Presenter: Lee Meng Horng *Discussant:* Mahdi Mohammadzadeh Monfared

Market-based or bank-based financial system drives the economic growth?
Evidence from Indonesia

Darmawati Muchtar

Abstract

This paper examines the effect of market-based and bank-based financial systems on economic growth. Particularly, it tests whether market or bank-based financial system that has bigger contribution to the growth. Using Indonesian data over 1981-1996 and 2000-2008 periods, the result suggests that bank-based financial system drives much of the economic growth in this country. However, when taken simultaneously, the results suggest that banking and stock market sector do not well explain the economic growth. Another financial system, which is traditional financial system, that is mostly used by the SME may be well explains the economic growth in Indonesia.

Keyword: Output growth, stock capitalization, stock turnover, bank loan.

Introduction

The development of money and capital market has contribute to the economic growth of a country. Bagehot [1] and Schumpeter [2] are among initial studies in this area which argue that there is a relationship between financial system and economic growth. As the advancement of economic activities, financial system becomes more complex and includes various types of institutions, such as banks, insurance companies, mutual funds, as well as securities markets. Banks and securities market are among such institutions that have significant role in the modern financial system. This is because they can directly affect the allocation of excess fund from the lenders to the borrowers' productive economic activities, and eventually it will enhance the economic growth.

Most studies on financial systems development and economic growth nexus indicate diminishing role of stock markets. Levine and Zervos [3] find that both stock market liquidity and banking development are positively and simultaneously correlated to future economic growth, capital accumulation, and productivity growth. They further suggest that banks provide greater financial services than that provided by stock market. Schmidt [4] also find similar conclusion by conducting a survey of external funds sources for non-financial business in United States. His survey reveals that stocks are not the most important source of external financing for businesses. Huge attention by the media on stock market makes many people have the impression that stock market is the most important source of financing for American corporations. He shows the stock market accounted for only small fraction (9.2%) of total external financing. Moreover, he pointed out that banks, in the form of bank loans, are the most important sources of external financing (55.3%) used by the businesses. Empirical findings which imply that banks have significant role to the economic growth seem to support the idea Stiglitz [5], Bhide [6[that banks are more efficient than equity markets to improve resource allocation and corporate governance.

However, similar studies in the area of financial systems development and economic growth relationship are minimal in Indonesia, especially after the Asian financial crisisin 1997-1998. The Asian financial crisis had negative impact to both stock market and banks in Indonesia. During the end of 1997-1998, rapid currency depreciation had made public debt to reach US$60 billion, causing real GDP growth and inflation were recorded at -13.7% and 77%, respectively. Starting in 1999, some measures have been taken by the authority to stabilize the economic condition, and both stockmarket and banking sector were also on their way for recovery. Thus, this paper is toanalyze the relationship between Indonesian financial system development and economic growth, particularly to test whether market-based or bank-based financial system that has greater contribution to the economic growth after the Asian financial crisis. The rest of the paper is organized as follows. Section 2 provides a literature review on the correlation between financial system development, especially stock market and banks, and economic growth. Section 3 describes data and methodology that are used in this study. Section 4 evaluate and discuss the empirical results. Finally, Section 5 presents the conclusion of this study.

Literature Review

Levine and Zervos [3] focus on the relationship between economic growth and financial system development using both banks and stock markets indicators. Their study cover a sample of 42 countries over the period 1976-1993 using crosssectional regressions. They find that the initial level of stock markets development liquidity and the initial level of banking development are positively and significantly associated with long term economic growth, productivity growth and capital accumulation. The results find that stock markets size, as measured by market capitalization to GDP ratio, is not correlated with growth indicators. Rousseau and Wachtel [7] contribute to the growing literature by using panel data method developed by [8], shows that both stock markets and banks development contribute to spur economic growth. Arestis, Demetriades and Luintel [9] study the relationship between financial system development and economic growth. After controlling for the effects of the banking system and stock market volatility, the results support the view that both banks and stock markets may be able to promote economic growth. Levin [10] finds that cross-country examination of which view of financial structure is more consistent with the data. The finding indicates that although overall financial development is robustly linked with economic growth, there is no support for either the bank-based or the market-based view, which is the stock market liquidity and banking development both positively predict output growth, capital accumulation, and productivity improvements when entered all together in regressions, even after controlling for economic and political factors. This is consistent with the view that financial market provide important services to economicgrowth and that the stock market provide different services from the banks. The paper also finds that stock market size, volatility, and international integration are notrobustly linked with output growth. Beck and Levine [11] further investigate the impact of stock markets and banks on economic growth using a panel data set for the period 1976-1998. Using generalized method of moments (GMM) technique developed for dynamic panel, they find that stock markets and banks positively influence economic growth. This finding is robust after controlling for potential biases due to simultaneity, omitted variables or unobserved country-specific effects.

Atje and Jovanovic [12] assess the impact of stock markets and banks development on subsequent economic growth for 40 countries over the period 1980-1988. They find a large effect on stock markets development as measured by the value traded toGDP ratio on subsequent development, but they fail to find a similar effect for bank lending. Hondroyiannis, Lolos and Papapetrou [13] assess empirically the relationship between banking system and stock market development with economic performance for the case of Greece over the period 1986-1999. Greece is a mediumsize EU country where the financial liberalization process started back in the early eighties. The empirical results suggest that there exists a bi-directional causality between finance and growth in the long run. They show that both bank and stock market can promote economic growth in the long run, although their effect is small. Moreover, they also find that the contribution of stock market financing to economic growth appears to be substantially smaller when compared to bank financing. Deiddaand Fattouh [14] find that both bank and stock market development have a positive impact on output growth, but the impact of bank development is lower the higher is the level of stock market development, which is contradict with Levine and Zervos [3]finding.

Nevertheless, other studies have also revealed that financial system development is irrelevant to economic growth. Harris [15] finds that the correlation between financial system development and output growth is weak. His study covers a sample of 49 countries over the period 1980-1991. Naceur and Ghazouani [16] study using a dynamic panel model with GMM estimators and an unbalanced panel data from 11 MENA region countries. Their finding reinforce the idea that no significant relationship between banks and stock market development to economic growth. The association between bank development and economic growth is even negative aftercontrolling for stock market development. They argue that this is probably due to the underdeveloped financial systems in the MENA region that hamper economic growth. Rousseau and Xiao [17] suggest that GDP and stock market development is cointegrated when the control variables are included in the analysis. Specifically, there is a long-run relationship between these variables when taken all together.

Moreover, there is a unidirectional causality running from stock market development to economic growth. On the other hand, they find that stock market development, asmeasured by market size and trading volume, do not contribute significantly to outputgrowth. Moreover, Ergungor [18] indicates that financial system structure is irrelevant to economic growth. He finds that there is a nonlinear (contingent) relationship between financial system structure and economic growth. Countries that have an inflexible judicial system grow faster when they have a more bank-oriented financial system.

Summarizing, some studies find that competitive stock markets reduce the counterproductive monopoly power of banks and boost innovation projects. Other studies argue that both banks and stock markets contribute to economic growth by improving information dissemination and reducing transaction costs. However, the literature is lack of study in analyzing whether market-based or bank-based system that has more contribution to the output growth in a country, especially in emerging markets like Indonesia. Thus, this study is aimed to fill that gap.

Data and Methodology

Two indicators of stock market development are generally used in previous literature, namely market capitalization and liquidity [3]. Market capitalization measures the stock market size and it is equal to the value of domestic shares listed in domestic exchanges divided by GDP. Levine and Zervos [3] find that an initial measure of stock market liquidity is a strong predictor of economic growth. In their study, they use an assortment of stock market development measures, including the overall sizeof the market (market capitalization relative to GDP), stock market activity (the value of trades relative to GDP), and market liquidity (the value of trades relative to marketcapitalization). However, unlike [3], Beck and Levine [11] define market liquidity as the total number of share traded over a period divided by the average number of share outstanding of the period. Market liquidity plays important role in financial markets and affect the pricing process in the market and the market anomalies. Empirical studies suggest that the higher the shares turnover, the more liquid the shares of the companies and the lower the transaction cost. In this study shares turnover is used to measures market liquidity, which is equal to the value of domesticshares traded in domestic exchanges divided by the value of listed domestic shares.

Cross-country researches have analyzed on how well bank identify profitable activities, exert corporate governance, mobilize resources, manage risks and facilitate transactions. Even so, economists have not been able to accurately measure these financial services for a broad cross-section of countries. Consequently, researchers traditionally use measures of banking sector overall sizeto proxy the financial depth [19, 20]. This financial depth indicator does not measurethe liabilities of banks, central bank or other financial intermediaries, nor does this financial depth identify where the financial system allocates capital. One indicator of bank development that is widely used to predicted economic growth is bank credit. According to [3] bank credit is defined as the value of loans made by commercial banks and other deposit taking banks to private saving sector divided by GDP. Bankcredit improve the open traditional financial depth measures of banking developmentby isolating credit issued by the banks, in contrast to credit issued by the central bankor other intermediaries, and identifying credit to the private sector, as oppose to credit issued to the public sector. King and Levine [21, 22] show that bank development, as measured by total liquid liabilities of financial intermediaries (M3) divided by GDP helps explain economic growth in a sample of more than 80countries.

Moreover, several indicators are available as indicators to economic growth. However, output growth that is measured by real GDP per capita growth is the widelyused one [23]. Below is the specification of the regression models that are used in this study.

Full model :

$$Y_t = \alpha_1 + \sum_{i=1}^{n} \beta_i Xi + \sum_{i=1}^{n} \gamma_i \, Zi + \varepsilon_t$$

Stock model:

$$Y_t = \alpha_1 + \sum_{j=1}^{n} \beta_j X_j + \varepsilon_1$$

Bank model:

$$Y_t = \alpha_2 + \sum_{j=1}^{n} \beta_k Z_k + \varepsilon_2$$

where Y is the economic growth measured by the real GDP per capita, X_i is the explanatory variables that represent the stock market development (stock capitalization and stock liquidity), Z_j is the explanatory variables that represent the banks development (bank loan and liquid liabilities), and ε_n is the error terms.

Data used in this study is yearly data from 1981 to 2008. Data is taken from IFS-IMF (International Financial Statistics-International Monetary Fund) database. Table 1 present descriptive statistics of economic growth, stock market development, and bank development over two periods of time (1981-1996 and 2000-2008). The two periods are selected to avoid bias due to Asian financial crisis in 1997-1999. During 1981-1996 and 2000-2008, the average output growth is 8.3% and 12.3%, respectively. Table 1 also provides the probability of test of normality. Based on the Jarque-Bera test, all variables in the models are considered normally distributed.

TABLE 1. Descriptive statistics for 1981-1996 and 2000-2008

	Growth	Stock Cap	Turnover	Bank Loan	Liabilities
1981-1996					
Mean	0.083	0.0744	0.1948	0.2958	0.297
Median	0.0782	0.0069	0.1896	0.2598	0.2716
Maximum	0.1178	0.3475	0.494	0.512	0.4767
Minimum	0.0635	0.0007	0.0158	0.0904	0.1524
Std. deviation	0.0175	0.1136	0.1537	0.1525	0.1083
Observation	16	16	16	16	16
2000-2008					
Mean	0.1233	0.2822	0.4732	0.2046	0.4306
Median	0.1212	0.2717	0.4348	0.2156	0.4303
Maximum	0.1451	0.5534	0.8247	0.2283	0.4958
Minimum	0.1072	0.136	0.2703	0.1723	0.3804
Std. deviation	0.0131	0.1313	0.1589	0.0242	0.0457
Observation	9	9	9	9	9

Note: Output growth is the real GDP growth divided by population, stock capitalization is the value of domestic shares divided by GDP, stock turnover is the value of domestic shares trade divided by stock market capitalization, bank loan is the bank loan to private sector divided by GDP, liquid liabilities is the total liquid liabilities in the banking sector divided by GDP.

Moreover, Table 2 shows the correlation between variables in the models. Note thatduring 1981-1996 stock capitalization and stock turnover are positive and significantly correlated to output growth at 1% level of significance. Similarly on bank based, bank loan and liquid liabilities have positive and significantly correlated to output growth. For the period 2000 to 2008, the results show that stock capitalization has positive and significantly related to output growth but stock turnover positive insignificant. Moreover, bank loan seems to have positive relation to output growth, and liquidity liabilities has negative correlated to output growth.

TABLE 2. Analysis correlation

Variable	Output growth	Stock Cap	Turnover	Bank Loan	Liabilities
1981-1966					
Stock capitalization	0.933***	1.0000			
Stock turnover	(0.617)***	(0.459)*	1.0000		
Bank loan	(0.962)***	(0.814)***	(0.735)***	1.0000	
Liquid liabilities	(0.979)***	(0.848)***	(0.693)***	(0.995)***	1.0000
2000-2008					
Stock capitalization	(0.863)***	1.0000			
Stock turnover	0.5570	(0.810)***	1.0000		
Bank loan	(0.905)***	(0.715)**	0.3400	1.0000	
Liquid liabilities	(-0.952)***	(-0.722)**	-0.3580	(-0.974)***	1.0000

Note: Output growth is the real GDP growth divided by population, stock capitalization is the value of domestic shares divided by GDP, stock turnover is the value of domestic shares trade divided by stock market capitalization, bank loan is the bank loan to private sector divided by GDP, liquid liabilities is the total liquid liabilities in the banking sector divided by GDP.

Findings

Table 3 provides the regression result of the stock and bank models for 1981-1996. All variables in each model are significant. In the stock model, stock market capitalization and stock market turnover (liquidity) are positively related to output growth. Stock market capitalization and stock market turnover are significant at 1% and 5% level, respectively. The goodness of fit between the explanatory variables and the dependent variable is explained by the adjusted R^2. In the stock model, the adjusted R^2 is 0.9014 which means that the variation of output growth is strongly related to the variation of stock market capitalization and stock market turnover simultaneously. Unlike the stock model, the bank model also reveals interesting result. In this model, banks loan is negatively related to output growth. On the other hand, total liquid liabilities of banks are positively related to output growth. Banks loan and total liquid liabilities of banks are significant at 5% and 1% level, respectively. The negative relationship between banks loan and output growth can probably be explained as follows. During 1981-1996, the country witnessed a rapid expansion of banks loan due to banking sector liberalization. The loan expansion is actually contributed to the GDP growth but at the same time the country also experience overheated economy due to rapid growth of the economy. Nevertheless,this positive economic growth also causes high growth in the population. Thecombine effect of overheated economy and high population growth diminish the output growth figure in the real term. This is why it looks like that banks loan per GDP is negatively related to real GDP growth per capita, when in fact in absolute numberbanks loan and the current price GDP is moving positively. The variation of output growth is also strongly related to the variation of bank loan and bank's liquid liabilitiesas indicated by the adjusted R^2 of 0.9681. Comparing the adjusted R^2, we find indication that bank-based model is better in explaining the output growth than market-based model. This suggests that during 1981-1996 banking sector provides bigger contribution to the Indonesian economic growth than stock market.

TABLE 3. Regression result in stock model and bank model for 1981-1996

Stock Model	**Coefficient**	**t-statistic**
Constant	0.0682	(30.0528)***
Stock capitalization	0.1270	(9.0168)***
Stock turnover	0.0272	(2.6187)**
R^2	0.9146	
Adjusted R^2	0.9014	
F-statistic	69.6177	
Prob (F-statistic)	0.0000	
Bank Model		
Constant	0.0205	(3.1102)***
Bank loan	-0.1282	(-2.4981)**
Liquid liabilities	0.3380	(0.46792)***
Coefficient of correlation	0.9723	
Coefficient of determination	0.9681	
F-statistic	228.6804	
Prob (F-statistic)	0.0000	

Note: *** significant at 1% level and ** significant at 5% level.

Moreover, Table 4 shows the regression result of the full model for 1981-1996. Taking the four variables into the regression simultaneously, only two variables are significant. Stock market capitalization and total liquid liabilities of banks are significant at 1% and 5% level, respectively. On the other hand, stock market turnover and banks loan are not significant. During 1981-1996, stock market in Indonesia is still in its infancy. Stock markets in their early development are typicallymarked by low stock turnover because the number of investors exists in the market isstill small. In this phase, the stock market is mostly driven by large investors in smallnumber. This probably explains why the stock market turnover during that time is insignificant. Further, the explanation to banks loan insignificancy in the simultaneousmodel is probably similar to the above mentioned one.

TABLE 4. Regression result in full model for 1981-1996

	Coefficient	**t-statistic**
Constant	0.0461	(11.2389)***
Stock capitalization	0.0539	(8.5669)***
Stock turnover	-0.0039	-1.0940
Bank loan	0.0028	0.1004
Liquid liabilities	0.1103	(2.6559)**
Coefficient of correlation	0.9964	
Coefficient of determination	0.9951	
F-statistic	770.2699	
Prob (F-statistic)	0.0000	

Note: ***, **, * significant at 1%. 5% and 10% level,

Table 5 provides the regression result of the stock and bank models for 2000-2008. In the stock model, only stock market capitalization has positive on outputgrowth. The stock market capitalization is significant at 1% level. The variation of output growth is quite strongly related to the variation of stock market capitalization and stock market turnover as indicated by the adjusted R^2 of 0.7391 (down from the1981-1996 stock model). The bank model also suggests that only total liquid liabilitiesof banks that is significant. The total liquid liabilities of banks are significant at 5% level. The variation of output growth is also quite strongly related to the variation of bank loan and total liquid liabilities of banks as indicated by the adjusted R^2 of 0.8867 (also down from the 1981-1996 bank model).

Comparing the adjusted R^2, wereconfirm the indication that bank-based model is better in explaining the output growth than market-based model.

TABLE 5. Regression result in stock model and bank model for 2000-2008

Stock Model	**Coefficient**	**t-statistic**
Constant	0.1057	(14.1169)***
Stock capitalization	0.1200	(3.8931)***
Stock turnover	-0.0342	-1.3447
Coefficient of correlation	0.8043	
Coefficient of determination	0.7391	
F-statistic	12.3349	
Prob (F-statistic)	0.0074	
Bank Model		
Constant	0.3378	(2.7838)**
Bank loan	-0.2265	-0.8032
Liquid liabilities	-0.3903	(-2.6090)**
Coefficient of correlation	0.9150	
Coefficient of determination	0.8867	
F-statistic	32.3112	
Prob (F-statistic)	0.0006	

Note: ***, **, * memberikan tingkat signifikan pada 1%, 5% dan 10%

This suggests too that during 2000-2008 banking sector provides bigger contribution to the Indonesian economic growth than stock market. The development of Indonesian financial system during 2000-2008 probably contributes to the insignificancy of some variables in the models. In the aftermath of Asian financial crisis, Indonesian authority has imposed some measures to strengthen the banking sector. These measures somehow affect the behavior of bankers in channeling the loans. Bankers are very cautious in distributing the loans. As the result, much of the fund in the banks cannot be distributed as loans, instead they were invested in government securities. Beside, after the crisis, many of the people have lost their purchasing power considerably due to inflation. Their saving power has gone lesser because most of their income is consumed. This probably explained why the total liquid liabilities of banks have negative relationship to the output growth during 2000-2008. The development of Indonesian stock market after the financial crisis even signifies the present of large, but in small number, investors. These large investors are mainly international or foreign investors. As previously explained, this suggests why stock market turnover is not significantly related to the output growth.

Moreover, Table 6 shows the regression result of the full model for 2000-2008. Taking the four variables into the regression simultaneously, only one variable is significant. Total liquid liabilities of banks are significant at 5% level. On the other hand, stock market capitalization, stock market turnover and banks loan are not significant. This suggests that probably there is another system apart from the two financial systems that explains the Indonesian economic growth. Traditional financial system being used by most of small and medium size enterprises (SME) in Indonesia may be well explained the output growth. This is because the country has witnessed that its economy were cushioned by the SMEs activities from further deepening during the Asian financial crisis.

TABLE 6. Regression result in full model for 2000-2008

Variable	Coefficient	t-statistic
Constant	0.3127	(4.8257)***
Stock capitalization	0.0369	2.0623
Stock turnover	0.0008	0.0785
Bank loan	-0.2712	-1.7757
Liquid liabilities	-0.3359	(-4.1796)**
Coefficient of correlation	0.9841	
Coefficient of determination	0.9682	
F-statistic	61.9224	
Prob (F-statistic)	0.0007	

Note: ***, **, * memberikan tingkat signifikan pada 1%, 5% dan 10%

Conclusion

This paper study the empirical correlations of economic growth with stock market and bank development variables using yearly data over 1981-1996 and 2000-2008periods. The results indicate that bank-based model is better in explaining the outputgrowth than market-based model for both time periods. This suggests that banking sector provides bigger contribution to the Indonesian economic growth than stock market. However, when stock market and bank development variables are simultaneously taken together in the model, three out of four variables are not significant in explaining the output growth. This suggests that probably there is another system apart from the two financial systems that explains the Indonesian economic growth. Traditional financial system being used by most of small and medium size enterprises (SME) in Indonesia may be well explained the output growth. This is because the country has witnessed that its economy were cushionedby the SMEs activities from further deepening during the Asian financial crisis. Further research is suggested to study the nexus between traditional financial systemthat is widely practiced by the Indonesian SMEs and the economic growth. Another interesting research would be to implement the same study on other countries, especially in Asian region that was affected by the Asian financial crisis too.

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