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Does the Role of Securities Regulators Matter for the Development of Securities Market in Cambodia? An Exploratory Study[1]

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Abstract

This paper is about the role of regulators in the efficient supervision and regulations in the development and the growth of securities market in Cambodia. A mixed methodological approach to examining the role that regulators have played in the Cambodia's securities market is adopted. To ensure the consistency and reliability of the collected data set, the diagnostic check is carried out. Cronbach's alpha values for all variables are very high, far exceeding the wildly used 0.7 cut-off. These constructs and attributes are therefore deemed to have high reliability. To empirically investigate the effects of the role of regulators on the growth of the securities market in Cambodia, multiple regression analysis is performed to show vigorously how each factor, especially the role of regulators which is the variable of interest in this paper, affects the securities market growth in Cambodia. Important diagnostic tests were carried out to avoid reporting spurious results. Based on the estimation results, three of the eight factors, namely prospects for the securities market, role of regulators, and regulations related to issuing securities, are found to be statistically significant. The findings in the paper provide some public policy implications that are of relevance for developing and emerging economies.

1. Introduction

Securities markets are instrumental in strengthening financial stability and promoting economic growth and development (Carvajal and Elliott, 2007). Securities markets have become the important sources of financing for the real sector economic activities, which constitutes an alternative financing for firms. Carvajal and Elliott (2007) indicate that markets are a mechanism through which risk is transferred and/or diversified, which allows financial institutions to manage risk more efficiently, and that they may also work as a buffer for a disruption of banking system, thus contributing to financial market stability which is identified as a driver for economic growth. Empirical research shows that securities markets have positively impacted upon economic development through the mobilization of savings which are channeled to the most productive economic activities (Demirgüç-Kunt, and Levine, 2001).

Securities markets are increasingly important for developing and emerging market economies, although the development of the markets in some of these countries is at infancy stage. The markets become a good source of financing for firms, despite the fact that large players are in a better position to participate in these markets successfully. With securities markets, developing and transitional economies become less reliant on the sources of foreign capital since the needed capital can be raised through their domestic capital markets. Well-functioning securities

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markets provide a number of benefits, namely enhanced savings mobilization, better resource allocation, efficient financial markets, improvement of capital structure, improved accounting and auditing standards, and efficient tools for macroeconomic policy.

Since the late 1990s and early 2000s, the Royal Government of Cambodia started to prioritize the financial sector through the development of the securities market in Cambodia and considered financial sector development as one of the country's engines for long-run economic growth. Since its inception, the securities market has gradually developed, despite the fact its growth has been slow. However, no research has been conducted to examine and understand the factors that influence securities market growth in Cambodia. This paper intends to provide a deeper understanding of the securities market, its characteristics, as well as determinants of securities market growth. Specifically, it addresses the following questions: namely (1) How important the role of regulators in the efficient supervision and regulations of Cambodia's securities market and growth of the securities market? (2) What other factors, in addition to the role of regulators, influence securities market growth in Cambodia? and (3) What factor contributes most significantly to the growth of securities market?

The purpose of study is to provide deeper understanding of the developments of the securities market in Cambodia, on the one hand, and to investigate the factors that may influence the growth of the securities market, on the other hand. Specifically, objective of the study is to provide deeper understanding of securities market development and the characteristics of this important market in Cambodia; to identify the factors that affect the securities market growth; and to provide policy implications on how to further develop the market in an efficient manner. The remainder of the paper is organized as follows. Section 2 provides a brief overview of Cambodia's securities market, followed by conceptual framework in Section 3.   Section 4 discusses research methodology. Section 6 presents and discusses results from survey and estimation. Section 6 concludes and provides some policy implications.

2. Cambodia Securities Market Development

The Royal Government of Cambodia with technical assistance from development partners has introduced several roadmaps and strategies to development financial sector. These include (i) Financial Sector Blueprint 2001-2010[3], (ii) Financial Sector Development Strategy 2006-2015[4],
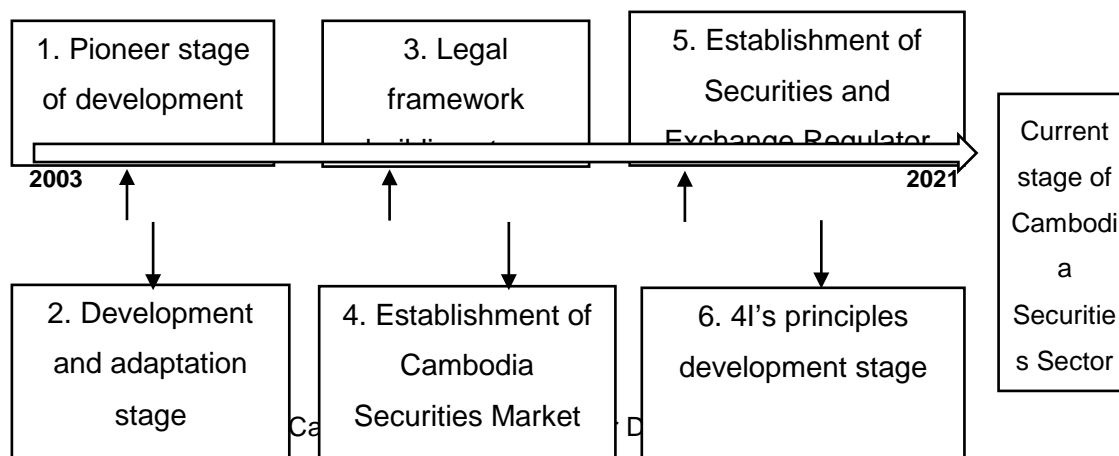
Rural Development Bank. Email: k.thach@ardb.com.kh, Tel: +855 12 234 566
[3] Financial Sector Blueprint 2001-2010, promulgated on October 2nd, 2001, by Senior Minister of Ministry of Economy and Finance and Governor of National Bank of Cambodia, aiming at setting up strategy to develop a sound market-based financial system to support resource mobilization and broad-based sustainable economic growth.
[4] Financial Sector Development Strategy 2006-2015, the update and revision of Financial Sector Development Blueprint 2001-2010, was promulgated on March 26th, 2007 by Senior Minister of Ministry of Economy and Finance and Governor of National Bank of Cambodia.

(iii) Financial Sector Development Strategy 2011-2020[5], (iv) Financial Sector Development Strategy 2016-2025[6].

1. Pioneer stage of development	3. Legal framework	5. Establishment of Securities and Exchange Regulator	Current stage of Cambodia Securities Sector
2003		**2021**	
2. Development and adaptation stage	4. Establishment of Cambodia Securities Market	6. 4I's principles development stage	

In the pioneer stage of Cambodia's securities sector development, the Royal Cambodia Government introduced the Financial Sector Blueprint 2001-2010 as a roadmap for financial sector development to maximize the utilization of excessive capital circulating in the economy. This Blueprint was developed in three phases: (i) in Phase 1, the government needed to accomplish the necessary preparatory work to create an enabling environment for capital market; (ii) Phase 2 established the foundation for capital markets by establishing a securities exchange and the necessary infrastructure related to securities trading, as well as by adopting detailed regulation and procedures; (iii) in Phase 3, systematic efforts were needed to develop the capital market by creating an enabling environment for capital market through establishing a key legal/regulatory framework, creating an enabling environment for the public bond markets, and building capacity for future capital market participants.

For development and adaptation of the financial sector blueprint stage, the Royal Government of Cambodia has started a new regime of developing the securities market starting from the regulatory framework to the development of the 4I's principles[7] to fulfill the basic securities sector ecosystem and the sector infrastructure. The Royal Government of Cambodia firstly moves from developing the legal framework, then establishment of the securities regulator, The Securities and Exchange Commission of Cambodia, followed by the securities market, Cambodia the Securities Exchange.

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[5] Financial Sector Development Strategy 2011-2020, promulgated on November 29th, 2011 by Senior Minister of Ministry of Economy and Finance and Governor of National Bank of Cambodia, was an update and revision of Financial Sector Development 2006-2015.

[6] Financial Sector Development Strategy 2016-2025 promulgated on October 26th, 2016 by Senior Minister of Ministry of Economy and Finance, aiming at achieving a sound, efficient, diversified, and inclusive market-based financial system that could broadly fulfill domestic demand for financial services and support sustainable economic growth.

[7] The 4 I's Principles include infrastructure, issuers, intermediaries, and investors.

In the legal framework building stage, major supporting legal frameworks were developed. In 2007, the Royal Government of Cambodia promulgated two important laws: Law on Government Securities and Law on the Issuance and Trading of Non-Government Securities. These laws open the page for securities development because it stimulates some of the market participants and market infrastructure. Subsequently, a sub-decree on the Conduct and Organization of the Securities and Exchange Commission of Cambodia had been promulgated. This sub-decree introduced the regulator's roles in managing and supervising the whole sector. In addition, in 2009 the Royal Government of Cambodia promulgated the sub-decree on Implementation of Law on Issuance and Trading of non-government Securities. At the same time, Securities and Exchange Commission of Cambodia also provided the approval to securities operators, including the Operators of Securities Market, the Operators of a Clearance and Settlement Facility, and the Operators of Securities Depository. Having such rules, securities trading was ready for listed companies. From 2010 to present time, there are plenty of relevant Prakas promulgated to equip the market infrastructure and legal infrastructure.[8] Those Prakas widen the scope to other capital market instruments, such as bond products, derivative products, and collective investment schemes products.

The next was the establishment of the Securities and Exchange Commission of Cambodia (SECC) which regulates the securities industry in Cambodia, which is viewed as a driver for socio-economic development through capital mobilization to meet the demand of financing for investors. The SECC shall assure a fair, effective and sound market. A fair market refers to a market where investors are fully protected from market abuse and fraud, such as insider-trading and market manipulation. Pertaining to an efficient market, it refers to a fairly competitive market, along with the establishment of market infrastructure to disclose appropriate and asymmetric information to the public, where a sound market refers to the avoidance from systematic risks in the market. As a result of the implementation of its functioning as securities regulator, the SECC issues a huge chuck of regulations, procedures and guidelines to form a necessary legal framework for licensing, accrediting and approval of the players in the operations of the securities market in Cambodia. Securities firms, including underwriters, dealers, brokers and investment advisors must be licensed by the SECC. Securities registrars, cash settlement agents, transfer agents and paying agents, and asset valuation companies are to be accredited as well as law firms; auditors need to be accredited by the SECC as qualified auditors for the securities market. Securities market operators, clearance and settlement facilities operators, and securities depository operators need to meet the standard of operation and approved by the SECC.

The SECC was transformed to the Securities and Exchange Regulator of Cambodia pursuant to the Law on Organization and Functioning of Non-Banking Financial Services Authority. The

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[8] Prakas could have an equivalent meaning to a proclamation, which is a ministerial or inter-ministerial decision and must conform to the Constitution and to the Law or Sub-decree to which it refers.

Securities Regulator shall carry out the duties of the SECC as provided for in the Law on the Issuance and Trading of Non-Government Securities promulgated in 2007 and other relevant laws and regulations applicable to the securities sector. Based on the International Organization Securities Commission's (IOSCO) principle, the core objectives of securities regulation are (i) protection of investors; (ii) ensuring that markets are fair, and efficient and transparent; and (iii) reduction of systemic risk. Securities regulators seek to achieve these objectives through setting standards, supervising markets, market participants and their activities, effective enforcement of those standards and close cooperation with other regulators.

The inception of Cambodia Securities Exchange (CSX) was through the Memorandum of Understanding (MoU) signed between the Royal Government of Cambodia and the South Korea Government during ASEAN+3 Finance Ministers' Meeting in Hyderabad City, India. Thanks to the success of South Korea's development of the securities exchange market, the Royal Government of Cambodia has selected a strategic partner, the Korea Exchange, one of the leading stock exchanges in the world, to help establish the securities market for Cambodia. CSX was incorporated on 23 February 2010. In accordance with the Joint-Venture Agreement, CSX has been capitalized by the Ministry of Economy and Finance (55%) and the Korean Exchange – KRX (45%). CSX received a license from the SECC as a market operator, clearing and settlement facility and depository operator in early 2011. The Royal Government of Cambodia adopts the 4I's principles which include (i) infrastructure of the securities market, (ii) issuers of securities, (iii) intermediaries of securities, and (iv) investors of securities to ensure the success of the development of the country's securities markets.

Currently, there are seven equity listed companies, of which three companies are state-owned; one is in the banking industry; two are manufacturing industries; and one is in the energy industry. By the second quarter of 2021, the market capitalization in Cambodia reached to around 8.41 trillion riels (approximately US$ 2.06 billion).   Several financial instruments have been launched in the securities market. Those instruments are equity instruments, debt securities instruments, derivative instruments, and collective investment schemes.

3. Conceptual Framework

Securities markets hold the key to the economy and the financial system of a nation. Within the securities market, savings are transformed into financing through a process on the basis of which those who need financing can approach potential investors. Securities markets play a critical role in terms of sources of funds for both non-financial and financial organizations. It also facilitates diverse participants from the market to effectively manage and take care of the risks associated with operations. Lastly, the securities market largely depends on the organizations of financial infrastructures which allow and facilitate financial transactions (Bayar, 2016). Different nations set up different regulations to supervise the securities market.

Securities regulation comprises regulation of public issuers of securities, secondary markets, asset management products, and market intermediaries (Carvajal and Elliott, 2007). Regulation is mainly formulated to address asymmetric information between securities issuers and investors, clients and financial intermediaries and between counterparties to transactions, as well as to ensure a smooth functioning of trading and clearing and settlement mechanisms that will prevent market disruption and build investor confidence. Regulation of public issuers is based on the principle of full, timely, and accurate disclosure of relevant information to investors whose role is to ensure that investors are given full, timely and accurate information to enable them to make informed decisions. Mechanisms are put in place to ensure the reliability of the information provided by issuers. Regulation of market intermediaries seeks to ensure that intermediaries enter and exit the market without disruption, conduct their business with their clients with due care and trade fairly in the markets. The main tools for the regulation of intermediaries are licensing requirements and market and business conduct obligations.

Based on Carvajal and Elliott (2007), the regulation of asset management aims to ensure professional management and adequate disclosure of investments to the investors. Most regulatory systems focus on collective investment schemes in the form of mutual funds or unit trust funds. Since collective investment schemes are investment instruments, they are bound by the same principle of full, timely, and accurate disclosure applicable to issuers. In addition, the operator and investment manager of the collective investment scheme are financial intermediaries and are regulated in a manner similar to other intermediaries. The regulation of secondary markets seeks to ensure the smooth functioning of the markets. Regulation of market conduct and trading seeks to ensure fair access and adequate price formation, thus preserving the market's efficiency and reputation. Regulation also aims to limit the disruptive effects that the failure of an intermediary could have on the market.

The current paper intends to establish a model to explain the growth of the securities market, which can be affected by a number of factors, including problems of the securities market; prospects for the securities market; the role of regulators, regulations related to issuing securities; responsibility of regulators; enforcement of securities regulations; and cooperation in regulations. These are the factors which are considered to be the most relevant constructs adapted for the study of the role of regulators in the efficient supervisions of regulations of securities in Cambodia. Based on the theoretical and empirical literature, the following conceptual model for Cambodia is proposed as follows:

The diagram shows seven boxes on the left connected by arrows to a single box on the right labeled "Growth of Securities Market":
- Problem of Securities Markets
- Securities Market Prospects
- Role of Regulators
- Regulations related to Issuing Securities
- Responsibility of Regulators
- Enforcement of Securities Regulation
- Cooperation in Regulation
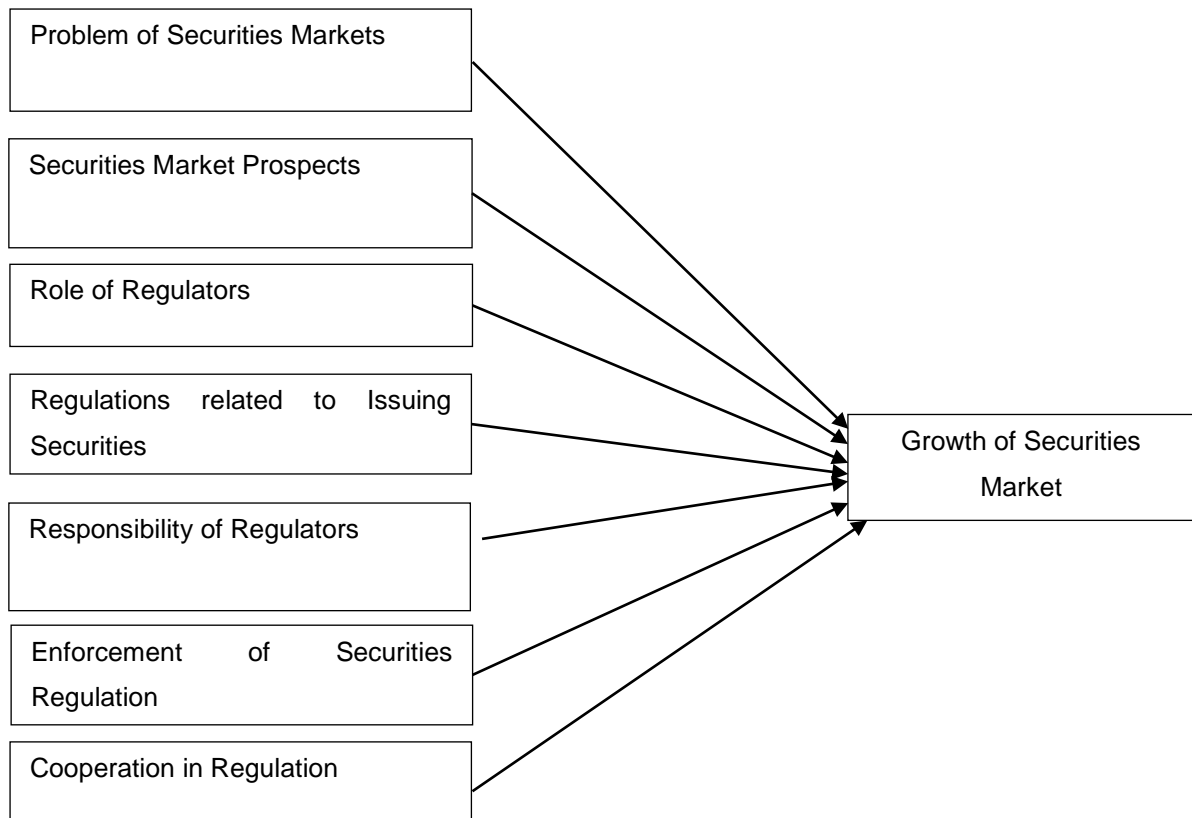
4. Research Methodology

4.1. Data Collection

This study employs the primary data collection method to collect the required data. The sampling method for data collection is non-probability method/purposive sampling. The study's target respondents include the management of Securities and Exchange Commission of Cambodia, Cambodia Securities Exchange, securities firms, auditors, lawyers, investors, accountants, and other key players in securities markets.

The questionnaire contains information related to demographic characteristics of the respondents, as well as factors that may affect growth of the securities market, including prospect for securities market; role of regulators, regulations related to issuing securities; responsibility of regulators; enforcement of securities regulations; and cooperation in regulations. Respondents were asked to respond to each item on a widely used five-point Likert scale, ranging from 1 (strong disagreement) to 5 (strong agreement). Based on the International Organization of Securities Commission (1998), the dependent and explanatory variables that are used in the current study are defined as follows.

The dependent variable *growth of securities market* refers to the combined growth of market capitalization and growth of the amount of initial public offerings (IPO).

The constructs that serve as explanatory variables are as follows:

Problems of Securities Market, which includes insufficient legal rules and regulations; information not easily available to investors; the securities market greatly influenced by small

number of large investors; and no special provision to attract institutional investors in the securities market.

Prospects for Securities Market refers to the securities market providing satisfactory return; increase in growth of the amount of IPO; general provisions becoming aware about the securities market; and liquidity and marketability as the main factor to develop the securities market.

Role of Regulators includes operational independence and accountability of the regulator in the exercise of its powers and functions; the regulator should adopt clear and consistent regulatory processes; the regulator should observe the highest professional standards including appropriate standards of confidentiality; and the regulator should have clearly and objectively stated responsibilities.

Regulations Related to Issuing Securities includes: the accounting and auditing standards should be of internationally acceptable quality; investors holding securities in a company should be treated in a fair and equitable manner; and there must be full, timely and accurate disclosure of financial results and other information that will assist the investor in making decisions.

Responsibility of Regulators includes: there must be a clear definition of the regulator's responsibility, preferably set out by law; and there must be strong cooperation among responsible authorities.

Enforcement of Securities Regulation refers to the power to impose sanctions and/or seek orders from the courts, to take action to ensure compliance with regulations; to suspend trading in securities or take other appropriate action; and to initiate or refer matters for criminal prosecution.

Cooperation in Regulation includes: the regulator should have authority to share both public and non-public information with domestic and foreign counterparts, establish information sharing mechanisms that set out when and how they will share both public and non-public information with their domestic and foreign counterparts; and the regulatory system should allow for assistance to be provided to foreign regulators who need to make inquiries in the discharge of their functions and exercise of their powers.

4.2. Specification and Analytical Techniques

Based on the theoretical and empirical literature, the econometric specification to empirically examine the factors that may influence growth of the securities market is proposed as follows:

$$\begin{aligned} Growth = \beta_0 &+ \beta_1 Problem\ of\ Securities\ Market \quad + \beta_2\ Prospects\ for\ Securities\ Market \\ &+ \beta_3\ Role\ of\ Regulators + \beta_4\ Regulations\ related\ to\ Issuing\ Securities \\ &+ \beta_5\ Responsibility\ of\ Regulators + \beta_6\ Enforcement\ of\ Securities\ Market \\ &+ \beta_7 Cooperation\ in\ Regulation + \varepsilon \end{aligned}$$

All variables are defined above. β_0 is constant and β_j are slope parameters to be estimated and ε is the error term.

Based on the conceptual framework presented in the previous section and the econometric specification above, growth of the securities market is influenced by: problem of securities market; prospect for securities market; role of regulators, regulations related to issuing securities; responsibility of regulators; enforcement of securities regulations; and cooperation in regulations. These are the factors which are considered to be the most relevant constructs adapted for the study of the role of regulators in the efficient supervision and regulation of the securities market in Cambodia.

The statistical analysis of the data consists of descriptive statistics, multivariate data analysis and other necessary diagnostic tests in order to avoid reporting misleading results. Reliability and consistency analysis, using Cronbach's alpha coefficient values, will be carried out to test the internal consistency of each of the perception and expectation attributes. Reliability of the data and its findings are one of the significant requirements. In the results of any research, reliability is based on the dependency, reliability and consistency of the research results. Since it reduces errors while analyzing the responses to questionnaires, it is considered as a vital concept in research (Neuman, 2011). It demonstrates the consistency and stableness of the scores of the instruments (Creswell, 2014). The coefficients of reliability are in the range of 0 to 1 where the higher reliability levels are indicated when the coefficients are higher (Traub and Rowley, 1991). Reliable data are said to be genuine, trustworthy, dependable, sure, reputable, authentic and unfailing (Mohajan, 2017) and the reliability of the data is perceived as the quantitative research strength. Since its degree measures are error-free, even on repeated testing periods it yields the same results consistently. In other words, repeating the data collection procedures will give the same results every time as in other operations of the study. Hence, reliability concerns the ability of the researcher to collect and record the information accurately along with stability, consistency, and repeatability with regards to the informants. Therefore, measurement errors are reduced by developing scoring results by the researchers. Conducting Reliability analysis helps in evaluating the internal consistencies of the scale items. By employing Cronbach's Alpha, the most commonly used tool for measuring internal consistency, the reliability of the instruments is evaluated. It is generally accepted that Cronbach's alpha coefficients should be 0.70 or higher to be internally consistent and reliable (Nunnally, 1967; Hair et al., 2010).

Since the data set used consists of cross-sectional data, heteroskedasticity is often present in such a data set. Therefore, the OLS estimator is no longer the best linear unbiased estimator, and the t-statistic is not *t*-distributed. Likewise, the *F*-statistic is no longer *F*-distributed. Before presenting econometric results, several tests, such as those for multicollinearity, based on the variance inflation factor (VIF), and heteroskedasticity, will be carried out. There are several competing tests for heteroskedasticity (Wooldridge, 2020). The first is the Breusch and Pagan test, which is shown to be equal to $LM = nR_{\hat{u}^2}^2$, where $R_{\hat{u}^2}^2$ is obtained by regressing the OLS

squared residuals on all *k* dependent variables, and *n* being the sample size. Under the null hypothesis of homoskedasticity, the LM statistic is asymptotically chi-square distributed with *k* degrees of freedom. The second test is known as the White test for heteroskedasticity and is based on an estimation of the OLS squared residuals on all independent variables, squares of independent variables, and all their cross products. The White test consists of the LM statistic for testing all the coefficients in the squared residual estimation on all independent variables, their squares and cross products, being zero, except for the intercept. To conserve degrees of freedom, especially when a model consists of a moderate or large number of independent variables, Wooldridge (2020) proposes the special White test for heteroskedasticity, which incorporates the Breusch-Pagan and the general White tests. The special White test, also based on the LM statistic, suggests testing for heteroskedasticity by estimating the OLS squared residuals on fitted values and squared fitted values. Under the null hypothesis, the LM statistic for the special White test is chi-square distributed with 2 degrees of freedom, regardless of the number of independent variables in the model. Therefore, the special White test for heteroskedasticity is to be preferred.

A multiple regression model may suffer from functional form misspecification when it does not or insufficiently account for the relationship between the dependent and independent variables. Important or relevant variables may be excluded from the regression equation or the model when a non-linear model is estimated as a linear model. Such misspecification will be detected by using the RESET test (F statistic), which is based on Ramsey (1969). Under the null hypothesis that the model is correctly specified, the F statistic distribution is approximately that in large sample. Rejection of RESET implies that the model under consideration is mis-specified. The multicollinearity check is done by considering values of the variance inflation factor (VIF), which has been shown to be equal to $1/(1 - R_i^2)$, where R_i^2 is obtained from the multiple correlation coefficient of an explanatory variable X_i regressed on the remaining explanatory variables. In order to obtain stable estimated slope parameters, VIF should be lower than five (Studenmund, 2017).

5. Results from the Survey and Estimation

Based on the survey results, it is found that the respondents had a varied background. 58% of the respondents were male and 41% of respondents were female. In terms of age of respondents, 50.9% of the respondents were between 21-30 years, while 35% between 31-40 years, 6.1% between 41-50 years and 8.1% less than 20 years. Regarding marital status, 61.4% of the respondents were unmarried, while 37.4% were married and 1.2% were widowed. With regards to the religious affiliations of the respondents, it was observed that around 92.7% of the respondents were Buddhists, 3.2% respondents were Christians, and 0.5% respondents were Muslims.

Further, it is found that around 63.8% of the respondents possessed a bachelor's degree, 35.7% held a master's degree, whereas only 0.5% of the respondents had received education up to the high school level. Out of the whole group of respondents, around 65.3% had an overall experience of less than five years, 25.2% around 6-10 years of experience, 4.9% 11-15 years, and the subgroup with experience of 16-20 years and more than 20 years respectively each contributed with 2% to the population of the respondents. With regards to the income of the respondents, it was found that around 64.5% of the respondents earned more than 1,000,000 riel (ca. 240 €)[9], which was followed by 15.2% of the respondents earning less than 2,000,000 riel, while 11.2% of the respondents earned between 5,000,000-10,000,000 riel, and 9% between 2,000,000-5,000,000 riel. As far as the place of residence of the respondents is concerned, it was found that around 81.4% of respondents resided in urban areas, whereas 18.6% of the respondents were residing in rural areas. Out of the whole group, it is noticed that around 83.4% of the respondents were hereditary investors while 16.69% of the respondents reported that they were new generation investors. A large number of respondents, around 50.1%, were long-term as well as day traders, with 41.8% being long-term investors and 8.1% day traders. Many respondents, 66.5%, said that they were both in the primary as well as in the secondary market, whereas 18.3% stated operating in the secondary market only, and 15.2% only in the primary market, as shown in Figure 2. Further, many respondents, 68.2%, had less than three-year experience within the market, while 16.1% had around 3-5 years of experience and 15.6% of more than five years. In addition, most of the respondents, around 88%, had made investments in less than ten organizations, whereas 8.1% had made investments in 10-20 organizations, and 3.9% in more than 20 organizations.

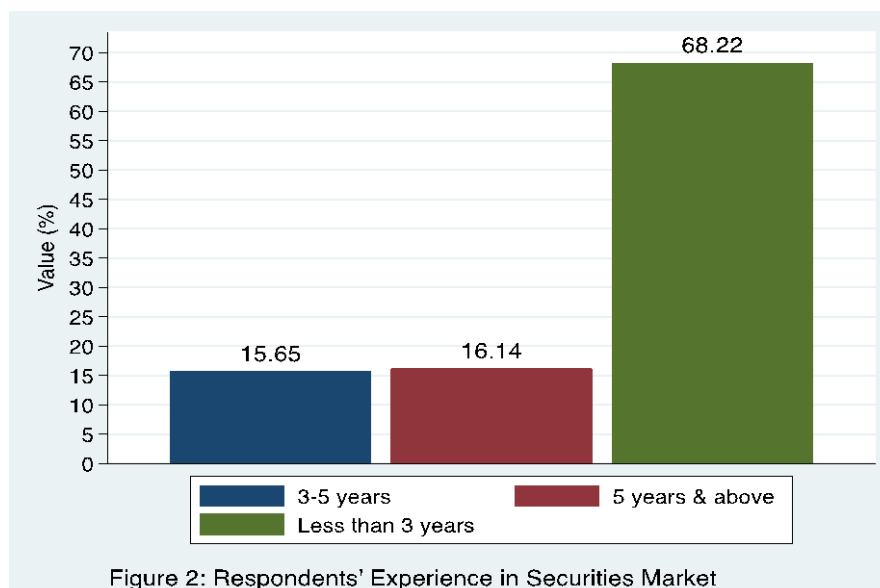
Figure 2: Respondents' Experience in Securities Market

Table 1 shows how the respondents view "growth of the securities market" in Cambodia. Of the respondents, 44%, 40.6% and 35.5% stated neutral for the statements 'The growth of market

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[9] On 21 July 2022, the exchange rate of the riel against the euro was 1 € = 4,164.88 KHR.

capitalization is satisfactory', 'Low level of industrialization and a small volume of securities traded delays the growth of the securities market' and 'The growth of amount of IPO is satisfactory', respectively.

Table 1: Growth of Securities Market

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
The growth of market capitalization is satisfactory	41 (10.0)	85 (20.8)	180 (44.0)	77 (18.8)	26 (6.4)
The growth of amount of IPO is satisfactory	38 (9.3)	106 (25.9)	166 (40.6)	74 (18.1)	25 (6.1)
Low level of industrialization and a small volume of securities traded delays the growth of the securities market	44 (10.8)	103 (25.2)	145 (35.5)	106 (25.9)	11 (2.7)

n stands for the number of respondents; figures between brackets are percentages

Table 2: Problems of Securities Market

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
Legal rules and regulations are not sufficient	26 (6.4)	71 (17.4)	168 (41.1)	99 (24.2)	45 (11.0)
Information is not easily influenced by small number of large investors	48 (11.7)	83 (20.3)	141 (34.5)	102 (24.9)	35 (8.6)
There is no special provision to attract institutional investors in securities market	20 (4.9)	71 (17.4)	163 (39.9)	127 (31.1)	28 (6.8)

n stands for the number of respondents; figures between brackets are percentages

Table 2 shows the survey results for "problems in the securities market". Among the respondents, 41.1%, 39.9% and 34.5% stated to be neutral for the statements 'Legal rules and regulations are not sufficient', 'There is no special provision to attract institutional investors in securities market', and 'Information is not easily influenced by a small number of large investors', respectively.

Table 3: Prospects of Securities Market

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
General provisions are becoming aware about securities market	28 (6.8)	72 (17.6)	159 (38.9)	119 (29.1)	31 (7.6)
Liquidity and marketability are the main factors to develop the securities market	35 (8.6)	62 (15.2)	194 (47.4)	99 (24.2)	19 (4.6)
Securities market provides satisfactory return	15 (3.7)	56 (13.7)	171 (41.8)	109 (26.7)	58 (14.2)

n stands for the number of respondents; figures between brackets are percentages

Table 3 depicts the survey responses for "prospects of the securities market". It was found that 41.1%, 39.9% and 34.5% of the respondents respectively stated being neutral for the statements 'Legal rules and regulations are not sufficient', 'There is no special provision to attract institutional investors in securities market', and 'Information is not easily influenced by a small number of large investors', respectively.

Table 4: Role of Regulators

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
The Regulator should have operational independence and accountability in the exercise of its powers and functions	22 (5.4)	50 (12.2)	141 (34.5)	134 (32.8)	62 (15.2)
The Regulator should adopt clear and consistent regulatory processes	8 (2.0)	16 (3.9)	108 (26.4)	203 (49.6)	74 (18.1)
The Regulator should observe the highest professional standards including appropriate standards of confidentiality	8 (2.0)	19 (4.6)	96 (23.5)	199 (48.7)	87 (21.3)
The Regulator should have clearly and objectively stated responsibilities	9 (2.2)	19 (4.6)	117 (28.6)	174 (42.5)	90 (22.0)

n stands for the number of respondents; figures between brackets are percentages

Table 4 provides answers to principles related to the Regulator. It was found that 70% of the respondents stated agreement and strong agreement for the statement 'Regulator should observe the highest professional standards including appropriate standards of confidentiality', while 48% stated agreement and strong agreement for the statement 'Regulator should have operational independence and accountability in the exercise of its powers and functions'.

Table 5: Regulations Related to Issuing Securities

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
Accounting and auditing standards should be of internationally acceptable quality	9 (2.2)	17 (4.2)	112 (27.4)	178 (43.5)	93 (22.7)
Investors holding securities in a company should be treated in a fair and equitable manner	1 (0.2)	15 (3.7)	117 (28.6)	158 (38.6)	118 (28.9)
There must be full, timely and accurate disclosure of financial results and other information that will assist the investor in marking decisions	4 (1.0)	17 (4.2)	126 (30.8)	165 (40.3)	97 (23.7)

n stands for the number of respondents; figures between brackets are percentages

Table 5 shows basic statistics relating to how the respondents viewed the regulations of the securities regulators. It was found that 66.2% of the respondents stated agreement and strong agreement for the statement 'accounting and auditing standards should be of internationally acceptable quality', while 64% stated agreement and strong agreement for the statement 'there must be full, timely and accurate disclosure of financial results and other information that will assist the investor in marking decisions'.

Table 6: Responsibility of Regulators

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
There must be a clear definition of the Regulator's responsibility, preferably set out by law	1 (0.2)	13 (3.2)	138 (33.7)	120 (29.3)	137 (33.5)
There must be strong cooperation among responsible authorities	4 (1.0)	14 (3.4)	163 (39.9)	147 (35.9)	81 (19.8)

n stands for the number of respondents; figures between brackets are percentages

Table 6 describes the survey responses regarding the Regulator's responsibility. It was found that 62.8% of the respondents stated agreement and strong agreement for the statement 'there must be a clear definition of the regulator's responsibility, preferably set out by law', while 55.7% agreed or strongly agreed with the statement 'there must be strong cooperation among responsible authorities'.

Table 7: Enforcement of Securities Regulation

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
Power to impose sanctions and/or seek orders from the courts	3 (0.7)	14 (3.4)	169 (41.3)	123 (30.1)	100 (24.4)
Power to take action to ensure compliance with regulations	8 (2.0)	24 (5.9)	183 (44.7)	127 (31.1)	67 (16.4)
Power to suspend trading in securities or take other appropriate action	3 (0.7)	28 (6.8)	146 (35.7)	151 (36.9)	81 (19.8)
Power to initiate or refer matters for criminal prosecution	4 (1.0)	28 (6.8)	155 (37.9)	151 (36.9)	71 (17.4)

n stands for the number of respondents; figures between brackets are percentages

Table 7 presents basic statistics for enforcement of the securities regulation. The survey results show that 56.5% of the respondents stated agreement and strong agreement for the statement 'power to suspend trading in securities or take other appropriate action', against 47.5% for the statement 'power to take action to ensure compliance with regulations'.

Table 8: Cooperation in Regulation

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
The Regulator should have authority to share both public and non-public information with domestic and foreign counterparts.	4 (1.0)	31 (7.6)	163 (39.9)	140 (34.2)	71 (17.4)
Regulators should establish information-sharing mechanisms that set out when	9 (2.2)	36 (8.8)	205 (50.1)	113 (27.6)	46 (11.2)

and how they will share both public and non-public information with their domestic and foreign counterparts.					
The regulatory system should allow for assistance to be provided to foreign regulators who need to make inquiries in the discharge of their functions and exercise of their powers.	2 (0.5)	48 (11.7)	188 (46.0)	118 (28.9)	53 (13.0)

n stands for the number of respondents; figures between brackets are percentages

Table 8 depicts the respondents' view on cooperation in regulation. It is found that 50.1% of the respondents stated being neutral for the statement 'regulators should establish information-sharing mechanisms that set out when and how they will share both public and non-public information with their domestic and foreign counterparts', while 13% stated strongly agreeing with the statement 'the regulatory system should allow for assistance to be provided to foreign regulators who need to make inquiries in the discharge of their functions and exercise of their powers'.

Table 9: General Attributes of effective regulation of the securities market

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)				
The market should be open to the inclusive range of members who meet the specified entry requirements.	4 (1.0)	30 (7.3)	196 (47.9)	132 (32.3)	47 (11.5)
The impact of potential regulations should be carefully considered by the Regulator when formulating policy.	1 (0.2)	34 (8.3)	199 (48.7)	134 (32.8)	41 (10.0)
The regulatory burden should be equally imposed on all who make a particular financial commitment.	-	23 (5.6)	181 (44.3)	144 (35.2)	61 (14.9)

n stands for the number of respondents; figures between brackets are percentages

Table 9 shows answers to general attributes of effective regulation of the securities market. It is found that 50.1% of the respondents stated 'agree and strongly agree for the statement: the

regulatory burden should be equally imposed on all who make a particular financial commitment, while 10% stated strongly agreement with the statement 'the impact of potential regulations should be carefully considered by the Regulator when formulating policy'.

Table 10 presents basic statistics for all explanatory variables included in the economic specification above. All variables receive an average score of well more than the mid-point of 3 on the 5-point Likert scale, which suggests that these attributes are important factors in the securities market in Cambodia. Cronbach's alpha values for all variables are very high, far exceeding the 0.7 cut-off recommended by Hair et al. (2010) and many other researchers. As can be seen from Table 11, Cronbach's alpha estimated for Problems of Securities Market is 0.727, Prospects of Securities Market 0.725, Role of Regulators 0.792, Regulations related to Issuing Securities 0.813, Responsibility of Regulators 0.892, Enforcement of Securities Regulation 0.893, Cooperation in Regulations 0.757, and General Attributes of Effective Regulations of Securities Market 0.739. These constructs are therefore deemed to have adequate reliability. Based on the estimated reliability coefficients, the scale for all constructs is highly reliable.

Table 10: Descriptive Statistics for All Included Variables

Variable Name	VIF	Mean	SD	Min	Max
Problems of Securities Market	1.08	3.11	0.75	1	5
Prospects of Securities Market	1.63	3.16	0.71	1	5
Role of Regulators	2.20	3.70	0.73	1	5
Regulations related to Issuing Securities	2.31	3.85	0.75	1	5
Responsibility of Regulators	2.08	3.81	0.75	1	5
Enforcement of Securities Regulation	2.01	3.65	0.78	1	5
Cooperation in Regulation	1.49	3.46	0.72	1	5
General Attributes of effective regulation of securities market	1.85	3.50	0.66	1	5

As indicated above, the problem of multicollinearity may lead to instability of estimated coefficients if there is not appropriate approach to addressing it. In practice, checks for multicollinearity can be examined by using the variance inflation factor (VIF). The VIF, which indicates the extent to which an explanatory variable can be explained by the other explanatory variables in the model, is widely used in the empirical literature to check whether multicollinearity is present in the regression equation. High multicollinearity masks the impact of the individual effect of each explanatory variable. Referring to Table 10, the VIF values for all independent variables are much less than five, implying that multicollinearity issues are of no concern for the analysis. The insignificant F value of Ramsey's RESET statistic suggest that the model does not suffer from functional form misspecification. Similarly, the highly significant χ^2

Breusch-Pagan statistic at the 1% level, confirming that there is presence of heteroskedasticity. Thus, the standard errors reported in Table 12 are corrected for heteroskedasticity.

Table 11: Reliability Analysis

Variable Name	No. of items	Mean	SD	Cronbach's Alpha
Growth of Securities Market	3	2.87	0.90	0.855
Problems of Securities Market	3	3.11	0.75	0.727
Prospects of Securities Market	4	3.16	0.71	0.725
Role of Regulators	4	3.70	0.73	0.792
Regulations related to Issuing Securities	3	3.85	0.75	0.813
Responsibility of Regulators	2	3.81	0.75	0.892
Enforcement of Securities Regulation	4	3.65	0.78	0.893
Cooperation in Regulation	3	3.46	0.72	0.757
General Attributes of effective regulation of securities market	3	3.50	0.66	0.739

To empirically investigate the effects of the role of regulators on the growth of the securities market in Cambodia, multiple regression analysis is performed to show how each factor, especially the role of regulators which is the variable of interest, affects the securities market growth in Cambodia. The results of our regression analysis are provided in Table 12, with unstandardized estimated coefficient reported in Column (1) and standardized coefficients given in Column (2), along with important statistics for statistical testing and other statistical diagnostics. Based on Table 12, three of the eight factors—prospects for securities market, role of regulations, and regulations related to issuing securities—are found to be statistically significant. Prospects for the securities market and regulations related to issuing securities are highly significant at the 1% level, while role of regulators is significant at less than the 5% level. The results provide strong evidence that these variables influence the growth of securities in Cambodia.

Table 12: Estimation Results for Growth of Securities Market

Variable Name	(1)	(2)	Robust Standard Deviation	T-Value	P-Value
Constant	0.686***	—	0.261	2.63	0.009

Problems of Securities Market	0.017	0.015	0.057	0.30	0.764
Prospects of Securities Market	0.671***	0.552***	0.056	12.05	0.000
Role of Regulators	0.182**	0.152**	0.075	2.43	0.016
Regulations related to Issuing Securities	-0.213***	-0.168***	0.080	-2.67	0.008
Responsibility of Regulators	-0.038	-0.032	0.073	-0.52	0.602
Enforcement of Securities Regulation	0.020	0.017	0.076	0.27	0.788
Cooperation in Regulation	0.047	0.037	0.071	0.66	0.511
General Attributes of Effective Regulation of Securities Market	0.032	0.023	0.088	0.37	0.715
N0. of observations			409		
F-Value			34.69***		
R-squared			0.364		
Breusch-Pagan Test Statistics for Heteroskedasticity			36.654***		
RESET Test Statistics			1.59		

Notes: * denotes that the slope parameter estimates are statistically significant at the level of 10%, ** at 5%, and *** at 1%.

Referring to Column (2), it is interesting to note that the estimated coefficient on prospects for the securities market is the highest, suggesting that prospects for the securities market are the largest contributor to the growth of the securities market in Cambodia, followed by the role of regulators. The evidence on the important role played by regulators in enhancing securities market growth is consistent with our conventional wisdom and the reality. This evidence should merit elaboration. Regulators can provide sound and effective regulation which is a precondition for market development. Good securities regulations increase the quality of financial reporting, transparency, and maintain investors' confidence in the securities market. This improves the securities market activities because investors believe that there are strong legal and contractual penalties for misreporting by the regulators. Financial markets often fail when left to market forces alone as the firms may not provide transparency about their operations which may send a bad signal to both existing and potential investors.

The result from the multiple regression analysis suggests that regulations related to issuing the securities market is negatively related to the securities market growth. This finding is

a surprise, but it can be explained by over-regulations doing more harm than good in many aspects. Over-regulation may impose a high cost on the securities market process. Excessive regulation could result in financial repression and might be costly for the general public and the market as such over a long-term period. The degree of regulation might assume the form of statutory legislation and the development of disclosure rules as laid down by pertinent accounting entities. The deliberation that investors within the securities market in developing nations are deprived of appropriate information emerges as the present regulations are weak and inadequate. This appears to be true, especially when the development of the securities market is at a nascent stage, as in the case of Cambodia.

With respect to the survey results, it is found that growth in terms of market capitalization was satisfactory. This finding was in tandem with a study conducted by Das and Swain (2019). According to Das and Swain (2019), capital market development was scaled by market capitalization as a proportion of the GDP. Stock markets facilitate buying and selling of shares within the secondary market. Economic growth in the market could be influenced by the stock exchange. The findings from this study further found that legal rules were not sufficient to effectively regulate the securities market in Cambodia. These findings were in tandem with studies by Goyal (2006) who indicated that with internalization and at the entry of new entities, controls effected by the government rules turned out to be ineffective.

6. Concluding Remarks

This study started with a detailed description of development of the securities market in Cambodia, which provides the overview of how the securities market is developed. The present research adopted a different approach and attempted to understand the role played by the securities regulators in maintaining market efficiency and growth in the securities market in Cambodia. At the outset, the methodology adopted to conduct this research was a mixed method which includes both qualitative as well as quantitative approaches to examining the role that regulators have played in the Cambodia's securities market. Respondents were asked to fill in the questionnaire anonymously so that the best possible responses to each question and statement can be obtained. Considering the possibility of having limited knowledge and understanding of the securities sector, the survey concentrated on responses from management to staff in the securities sector.

Variables included in the analysis receive an average score of well more than the mid-point of 3 on the 5-point Likert scale, which suggests that these attributes are important factors in the securities market in Cambodia. To ensure the consistency and reliability of the collected data set, important diagnostic checks were carried out to avoid reporting spurious results. Cronbach's alpha values for all variables are very high, far exceeding the 0.7 cut-off recommended by Hair et al. (2010). Specifically, Cronbach's alpha estimated for Problems of Securities Market is 0.727, Prospects of Securities Market 0.725, Role of Regulators 0.792, Regulations related to Issuing Securities 0.813, Responsibility of Regulators 0.892,

Enforcement of Securities Regulation 0.893, Cooperation in Regulations 0.757, and General Attributes of Effective Regulations of Securities Market 0.739. Based on the estimated reliability coefficients, it is apparent that the scale for all constructs is highly reliable.

To empirically investigate the effects of the role of regulators on the growth of the securities market in Cambodia, a multiple regression analysis is performed to show how each factor, especially role of regulators which is the variable of interest in this paper, affects the securities market growth in Cambodia. Based on the estimation results, three of the eight factors, namely prospects for securities market, role of regulations, and regulations related to issuing securities, are found to be statistically significant. Prospects for the securities market and regulations related to issuing securities are highly significant at 1% level, while role of regulators is significant at less than 5% level. The results provide strong evidence that these variables influence the growth of the securities market in Cambodia.

It is interesting to note that the estimated coefficient on prospects for securities market is the highest, suggesting that prospects for the securities market are the largest contributor to the growth of the securities market in Cambodia, followed by the role of regulators. The evidence on the important role played by regulators in enhancing securities market growth is consistent with our conventional wisdom and the reality. Regulators can provide sound and effective regulation which is a precondition for successful market development. Good securities regulations increase the quality of financial reporting, transparency, and maintain investors' confidence in the securities market. This improves the securities market activities since investors believe that there are strong legal and contractual penalties for misreporting by the regulators.

The result from the multiple regression analysis also suggests that regulations related to issuing the securities market is negatively related to the securities market growth. Over-regulation may impose a high cost on the securities market process. Regulation in excess could nonetheless result in financial repression and might be costly for the public and to the market as such over a long-term period. The degree of regulation might assume the form of statutory legislation and the development of disclosure rules as laid down by pertinent accounting entities. The deliberation that investors within the securities market in developing nations are deprived of appropriate information emerges as the present regulations are weak and inadequate. This appears to be the case, especially when the development of the securities market is at a nascent stage, as in the case of Cambodia.

Some important policy implications can be drawn based primarily on the findings in this paper. The current study finds that three factors, namely prospects for the securities market, role of regulators, and regulations related to issuing securities, are found to have impacted upon the securities market in Cambodia. First, as regulators are found to play important role, it implies that an improvement of the regulators' capacity is vitally crucial for the efficient supervision of the securities process. Young officers with fewer years of experience in the field may have

difficulty in understanding the motives behind some of the supervisory and regulatory tasks. It is suggested that not only should the officers be well trained in various skills related to their respective tasks and in performing the supervisory tasks efficiently, but that this training should be carefully customized to meet the requirements of performing their tasks so that their main duties and supervisory objectives can be achieved. Additionally, internal training and continual coaching is highly recommended, which facilitates knowledge spill-overs to be passed from more experienced officers to their younger counterparts with relatively less experience.

In addition, the regulators should be more dynamic. It is suggested that an effective regulator should not only understand the various functions of its regulated entities, but should also be involved in the evolving process in accordance with the ever-changing business environment. This dynamic change process directly relates to the regulators' capacity in supervising the regulated entities. The regulators' capacity should also include the ability to adjust the regulation process to suit the target group's practices and business environment. With reference to dynamic change, it is suggested that regulators should also play more of a proactive role in the supervision process. Regulators should try to encourage the target group to increase the level of voluntary compliance by allowing them to recognize the benefits of supervision. It is also suggested that the supervisory agency should try to lessen its rules-based supervision regime, as over-supervision often has adverse effects.

Second, with respect to prospects for the securities market, the improvement of the overall investment environment is important for the securities market to develop successfully. It includes political stability, macroeconomic stability, regulatory quality, and high quality of other institutions. These aspects of institutions are important to enhancing the business environment. Of these institutional quality variables, rule of law is found to be the most significant contributor to shaping many international business transactions as well as transactions in the securities market. This appears to be consistent with the achievements made by Cambodia in building its domestic institutions that were grossly destroyed during the more than three years of the Khmer Rouge rule. Over the past years, despite having some challenges that need to be addressed, Cambodia has gradually improved many of these institutional factors. Thus, constant improvements of the domestic institutions are expected to improve the competitiveness of Cambodia and to enhance the business environment that is believed to generate ripple effects on social indicators, namely poverty reduction and inequality, to mention a few. Successfully addressing poverty and inequality issues has been reported to have played an important part in resolving social issues as well as contributing to social cohesion and harmonization in the globalized society.

Third, as 'regulations related to issuing securities' is found to be negatively related to the development of the securities market and its growth, which may be attributed to the problem of excessive regulation. There is large evidence of over-regulation. Restrictive regulation circumscribes the freedom and tends to have an adverse impact on flexibility, innovation, and

efficiency; to increase the costs connected with rule-making, rule-application, and rule-adjudication; and to lessen respect for rules and contribute to covert and overt non-compliance. Moreover, when regulation is extensive and intensive, rules are prone to be specific rather than general, to suffer from inconsistencies, and to breed uncertainty because, besides often creating confusion, rules and regulation have to be frequently modified or changed in response to both changing conditions and contingencies. That is why de-regulation has been ongoing around the globe. However, while modification of rules and regulations is recommended, an optimal level of regulation is encouraged to simultaneously protect investors, increase the confidence of investors as well as reduce the adverse effects of excessive regulation.

Finally, the literature has indicated the role that the securities market has played in economic growth and financial stability. The securities market is to serve as a mechanism for the transformation of savings into financing for the real sector, thus constituting an alternative to bank financing. It is also a mechanism through which risk is transferred and risk exposure diversified, allowing firms to unlock capital for new investments. The more efficient the securities market is, the better these outcomes are achieved and the greater the contribution to the economy. However, for the case of Cambodia, based on the responses to the questionnaires it appears that the important role of the securities market is not well understood by the public, including businesspeople, students, academia, and the like. Therefore, it is important to do 'marketing' for the 'securities market' products. A full understanding of the said market is crucial for the successful development of the securities market in Cambodia, which potentially contributes to economic growth, income generation, poverty reduction, economic inequality, all of which help address many economic and social issues.

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