MARKET INTEGRATION, CORRUPTION AND CAPITAL STRUCTURE DECISION: EVIDENCE FROM EMERGING ECONOMIES

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MARKET INTEGRATION, CORRUPTION AND CAPITAL STRUCTURE DECISION: EVIDENCE FROM EMERGING ECONOMIES

ABSTRACT

This thesis investigates the impact of financial integration on the capital structure of the firms operating in 22 emerging countries listed in the MSCI Index. The main objective of this study is to determine the level of integration that has the strongest influence on the financing decisions of the firms and their maturity. For this purpose, we examine a large sample of unbalanced data of firm-level and country-level integrating variables for 9563 firms over the period of twenty-six years i.e. 1990 – 2015. The study also uses some institutional factors like the law and level of corruption that affects the integration level of the country and hinder firm financing decisions. The results of the fixed effect indicate that firms involved in foreign sales (Internationalization) can secure more loans in emerging markets. For country-level integration, we find that credit market integration is positively related to firms' leverage with short maturity while equity market integration is negatively related. The positive relation of leverage with credit markets suggests that the firms take benefit from cheaper loan options that are not available in their own country. However, the effect of equity market integration is more pronounced on the firm's capital structure and its debt maturity as it serves as the cheapest source. The results also suggest that countries that follow Common laws and have a lower level of corruption are more integrated as the firms in these countries can secure more loans with long maturities. The results provide valuable implications on financial integration to the policymakers and capital structure decision-making for managers in emerging markets.

Keywords: Financial Integration, Capital Structure, Corporate Leverage, Debt Maturity, Corruption.

ABSTRAK

Tesis ini menyiasat kesan integrasi kewangan ke atas struktur modal firma yang beroperasi di 22 negara sedang pesat membangun yang disenaraikan dalam Indeks MSCI. Objektif utama kajian ini adalah untuk menentukan tahap integrasi yang mempunyai pengaruh paling kuat terhadap keputusan pembiayaan firma dan kematangannya. Untuk tujuan ini, kami meneliti sampel besar data tidak seimbang pembolehubah penyepaduan peringkat firma dan peringkat negara untuk 9563 firma dalam tempoh dua puluh enam tahun iaitu 1990 – 2015. Kajian ini juga menggunakan beberapa faktor institusi seperti undang-undang dan peringkat rasuah yang menjejaskan tahap integrasi negara dan menghalang keputusan pembiayaan yang tegas. Keputusan kesan tetap menunjukkan bahawa firma yang terlibat dalam jualan asing (Pengantarabangsaan) boleh mendapatkan lebih banyak pinjaman dalam pasaran baru muncul. Untuk integrasi peringkat negara, kami mendapati bahawa integrasi pasaran kredit berkaitan secara positif dengan leverage firma dengan tempoh matang yang singkat manakala integrasi pasaran ekuiti adalah berkaitan secara negatif. Hubungan positif leverage dengan pasaran kredit menunjukkan bahawa firma mengambil manfaat daripada pilihan pinjaman yang lebih murah yang tidak terdapat di negara mereka sendiri. Walau bagaimanapun, kesan integrasi pasaran ekuiti lebih ketara terhadap struktur modal firma dan kematangan hutangnya kerana ia berfungsi sebagai sumber termurah. Hasilnya juga mencadangkan bahawa negara-negara yang mematuhi undang-undang British dan mempunyai tahap rasuah yang lebih rendah adalah lebih bersepadu kerana firma di negara-negara ini boleh mendapatkan lebih banyak pinjaman dengan tempoh matang yang panjang. Hasilnya memberikan implikasi yang berharga terhadap penyepaduan kewangan kepada penggubal dasar dan pembuatan keputusan struktur modal untuk pengurus dalam pasaran baru muncul.

Kata kunci: Integrasi Kewangan, Struktur Modal, Leverage Korporat, Kematangan Hutang, Rasuah.

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LIST OF SYMBOLS AND ABBREVIATIONS

EM   :   Emerging Markets

MNC's   :   Multinational Companies

OLS   :   Ordinary Least Square

FDI   :   Foreign Direct Investments

US   :   United States

GDP   :   Gross Domestic Product

IMF   :   International Monetary Fund

GMM   :   Generalized Methods of Moments

Cor_IDX :   Corruption Index

CREDIT   :   Credit Market Integration

EQUITY   :   Equity Market Integration

LEV   :   Leverage

DMAT   :   Debt Maturity

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CHAPTER 1: INTRODUCTION

1.1   Introduction

This research analyses the impact of financial integration on the capital structure of firms in emerging markets considering the fact that financial integration results in the reduction of the cost of debt and equity when the country opens its economic borders to foreign investors. This reduction in cost helps corporate firms to reach their optimal capital structure. Most of the countries in emerging markets have adopted similar financial developments during the last three decades with the only difference in the timings and execution of these reforms. The basic rationale behind the financial liberalization in all these countries is to remove government restrictions on the financial system and to freely allow the market forces to allocate resources according to the economic growth of a country. This study explores a number of financial issues related to financial integration including internationalization, stock and credit market developments, capital structure, financial crises, and corruption by employing an extensive empirical methodology.

In most emerging countries, the pre-liberalization period was considered to be a financially restricted period with a lot of financial restraints and capital controls regulated by the government. However, starting in the 1990s, most of these countries liberalized their financial systems with a belief that the prevailing system would not be supportive enough to promote real economic growth (Schianteralli et al., 1994). During the last two decades, most of the financial markets in these emerging countries have reduced financial constraints and are more integrated with other developed markets. Though most of the previous literature argues about the causes of financial integration, this is not the prime motive of this research, which instead considers the impact of integration on the cost of financial resources and its effects on the optimal capital structure of the firms operating in these markets.

Financial liberalization leads to financial integration (Henry 2000). This liberalization in the previous literature has often been studied using event study methodologies (Bekaert and Harvey 2000; Laeven 2003). However, a lot of criticism also exists in the previous literature which highlights that liberalization is a continuous process (Stulz 2009; Bandiera et al., 2000) and cannot be considered an event study. Moreover, this liberalization is a multifaceted phenomenon that varies across countries and has some strong implications for the economic reforms of a country, some of which include development in the banking sector, stock and credit market liberalization, trading reforms, and openness of financial markets for foreign investments. This liberalization results in the integration of financial markets of a country across borders and has a complex and heterogeneous effect on the financing choices of individual firms (Bandiera et al., 2000).

The financial development of a country is a result of the improved quality of financial institutions. These financial institutions play a vital role in attracting foreign investments. However, weak institutions, lack of accountability and creditor protection laws, poor judicial system, and no enforcement of the contracts, works as the biggest hurdle in the development of countries. Moreover, if corruption is also added to these weaknesses the whole system collapses. In 2001, the World Bank identified corruption as the most damaging growing disease and the biggest obstacle to a country's development. According to Transparency International, by 2006 corruption was widespread in almost 50 percent of 163 countries ranked in their index. This obvious relation between corruption and the level of development of a country has led us to believe that the existence of corruption is working as the biggest hurdle in the economic growth of the emerging market.

This research aims to investigate the joint influence of firm-level and country-level integration on the capital structure of the firms operating in 22 emerging economies

(Table 8.1), and, in case of the presence of this relation , which level of integration has the strongest impact on its financing part. The empirical results provide answers to the following main questions of the study:

1. Do firm-level and country-level integration have an impact on the firm's leverage?

2. Do firm-level and country-level integration have an impact on the maturity of a firm's debt?

3. Which level of integration strongly influences the financing decisions of the firms operating in emerging markets?

4. Do the level of corruption and legal systems affect the financing choices of firms in emerging markets?

1.1.1 Background of the Study

By the end of World War II, most of the currencies were not convertible and if the investors want to invest, they could only get access to scarce foreign currencies. Most countries had also put restrictions on foreign investments where the native investors were not permitted to invest in foreign markets and likewise domestic markets did not welcome foreign investments. Even if the investors got access to foreign markets, there were strict restrictions on ownership and voting rights. This was also made difficult because of high political risk, absence of accounting synchronization across borders, lack of institutions to deal with foreign investors' rights, and insufficient knowledge of hedging against the risk.

Over the next fifty years, and especially after the crash of the US stock market in 1987, these obstacles to international investments were gradually removed among the developed markets; now the effects can be seen in many emerging economies. Due to this relaxation, international activity has increased which has helped the countries in the

development of capital and foreign exchange markets (Fernandes 2011). This global increase in integration and the exchange of capital flows have ignited more growth opportunities for the firms operating in emerging economies, while allowing them to access external funds. Gaining access to international markets is important for firms to meet their international expansion goal and to finance their growth with the required funds i.e., debt and equity. The previous literature highlights this relationship between foreign activity and the level of financing and how it affects the firm ability in raising external funds. This study takes it further by examining the capital structure of the firms located in 22 emerging economies and how it is affected by the levels of integration.

1.1.2   Capital Structure Theory

Firms need finances to support their ongoing operations. After consuming the retained earnings, they look for external options to continue their profitable projects. External financing can come in two ways: either debt or equity. The combination of debt and equity is termed as the capital structure of the firm. The external financing option depends on the firm's characteristics and the economic and financial environment of the country in which it operates. As discussed in the previous literature, the firm's characteristics have a strong impact on its capital structure and debt maturity decisions. In this study, we also explore the impact of economic and financial factors of the country on its external financing behavior.

The initial discussion on capital structure begins with the irrelevance theory by Modigiliani and Miller (1958). They proposed that in efficient capital markets, the financing decisions and debt-to-equity ratio did not affect the firm value. Following this theory, three main theories of capital structure were proposed in the literature: trade-off

theory, pecking order theory, and agency cost theory. Each of these theories gives an insight into the choices for debt and equity.

Trade-off theory proposes that an optimal debt ratio is achieved by balancing the tax benefit of debt and the cost of bankruptcy. Pecking order theory suggests that firms follow a hierarchy in determining their capital structure. Initially, they prefer internal financing, then debt, and finally equity financing. The agency theory highlights that the agency costs (i.e., the cost that arises due to the conflict between managers, shareholders, and bondholders) help in determining the firm's capital structure. In the context of debt maturity, the matching principle suggests that the length of the loans should match the life of assets used as collateral. Hence, the longer the life of assets, the longer the debt maturity. Considering these theories, we highlight the factors that may affect the financing decisions of the firms and their debt maturity.

The financing decision of the firms not only depends on its characteristics but numerous external factors that may affect the availability of external funds within the country they are operating. These factors are more prominent in emerging markets due to unstable economic and financial markets. As the firms in emerging countries do not have access to international markets, the local instability and a weak financial system limit their access to external finances due to which they keep their operations limited within the given resources. In addition to this, the macroeconomic factors also impact the financing decisions of the firms (Demirguc-Kunt and Maksimovic 1998, 1999: Fan et al., 2012).

Efficient financial system of a country plays an important role in providing firms with better opportunities for external financing. Since the financial markets of emerging countries are not as developed as those of the developed countries, the financing decisions of the firms may differ from the firms in developed markets. Therefore, in this study we

examine the financing decisions of the firm, focusing not only on the firm level characteristics but also on the economic and financial factors of the country.

Our main focus is to examine the financial integration factors of the country and their impact on firm financing decisions. For this purpose, we have grouped the determining factors into four different headings: financial integration, firm-level, macro-economic, and financial environment factors. Financial integration includes two domains in which a firm can integrate with other countries i.e., internationalization (Foreign sales/Foreign assets) and financial market integration (Equity and Credit markets). Firm-level variables include size, growth, tangibility, profitability, and non-debt tax shield. All of them are adopted in accordance with theories. The macroeconomic factors include GDP per capita and Inflation. The financial environment includes stock and credit market development, corruption, legal systems, rule of law, and regulatory quality. All these variables are tested to explore their impact on the financing decisions of the firms operating in emerging markets.

1.1.3 Financial Liberalization

Financial reforms generally involve several steps to relax controls over financial activities and directed credit, along with limiting the government interference in defining interest rates (Schianteralli et al., 1994). These reforms increase the competition in the financial sector by reducing the barriers to the entry of foreign banks, allowing operation for private bank/non-banking financial institutes, and privatizing the banks owned by the government. Moreover, these financial reforms also reduce the extra reserve requirements of banks and allow freedom for residents to enter into a private contract as investments in foreign country's assets, investments in domestic capital markets, and cross-listings. Though it may seem simple, taking appropriate measures for financial liberalization has

always been a major concern for the policy makers to understand the level of implications a country may have in the future.

1.1.3.1 A Sequence of Financial Liberalization

Past literature on the sequence of financial integration suggests, firstly, liberalizing the trade and exchange system for current account transactions and then opening the domestic financial system. Lastly, it is opening up the capital accounts for foreign investors. This should be followed by fiscal reforms and price stabilizations while also privatizing the state-owned enterprises. McKinnon (1991) discusses that this privatization is important in the case where the government has strong holds on the factor of production. Moreover, the pace at which these steps follow the sequence depends on the constraints in the financial system of the country. However, the openness of the domestic financial system should start with the liberalization of interest rates and introduce market-oriented instruments like central bank securities for regulating the monetary system. Also, policies to increase competition among banks, and measures to develop the equity markets along with non-banking financial institutes should be considered as the later steps in future reforms. Though all these steps are important for the liberalization of a country's financial system, literature suggests that some countries adopt a gradual approach, while others follow a "big bang" strategy for capital account liberalization.

Quinn (1997) is considered as one of the earliest researchers who worked on the financial openness of a country and recommended a gradual approach toward reforms. According to him, financial openness minimizes the adjustment cost and restricts the financial burden on specific groups in the initial years, while the reforms imposed are in alignment with a politically acceptable pace. On the other hand, Bruno (1992) and Ahluwalia (1996) argue for rapid growth in the reforms, suggesting that under some circumstances, a faster pace of reforms will add further reliability if the results achieved

in short term are favorable to justify against reversibility. Moreover, if the scope of reforms is kept specific and evaluated at every stage, this will build confidence among the institutions and they will support the long-term strategies of liberalization. Cho (1986) argued that both the domestic sector and capital markets should be liberalized simultaneously while the development of equity markets is an important step to complete financial liberalization. According to Karacadag (2003), both the internal and external reforms should follow a sequence in a way that all the infrastructure and the financial institutions should support these reforms with a capacity to manage the risks arising from new financial transactions and investments. These reforms should be in an order, starting with money markets and opening foreign exchange, followed by treasury bills and bonds markets, and lastly markets for corporate equity and bonds, and derivatives.

Blejer & Sagari (1988) contributing to the previous literature and working on firm-level financing, argue that the sequence of liberalization also differs according to the banking structure of the country. If liberalization starts with the external factor while opening the international capital flows, but internally the foreign banks are not allowed to enter the domestic markets, very few local borrowers having connections will get access to foreign loan markets and make transactions at a foreign interest rate. Many of the borrowers will still not be able to get access to foreign markets because of imperfect information. Alternatively, if the liberalization starts from internal factors by allowing foreign banks entry, this will weaken the local banking structure and the domestic interest rate will then be determined by the market forces. In this case, despite limitations on the external capital flows that would prevent the firms to benefit from the international interest rate, these firms would still take benefit from internal liberalization. However, after the removal of restrictions on foreign capital markets, the volume of debt in the economy as a whole will increase, because foreign banks would also start lending to local

banks. This internal liberalization will help the economy grow relatively, because of the inefficient allocation of resources in the domestic market that was not in use earlier.

1.1.4 Financial Integration Concept-Law of One Price

In the last step of financial liberalization, the country moves to financial integration. This financial integration has been defined in many ways by different scholars. Baele *et al.,* (2004) suggest that for the market to be integrated, the following criteria should be fulfilled: 1) each investor faces the same set of rules for each instrument, 2) Each investor has equal access to all instruments, 3) each investor is treated equally in the market. This definition refers to the law of one price. Brouwer (2005) describes financial integration as a process where the financial market of one country becomes closely integrated with another country or the rest of the world. Yeyati *et al.,* (2009), state that if the financial instruments have the same risk and return, they should have the same price, irrespective of where they are being traded. Integration can also be defined as monetary integration, entry of foreign banks, and harmonization in the regulation of different countries. Hence the integration should result in same price for all the securities across the borders.

Some other authors have also discussed the benefits of integration. Baele *et al.,* (2004) describe integration as risk sharing, better capital allocation, and financial development. All these three factors help in economic growth. Integration into bigger markets can be of benefit to both the firms and financial institutions. It helps firms from smaller markets having insufficient capital to raise and access more capital to finance their projects even at low costs (Levine & Zervos 1996). Integration of markets removes barriers to the trade of financial assets and capital moves from surplus markets to markets having scarce capital. With an improved capital available and equal opportunity for risk sharing, this integration leads to an efficient capital allocation by the firms and improved economic growth. According to Hartmann et al., *(*2007*)*, financial openness is a process that will

eventually reduce information asymmetry, cut transaction cost, and increases competition.

When the markets are integrated, the capital flow increases across the countries hence equalizing the returns. Integration also comes with equal risk-sharing for the financial instruments traded across the countries. If the firms get access to foreign markets or foreign investors are allowed to invest in local markets, more options are available for the firm financing at a cheaper cost. Even the local creditors have to reduce the cost as the supply of credit in the market has increased. Moreover, foreign investors are willing to invest in local firms with a low required return and with a short maturity. This short maturity is due to weak laws and regulations for foreign investors in emerging markets. The benefit of this integration goes to firms as they can get cheaper loans and increase their leverage to fulfill their growth requirements resulting from globalization.

Policymakers from emerging economies have also highlighted the uncertainties attached to market openness. One of the major concerns is the movement of the international flow of funds which is highly sensitive to interest rates, expected returns from the securities, and high expectations of future economic growth. With this sensitivity, a small shock even could lead to a volatile change in the flow of funds, which intensifies the shock and would destabilize the domestic economy (Chen 2018). Furthermore, market integration means more dependence on the foreign market. If the foreign market is more volatile than the domestic market, it will make the domestic market more volatile. This will stop the investor from holding the stock that leads to increase in demand and higher-risk which eventually effects the cost of capital. Hence financial integration may lead to negative effects like economic imbalance, increase volatility and potential financial crises; if not implemented diligently.

1.1.5   Why Emerging Markets

The motivation for the selection of emerging markets is as follows: One of the reasons to select the emerging countries is because of the extent of financial liberalization. For example, regulations for interest rates, banking sector reforms, equity and credit market development, trading openness and cross-border flow of capital is considerably greater in emerging markets as compared to developed economies. Furthermore, though these emerging economies are moving towards fully integrated markets, most of them are not enjoying the actual benefits as that of developed economies.

Some interesting findings on the capital structure of emerging markets are also reported in the literature, which becomes another reason to select these countries. Booth *et al.*, (2001) report that the capital structure of the countries differs due to their firm's characteristics and economic environment, while Deesomsak *et al.*, (2004) argues that there is not much evidence available on how the level of liberalization may affect the capital structure of the existing firms. Kaminsky & Schmukler (2002) added to the literature that liberalization cannot be analyzed as the only factor that may influence the capital structure, and suggested that other liberalization factors including the development of the stock and credit market and the openness of capital accounts for each country must be jointly considered to analyze the complete impact. Others have proposed that micro and macro-level variable are also important in understanding the dynamics of each country (Köksal & Orman 2015). Some of the literature has also highlighted the importance of regulatory environment in defining the capital structure of the firms (Casino-Martínez et al., 2023; Doan et al., 2023).

In light of the above inconclusive arguments, we believe that this is the right time for this research because it has been over a decade since the global financial crisis, and most countries are moving into stable integrated economies. The focus of this thesis will be to

study the impact of financial integration (both firm and country-level combined) on the capital structure of the firms and to analyze which financing sources work as cheaper (sources) to finance in emerging markets. For the firm-level integration, the focus is on the foreign sales of the company which help them to internationalize across borders, while for country-level integration, the emphasis is on the assets and liabilities held by the country on behalf of foreign/non-resident investors. This combined effect of firm and country-level integration will highlight the importance of our analysis because there is no such study available on the emerging markets that investigates this unique impact and concludes which of these factors (firm and country level) has a strong influence on the firms' financing options.

1.1.6   Financial Integration and Cost of Capital

Firms engaging in foreign sales are set to be integrated at the firm level. This integration in literature is termed as internationalization. Internationalization benefits the firms in entering foreign markets and getting access to low-cost external financing, which allows them to grow faster (Demirgüç-Kunt and Maksimovic 1998). Moreover, getting access to funds from international markets also reduces the problem of information asymmetric (Myers 1984; Hooy & Lim 2013). From the country's perspective, the openness of domestic markets to international investors is what is termed as financial integration. When the foreign investors are allowed to invest in the domestic market, this domestic market is said to be financially developed and liberalized. However, when investors from the domestic market are also allowed to invest in the foreign markets in the same period, that market is said to be fully financially integrated with the world markets.

The rise in financial integration opens up the economy to global markets. The integration theory suggests many benefits arising from financial integration, two

prominent being risk-sharing and availability of extra funds to local firms. If an economy is segmented from global markets, the local investor bears all the risk. However, when the economy is integrated with the global markets, the foreign investor can invest in the local market while the local investor can also invest abroad, hence sharing the risk by diversification (Obstfeld 1992). This availability of extra funds allows the local firms to accept the projects which were rejected initially due to lack of financing. Thus, financial openness improves the availability of capital and reduces risk, which in turn reduces the cost of financing for local firms (Stulz 2005).

It is also important to address the question whether it is better to be more integrated. Since the East Asia Crises (1998) and Global Financial crises (2007), financial markets have provoked numerous academicians and researchers to question the flow of capital among emerging markets. Boyd & Smith (1996) theoretically prove that opening markets is a good option to attract external capital and finance your economic growth while Levine & Zervos (1998) empirically prove that market openness is positively related to a company's future growth. Rajan & Zingales (1998) while comparing the growth of different financial markets conclude that market integration facilitates capital structure decisions by decreasing the cost of external finance. As foreign investors require transparency of information and improved disclosure requirements important for the efficient allocation of capital, they can also claim the accountability of management and secure the right of shareholders to safeguard against the misuse of wealth by monitoring investors. A considerable and appropriate response to these concerns by foreign investors will reduce the risk which will in return lower the cost of capital (Obstfeld 1992).

Previous research has reported different ways in which market integration has affected the capital structure decisions of the firms. Mansi & Reeb (2002) provide evidence that internationalization is associated with a low cost of credit. Moreover, firms at a low level

of internationalization use low debt in their capital structure while the debt increases as the level of international activity increases. Giannetti et al., (2002) worked on emerging markets and concluded that globalization has given a new shape to financial markets and has provided firms with new financing options, especially in emerging markets. Henry (2000) and Chari & Henry (2004) find that the impact of integration is stronger in emerging markets as compared to developed markets. Schmukler & Vesperoni (2006) suggest that the integrated markets will allow more credit to local firms, hence reducing their cost due to more liquidity. Moreover, being a risk avoider, the international investor will only allow loans for the long term if the country has strong creditor-protected laws. Agca *et al.*, (2007) report that credit market integration will increase the competition, hence the domestic lender has to reduce the cost to make it more attractive. Furthermore, equity market integration will make equity more attractive for the firms and they will switch from debt to equity to take the maximum benefit of reduced cost. Fan *et al.*, (2012) find that integration at the country level will increase the long-term debt of the firms with shorter maturity. Furthermore, the reason for short-term maturity is the lack of legal laws and creditor protection rules in the domestic country because of which the foreign investor will not lend for the long term.

The objective of this thesis is also to investigate the impact of financial integration on the financing decisions of the firms operating in emerging markets. The study considers both the firm and country–level integration together to identify the cheapest source of financing available to the firms in these markets. Moreover, controlling for both the firm and country level variables and considering the legal environment of the country, we have proposed some hypotheses in the further chapters.

1.1.7   Corruption

Corruption is a worldwide disease that usually exists in the institutions of countries. . Due to its complex forms and multifaceted phenomenon, it is often difficult to detect and to control its outcome. Although it exists in all countries in different forms, its presence is more pronounced in emerging countries. In 2001, the World Bank identified corruption as the most damaging growing disease and the biggest obstacle to countries' development. According to Transparency International, by 2006 corruption was widespread in almost 50 percent of the 163 countries ranked in their index. This obvious relation between corruption and the level of country development has led us to believe that the existence of corruption is working as the biggest hurdle in the economic growth of the emerging country.

Corruption is taken as one of the greatest challenges in emerging economies. It is broadly defined as the misuse of public affairs for personal benefits, bribery, money laundering, and illegal financial activities. All these misappropriations undermine the efficient allocation of financial resources. They (or Corruption) also affect/affects the economic growth of the country as it restrains foreign investors from entering the borders (Treisman 2000). In the previous years, lack of governance and increased level of corruption have added a new forum of discussion among the researchers and they are now more interested to explore the relationship between corruption and firms' performance.

It is a well-known fact that corruption and easy access to credit are two significant problems faced by emerging economies nowadays. According to the Transparency International Index of 2015, the score of many countries has dropped gradually which shows that the level of corruption is increasing globally. Moreover, the Doing Business 2015, published by World Bank also highlights that the ease of doing business and getting access to easy credit in different countries is also being affected. This raises the question

whether this increase in corruption level experienced by emerging economies affects their access to credit. Demirguc-Kunt & Maksimovic (1999) and Booth *et al.*, (2001) both find that countries having strong regulatory systems, legal execution, and creditor protection rights are more likely to raise more long-term debts for the companies operating there. In this context with financial integration taking effect globally, it is uncertain whether this financial development has restricted the impact of corruption on a firm's capital structure decisions.

Some of the previous literature suggests that corruption is the key problem in many emerging nations which works as a major hurdle in their financial and economic development. Mauro (1995) and Park & van der Hoorn (2012) report that bad governance and misuse of resources reduce the level of investment in the country. Us Swaleheen (2008) concludes that corruption affects the overall saving behavior in the country and discourages investments. According to Weill (2011), bank borrowing is severely influenced by corruption in Russia, while its negative effects also reduce private borrowing as compared to state borrowings. Moreover, at the macro level, corruption has a strong impact on the economic growth of the country while it also discourages foreign investors to invest in the host country. In addition to this, corruption also reduces the efficiency of loanable products in the country which increases poor asset quality (Barth, et al., 2009). A paper by Bougatef (2016), working on emerging markets and debt portfolios, reports that corruption hinders economic development due to the misallocation of loanable funds. In nutshell, these studies conclude that corruption works as an obstacle to the financial development of the country and discourages foreign investments. This argument opens a new knowledge gap for our study: how the level of corruption affects the financial integration and allocation of resources in an economy, which in turn influences the financing behavior of the firms.

1.1.8 Legal Structure and Origins

With the growing complexity of business, especially with global markets in place, the role of law and the quality of regulations have become increasingly important. Rules and regulations are generally nation-specific, however, with financial openness, the firms might be required to adapt to some international norms as well to compete globally. Multinational firms doing business have to follow local regulations to succeed. Hence, the regulations help reduce the information asymmetry among the firms and allow all the firms to compete at one level, including international firms.

The presence of rules and regulations makes it easier for foreign firms to conduct their business in the host country while promoting the host economy to integrate with the rest of the world. These regulations include starting of new businesses, paying taxes, and investments. Sound policies can facilitate the firms in raising external finance, engaging foreign investors, and promoting financial openness. Simple and clearly defined policies work as a catalyst for financial integration which leads to a reduction in the cost of capital. Sharing the risk globally reduces information asymmetry, promotes credit formation, and reduces the cost of capital. So, opening up of borders for foreign investors has to be gradually supported with a good regulatory environment because, in the absence of regulations, the financial integration can lead to poor allocation of capital resources and can expose the economy to international risks which could reverse the cash flows (Mishkin 2007). Moreover, the redundant regulations increase the time, cost, and effort of doing business (Ocampo 2003).

The regulatory environment has mostly been investigated in isolation in the past. Most of the previous literature examines the empirical effect of any particular regulation and its effect is mostly limited to specific industries. However, these regulations not only affect the firms incrementally but in a comprehensive manner. Every new rule adds to the

existing system of regulations and is connected to other rules of the economy as well. Very few studies in the past have examined the effect of regulation at a cumulative level considering different economies. This work uses the legal variable in two different dynamics. Firstly, we consider the "Laws" followed by the countries. In this regard, the literature suggests that the countries following Common law have the strongest rules and regulations for foreign investors (Fauver *et al.*, 2003). Secondly, we have used two other legal variables which include "Rule of Law" and "Regulatory Quality" which show the level of implementation of law in the country. These legal variables propose that the firms in the countries following Common law and with better rule of law and regulatory quality can secure more loans with long term maturities.

Summary of Results

Our result shows that financial integration has a significant impact on the capital structure of firms in emerging economies using firm and country level integration measures. Internationalization is positively related to firm leverage which means that firms that engage in foreign sales can access cheaper loans across borders. From country level variables, credit market integration is positively significant with leverage while the equity market is negatively significant. This shows that credit market integration provides the firms with better access to cheaper loans to fulfill their financing needs while equity market integration attracts more equity. We also provide new evidence on the cheapest financing source available to the firms in the sample emerging markets. Although firm-level internationalization shows a positive relationship with leverage, our country-level integration measure suggests that among the levels of integration, the equity market integration works as the cheapest source of finance for the firms in designing their optimal capital structure. The results also show that debt maturity decreases as the firms get more financing options across boundaries.

The results of our control variables show that size, growth, and tangibility are positively related to a firm's leverage while profitability and tax shield are negatively related. The countries following the Common law are more attracted by the investors and the firms can access more loans in those countries due to strict compliance with the law. However, the countries with a higher level of corruption discourage more leverage for the firms as investors' rights are not protected and there is a high risk of default due to the lack of regulatory quality and rule of law in those countries. Overall results support our proposed hypothesis and conclude that financial integration has a strong influence on defining the capital structure of operating firms in those countries.

Thesis Structure

Chapter 1 is the introduction to our research topic. It includes the detailed background of the study, the concept of capital structure in finance and its relation to financial integration, the research problem, research objectives and questions, the research gap, the motivation for our study, and the significance of the study. Chapter 2 is the summary of earlier research conducted to date, highlighting the discrepancies in the previous studies and indicating how this present study can contribute to the existing knowledge. This chapter includes three main parts. The first part relates to the previous literature review, discussing the main variables and the importance of control variables used in the past studies and their significance in our study. The second part of this chapter relates to the empirical evidence available on the dynamics of financial integration and its impact on the micro and macro levels of the economy. The third part relates to the theoretical and conceptual framework of this study. This includes the theories related to capital structure and financial integration that support our research topic and help us reach conclusions. The last section of this chapter relates to the development of a hypothesis for all the variables used in this thesis.

Chapter 3 relates to the data and methodology used in this study. The first part discusses the data and variables used in the research. This includes the discussion on the sample of countries chosen for this thesis and the sample period. It also includes the details on our main variables and the new measures used to test those variables and how they differ from the previous work. Control variables are also included in this part. The second part relates to the methodology adopted and the empirical models used in this study. It starts with the initial model which relates to the firm integration and then country level integration and lastly with the combined effect of both the firm level and country level integration variables along with control variables. This section also includes the models for financial crises, interactive dummies, and further analysis of our study.

Chapter 4 discusses the final empirical results for all the models against the hypotheses proposed in the study. This includes the results of firm-level integration and country-level integration along with the control variables. We also report the results of the cheapest source available to the emerging markets in our sample. Moreover, the results of interactive dummies and financial crises are also interesting reads for researchers. This section also presents the robustness results.

Chapter 5 draws some conclusions from the empirical results presented in the previous chapter and highlights the contributions and policy implications.

1.2   Research Questions

The general questions that are to be addressed in this thesis are as follows:

RQ-1 How are the leverage and debt maturity of firms within emerging economies affected by firm internationalization?

RQ-2 How is the leverage and debt maturity of the firms in emerging economies affected by credit and equity market integration?

RQ-3 Are the leverage and debt maturity of the firms more affected by firm-level integration (i.e. Internationalization) or country level integration (i.e. credit and equity market)?

RQ-4 Are the leverage and debt maturity of the firms affected by the level of corruption and legal system within the country?

RQ-5 How are the leverage and debt maturity, of the firms in emerging economies affected by the financial crises?

1.3   Research Objectives

The objective of this study is to verify the assumptions laid by the theories of the capital structure taking into consideration the effect of both the firm level and market-level integration in emerging markets only. Moreover, this study also explores the level of integration that has a stronger influence on the decisions of the firms to change their capital structure. So, this research comes with the following objectives.

RO-1 To examine the impact of internationalization (firm-level integration) on the leverage and debt maturity of firms within the emerging economies.

RO-2 To analyze the impact of credit and equity market integration at the country level on the leverage and debt maturity of firms operating within the emerging economies.

RO-3 To determine the integration factor, whether at the firm level or country level, that exerts a more significant influence on the leverage and debt maturity of the firms within emerging markets.

RO-4 To investigate the impact of level of corruption and legal systems within a country on the leverage and debt maturity of firms in emerging markets.

RO-5 To explore the impact of financial crises on the leverage and debt maturity of the firms within emerging economies.

1.4   Research Problem

Over the last three decades, the waves of liberalization have washed away all the protected barriers in emerging economies. As the countries integrated into international markets, multinational companies from America, Europe, and Japan stepped in. As a result, most of the businesses lost their market share while some fought back, restructured themselves, explored new opportunities coming with the liberalization, and built world-class companies giving good competition to their rivals. So, how can the firms in emerging markets be strong competitors to the global giants from the United States and Europe? Because of the lack of specialized intermediaries, weak regulatory systems, and poor law enforcement mechanisms, companies in emerging markets cannot get access to financial resources as easily as firms from developed nations can acquire.

Emerging economies have always been the center of attraction for academic writers. After globalization, the dynamics of the world have changed rapidly and now the focus is more on these emerging markets as compared to developed economies. Over the years, this globalization has added many new elements to the economy, one of which is market integration. This integration among the countries has given new operational and financial openings to firms in emerging economies. With the openness of trade and the flow of capital across the countries, many firms have internationalized themselves by increasing foreign sales and attaining access to external funding. Getting access to the international market allow firms to revise their capital structure and raise adequate external funds in the form of equity and debt to fulfill their growth opportunities arising from globalization.

According to Kwok & Reeb (2000*), "when firms from more stable economies make international investments, it tends to increase their risk and leads to a reduction in debt usage. By contrast, when firms from less stable economies make international investments, it decreases their risk and allows for greater debt utilization"*. If there is an

increase (or decrease) in the risk, the traditional capital structure theory suggests that firms will choose debt over equity because the cost of equity is more than the debt due to asymmetric information (Myers & Majluf, 1984). Conversely, Fama and French (2002) argue that small growth firms with less collateral value will favor new equity issues and can hardly take on debt, which counters the arguments of the pecking order theory. However, this puzzle remains unsolved. So, when a firm from a developing country enters international markets, it has access to lower finance not available in its own country. In this way, firms from countries with weak capital markets are more likely to increase their amount of debt when they find an easy loan attached at a lower cost.

The above arguments conclude that when markets are integrated, capital moves from capital-abundant markets to capital-scarce markets, hence diversifying the risk of the investors. From an investor's point of view, this integration helps in diversifying their portfolios as they can easily access the domestic and international markets, reducing their risk profile. From a firm's perspective, integration is an entry pass to explore opportunities in foreign markets in search of cheaper financing options while it also helps in increase of money supply in the market as more foreign investors will be investing. This increase in capital supply in the domestic market reduces the risk for investors and will decrease their required returns. A reduction in the required returns of the investors will drop the cost of capital which allows firms to revise their financing policies for debt and equity.

Most of the previous work has highlighted the impact of internationalization on the leverage of the firms. Very few among others have extended their analysis while investigating the effect of country-level integration i.e., equity and debt market integration, on the capital structure of the firms. This work tries to fill in the gap by investigating the impact of both firm-level internationalization and country-level

integration on the capital structure of the firms in 22 emerging economies. Further empirical analyses will be carried out to see which of the firm-level or country-level integration is significant in influencing the long-term debt of the firms controlling for both the firm and country-level variables simultaneously. Lastly, the impact of this integration will also be tested on the maturity of long-term debt considering the legal status of the countries and their regulatory environment.

1.5   Contribution of the thesis

The main contribution of this thesis lies in investigating the joint effect of both the firm-level and country-level integration on the capital structure of the firms for 22 emerging economies listed by Morgan and Stanley emerging market index. The objective is to explore the level of integration which has a strong influence on firm financing behaviors.

Most of the previous research has investigated these integration levels in isolation using different proxies and exploring different markets but none of them have considered the joint impact of the firm-level and country-level integration together. Only Gonenc & de Haan (2014) work is the most relevant to our study who measures the liberalization at the national level which includes the openness of domestic stock and credit markets for the foreign investor and termed it as financial development. However, his work did not cover the next level of development which covers the level of openness for the domestic country to invest in assets of the foreign country in the same period which is termed as financial integration.

Our work is unique in this context as for country level integration we have used the new data set by Lane and Milesi (2018) that shows the level of international equity and foreign debt held by a country. This measure covers the foreign aspect of integration i.e. when the country after the liberalization of their capital accounts is at a state where other

countries are allowed to invest and borrow within and across the borders. This includes the assets and liabilities held by the country on behalf of foreign/non-residents investors. Our work especially differs in the context of country-level integration as we simultaneously test both the equity and credit market integration of the country and its effect on firm financing decisions while many previous studies have only considered the dates of financial liberalization or factors that predict the internal level of financial development of a country. However, we have used the financial development variables of a country as a control variable in this study. Moreover, the prime motive to test the combined effect of firm and country-level variables is to investigate which integrating level reduces the cost of capital and has a stronger influence in defining the optimal capital structure of the companies as predicted by the pecking order theory.

One important contribution of this study is the use of regulatory variables of the country and how it works with financial integration in influencing the financing behavior of the firms. Financial integration works gradually and if rules and regulations are in place the foreign investor will be more secure to share the investment across borders. Considering this, we have used the code of corruption as a proxy to measure the level of transparency in a country. Moreover, rule of law and regulatory quality of a country are also been used as legal variables that may influence the level of integration and have an impact on a firm's capital raising decisions.

Another contribution comes in the form of exploring the effects of integration on a firm's debt maturity. Most of the previous literature suggests that firm size and tangibility affect the maturity of the firm loans (Fan *et al.,* 2012). Moreover, the empirical evidence also suggests that market integration is likely to affect debt maturity in emerging markets. When the credit markets of a country get more integrated with other countries, the firms will get additional debt with short-term maturities (Barclay & Smith 1995). Moreover,

foreign lenders will always lend in for the short term due to the lack of information asymmetry and the weak protection laws for the creditors. Considering this fact, this study considers debt maturity as an important variable and investigates how the level of integration will have an impact on the debt maturity of the firms in emerging markets.

1.6   Motivation for the study

Globalization has opened new financial and economic horizons in emerging markets, which gives us more space to enhance our knowledge of emerging market dynamics. The main objective of this work is to understand the phenomenon of financial integration in emerging markets. Our work revolves around three major themes presented in our framework: firstly, major emerging markets around the world witnessed huge capital market openness in the 1990s. They did this by removing the barriers to cross-border investments, issuing securities to foreign investors, and allowing foreign institutions to operate in local markets. This motivates the researchers to inquire whether these changes have brought the local and international markets together, and how this level of integration changes the financing behavior over the period. The answer to this question has important implications for the economic outcome, portfolio diversification, and cost of capital.

Second, the association between financial integration and a country's economy has been discussed in the existing literature. In this work, we focus on understanding the impact of financial integration on the capital structure of firms operating in emerging markets. This motivation comes through the changes expected through integration such as new financing options and a reduction in the cost of capital. Third, although economic researchers have achieved great success in defining market integration and the variables which affect this integration, still it is indecisive and the search for unknown determinants is still an intriguing objective for the researchers. In this context, as the state plays a major

role in removing the barriers for foreign investors, the legal origin on which legal institutions are based in a country, also plays a key part to attract investors while assuring them of safeguarding their investment from any default. Moreover, the level of corruption which is widely recognized as a root cause behind the lack of implementation of legal regulations and also hinders potential investors from investments is also part of the study. All these factors motivate us to understand the role of legal factors in defining the magnitude of integration of each country, and how it derives the capital structure of operating firms. Considering these factors, the study of financial integration and capital structure of the firms was found to be an interesting topic for this research.

1.7   Scope of the study

The scope of this study revolves around the emerging economies and the way they behave according to trade-off and pecking order theory, especially after the markets are integrated as compared to developed economies. If the firm is internationalized i.e., the company is involved in foreign sales, it will help them to explore more opportunities in the foreign market and to get more funding options at a cheaper rate as compared to the domestic market.

If the credit market is integrated, more capital will flow into the domestic market which will result in firms taking more leverage at a reduced cost. As suggested by trade-off theory, the firm will try to adjust its optimal capital structure and will take benefit of the tax shield but it might ignite the agency conflict as the existing shareholders will not accept more leverage. If equity markets are integrated, the firms will reduce their leverage and issue more equity as the cost of equity would have reduced after-market integration. As per pecking order theory, the firm will take benefit of equity market integration, and its target debt ratio will reduce. The main purpose of these theories is to look at the optimal level of capital structure that can reduce the cost of financing. As per the suggested

literature, with internationalization or financial integration of either the credit market or equity market, firms can reduce their financing cost and can grow more rapidly. It is also suggested that the effect of market integration and openness is more in emerging economies as compared to developed ones.

1.8   Significance of the study

This research fills the gap by looking at different levels of integration and their impact on capital structure decisions for firms operating in emerging economies. The significance of this research can be seen from different perspectives. From an investor's point of view, integration helps in diversifying their portfolios as they can easily access the domestic and international markets, reducing their risk profile. From a firm's perspective, the integration will help increase of money supply in the market as more foreign investors will be investing. This increase in capital supply in the domestic market will reduce the risk for investors and will decrease their required returns. A reduction in the required returns of the investors will drop the cost of capital which will allow firms to revise their policies for debt and equity.

For academicians, a lot of previous research has been conducted on the determinants of capital structure while very few have highlighted the importance of integration and its impact on the leverage of the firm. So this research will open a new area of interest for the researchers. They can explore further levels of integration and its impact on the overall performance of the firm and the economy of the country. For the regulators, this research can help in understanding the importance of integration and the rules and regulations that can be levied on the economy to help the firms take benefit from this integration which will support the overall growth of the country. Moreover, protecting the rights of foreign investors will attract more international investment to the country which will also benefit the growth of capital markets.

1.9 Implications of the study

Our results suggest some useful implications for policymakers in designing an appropriate framework for the efficient functioning of financial markets in these emerging economies. Firstly, the policymakers should allow transparency in the financial markets with more credible financial institutions to implement the liberalization rules in their true spirit, to gain and maintain the attention of foreign investors as in developed economies. In particular, our results also imply that if a country has a strong rule of law and better protection rules and regulations for foreign investors, there are good opportunities for the firm in those countries to get cheaper financing sources as it attracts more portfolio investors. Mitton (2006) reports that firms that are open to foreign investors evidence higher growth, better profitability, more efficiency, and greater investment. However, it is pertinent to highlight here for the policymakers that these changes and reforms might not be easily acceptable to firms in emerging economies. That is because attracting investors and securing his investments comes with an extra cost. Moreover, entering another cultural domain is highly risky and investor needs additional compensation. Moreover, international listings for firms require mandatory disclosure requirements. So, there is a need for time to educate and train the organizations and the regulatory authorities and make them aware of the benefits that may arise with the integration of markets. This investment in training and awareness among the financial institutions will pay off in the future for these emerging countries.

Another useful implication of this research is that it will help the policymakers and decision-makers to understand the dynamic nature of a country's financial liberalization and to the extent it integrates that country with other markets. An important aspect of this implication is to understand the timings of integration to derive the maximum economic benefits attached to it, especially in the short term. In the long term, it's important that a country sustains its financial position and assures compliance with all the rules and

regulations to protect the investor's portfolio and build confidence for the countries interested in investing in your country. It is also important to assure the coherence of step-wise reforms taken by the regulators. However, the nature and timings of government interventions in the local financial markets and financial institutions should be highlighted to ensure the proper transparency and transfer of information to all those stakeholders who can benefit from these market reforms resulting from market integration.

CHAPTER 2: REVIEW OF RELATED LITERATURE

The globalization of financial markets has attracted a lot of interest for researchers in the last few years. The development of financial markets and their integration has given new insight into this topic. This chapter revolves around the main theme of financial integration and the relevant finance literature available in past research. Section-A explores those restrictions and controls that existed before the liberalization of the markets due to which the firms had limited financing options. It shows how the banking sector, stock markets, and government control policies drive the financial sector of a country and how the integration allows freedom to the participants of the financial sector. Section B discusses the importance of capital structure decisions and some internal and external factors that influences the financing choices of the firms. Section C provides a detailed overview of the factors that affect financial integration and the methodologies used in the past to measure integration. It further digs into the economic and non-economic factors that contribute to market integration. Section D proposes a complete framework that shows the relationship between the levels of financial integration and its impact on the cost of equity/debt and the firm's capital structure. Hence, the literature review not only highlights the previously conducted research but also provides evidence of the missing context related to our research questions. The last section develops hypothesis against the objectives of the study discussed in the last chapter.

2.1 Market Imperfections and Financial Liberalization

Most of the financial markets in emerging countries are under the influence of managed controls i.e., control on initial public offerings, limitation on foreign investors and foreign loans, directed or connected loans, control over banks, interest rates, and loan ceilings. However, during the last two decades, these controls have been relaxed by the openness of financial sectors, which has allowed the financial markets in these emerging

economies to integrate with the developed countries. To critically understand the impact of financial liberalization, there is a need to learn about market imperfections also called financial repression, and their impact on domestic financial sectors. This discussion will help us differentiate between financial liberalization and financial repression and its effect on micro and macro levels.

2.1.1 Financial Repression

Financial repression is a commonly used term that means the "effect of policies" instead of policies themselves. Financial repression occurs due to different policies which include the restriction on price and quantity imposed on the local financial sector which distracts the financial institutions and the investors (Giovannini *et al*., 2013). Moreover, government interference in the pricing and allocation of resources decreases financial deepening mainly by reducing real interest rates. Also, the restrictions are imposed on foreign capital flows by the government otherwise most of the regulations for the domestic financial sector could be bypassed through offshore financial transactions. Stiglitz (2000) supports the arguments of government interference in the financial markets of developing countries and proposes that "there exists a form of government interference that will improve the performance of the economy and will make the financial markets better". He further argues in favor of interest rate restrictions and against interest rate liberalization while concluding that financial liberalization increases the competition among the banks which reduces their profitability. This reduction in profits lowers the incentive for making good loans which increases the guard against risk. So, according to Stiglitz (1994), without strong restrictions, interest rate liberalization will surge more pressure on the banks to take risky loans. In addition, he also suggests that financial repression results in reducing the cost of equity capital due to which firms increase their equity.

Financial repression can also be explained from the perspective of public finance. According to their arguments, the government influences the financial system to smooth down the variations in the budgeted revenues. (Alm & Buckley 1998). Moreover, when the banks are imposed with higher reserve requirements by the government, this creates an artificial demand for government securities (Agenor & Haque 1996). Thus, in the short run, this high reserve requirement increases the government's fees while reducing the credit supply in the market. However, in the long-run, this financial repression transfers funds from the financial system to the borrowing sector for the public. Hence the policies of repression are directly concerned with the distortion in financial markets and the banking system, namely the high reserve requirements, controlled interest rates, directed policies, connected loans, and capital controls. The following section discusses the effects of distortions on the firm's financing decisions.

2.1.2 Banking Sector and Financial Intermediaries

An important feature in the financial sector of emerging markets is the control of the government over the banks (Fry 1997), which are considered one of the key institutions involved in the process of financial liberalization, and hence are the most affected by the financial repression. Previous literature suggests that state ownership in the banks allowed the state to favor selected industries in form of direct ownership and control over their financing decisions while providing them with directed policies and subsidized loans. For example, the agriculture, heavy industries, and small business sectors in Mexico, India, and Pakistan seemed to support this view before the liberalization (Levine & Zervos 1996). However, these subsidized loans were usually below the market rate, and banks did not consider the sectors which required lending on a priority basis while also ignoring the non-performance of sectors that were given subsidized loans by the state (Demetriades & Luintel 1997). This resulted in an imbalanced economy and many countries could not reach their desired growth level.

An alternative opinion also exists in the literature which suggests that state-own banks offer benefits to their supporters in form of employment, for those who have voted for the government, and provided political assistance and bribes. For instance, Caprio (1998) working in Indonesia, reported that state-owned banks served as a channel to transfer the funds of government oil revenues to politically connected firms under subsidized credit which resulted in higher growth and profitability of these politically connected firms while other sectors were still struggling with their finances. The same scenarios were experienced in Malaysia and China where there were credit allocation restrictions like lending to natives only by the local banks. (Tan *et al*., 2021)

In South Korea before liberalization, all the strategies were to promote the large-scale chemical industry, as all the funds were channeled to these industries, and the government allowed special subsidized rates and tax benefits for these exporters. However, this directed support resulted in the decline of other manufacturing industries which were significant producers and exporters of necessities. Subsequently, due to this favored allocation of resources, there was a widespread in priority and non-priority loans because of which there was over-investment in the targeted sectors as only the supply side of the funds was considered by the banks ignoring the demand side forecast. Though there was rapid industrialization growth in the country, the economy suffered a major disturbance in the market structure and wrong allocation of resources (Kwon 2004).

Xu & Pal (2022), explores India's manufacturing sector after the liberalization. Because India is a banking-oriented market that liberalized in the early 1990s, the study using a dynamic panel model reports that financial liberalization has a strong impact on the factor of production of private sector and foreign owned firms, while public sector firms are not much affected by these changes. The results also concluded that the need to have an improved banking system is greater for the firms in the private sector because the public

firms are mostly state-owned firms that get access to state loans easily. However, private firms depend more on the equity markets for their funding requirement.

Considering these conflicting cases from different emerging markets, with similar results of repression and restrictions on financial intermediaries indicate that some industries of the economy get over-funded by the banking sectors while others have to struggle for the availability of cheaper funds. Moreover, as most of the emerging countries opened their economies in the late 90s, it would be interesting to explore the impact of this liberalization on the financing decisions of the firms operating in this region and how much these firms are successful in obtaining loans from the integrated markets.

2.1.3   Foreign bank Entry and Competition

Till the late 90s, most of the banks in the sample countries were owned or controlled by the government to regulate the money supply as per the policies which could favor the state. Due to this, there were strict restrictions on the entry of foreign banks. This led to a situation where the banking industry enjoyed its monopoly, as most of the bank's assets were held by the state (Pill & Pradhan 1997). A study conducted by Claessens *et al.,* (2001) on 80 countries across the world, reported that the average presence of foreign banks in these countries ranged from the lowest at 0 in India to the highest at 0.35 in Indonesia from the years 1988 – to 1998. Most of these countries also lacked private banks and other credit institutions to help the corporations in their financing options. Even, in some Asian countries, some commercial banks were set up by huge business groups to finance their business operations (Lauridsen 1998).

As the government seems to have controlled the banks and their incomes in the past, there was no competition within the banks with respect to interest rates. When the ceilings were imposed on these banks for the lending rates, they could not charge market interest rates which resulted in a decrease in spreads within the banking industry. This situation

according to the World Bank (1990) led to capital rationing as the supply of credit was less than the demand. To cater to this demand and to speed up economic growth, other credit institutions were established in the countries with the support of the government. This development worked as a source of subsidized credit as it created competition in the industry and also helped in developing credit lines with foreign banks (Gopalan & Sasidharan 2020). This was the first step towards liberalized economies where foreign banks could lend credit supply across borders.

2.1.4   Capital Controls and Unattractive Capital markets

Strong restrictions on capital controls were considered one of the main reasons for the lack of development in capital markets in emerging economies (Haque & Montiel 1991). With other restrictions, one was mainly to limit foreign and portfolio investments. The literature suggests that capital markets are controlled due to the following reasons: i) this limitation helps in managing the balance of payments crises for a country, and ii) these control policies ensure that the domestic savings are properly channeled to finance domestic investment instead of investing in foreign assets; iii) these control limits the external ownership in internal factor of productions. These restrictions created severe capital mobility issues across the countries and the governments have to rely on domestic debts to meet their deficits.

Earlier, the stock markets of most emerging countries were closed for any foreign portfolio investment and there was no freedom to move the investments across the countries at any time. Moreover, the opening of capital accounts in other countries using country funds was not accepted by the governments, which prevented the local market integration with the other global markets and wiped out the opportunities like a reduction in the cost of capital for the local firms. In today's capital markets, higher risk premiums are related to more volatility in equity returns while more volatility results in a higher cost

of capital (Bekaert & Harvey, 1995). In the past, there was no consideration for the opportunities arising from taking a risk by the governments for local and foreign portfolio investors, because most of the capital would flow towards the assets with higher market returns.

Capital markets also became less attractive due to the following reasons. Firstly, in the past, family-owned businesses were reluctant to go public and share their ownership with outsiders. They were also afraid of getting regulated as the governments restricted the prices of the initial public offering and the price movements in the stock market were also controlled by the state. There were limitations on the maturity period of debt while only the large firms were allowed to get listed in the stock market which created severe liquidity and financing issues (Hasnan 2000). Most of the emerging markets including India, Indonesia, and Korea were under these constraints as their stock markets were not providing them with long term finances. The state used to allow selected firms to go public while fulfilling some strict regulatory requirements including the voting rights and limits of maximum share to be held by an individual. Even the issuance of bonds was limited by the governments in some of the Asian markets.

Another reason that affected the stock market investment was the high capital gain tax rates. For investors, capital gains are considered the most attractive feature that saves them from the potential inflation effects. But in most of the emerging countries, there were higher capital gains tax rates which had a negative impact on the investments and demand for new shares (Glen & Pinto 1995). This made debt more attractive for the firms instead of equity financing. Also, the difference between taxes paid on capital gains and debt should make debt relatively more attractive for the firms considering the cost of investment.

When equity finance becomes less attractive for the firms, the literature and the theories suggest that debt financing takes over due to the advantage of tax benefits (Booth *et al.*, 2001). In most of the countries where the equity markets were not well developed and there was restricted access to bank loans by the state, many firms used short-term debt to finance their expenditures and working capital. This was because the stock markets became less attractive for investors due to weak corporate governance issues and tax requirements while the lack of creditor protection leads to smaller debt markets. This resulted in a high level of uncertainty and information asymmetry for potential investors and entrepreneurs. Hence, the stock markets in emerging countries remain small, unpredictable, and less liquid with the limited number of actively trading firms while the debt markets through attractive for investors were still not protective of the funds of creditors. This scenario ignited the situation where the state was not supportive enough to deal with the growing needs of firms' financing, so the firms have to look over to other developed countries for cheaper sources of finances available.

2.1.5 Financial Constraints Perspective

An intense discussion has taken place in previous years about the extent to which the firms are financial constraints. Usually, the financial constraints of the firms can be seen from two different perspectives: "Internal" constraints (i.e., availability of internal funds)and "external" constraints (i.e., access to external finance). Internal constraints are measured as the cash flow generation of the company through its internal operations whileexternal constraints are financing constraints due to which the company has to reject a number of projects suffering from limited financial resources. According to Leland and Pyle (1977), a firm with greater internal cash flows will find it easier to obtain external finance as it will be perceived as less risky by the creditors. High cash flows are evidencethat the firm is on the growth path and the creditor's loans are secure. Moreover, smaller and younger firms have more financial constraints as they are

susceptible to more information asymmetry issues. With all these constraints in place, does financial liberalization work as a saving jacket for firms looking to finance their operations through external funds.

Entry of foreign banks also works as a financial constraint in many emerging countries. When a foreign bank enters the local market, it increases competition, improves efficiency, and removes financial barriers for the firms in providing better opportunities to finance their operations. Claessens *et al*., (2001) examine how the entry of foreign banks affects the domestic banking system in a panel of 7000 commercial banks in 80 countries over the period of 1988 – 1995. They report that the existence of foreign banks reduces the profitability and non-interest income of domestic banks. The results suggest that the domestic banking market becomes more competitive and the local banks are forced to work more efficiently due to the entry of foreign banks. A similar work by Xu & Pal (2022) on India, a banking oriented market liberalized in early 1990's, reports that financial liberalization removes the financial constraints for the firms especially looking for external financing. His work suggests that improvement in banking system due to entry of foreign banks and removal of financial constraints is more favorable to private and foreign owned firms as the public firms can fulfill their funding requirements through state interventions.

Using a huge panel of 60000 firm observations for listed and unlisted firms in European countries, Giannetti & Ongena's (2009) result report that the entry of foreign banks improves foreign lending and firms' performance. Moreover this foreign lending improves firm's sales, assets, and the use of financial debt. However, according to the authors, this improvement is more evident in small firms. Gupta & Yuan (2009) using the industry-level data for 31 emerging economies, find that the industries which are dependent on external factors grow faster after market liberalization. This is because liberalization removes financial constraints from the equity and debt markets and there

exist more opportunities to grow faster.

Wu et al., (2017) working on the Taiwan market which liberalized in 2003, concludes that foreign capital investments have a strong impact on financial markets. The focus of this study was not to measure the impact on any specific market or instruments, however, the results report that liberalization in Taiwan plays an important role in overall lifting the financial constraints of the economy by appreciation of local currency, development of stock markets, improvement in real estate and improvement in bond prices. Moreover, this small economy also experienced a boost in investments, enhanced liquidity, and better availability of information in the financial markets which was not the case before the financial crises in 1997.

Wang (2022) paper gives a new insight into the effects of financial institutions on the economy. His work investigates the cash flow sensitivity required for investments after financial liberalization. Taking a sample of 69 developed and emerging economies over the period of twenty-five years, 1990 – 2019, the results provide strong evidence to support their hypothesis that firms in a country with a more open domestic financial market are less affected by the amount of cash they require to make investment decisions. In other words, these companies are not dependent on the current level of cash flows to determine their investment choices. This lower sensitivity of cash flows is because of the reduction in financial barriers and promotion of external funds that are a result of financial integration. For further investigation, the author divided the sample into high and low income economies. The findings indicate that in high-income economies, the increase in financial integration tends to boost investment for firms with higher cash flows. However, on the contrary, in low-income economies, integration has a stronger impact on companies with lower cash flows which leads to an increase in investments. The results of this study imply that economies should encourage market reforms and remove restrictions in the domestic markets to promote external finance

and investments. Moreover, the elimination of distortions in the financial system seems to have a much positive effect, as it reduces financial constraints and promotes access to external funds that eventually facilitate your investment projects and economic growth.

Hence, it can be concluded that most of the firms, especially in emerging markets, do have the potential to grow further but the only hurdle they have to face is the lack of financial resources. The firms in developed economies have the advantage of limited intervention by the state and a balanced distribution of funds throughout the sectors which gives them the opportunity to grow beyond their potential. Therefore, this financial liberalization can work as a tool to facilitate the country and its firms to explore financing options. As financial integration works as a removal of barriers, this also works as our motivation for this thesis which gave us the insight to explore the impact of the integration of emerging markets on the financing decisions of its firms.

2.2   Capital Structure and its determinants

A firm needs finance to support its operations. To raise finance, firms can utilize their retained earnings i.e. internal financing or can take loans and issue shares i.e., external financing. A capital structure can be defined as a mixture of debt and equity used by an organization to finance its running operations. The first paper which builds the foundation of capital structure theory was given by Modigliani & Miller (1958). It refers to the irrelevance theory saying that the capital structure of the firm is irrelevant under certain assumptions. According to this theory, the value of a company doesn't depend upon its capital structure as long as the bankruptcy cost, corporate taxation, and market imperfections do not exist. Hence, the financing choice of a company, either equity or debt, makes no difference in the firm's value. However, in reality, the capital markets are not perfect and the financing choices of a firm are important for its capital structure. Considering this as the baseline theory in the literature, three main theories of the capital

structure were further proposed in the literature; trade-off theory, pecking order theory, and agency cost theory. Each of these theories gives an insight into the choices for debt and equity. The past literature on the capital structure has explained the implication of these theories in different countries and markets and their results suggest that the markets differ due to their economic and institutional systems. This makes it difficult to reach a consensus on the theory which has a strong impact on capital structure decisions. Some of the work in the past is reported below as a literature review.

2.2.1 Empirical Literature on Capital Structure

The previous literature has discussed many determining factors of capital structure for both developed and developing countries. The empirical factors that affect the choice of debt-equity in the firm are based on the attributes that are proposed by different theories of capital structure. Most of the studies on developed countries have analyzed the determinants of capital structure both within and across the country. Titman & Wessels (1998) examine the factors that have an impact on the financing decisions of U.S. firms. They use firm-level factors like asset tangibility, growth non-debt tax shield, research and development, size, and profitability. Their results show that size is positively related to firm leverage while research and development and profitability are negatively related. All other variables were not significant with leverage. They conclude that the negative relation between profitability and leverage is due to higher transaction costs in the U.S. The findings are consistent with the pecking order theory as the firms in the U.S. prefer internal to external financing. Rajan & Zingales (1995), exploring the across countries determinants of capital structure in G-7 countries consider four factors: tangibility of assets, firm size, market-to-book ratio, and profitability. They report a positive relationship between tangibility and size with leverage while a negative association with profitability and market-to-book ratio.

While, most of the previous studies (Wang 2022; Wang *et al.,* 2020) have focused on developed countries due to similarity in their institutional structure and characteristics, research on the factors that determine the financing pattern of emerging countries is still scant. Booth *et al*., (2001) work is one of the earliest studies focusing on emerging markets He examines the financing decisions of firms across 10 emerging countries for ten years i.e. 1980 – 1990. The countries include India, Pakistan, Thailand, Malaysia, Turkey, Zimbabwe, Mexico, Brazil, Jordan, and Korea. The variables chosen were based on the theoretical models of capital structure. Their results show that only size has a significant effect on firms' leverage in developing countries while tax shield, asset tangibility, return on assets, and profitability are negatively significant. However, market-to-book and business risks were not found to be significant. He further concluded that the factors which affect the financing behavior of developed countries are the same as in developing countries, despite having a different institutional structure. However, institutional factors are supposed to influence capital structure decisions differently. For example, Skalicka *et al*., (2017) find that the legal structure and taxation policies of the country have a substantial impact on the equity financing of firm capital in Czech Republic companies. Hence, the financing decisions vary according to the boundaries and structures.

A set of literature focuses on the debt maturity of firms and their relationship with country-level factors. The results in these studies differ with country sample and time periods. Using the data for 20 years and considering a sample of 30 developed and developing countries, Demirguc-Kunt & Maksimovic (1998) find that an efficient legal system and a liquid stock market results in longer maturity for large firms. For small firms, a well-organized banking system results in longer debt maturity, while legal efficiency and stock market liquidity are not significant. Moreover, they also concluded that the degree of creditor protection in case of bankruptcy is not related to debt maturity.

Giannetti et al., (2002), in contrast, finds a positive relation between creditor protection in bankruptcy and debt maturity in the sample of European un-listed firms. The same results were predicted by Qian & Strahan (2007), using a cross-country comparison of loan contracts including global loan issues. They also conclude that countries with strong creditor protection rights have longer debt maturities. Moreover, countries following Common law have stronger protection rights for foreign investors.

Chen *et al.,* (2013) work on China reports that Chinese firms differ from the firms in developed countries based on their choice of long-term and short-term financing. He further suggests that Chinese firms prefer short-term financing over long term, hence the theories of capital structure in China may not predict the true financing patterns. However, despite having a different institutional setup, some of the factors are found to be highly significant in explaining the capital structure choices in China, as in the developed countries.

Fan *et al.,* (2012) investigating the determinants of capital financing in 39 countries concludes that country factors are as important as firm factors in determining the financing patterns of the countries. Moreover, they also highlight the importance of country-level characteristics having an impact on capital structure decisions. Their findings are in line with Rajan & Zingales (1995) and Booth *et al*., (2001) regarding the impact of firm-level factors on the leverage and debt maturity of firms across the countries. In addition, their results also suggest that countries with high corruption levels have high debt ratios, but with lower maturity periods. They also find that countries with a legal system based on common law have low leverage with longer debt maturity.

Previous literature on capital structure also suggests that deregulating the banking system of a country also impacts the economic growth and credit availability of the firms. For instance in the United States., the barriers to interstate banking and restriction on

banking branches were relaxed in the 1980s, which leads to accelerated economic growth (Jayaratne & Strahen 1996), an increase in the sensitivity of bank lending decisions linked to firm performance (Stiroh & Strahan 2003) and improved funds availability for all firms (Cetorelli & Strahan 2006). These results on the U.S. market are supported by other studies working on developed countries. Exploring the Italy market, Guiso *et al*., (2006) concludes that banking deregulation leads to improve credit availability among firms and reduces interest rate spreads. This literature on banking deregulations coincides with our work in a way that as the barriers to the financial system of a country are removed, foreign banks will have an opportunity to step into the market where the firms are looking for funding options. This integration of the market will result in competition among the fund providers and will result in the availability of low-cost loans for the firms as proposed by our hypothesis.

Some of the literature focuses on the effect of financial integration on the capital structure and economic growth of the country but the findings are generally mixed. Kose *et al*., (2006) and Henry (2000) report that when a large sample of countries are studied together, the countries which liberalize their capital markets faster and are more financially integrated with the world, do not exhibit faster growth. On the contrary, the literature that studies the impact of the openness of the stock market to foreign investors reports substantial overall growth (Bekaert *et al.,* 2005) improved equity returns (Henry 2000), better investment opportunities (Alfaro *et al*., 2007) and reduction in the cost of capital for firms (Lucey & Zhang 2011).

Many previous pieces of research have studied the changes in the firm's financing behavior after the liberalization of home country capital markets. Harris *et al*., (1994) working on the Indonesian market finds that financial constraints for the firms decreased after liberalization. On the other hand, Haramillo *et al.,* (1996) fail to find any evidence

that financial liberalization eases the financing constraints in Ecuador. Moreover, the author also suggests that the effect of liberalization is slow in Ecuador as compared to other countries, and this liberalization only affects selected firms. Gelos & Werner (2002) also report that financial constraints are only eased for small firms in Mexico after liberalization while large firms benefit less as they already have better access to credit. Laeven (2003) study a panel of firms in 13 countries and finds that liberalization removes the financial constraints for small firms while increasing the constraints for large firms which according to the author is due to the decrease in access to direct credit after liberalization. Analyzing more than 1000 Indian manufacturing firms, Ghosh (2006) findings suggest that small firms get more benefits from liberalization while large firms lose access to direct credit as the liberalization exceeds.

Agca *et al*., (2007) selected a sample of both developed and emerging markets and indicates that integration with the global credit markets increases the leverage of the firms. However, the debt maturity differs, which is longer-term in developed economies while reducing it to the short term for emerging countries. The author also reports that weak institutional and financial systems in emerging economies discourage firms to borrow long-term loans.

Schmukler & Vesperoni (2006) examine the effect of financial reforms on a firm's leverage and debt maturity. Considering a sample of seven emerging economies over the period of twenty years i.e. 1980 – 1998, the author uses three different proxies (dummy variables) to measure the financial reforms – the first proxy represents whether foreign investors are allowed to enter the local financial markets (Bekaert & Harvey 2000); the second represents the openness of domestic financial sector; and the third shows the reforms in control of foreign capital flows (Kaminsky & Schmukler 2002). The two important findings of this paper are: (i) financial liberalization doesn't have a significant

impact on leverage and debt maturity of the firms that actively participate in global markets; (ii) liberalization results in lower leverage and shorter debt maturity in the firms that do not have easy access to the financial global markets. The authors conclude that the impact of financial reforms is distorted in emerging markets, as the firms which are unable to integrate with the world market fail to obtain long term loans. However, this paper was criticized by the authors for not controlling for the macroeconomic variables in the study which could have resulted in biased results.

Lucey & Zhang (2011) work on emerging markets reports that credit market integration facilitates the firms with long-term loans while the maturity of the loan is reduced if the country's legal systems have loose controls over foreign investors' protection rights. Moreover, equity market integration reduces the cost of equity and allows firms to increase their finances through equity. However, this phenomenon is more pronounced in high growth and large firms.

Fan *et al*., (2012) explore 39 developed and developing countries using 12 institutional variables to determine the capital structure and debt maturity choices of the firms. They find that the firm uses more debt if they find to have more tax benefit from the leverage, which is in contrast to Booth *et al.,* (2001) findings who could not find any significant relationship between debt ratio and tax policy. In addition to the tax benefit, they also find that the strength of the legal system of the country affects the firm capital structure decisions. Weak laws with high corruption levels are associated with more debt and short maturities.

Gonenc & de Haan (2014) work is one of the most relevant works conducted in the field of integration. Using the data of 31 developing countries and 18000 firm/year observations, the author investigated the importance of firm internationalization in defining the capital structure decisions of the firms. The author concludes that firms with

better growth opportunities are relatively able to secure more loans than compared to low growth and small firms. His results also suggest that developed economies can mitigate the effect of information asymmetry which decreases the agency of debt for firms with a higher level of integration.

Among the researchers who have investigated the determinants of capital structure in the different regions, Khaki & Akin (2020) is the one who explores the GCC region for the period 2009 -2017. Considering the non-financial firms with both the country and regional level variables, the author finds that age, profitability, liquidity, and state ownership are negatively affecting the firm's leverage while operating risk has a positive relation with leverage. Their results suggest that the GCC countries have unique institutional factors that distinguish them from the other regions. Moreover, the findings also conclude that this region is affected by the same factors as in other emerging markets.

Many theories in the past have been tested from time to time to explain corporate financing behavior. In this context, the trade-off theory is the first one in this direction which is still considered the mainstream theory explaining the capital structure pattern. It suggests an optimal mix of debt and equity for the firms to achieve their maximum value; while considering the tax shield benefit and the cost of financial distress, together with agency cost and moral hazard (Myres 1984). In this context, Merlo & Wamser (2014) suggest that the firms should first use the right model to evaluate their investment risk, as it will help them to raise the required capital at favorable terms, hence reaching an optimal capital structure. Machek & Kubicek (2018) also report their findings in favor of the trade-off theory in Czech Republic companies. They report that agency cost minimizes the ownership structure and firm performance but to a certain extent. They conclude that a firm must trade off the effectiveness of ownership structure against the organizational efficiency to reach the optimal capital structure.

Although the classic argument to support the trade-off theory is based on tax shield benefit and agency theory, however, there is good evidence available in favor of the pecking order theory which is based on asymmetric information issues. Stryckova, (2017) did not find any evidence of trade-off theory in the comparative global study of different countries, looking for tax-based target capital structure. However, the evidence was there in support of bankruptcy costs. In the same context, Booth *et al*. (2001) work on emerging countries, lends full support to the existence of asymmetry information, and hence rest their arguments in favor of the pecking order theory. Frank & Goyal (2009) report that the pecking order theory is not acceptable in its classical form as it encounters many other problems while explaining the financing patterns of developing countries. Stryckova (2019) work provides substantial support for the pecking order theory while concluding that earnings volatility and retained earnings are the major factors that define the firm debt policy. Chen *et al*., (2013) demonstrate that due to differences in institutional factors like ownership structure and legal constraints, the firms in China follow a different pecking order i.e. internal earnings, equity, and debt as a last option.

Another study by Drobetz & Wanzenried (2006) on examining the determinants of capital structuring used panel data of 90 Swiss firms over the period of 10 years i.e. 1991 – 2001. The hypothesis in this study proposes that the adjustment cost may partially impact the decisions to reach the optimal capital structure. However, the results show that adjustment cost does not hinder the adjustment cost of financing as it is not too high. The two-step GMM estimator was applied to estimate the explanatory variables. The results also suggest that macroeconomic variables have a positive impact on the speed of adjustment to reach the optimal level.

A study by Silva & Rego (2009) explores the non-financial firms of the Portuguese market for the period of 15 years i.e. 1991 – 2004. The aim of the study is to investigate

the adjustment speed of debt toward the target capital structure. More than 40 firms from the public and private sectors are investigated and reported that firm-level variables are the major influencers in determining the capital structure. Moreover, size, tangibility, and profitability are the main determinants as predicted by the trade-off theory. The results indicate the tangibility of assets and their size affects the adjustment speed to an optimal level. However, profitability has a negative influence on firm financing decisions.

Getzmann *et al.*, (2014) examines the financing behavior of 1239 firms in eleven Asian countries for 12 years. Their results indicate that Asian firms adjust their capital structure toward the optimal level and the trade-off theory is the best theory to forecast decisions. They conclude that profitability has a negative impact on financing decisions, while the tangibility of assets contributes positivity in achieving optimal levels. Moreover, the industry-based factors in Asian markets also have a significant impact on the firm financing patterns.

Vo (2017) explores the Vietnamese firms, using a sample of 228 firms for the period of 5 years i.e. 2010 – 2014. The study focuses on investigating the determinants and the adjustment speed of capital in the Vietnam market. The results suggest that the pecking order theory holds the major market decision. They conclude that liquidity and profitability are negatively related to firms' leverage, while growth and size show a positive effect on the target debt ratio.

Although the trade-off theory still dominates the theories of capital structure, however, it is under continuous criticism due to its failure in explaining the financing behavior of the firms. This has led to many alternative theories which include – the pecking order theory, signaling theory, and the market timings theory. However, the previous literature has shown many conflicting results on these theories based on markets, regions, countries,

and across firms. Hence, the theory which works as a main stream theory and gives out the optimal results is still inconclusive.

2.2.2   Firm Characteristics and Capital Structure

In the extensive literature available, it is widely accepted that the capital structure is dependent on firm-specific factors (Sheikh & Wang 2010; Chang *et al*., 2014) which include size, growth opportunity, profitability, asset tangibility, non-debt tax shield, and liquidity, etc. According to Kayo & Kimura (2011), almost 78% of the firm's debt is dependent on the firm's characteristics while the remaining depends on institutional and macro-level factors. In most of the papers, the authors have commonly used these firm-level variables to study the impact on financing decisions. However, someothers have also used other factors which include business risk (Khaki & Akin (2020), free cash flow (Khan *et al.,* 2014), foreign sales (Lindner *et al.,* 2018) and financial liberalization (Wang 2022) to predict the firm financing patterns.

Profitability:

Profitability is an important proxy that dominates all three traditional theories of capital structure. Chen (2011) indicates that both profitability and growth are important factors that influence the firm financing decisions. Their results signify a negative relation between profitability and leverage as predicted by the pecking order theory. This shows that the more profitable firms have more internal sources to finance their investments hence reducing external finance consumption. The rationale behind the pecking order theory is the cost attached to the sources of finance. So, as internal financing comes with the cheapest sources, the firms with more profits would prefer internal sources and then will move to external financing if required (Sheikh and Wang, 2010). Hence successful companies use their retained earnings to finance new projects instead of using external

sources. Moreover, the use of equity and debt as external financing dilutes the potential ownership and control over investors. This suggests that firms will preferably rely on internal sources and once they are exhausted will move to debt capital before relying on equity (Danso & Adomako 2014).

However, the trade-off and agency theory suggest a positive relationship with profitability. They assume that high profitability is attached to more debt financing due to the benefit of a tax shield on interest payments (Schoubben & Van Hulle 2004). Furthermore, profitable firms promote more debt financing as they are less likely to go bankrupt (Barros *et al*., 2007). The empirical evidence on the relationship between profitability and leverage is still unclear. On one hand, as several studies appear to be consistent with the pecking order theory, some of them also indicate a positive relationship. However, some of the studies also indicate a non-significant role of profitability in determining the debt-equity choices of the company (Khémiri & Noubbigh (2021).

Tangibility:

Firms' asset tangibility also plays an important role in capital structure decisions. This is because firms with more tangible assets have the probability to pledge more assets as collateral against the issuance of debt. The trade-off theory suggests a positive relation between tangibility and firms' debts as in the context of creditors, the availability of assets will reduce the risk of default as these assets work as collateral against the debt. Moreover, the higher tangibility reduces the agency cost of debt due to high liquidation value which will work to reduce the bankruptcy cost.

However, the pecking order theory predicts an opposite relation between tangibility and leverage. This is because firms holding more physical assets will have less

information asymmetric problems and will have to issue less debt (Schoubben & Van Hulle 2004). Myers and Majluf (1984) assume that management may reduce the cost of debt by issuing secured loans. This means that firms with more assets that can be used as collateral will be able to take more debts (Barros *et al*., 2007). Khémiri-, & Noubbigh's (2021) work on African countries confirms a positive relation of tangibility with firms' leverage. Their results suggest that a firm with more physical assets can borrow at lower interest rates by using its assets as collateral.

On the contrary, the higher tangibility will result in lesser agency problems as the management will not be able to misuse their powers (Schoubben & Van Hulle 2004). Due to this the agency theory predicted a negative hypothesis between tangibility and firm leverage. Sheikh & Wang (2010) results are consistent with the agency theory which indicates that in Pakistan firms, the tangibility of assets is negatively significant with firm leverage. However, most of the studies in the past are consistent with the pecking order and trade-off theory which predicts a positive impact of tangibility on the firm capital structure decisions.

Size:

According to trade-off theory, the larger companies should be able to borrow more as they have a more diversified business which reduces their chances of bankruptcy. However, the company smaller in size should be operating at low leverage as their probability to liquidate is higher in case of financial distress. Moreover, the agency cost in larger firms is less as compared to smaller firms. This is due to the less volatility in cash flows and easy access to capital markets which reduces the monitoring cost of the firms. Hence, this theory proposes a positive relationship between firm size and debt financing.

In contrast to trade-off theory, the pecking order theory predicts a negative relation between firm size and leverage. This is because of the information asymmetric issues which are less obvious in large firms (Sheikh & Wang 2010). Moreover, equity financing is relatively more costly for small firms than the large firms. So, rationally the literature suggests that small firms usually stick with short term borrowings instead of acquiring long term loans (Schmukler & Vesperoni 2006).

Growth:

In the case of firms with growth opportunities, the trade-off theory predicts a negative relationship between growth and leverage. The growth firms tend to acquire fewer loans due to the increased possibility of bankruptcy costs. Even though the growth firms will add to the existing value but it doesn't have the capacity to pledge as collateral because of intangibility issues. The same is the case with agency theory which proposes a negative relationship between growth and leverage. The reason behind this is that growth firms require large cash flows. If they increase the use of debt in their capital structure, they will hamper their future projects because of the pressure of additional cash flows which will be used to pay off the debt service. Moreover, the growth also serves as a quality signal, thus the signaling theory proposes negative relation between growth and debt financing. On the contrary, the pecking order theory is the one which suggests that growth companies will probably be using debt financing as the first option as compared to equity (Schounnen & Van Hulle 2004).

The results of Lucey & Zhang (2011), and Fan *et al*., (2012) indicate a positive impact of growth on leverage. This is in contradiction with trade-off and agency cost theory, while consistent with pecking order theory. However, Huang *et al*., (2016) working on the impact of CEOs on debt maturity, report that higher growth firms tend to avail short

term debt. In the same context, some of the authors find an insignificant relationship between firms with growth opportunities and their leverage (Jahanzeb *et al*., 2015).

Non-Debt Tax Shield (NDTS):

The trade-off theory is the most prominent theory that discusses the importance of tax benefits when the firm finances its operation by debt capital. According to this theory, the non-debt tax shield is negatively correlated to firm leverage. Moreover, the large firms with higher tax-shield will be using lesser debts due to the lower advantage of using debt. Previous literature has used different proxies to measure this variable. Ahsan *et al* (2022) and Khan *et al*., (2014) define a non-debt tax shield as the annual depreciation expense over total assets. While, Jahanzeb *et al*., (2015) use the earnings before interest and taxes to book the value of assets as a proxy to measure non-debt tax shield. Some have also used a ratio of tax expense to profit before taxes as their measure.

According to the review of Khan *et al*., (2014), many empirical studies have shown a negative correlation between NDTS and leverage. However, some studies have shown an insignificant relation whereas some researchers have even witnessed a positive relationship in some European countries.

Conclusion:

Many empirical studies in the past have examined the factors that may help in determining the true capital structure of the firms following traditional theories. However, all these studies indicate mixed results and the researchers cannot still identify the best theory which can help in explaining the capital structure choices. For that reason, it is recommended that future studies should add potential variables that may influence the firm's financing choices.

2.3   Review on Financial Integration

Financial integration opens up the economy to global markets. The integration theory suggests a number of benefits arising from financial integration, two prominent being risk-sharing and availability of extra funds to local markets. When an economy is segmented from global markets, the local investor bears all the risk. When the economy is integrated with the global markets, the foreign investor invests in the local market while, the local investor can invest abroad, hence sharing the risk by diversification (Obstfeld 1992). This availability of extra funds allows the local firms to accept the projects which were rejected initially due to lack of financing. Thus, financial openness improves the availability of capital and reduces risk, which in turn reduces the financing cost for local firms (Stulz 2005).

Earlier studies divide integration into two different domains: the first is known as internal integration which comes with foreign sales, also known as internationalization, while the second is recognized as external integration, i.e., integration of a country's equity and credit markets with other countries. Good literature is available that documents the impact of integration on various aspects of corporate firms as like decrease in the cost of capital (Henry 2000; Bekaert & Harvey 2000), firm's growth (Mishkin 2007; Mougani 2012), and private investments (Henry 2007).

Some others have highlighted the effect of integration on the financing structure of corporate firms. Mansi & Reeb (2002) provide evidence that internationalization is associated with the low cost of credit. Moreover, MNCs at a low level of internationalization use low debt in their capital structure while the debt increases as international activity increases. Using same level of integration, Hour & Dincergok (2021) report that firms with international activities are more likely to raise more debt as compared to local firms. Moreover, firms which have presence in more than one

country tend to employ more debts as they can have access to low cost finances in these global markets.

Liberalization also affects the maturity structure of the firm. Schmukler & Vesperoni (2006) shows that globalization affects the debt maturity in emerging economies. When firms have access to international markets, they increase their long-term debt with extended maturity. However, in emerging economies, debt maturity decreases due to information asymmetry for the creditors. Atawnah et al., (2023) exploring foreign competition in emerging markets, finds a strong positive association among firms with higher information asymmetry and lack of audit by the institutions with its short-term debt. This shows that integration also affects the debt maturity of the firms in emerging markets as the lenders are not secure to lend for long term due to the weak financial structure of the country.

Giannetti & Ongena (2009) working on a panel of 60000 firm observations in European countries concluded that lending by foreign banks enhances the debt capacity of high-growth firms while small firms are not much affected by foreign integration. Moreover, firms operating in markets with more credit market integration have more loans with less maturity, while equity market integration results in less leverage. Moreover, the literature also reports that country characteristics like legal laws, regions, and regulations for foreign investors does matter for an investor to take benefit from integrated markets (Lucey & Zhang 2011). All these studies provide a convincing argument that market integration helps firms in redefining their capital structure while also considering the micro and macro- level characteristics of the country.

2.3.1   Internationalization and Capital structure

According to the pecking order hypothesis, an increase in a firm's level of internationalization decreases its level of debt. More internationalized firms are more

diversified having more operational divisions across different countries. This helps in developing the internal capital markets hence reducing the problem of asymmetric information and providing the firms with low-cost finance as compared to external financing. So, the pecking order theory expects the relationship between internationalization and debt to be negative.

As per the trade-off theory, the capital structure of the firms is measured by the agency cost of debt and its tax benefit, considering the bankruptcy cost. Investors of firms which are geographically dispersed will have problems getting the required information hence increasing the monitoring cost. On the contrary, for the creditors, there is a risk of misuse of funds by the managers (Chen *et al.*, 1997). Due to this, the creditors will demand much higher compensation in the form of high interest, hence restricting the firms to keep a low profile of debt in their capital structure. The benefit of tax on debt suggests a positive relation between internationalization and the level of debt as long as the marginal effect of the tax is more than the marginal cost of financial distress. When the firm internationalizes, it may expand by opening new subsidiaries in other countries having better interest rates and tax brackets hence allowingthe firm to optimize its tax benefit geographically. Moreover, expanding geographically would diversify the business risk of the firms while reducing the chances of financial distress (Chen *et al.*, 1997). So theoretically, when firms internationalize, they can call upon more debt.

Previous studies investigating the relationship between the internationalization of the firm and its impact on leverage find that multinational firms (MNCs) are using less debt than domestic firms (Burgman 1996). This is due to the high agency cost of debt because of which the companies have to put restrictions on their leverage. However, Mansi & Reeb (2002) reported that internationalization and the level of debt have a consistent relationship i.e., with a low level of internationalization, firms maintain low debt while

with a higher level of internationalization, firms keep high debts. Mitto & Zhang (2008) working on Canadian multinational firms concluded that the firms having access to the international credit market i.e., bond market maintains a high level of debt to cushion their expanding growthlevels.

Khurana *et al*., (2006) and Gonenc & de Haan (2014) working on developed economies concluded that the level of foreign sales and the firm debt structure depends on both the country-developed factors and the firm growth opportunities. These developed countries will have higher international activity with relatively more debts if the home country markets are more developed. They also concluded that the problem of asymmetric information is less in emerging countries and the firms from these countries with more foreign sales show more growth as they can have access to low-cost debt.

As integration also works in the form of internationalization, multinational firms are the main beneficiary of this level of integration. However, unlike domestic firms, the MNCs have to deal with the monetary policy of the banks, political risk, exchange rate risk, and interest rates in the domestic market. Hence, MNCs have to be more vigilant in deciding their financing decisions. Exploring the fact, Duran & Stephan (2020) examine the impact of internationalization on the capital structure of the firms operating in five countries of Latin America. The initial results indicate that there is no difference in the capital structure policy of both the domestic and MNCs. However, further investigation suggests that before the financial crises, the firms with foreign activity were holding lower levels of debt. This supports the hypothesis that MNCs are exposed to higher levels of political and exchange rate risk that leads to higher costs of debt. Moreover, the results show a significant increase in the level of debt of Latin American MNCs after the financial crisis. This is because these firms can get access to low-cost financing globally which domestic firms cannot access, which results in a higher level

of debt. The results also suggest a positive relationship between leverage and profitability which shows that firms still prefer internal financing over external that supports the pecking order theory.

Using the same level of integration, Hour & Dincergok (2021) analyzes the impact of corporate strategies (Internationalization) on the financing decisions of non-financial firms listed on the Turkish stock exchange. The results of this emerging market coincide with other markets and conclude that firms with international activities are more likely to raise more debt in their capital structure as compared to local firms. Moreover, the firms which are more diversified with their presence in more than one country tend to employ more debt as they can access the global markets with low interest rates which domestic firms cannot do. Moreover, the liquidity, tangibility, and non-debt tax ratio are important determinants of capital structure in Turkish firms.

The above discussion concludes that internationalization is a source of integration where the firms get access to other markets in the form of foreign sales. This foreign activity works as an entry pass for the firms to look for the financing options not available in their home country. If they are able to secure cheaper financing they will be revising their capital structure and invest in the projects which can help them grow and compete in the market.

2.3.2   Integration and Cost of Equity Markets

Stock markets are said to be integrated if two stocks of the same risk level and from two different capital markets give out a similar return (Lin 2005). In other word, the movement of the stock market together means that they are strongly correlated. Theory based on the international asset pricing model (IAPM) suggests that equity market liberalization will help in reducing the country's cost of equity capital (Henry 2000; Bekaert & Harvey 2000). This reduction in the cost of equity capital occurs due to

higher risk-sharing among local and international markets which results in low equity premiums and returns.

With an increase in foreign investment in a country, the net capital inflows will increase. Higher capital inflows will increase the total stock of loanable funds thus decreasing the risk-free rates. According to the capital asset pricing model (CAPM), the lower the risk-free rate in the market, the lower will be the cost of the equity. Moreover, a rise in capital inflow will increase the liquidity in the market, which means there will be more supply of funds in the market with low demand. This will also make the equities be traded at a low price thus reducing their cost (Levine & Zeros 1998). Moreover, lower cost of equity will end up with higher market value and better market performance (Henry 2000).

Lucey & Zhang (2011) working on emerging markets reports that credit market integration has a positive relation to leverage while equity market integration is negativelylinked to leverage. This shows that higher credit market integration will allow firms to raise more debts at cheaper cost which is not available in domestic markets. Moreover, if equity markets are more integrated, firms will prefer more equity over debt. This also aligns with Giannetti *et al.*, (2002) concluding that an increase in financial services in the local country market will result in more openness to international markets. As the access to international markets gets easy, firms can make adjustments to their capital structure.

Financial integration has been a long standing phenomenon, but its importance has been recognized in the last few years. Its significance has become more apparent, indicating a growing awareness of its implications. A recent paper by Tongurai & Vithessonthi (2023) gives strong implications for the policymakers. The author investigates the relationship between financial openness and financial development of

164 countries after apportioning them into different sub-regions. The financial development was further subdivided into the development of the banking system, equity markets, and bond markets. The results suggest that financial openness has a positive significant relationship with the banking system and equity market development. However, the relationship between financial openness and the bond market development of these countries is negative. This concludes that an increase in financial openness fosters the development of the banking system and equity market of a country, but it tends to have a declining impact on the bonds market. These results imply that the policy makers should formulate those policies that facilitate the integration of financial markets with other countries. This enables the investment to move freely and the country gets the real benefit of financial openness. The result also aligns with our study objectives, which show that with the openness of financial markets, firms look for cheaper financing that are not available in their domestic market. This integration improves the availability of funds in the banking system and equity markets and allows the firms to raise low cost finance to accept the projects with negative NPV's.

A similar work on the independence of the banking system and cross-border capital flows was conducted by Yayi (2023). This study uses a sample of 34 OECD countries while comparing it to other 134 host countries. The results coincide with that of Tongurai & Vithessonthi (2023) who conclude that an independent banking system significantly contributes to the FDI flows to the host country. Moreover, lesser financial restriction in lower and middle-income countries has a greater impact on banking independence while making it easier for investments to flow across the countries.

Although integration is supposed to have a positive impact on financial markets, some of the markets which are bank dominated may not have the same impact. Jadiyappa et al., (2016) exploring the Indian market report that the financial reforms

have a negative impact on the debt level of the Indian firms. This is because Indian markets are bank dominated markets where firms take more loans from domestic banks. With progress in financial reforms, the market is dominated by stock market development where the firms start using equity as an alternative to debt to fund their projects. This results in decline in the debt levels. The same is the case with China (Ahmed et al., 2022) where there is state owned major proportion of the banks. These state owned banks are more inclined to state owned companies which gets major portion of financing through these banks due to state influence. Hence the liberalization doesn't affect the debt market of the country. However, the equity markets are more influenced by financial liberalization.

With the discussion above, it would be interesting to see how the equity market integration will affect the capital structure of the firms in emerging markets. Although we have contradictory results in the literature due to different countries having different financial setups, it is essential to conduct further research to analyze the countries and understand the potential impact on their capital structure.

2.3.3 Integration and Cost of Debt markets

Most of the empirical literature on financial integration comes from U.S. data. Rajan and Zingales (1995) investigate the impact of integration on the capital structure framework of the U.S. and other countries and finds that developed countries like the U.S. can take more benefits from financial openness as compared to emerging countries. Booth *et al*., (2001), explores both the leverage and debt maturity of 10 countries and reports that even though the markets are integrated, some country specific characters play a very important role in deciding its capital structure.

Some studies focus on the relationship between debt maturity and country specific characteristics. Demirgüç-Kunt & Maksimovic (1999) using data from the 1980s with

a sample of 30 developed and under-developed countries concluded that effective legal systems and stock market liquidity are correlated with extended debt maturity in large firms. While in small firms, an integrated banking system is connected with extended maturity whereas the impact of integration and legal efficiency is insignificant. Giannetti (2002), on the contrary, finds that a country with stronger protection rules for the creditors is positively associated with more leverage and increase debt maturity in European companies. These results are in alignment with that of Qian & Strahan (2007), in an across-countries comparison stating that with stronger rules to protect the creditor rights, an increase in debt financing is accompanied by longer pay-off periods.

Although most of the studies have focused the developed markets in context of integration, from the last few years the focus is towards the emerging markets now. Colombia is also one of the emerging countries struggling to compete in the global market. In 2012, the trade agreement between USA-Colombia caused Colombia to liberalize its financial markets allowing access to foreign investors. This liberalization has resulted in the reduction of credit requirements of the firms allowing them to compete with the foreign giants. A recent paper by Knudsen & Lopatin (2023) using 7000 firms' data over 10 years report that the sectors which rely on external financing have increased their exports in the last ten years. This is due to the improved availability of external funds by foreign investors which can be accessed by the more productive exporter firms. Hence, this agreement has given a new opportunity to Colombian firms to take benefit of low cost loans and boost their economy. However, Manova (2008) also exploring the Colombian market suggests that liberalization is most likely to affect the financially vulnerable sectors as they are more likely to increase their exports. With these mixed results from Colombia, it seems that the country is still struggling to take full benefit of liberalization as being an emerging market, the country also has to deal with other macro factors to cope with the challenges of liberalization. Although the

results are mixed, this study also includes Colombia as a sample country in our sample of 22 emerging countries and collectively investigates the impact of financial integration on a firm's capital structure.

Some of the literature also sheds light on the financial development in African countries. Khémiri & Noubbigh, (2021) explore the debt-growth nexus of five sub-Saharan African countries while considering financial liberalization as a mediator. Using a GMM technique, the initial results suggest that there is a threshold level of debt; below which the firms show positive growth. However, above that threshold level the growth level starts declining for the firms which increases their chances of financial distress. At the next stage financial liberalization was included in the model. Financial liberalization encourages managers to take more risks. It urges them to use more debt which is used as leverage for the firms to grow. However, this higher use of debt due to liberalization, takes the firms above that threshold level previously set at stage 1 which results in a negative relation with the growth of the firms. The result also concludes that the sub-prime crises that erupted in African countries in 2008 were a result of this phenomenon. These results imply that the financial decision-makers in the region should understand the relationship between the debt structure of firms and their growth capacity. They should evaluate the level of risk these firms can take while using the level of debt in their structure. Moreover, financial liberalization should gradually be used to make financial reforms in African countries.

Some contradictory results on integration and debt markets are also reported in the literature. Schmukler & Vesperoni (2006) investigate the effect of market liberalization on leverage and debt maturity. The sample consists of seven emerging economies with aperiod of nine years i.e. 1980 – 1989. They used three dummy variables to measure three different reforms; first, if foreigners are permitted to participate in the local

markets (Bekaert & Harvey 2000); Second for the openness of the local financial sector, and last for the restrictions on foreign capital flows (Kaminsky & Schmukler 2002). The key finding by the author is: financial liberalization has no major impact on the leverage and the debt maturity of the company having access to foreign markets. The author also reported that liberalization ends up with lower leverage and debt maturity for those companies having no access to foreign markets. The study concluded that financial liberalization doesn't hold in emerging countries as they are not able to integrate into the world market and cannot take benefit of long-term debt.

The results from the literature indicate that financial openness causes a reduction in the cost of financing and raises the availability of credit but this might not be the case in emerging economies. That's because emerging markets are weak in financial infrastructure, have poor governance, and have no proper regulations for the rights of creditors. So this study attempts to analyze the company's leverage and the debt maturity of the firms in 24 emerging economies controlling for different social and macro-economic country-wise factors.

2.3.4 Literature for the combined effect of internationalization and integration

The empirical analysis applied in this work is to test the combined effect of how the firm internationalization and market integration together with firm and country level variables affects its leverage and maturity. Firm Internationalization is taken as a strategy for firms to get access to foreign markets and if they are successful, it will help them explore the opportunities coming with globalization. This access to international markets will support the firms to access external financing at a low cost.

Myers and Majluf (1984) highlighted two main firm level factors which influence external financing: first, the financial constraints faced by the local firms i.e., the

availability of internal funds and the legal requirement of the country, and secondly the asymmetric information i.e., which affects the cost of funding and growth opportunities. For that reason, the combined effect of both internationalization and market integration may have different results when we incorporate firm level variables. That is because the firm having high profits will rely more on internal finance and less on capital markets. Firms with financial constraints do not generate more cash flows. i.e., they have lower profits and hence they need more external finance for growth for which these firms have to pay a high cost. Love (2003) and Khurana et al., (2006) report that firms operating in integrating markets have to face fewer problems arising from financial constraints. They also added that firms with more growth opportunities are discouraged to approach the capital markets because of high financing costs arising from asymmetric information. McLean et al., (2012) discuss that this relationship between growth and external financing will be stronger in the economies where investors are overprotected (which is a sign of a developed financial market).

The previous literature also suggests that over the last few decades, several emerging and developing markets have implemented varying degrees of market liberalization that have resulted in a substantial rise in the presence of foreign activity within their economies. However, ambiguity still stands that whether the inclusion of these foreign activities in the domestic market has reduced the credit constraints for the firms in these economies. Gopalan & Sasidharan (2020) tries to address this issue while exploring 60 emerging and developing economies from 2006 – 2014. The initial results from this study indicate that the presence of foreign banks reduces the cost of financial intermediaries while increasing the credit availability for the firms operating in those markets. Further investigation shows that firms with properly audited financial statements tend to provide better information disclosures to foreign banks which can provide them ease in credit constraints. This implies that the policymakers should make

appropriate regulations for the firms to reduce the problem of information asymmetry that can smoothen the credit availability issues for the companies.

The role of institutions is also vital in defining the capital structure policy of the firms. A lot of previous literature has taken into account different institutional and regulatory policies to investigate their impact on a firm's performance and its financing decisions. A recent study by Casino-Martínez et al., (2023) analyses the influence of institutional factors on the capital structure of the firms operating in all European Union countries. By dividing the large sample into small and large firms, the author concludes that the regulatory environment in the EU significantly impacts the leverage of small firms. This is because small firms are assumed to be more financially constrained and are more susceptible to changes in business regulation, enforcement of laws, and financial development. Moreover, the results are consistent with the presence of corruption and the strength of the legal system in the country. These results imply that small firms are more severely affected by external financing conditions. So, improving the institutional environment in the context of trusted institutions and efficient judiciary laws can overcome the financing issue for all the firms. Moreover, a better financial system results in limiting the credit constraint for the firms, especially in bank-oriented economies.

This work also tries to analyze the relationship between integrated markets and their impact on the capital structure of the firms. As the previous literature suggests that emerging markets are more integrated, this work intends to test the relationship in the same context. Moreover, both the firm level integration and country-level integration will be tested to see if it impacts the capital structure of the firms, especially their leverage and maturity.

2.4   Corruption's Role in Economy

Corruption is considered a serious obstacle worldwide that affects the country's economic growth. One of its types is commonly known as bribery, which is the main hurdle for businesses. According to World Bank Report (2018), businesses spend around $1.5 trillion in bribes every year which is approximately 2% of the global GDP. Moreover, this bribe works as the main deterrent in influencing foreign investors and preventing foreign investments in the country. There are some mixed conclusions in the literature about the effect of corruption on foreign investments and firms' performances. Some authors (Cuervo-Cazurra 2006; Javorcik & Wei 2009) report a negative relation between corruption, foreign investments, and firms' performance since it is considered an additional cost for the multinational firms and foreign investors which prevents them from investing in the corrupt host country. Some other authors report a positive relationship between corruption and foreign investments (Egger and Winner, 2007). They justify this positive relationship as multinational firms adopt some corrupt practices to bypass the rigid regulations of the corrupt host country. Using these corrupt practices, companies can secure more loans from the financial sectors that help them grow faster as compared to other companies. However, literature is still inconclusive on the impact of corruption on a firm's capital structure and how it impacts foreign investors.

In the last few years, corruption has emerged as a focal problem throughout the world and now a lot more is being discussed among academic researchers as it has some important implications at the firm level. Most of the previous literature studies the effects of corruption on various macro levels of issues like foreign direct investments, gross domestic products, and economic development (Mauro 1995; Wei 2000). However, some empirical studies focus on the importance of corruption in determining a firm's value and its financing patterns. For instance, political connections are found to be positively

connected with firm value and its financing choices (Fisman 2001). Goldman *et al.*, (2009) find positive stock returns for firms with politically connected directors. Some other studies use the event study approach and report a positive association between bribery and firms' value (Zeume 2017). Despite the large body of research available, there still exists inadequate empirical research at micro level, especially examining the impact of corruption on a firm's financial policies. Moreover, as a key institutional variable of a country, the studies have not given enough attention to the firms operating in emerging markets. Hence, this work considers corruption as an important variable that affects the firm financing behavior when the countries are financially integrated.

In today's world, the capital markets globally have seen many more options for corporate funding, still, the economies are relatively underdeveloped (Gong & Wu 2012) and banks remain the major credit supplier to corporations and enjoy the monopolistic position in credit markets. Even though the central banks control the bank profit by regulating the interest rate, but still the bank officers have many methods to bypass the controls and to make illegal profits. So, the bank officers are likely to be bribed by the firms to receive bank credit (Xie and Lu, 2005). Meanwhile, the regulators monitor the banks' non-performing loans which means that banks must restrict the risk of not taking back their capital. Hence, short-term credits are favorable for the banks to keep the track of debtors while placing the firms under close supervision of the banks (Diamond & Rajan 2002; Jiang and Li, 2006). Therefore banks prefer to lend short-term loans to the debtors in regions with high corruption levels.

2.4.1   Corruption, Foreign Investment, and Institutions

There is a general conclusion among researchers that foreign investments can play a vital role in the process of financial development. This is evident from the previous research (Claessens *et al*., 2008) that countries that are open to foreign investors and

foreign institutions have shown more growth than countries that don't allow foreign entry. Some of the literature also exists suggesting that banks that have penetrated into foreign countries have outperformed domestic banks in different regions. (Bonin *et al*., (2005); Havrylychk (2006)).

However, one cannot ignore the fact of entry requirements for foreign investors for each country and region. The unanswered question is: *why some of the countries are more integrated and open to foreign activities compared to others*? The evidence shows that the level of corruption, which results in weak institutions, lack of accountability and creditor protection laws, poor judiciary system, and enforcement of the contract, work as the biggest hurdle in inter-country integration levels. Hence the level of development and foreign entry is in the hands of strong institutions which work as a regulator in implementing the rules of the state. Although corruption is part of all countries, it is particularly more common in emerging countries with weak legal institutions and judiciary systems that make law enforcement more difficult in case of any conflict (Hellman 2000). Corruption makes it difficult for foreign investors looking for opportunities to diversify their risk and get better returns in transition economies. Moreover, with the prevailing level of corruption, the financing opportunities of the host country are reduced as the local lenders will have the monopoly to lend the loans at the cost of their choice. According to Naaborg *et al*., (2004), corruption in the home countries can explain the level of variation in the mode of entry for foreign investors and foreign institutions even after controlling all other factors.

The role of quality institutions also plays a vital role in attracting foreign investments, especially in the financial sector (Galindo *et al*., 2003). These quality institutions are the ones in which the creditors and shareholder's rights are protected and upheld. Judiciary efficiency is also essential in enhancing the development of the economy. Political

stability, accountability, and democracy also play an important part in developing the quality of institutions. According to Demirguc-Kunt *et al.,* (2003), economic freedom is an important indicator in predicting the quality of a country's financial institutions. The state has to provide support to these institutions to ensure that the quality is maintained and contracts are being fulfilled as they mature. Because it is these institutions that work as a backbone to build the country's economy and provide the basis to attract foreign investors. This good quality of institutions will also provide better financing options for the firms and will raise competition in the market. However, if corruption is part of these institutions the whole system will collapse. As the state is by nature inefficient in emerging countries, the corruption in the institutions further enhances the inefficiency which results in distrust of foreign investors and ultimately prevents the country from reaching the level of development.

Corruption also works as a hurdle in the enforcement of contracts due to weak institutional setup in emerging countries. There is no guarantee that the contractual obligations will be upheld by the local institutions. However, for foreign investors, the utmost concern is to fulfill the contract made by the local host country. The lenders need to make sure that the loans are being paid back on maturity with the promised returns. Hence, strong institutions, a solid legal system, and proper enforcement of laws can guarantee the investor. This guarantee will allow more investment across borders and hence the firms will have more financing options at a cheaper cost as compared to the options available in local markets. The purpose of this research is to investigate how the corruption level affects the financing behavior of the country considering the integration among the countries.

2.4.2 Corruption and Firm Value

According to the valuation theory (Modigliani and Miller 1958), the firm determines its value through future cash flows, the expected growth rate, and its cost of capital. Corruption affects firm value through these key factors. Firstly, the firm's future cash flows are the main driver of its internal growth but corruption can directly influence these cash flows. In a corrupt environment, the controlling shareholders can easily engage in "tunneling" activities that divert the firm's resources to personal benefits (Jiang & Nie 2014). Moreover, the negative effect of corruption can also be seen through wide-ranging agency costs from management misbehavior i.e., misappropriation and empire-building (Jensen and Rehman, 2010). Hence countries with a strong legal system protect the investors from these corrupt practices whereas, in corrupt markets, these practices are more rampant (Jiang & Nie 2014; La Porta & Lopez-de-Silanes 1998). Secondly, corruption is negatively correlated with economic growth which has been verified by previous studies (Mauro 1995). Future growth rate also works as a key factor in driving firms' value. Hence firms operating in corrupt settings are expected to have a slower growth rate.

2.4.3 Corruption and Cost of Capital

Corruption also affects firm value through increased cost of capital which results from a lack of rules and a regulatory environment (La Porta & Lopez-de-Silanes 1998). In many countries, it's common to have ownership concentration with large controlling shareholders (Nenova 2003). In economies with weak institutional settings, the controlling shareholders tend to take benefits by using government connections (Young *et al.,* 2008). These connections lead to a downgrade in the efficiency of the regulatory system of the country, by misuse of resources and an unbalanced distribution of finance, which reduces the value of the firms. The empirical studies in this context also show that countries with strong legal footing for investor protection rights are successful in getting

more foreign investments, higher firm value, and better growth prospects as they have access to lower costs of financing (La Porta *et al.,* 2000).

Most of the past literature highlights the effect of corruption at firm-level variables in developed economies. For instance: Amore & Bennedsen (2013) find a positive relation between politically connected firms and their profits. Lee & Ng, (2006), working in 46 countries explore the relationship between stock prices and corruption. Their findings suggest that firms in more corrupt countries trade at lower value with low returns to their investors. Dass *et al*., (2016) investigate the effect of state corruption on firms' value and reports a negative relation among them in US companies. However, not all studies support the hypothesis that corruption has adverse effects on firm value. Some also report a positive impact of corruption and suggest that it works as a "greasing the wheels of the economy" and consequently reduces the cost of capital of the firms (Leff 1964; Lui 1985). Based on the above arguments, we test whether firms operating in an economy with a greater level of perceived corruption tend to revise their capital structure due to changes in the cost of capital.

In this study, we investigate how the level of corruption in the country mediates between financial integration and the firm's capital structure. For that purpose, we use the corruption data from the World Bank report for the selected countries in the study and conduct an econometric analysis using the firm-level panel analysis. We reverse the index so that it ranges from 0 to 10, with a larger value showing a higher level of corruption. In the context of firm capital structure decisions, this index refers to the threat to the investor's rights being expropriated by the management of public officials. In corrupt public offices, loans are expected to be used more than the equity as it is easy to expropriate equity holders than debt holders. Similarly, this can also be argued that as short-term debt is more difficult to expropriate, it will be used more frequently than long-

term loans in more corrupt countries. Other than corruption, this work also uses the "rule of law" and "regulatory quality" variables to study the level of implementation of the law by each country.

2.4.4 Corruption and debt-equity financing decisions

The literature usually highlights the institutional and agency theories to examine the impact of corruption on firm financing decisions. The institutional theorists suggest that the principal-agent contract between the outsiders and insiders is socially binding such that the institutional setup surrounding the contract may affect the nature of the moral hazard, the level of governance that is being used, and the goals that agents and principals may seek (Hoskisson *et al.*, 2000). These arguments are consistent with that of traditional agency theory as well. Thus, corruption in a given country forms part of the institutional context which measures firm behavior and also affects the principal-agent relationship. In countries that are spoiled with corruption, where contract implementation is compromised and capital markets are poorly regulated, the firms are more likely to use debt instruments than equity as it allows for more room to entrenched managers (Willaimson 1998). This happens because corruption tends to move managers away from engaging themselves in potential opportunities due to a lack of influence from enforcement institutions which leads to more usage of debt instruments.

Du (2008) and Chen (2011) conclude that corruption weakens the enforceability of law which obstructs the regulation of financial markets and affects the efficiency of legal institutes. In the same context, Fan *et al*., (2012) also find that corruption reduces the enforceability of contracts and firms have to revisit their financing decisions. In a weak environment with low enforcement of the law, firms are more likelyto use more debt than equity as the terms of debt limit the ability for the expropriation ofexternal rights by internals.

Diamond & Morlino (2004) raised this important question in his research: How should financial contracts be enforceable as they become ineffective and costly due to the presence of corruption? In the countries where the lenders have to bear extra enforcement cost which is not recoverable if the firm default, the lenders are reluctant to go to the courts to fight their case as they know that they will be worse off if they enforced the contract. Hence in the compromised legal systems, corruption leads to ineffective and expensive contract enforcement. This could end up in a complete collapse of financial markets in countries with the existence of corruption.

Keeping in view the importance of regulatory variables and their influence on firm policy decisions and governance mechanisms, Doan et al., (2023) investigate Vietnamese firms from 2010 to 2018. Two important quality variables were taken into regression i.e., corruption and economic freedom and their impact on firms' leverage. The study suggests that control of corruption is positively related to firms' leverage while high economic freedom tends to reduce the leverage. Further analysis report that the interaction of corruption and economic freedom has a strong positive impact on firm leverage. These results imply that the adoption of an anti-corruption policy may help improve the investment efficiency of the firms. Moreover, with the potential of moving towards financial openness, the regulators should take serious administrative actions to remove the barriers that work as a hurdle for the firms to function well in their daily businesses.

In this work, we argue that corruption – the abuse of state power by officials for personal benefits (Tanzi 1998) – which is more widespread in emerging countries restricts the effectiveness of the country's institutions in improving corporate governance. Moreover, it also distorts the rule of law of the country and jolts its institution's roots (Mauro 1995) which were supposed to mitigate agency problems. Also, it affects the efficiency of financial markets by hindering their regulations; it increases the operating

cost of the firms due to an increase in licensing and permit costs and cost of loans; and it weakens corporate governance (Stulz 2005; Kimuyu 2007). This view was also discussed by Du (2008) and Chen (2011), who writes that corruption discourages public officials from lending contracts to private parties and enforcing property rights which in return hinders the development of financial markets.

2.4.5 Corruption and financial development

Corruption is generally defined as "an abuse of public powers for personal gains". It may exist in different facets and is difficult to control (Senior 2006). Corruption at a low level may include bribery to conduct routine operations more quickly and efficiently as discussed in the efficiency greasing theory by Leff (1964). However, corruption at a higher level involves the senior state officials which are involved in the highest decision-making in the country under which the institutions are being operated. Thus, this level of corruption has a significant impact on the firm's financial development as they have to devise policies for the institutions that should contribute to the overall growth of the country.

Past literature on the significance of corruption, foreign investment, and financial development has gained importance among researchers. A general consensus on corruption is that it acts as a tax on international investments (Wei 2000). According to Globerman & Shapiro (2003), higher levels of corruption weaken the institutional quality in European countries. These weak institutions discourage foreign investment and hinder financial development. Moreover, corruption may lower the foreign ownership in non-financial firms in developing regions. Casino-Martínez et al., (2023) working on European Union countries conclude that corruption has a significant impact on the leverage of the small firms. That is because the small firms are already financially constrained. The existence of corruption makes it more difficult for them to raise finance

in a competitive environment. So improving the institutional environment in the context of trusted institutions and efficient judiciary laws can overcome the financing issue for all the firms.

The previous literature has highlighted many different types of corruption some of which include, public corruption, political corruption, bureaucratic corruption, etc. However, all of them are generally thought to harm the economic, social, political, and financial outcomes of the country. Although some of the optimistic theories about efficiency related to corruption i.e., efficient grease theory or speed money theory by Leff (1964), suggests that there still exists a wide range of evidence that corruption has a negative impact on the economic and financial development of the country. The number of factors that contribute to his negative impact includes the reduction in foreign direct investments, taxation, foreign aid, and weak financial and economic activities. Some of the authors even concluded that these negative effects are worsened if this corruption is disorganized and uncoordinated (Bardhan & Mookherjee 2006). However, analyzing the level of corruption is a complex issue that differs across many disciplines and hence beyond the scope of this research. However, with the growing line of literature regarding the impact of corruption on different disciplines, the unchallenged conclusion is that corruption is bad for economic development in a country.

Most of the existing work combines a number of institutional and regulatory indicators to measure the quality of institutions in the country (Claessens & Van Horen 2008; Casino-Martínez et al., 2023). This study also focuses on the corruption variable as the main variable that may hinder financial development and integration among the countries. However, some of the authors argue that only corruption cannot be taken as a variable to measure the regulatory quality of the country due to its multifaceted phenomenon. Considering this fact, this study also takes "rule of law" and "regulatory

quality" as alternative measures to examine the institutional quality and how it may affect the integration level of the country.

2.5   Methodologies Used in Measuring Financial Integration

Financial integration results in international risk sharing, and portfolio diversification, and gives access to international financial institutions and markets. These potential benefits encourage countries, especially emerging countries, to promote those policies and reforms that would reinforce financial cooperation and integration with other countries. A recent wave of financial liberalization in most of the emerging markets can be considered a good example for the countries looking forward to exploring the benefits of liberalization. With this background of devising policies for liberalization, it is important to have appropriate measures to gauge the progress and extent of financial integration. The following sections provide the indicators that have been used in the past to access the dynamics of financial integration.

2.5.1   Correlation Analysis

Few past studies have used a correlation coefficient to gauge the level of integration among the countries (Watson 1980; Heaney *et al*., 2002; Kim *et al*., 2005). The idea behind this approach is that if the correlation between the two countries is high, it can be assumed that there exists an integration between the two. Kim *et al*. (2005) use an EGARCH model with a time-varying correlation to investigate the process of market integration in European countries. They conclude that after the entry of the European Monetary Union (EMU), the European region's stock markets are more correlated. However, Forbes and Rigobon (2002) raised some concerns while using correlation as a proxy for integration. According to them, the unadjusted correlation coefficient across the markets depends on market volatility and is hence not capable of measuring the degree

of integration. In light of these concerns raised by Forbes and Rigobon (2002), the studies that have used correlation as a proxy to measure integration have to interpret their results more carefully.

2.5.2 Asset Pricing Models

Some other studies in the literature propose to use asset pricing models to examine the integration within the countries. The purpose is to check whether the home country's asset pricing models imply market segmentation or the world asset pricing models imply market integration. Testing these hypotheses, Errunza *et al.*, (1992) working on emerging equity markets conclude that these markets are neither fully integrated nor segmented. Harvey (1995) tests the world asset pricing models for the returns in 20 equity markets and finds that world portfolio risk does not have a strong influence on other emerging markets. The author also suggests that emerging market returns are mostly affected by local information only. Hence the markets are not completely integrated with the world markets.

Many authors have utilized the time-varying model proposed by Bekaert (1995) to measure the level of market integration among the countries. Barr and Priestley (2004) inspect the level of integration of the U.S. and European bond markets and finds that these markets are only partially integrated with world markets. They further added that around 70% of their returns are correlated with the world market while 30% of excess returns are associated with local market risk. Hardouvelis *et al.*, (2006) associate the market integration of the European stock market with the development of the European Market Union (EMU) and the adoption of the euro. They also find that integration gradually increased in late 1990 as the Eurozone became fully integrated with the EU market. Hunter (2006) selects Latin American countries for the sample and used ADRs for the

test. He reports that these markets are not integrated with the world markets even after the decade of liberalization.

Carrieri *et al.*, (2007) examine the time-varying integration of 22 emerging economies for 1977 – 2000. They report that domestic risk plays an important part in the variation of return, however, none of the countries seems to be fully integrated. Chambet and Gibson (2008) use a risk factor in the time-varying integration model and find that the emerging market is still segmented over the selected period. They also report that financial integration reduced during the Mexican (1994-1995) and Asian (1997-1998) crises while it increases after the years ahead of the crises. Abad *et al.*, (2010) test the integration level in the European bond markets and report an absence of integration among European and world markets while suggesting an influence of local variables on bond returns. The author also concludes that non-EMU economies are mostly affected by world risk factors, while EMU economies are under the influence of Eurozone risk.

2.5.3 Co-integration Analysis

One of the important approaches widely used in the previous literature to check for the integration of financial markets is the co-integration test proposed by Johansen (1988). Many authors have used this test to investigate the integration among different regions and countries and reported their results. Kasa (1992) inspects the level of integration among five developed countries using the multivariate co-integration approach. This included the countries like Japan, Germany, Canada, the US, and the UK. The authors find a single co-integration factor among these markets which suggests a low level of integration. DeFusco *et al.*, (1996) examine the co-integration among the US and groups of emerging markets and reports no integration relation within these countries over the years 1989 – 1993. Masih & Masih (1999) test the level of financial integration between International and Asian stock markets and finds a single integrating vector among the

sample countries. Sheng and Tu (2000) studies the linkage between Asian Pacific stock markets around the Asian financial crises in 1997-1998. Their results indicate that no integration exists among North Asian equity markets while a single integrating vector can be observed in South East Asian markets during the crisis period.

Smith (2002) is among the few authors who have examined co-integration in the international bond markets including Germany, France, Japan, Canada, the US, and the UK. The results indicate the existence of co-integrating vectors which suggest that these markets are efficient as this cointegration can predict the future price movement in the bond markets. Yang *et al*., (2003) tests for long term integration between the US and ten Asian countries during the crises (1997-1998) and concludes that these markets become more integrated after the crisis period than before the crisis. Yang *et al*., (2003) explore the impact of EMU on the equity markets of European and non-European markets. The sample was divided into two sub-periods i.e. before EMU (1996 -1999) and after EMU (1999-2001). The results suggest that co-integration is stronger in the post EMU period as the market returns to equilibrium much more quickly than in the pre EMU period. Lagoarde-Segot & Lucey (2007) test the capital markets of the Middle East and Africa for 1998 – 2004 and report a non-significant long-term relationship among these markets. Vo (2009) focuses on the international integration among the Asian bond markets for the period of 15 years i.e. 1990-2005. Their result didn't indicate a high level of integration among the bond markets in the sample countries. Similarly, Huyghebaert & Wang (2010) test the Asian stock markets during and after the Asian crises and suggests no integration vector exists among these countries. The author interprets these results as outcome of synchronized policies that were adopted by Asian markets to avoid future crises.

2.5.4   Price and Quantity-based Approaches

Price based approach argues on the law of one price. It says that financial assets traded across the countries in integrated markets should give the same returns to the investors. Studies using this approach focus on the interest rate parity to measure the level of integration. In this regard, Flood and Rose (2002) used a sample of 23 countries to test for uncovered interest parity and found that this uncovered interest parity worked better and suggested an increased integration among the countries during the selected period. Cheung *et al*., (2006) explore the integration level between China and the other four countries (Japan, Taiwan, Hong Kong, and the US) and report that the parity shows better results in the long run while the level of deviation from the parity is decreasing over time.

Edison and Warnock (2003) introduce a new approach to measure equity market development. It uses the outstanding shares of the company available to foreign investors to measure the level of openness of 29 emerging economies. The results show that most of the sample countries have experienced openness after 1990, suggesting relaxation in capital controls and more integration. Using the same idea of openness, Lane and Milesi-Ferretti (2001, 2007) construct a new database of gross stocks and liabilities of 145 countries from 1970 to 2007 using the basic data extracted by the International Monetary Fund (IMF). The results indicate that the level of integration of the European region has almost doubled in the years 1997 to 2004. World Bank also maintains a database with the name of the financial structure database. This database includes many different variables to measure financial globalization such as outstanding international debt over GDP, International deposits to domestic deposits, loans from non-residents to GDP, and remittances to GDP. Using these variables Beck et al., (2009) find that integration has been increasing in high-income countries while it is relatively stable in low and middle-income countries.

2.5.5   Other measures

Barari (2004), proposes a new integration score model based on international risk. The model tests a time-varying measure for integration in six Latin American countries. The author reports that regional integration increased in the first half of the 1990s, while the second half of the 1990's experienced rapid global integration. The same model was applied by Lagoarde-Segot & Lucey (2007) to the capital markets of the MENA region and the results show that the countries in this region have moved towards higher financial integration. Chelley-Steeley (2004) uses a non-linear logistic trend approach to measure the integration level of stock markets in Asia-Pacific countries. He also concludes that there has been a significant increase in both local and foreign integration among the sample countries.

Kim *et al*., (2006) investigate the level of integration among the European bond markets during the period 1998 – 2003. To measure integration, they use the co-integration test and conditional correlations. The results show a significant relationship between the European bond markets with that of Germany (used as a proxy for representing EMU). Pukthuanthong & Roll (2009) based their analysis on the R-square integration approach and finds that equity markets are getting more integrated globally over the last two decades. Especially, the European region has shown faster growth as compared to the countries in the Asian region.

Some other approaches are also being used in the past to measure the intensity of integration among the countries. Yu *et al*., (2010) working in 10 different Asian countries from 1994-2008 uses two different indicators in their study. To measure integration they used cross-market return dispersion suggested by Solnik and Roulet (2000) and the filtering method recommended by Haldane and Hall (1991). Although, both methods report different results, however, it was concluded that integration gradually increased in

the early 20s while it picked up faster in the late 20s. Moreover, integration is stronger in developed countries as compared to emerging markets while China seems to have a weak link among the countries.

2.6   Causes of Financial Integration

The level of financial integration differs across countries and over time. This provokes the researchers to look for the factors that cause integration. The following section provides the economic and non-economic determinants of integration discussed in past literature.

2.6.1   Economic Determinants

Some of the authors explore the factors of correlation and co-movement among the stock returns of different countries. Bracker & Koch (1999) use the Geweke method to study the co-movement among eight developed equity markets with the US market over the period of 1972-1993. They witness the same-day reaction in developed markets with the US market and conclude that macroeconomic factors like import dependence and the size of the two financial markets play an important role in influencing the market movements between the sample countries. Bracker & Koch (1999) study the correlation between ten equity markets for the period of 20 years i.e. 1972 to 1992. They find that these markets are positively correlated with the world market while negatively correlated with exchange rate fluctuation. Moreover, this correlation to some extent is also related to real interest rate differentials, term structure differences, and international market returns. Using the bilateral correlation model among 10 emerging stocks, Pretorius (2002) finds that the correlation among the countries is positively related to their trade relation and negatively related to the difference in their industrial growth rates. The results indicate that the markets within a region are more interrelated than those in other regions. Moreover, the correlations are significantly higher in the post-Asian crisis period than

before the crisis. Johnson and Soenen (2003) report a high degree of correlation within the eight stock markets in the United States. The author finds that this co-movement is positively related to the share of trade with the US, while negatively related to the mutual exchange rate and the ratio of stock market capitalization.

Kim *et al*., (2005) find a significant impact of EMU on the market co-movement in European stock markets. Other than EMU, the author also reports other determining factors that cause the correlation. This includes the size and development of financial markets, exchange rates, and interest rates within the markets. Chambet and Gibson (2008) examine the relationship between the openness of a country's international trade and its degree of financial integration. They conclude that trade openness positively affects the country's level of integration. Moreover, countries with undiversified trade structures end up with more integrated financial markets.

2.6.2   Non-Economic Determinants

Though most of the studies consider economic factors as the cause of integration within the countries, however, some researchers consider geographical distance as the main determinant of international financial integration. They claim that the flow of capital from one country to another depends on the country's size and the physical distance between them. Portes and Rey (1998) investigate the cause of correlation among 14 countries for 1989 – 1996 and concludes that geographical distance is statistically significant in the cross-border flow of equity capital. Flavin *et al*., (2002) examine some geographical factors including distance, common language, common border, colonial links, and working hours between the countries and their impact on stock market correlations. The authors report that sharing a common border and overlapping working hours has a significant impact on the correlation within the markets. Portes and Rey (2005) also conclude that geographical and cultural information is the key cause of cross-

border equity correlation. Moreover, these geographical factors act as a proxy for information asymmetry, transaction cost, and unfamiliarity effect which affect cross-border price movements.

On the other hand, Ghosh and Wolf (2000) used cross-section regression estimates on the equity, debt, loan, and treasury stocks of G7 countries and reported that geographical distance do not have a significant impact on these variables. Similarly, Portes *et al.*, (2001) also analyze the returns in equity, corporate, and treasury bonds among the US and forty other countries across the globe and find that physical distance between the countries harms international market transactions.

2.6.3   Financial Integration Effects on the Economy

According to the integration theory, the liberalization of financial systems accommodates the financial development of the country while ensuring more competition and transparency in the region (Obstfeld 1992), allowing efficient allocation of capital resources and assuring the regulators to form best practices (Kose *et al.*, 2009). Hence, the opening of capital markets contributes to increasing market liquidity, enhancing the banking system's efficiency (Levine 2001), and decreasing the cost of capital (Stulz 2009).

Initially, under financial liberalization, it was expected to boost the economic growth of the country by increasing financial development and allowing foreign investors to invest in local markets. This helped in improving the availability of capital for local markets while lowering its cost. Money was expected to flow from capital-abundant countries to capital-scarce countries as the latter usually offer higher yields for investments (Barro *et al.*, 1992; Stiglitz 2000; Mody & Murshid 2005; Henry 2007). Moreover, allowing local firms, to make more exports in the form of foreign sales is like allowing a local investor to invest in international markets. This will add more variety to

financial instruments, and help in diversifying the investor's risk (Obstfeld 1992). Furthermore, with the reforms in financial infrastructure, financial integration improves the accessibility and quality of financial services which would enhance the performance of the financial industry and contribute to economic growth (Mishkin 2009).

The outcome of financial integration not only triggers the researchers to measure its impact and look for its contributing factors but also works as a source of motivation to study its impact on a country's economy. As discussed in the earlier sections, financial integration may result in more financing options for the firms due to the decrease in the cost of capital, which could have other consequences. Figure 2.1 represents some of the changes caused by financial integrations and their effect on economic and financial variables. Items presented in the box are considered as the variables that exert pressure on the economy and financial variables due to financial integration.

| Financial Integration | International Risk Sharing / Efficient financial Institutions / Increased competition / Improved Information Environment | Market Returns / Return Volatility / Economic growth / Financing Constraints |
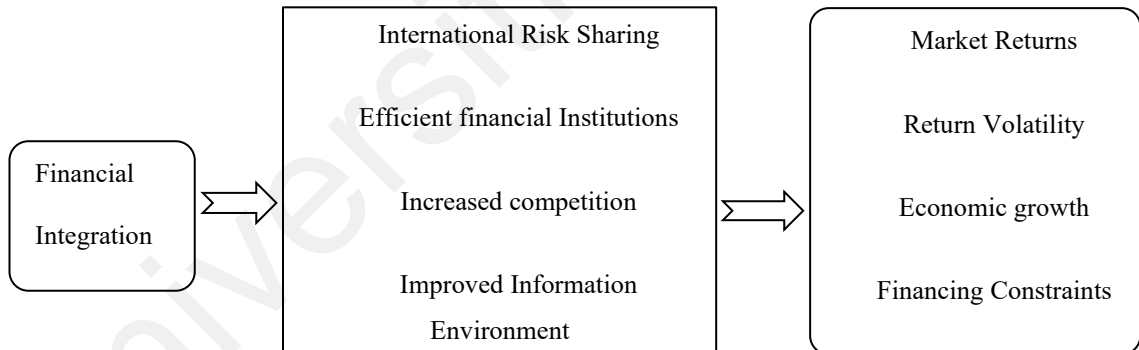
Figure 2-1 Effect of Financial integration on finance and economics

2.6.4   Financial Integration at Macro level

2.6.4.1 Market Perspective

Bekaert and Harvey (2000) conducted a comprehensive study to explore the effect of liberalization on market characteristics like return volatility, beta, correlation, and cost of

capital with the world's other market. He reported that the cost of equity capital measured as dividend yields always reduces after market liberalization while the effect of other variables was found to be weak and insignificant. Errunza and Miller's (2000) work was focused on the effect of ADRs (American Depository Receipts) on the cost of capital for US firms. They concluded that there is a decline in abnormal returns due to the entry of ADR in the markets, which is due to a reduction in the cost of capital. Henry (2000) working on a sample of 12 emerging countries, finds that there is an increase in abnormal returns of the country's stock index before the liberalization of its stock market. Their results support the theoretical prediction that reduction in the cost of equity capital will cause a revaluation of an overall price index. Han Kim & Singal (2000) investigate the effect of market openings in 20 countries on their returns, volatility, and efficiency. They find that there is an immediate increase in returns after the liberalization of the stock market while the volatility remains constant for a while and decreases in the long run after four to five years of market opening. They also report that markets become more efficient after liberalization.

Chinn and Ito (2002) test a relationship between the openings of capital accounts and the development of credit and equity markets in 105 countries from the period 1970 - 1997. They report that a higher level of openness of capital markets results in more developed financial markets. These findings support both the developing and developed markets. Their results also suggest that this relation is more obvious in countries with higher legal structures and institutional development. Edison and Warnock (2003) introduced a new proxy for measuring capital controls based on the limitation of foreign ownership in local equities. Analyzing 29 emerging markets, the author concludes that partial openness increases the cost of equity capital while complete openness results in a sharp decline in the cost of capital.

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Extending their last work, Chinn and Ito (2006) introduced the interactive effect of capital accounts with legal and institutional development over the period of 1980-2000. The empirical results show that if a certain level of the legal environment and institutional development is maintained by a country then a higher level of openness results in the development of financial markets. If the legal and institutional systems are weak with creditor protection rules not properly implemented, this may even harm the development of equity markets. Klein and Olivei (2008) investigate the same relation and report that the credit market in the countries with restricted capital accounts is not well developed as compared to the countries with open capital accounts. Moreover, these results are more significant in developed countries. They also conclude that countries require the best use of legal, social, and economic variables to liberalize their capital accounts and to get benefits from financial depth.

2.6.4.2 Macroeconomic Effects

Despite the different liberalization policies adopted by countries, the economic effect of financial liberalization has been quite dramatic. Many prior studies have used cross-sectional and time-series data along with qualitative and quantitative measures to study the impact of financial liberalization at a macroeconomic level. Alesina *et al*., (1993), using the quantitative measure constructed by IMF for financial integration, finds a non-significant relation between capital controls on economic growth while working in OECD countries over the period of 1950 – 1980. Similarly, Grilli & Milesi-Ferretti (1995) did not find any correlation between capital control restrictions and the growth of 61 countries. On the contrary, Quinn (1997) develops a new measure from AREAER (Annual report on Exchange Arrangements and Exchange Restrictions; (by IMF) and reports a positive relationship between capital account restrictions and economic growth for 64 countries from 1958 to 1989. Working on emerging countries, Henry (2000)

concluded that the stock market in these countries experienced rapid growth after liberalization. Moreover, according to the author, this growth was due to the decrease in the cost of equity capital after liberalization.

Bekaert & Harvey (2000) also document that financial liberalization is associated with an increase in economic growth after controlling for macroeconomic factors, stock market development, and the banking sector in a large sample of 95 countries. They further related this growth to the cost of capital, which is expected to go down due to high risk-sharing and a reduction in financial constraints once the integration moves to deeper levels. Extending their previous work on emerging markets, Bakaert *et al*., (2001a) reported that GDP growth level increased from 1% to 2% annually after the liberalization of capital markets.

Edison *et al*., (2004) explore the same relation in middle-level countries and report that though liberalization has a positive impact on the economic growth of the country, interestingly this impact disappears when you control for institutional variables like government reputation. Bekaert *et al*., (2007) propose a new measure for growth opportunities that according to the author can predict the real GDP and investment of the country. According to him, capital account openness plays a strong role in defining growth opportunities as compared to other factors like external finance, financial development, and investor protection. Gonenc & de Haan (2014) working on 31 developing countries report that countries with relatively developed financial markets end up with a greater amount of debt when they have better growth opportunities. His results also suggest that developed markets can mitigate the effect of information asymmetry which decreases the agency of debt for firms with a higher level of integration.

2.6.5 Financial Integration at Micro level

According to the literature, the factors that influence the macro level changes may also affect the firm level variables. So, to better understand the economic benefits arising from the integration it is important to explore the firm-level data. Using the firm-level data allows the researchers to get more rigorous results while addressing some issues which are not feasible by using country-level analysis. This makes micro level analysis more attractive and desirable for researchers to extend their academic reasoning.

2.6.5.1 Market Behavior

Many studies have been conducted to explore the market perspective of financial liberalization. Foerster & Karolyi (1999) investigate the cross listing of non-resident companies in US exchanges and how their home market price will be affected by these listings. The results show that the companies experience abnormal returns a year before the listing while the returns decreased after the year following the listing. The results coincide with the theoretical prediction that the stock price should increase initially and will fall subsequently due to the sharing of risk compensated by the international barriers. Chari and Henry (2004) study the effect of equity market openness in 11 emerging markets with 410 firms. They report that the firms in which foreign investors can invest easily experience an average stock return of 15% approximately. This concludes that this average return is the result of risk-sharing arising from financial integration. Doidge *et al*., (2004) also explore the integration effect and report that the foreign firms which are cross-listed in US exchanges earn 17% extra return as compared to the firms not cross listed.

Patro and Wald (2005) working on 500 firms in 18 emerging markets find that the returns of stock increase before liberalization while both the mean return and dividend

yield declines after integration. These findings are again consistent with the theory which says that as the financial market integrates, the cost of capital will reduce due to international risk sharing. The author also concluded that the financial exposure of the firms in an emerging market is lower in the domestic market while it increases as the world market integrates. Christoffersen *et al*., (2006) use the interaction variable of liberalization with firm size in 12 emerging markets. They find that small firms tend to have small revaluation effects, improved performance in sock price, lesser decrease in volatility, and a drop in correlation with the world market. While large firms exhibit a large revaluation effect, higher decrease in volatility and insignificant changes in stock price performance and correlation with the world market after liberalization.

In an event study approach, Korczak & Bohl (2005) investigate the impact of cross-listing on the firm's characteristics in Central Europe. They report that stock returns drop significantly after the foreign listing which suggests an increase in price efficiency. In similar research by Liu (2007), the author concludes that the firms which are cross-listed in developed countries show better price efficiency in their home market. This is linked to an improved information environment in the domestic market, whereby more details about the fundamentals of these firms are revealed which are then reflected in their local market prices.

2.6.5.2 Microeconomic Effects

A large number of previous studies have investigated the impact of financial integration on the financing pattern of firms. Demirgue-Kunt & Maksimovic (1996) report a positive relationship between bank development and firm leverage, while a negative relationship between stock market development and firm leverage. This proves that stock market development is not a hurdle for the firms to obtain debt but it facilitates the firms to increase more debt in their capital structure. Glen & Pinto (1995) conclude

that the liberalization policies adopted by many emerging economies have not only facilitated their stock markets but also it has enabled the firms to use short and long term debts along with foreign bonds and equity capital to finance their future projects.

Lee & Kwoc (1988) investigate the dependence of firms on domestic versus foreign financing and equity versus debt funding in emerging and developed countries. He reports that countries with a higher level of creditor protection rules, better accounting standards, and open stock markets depend more on the local bond market and foreign equity markets. Guha-Khasnobis & Bhaduri (2000) working on Indian firms find that financing from the stock market increases after the control over equity issues and prices were eliminated. He further concluded that due to liberalization, the equity market may have dominated the other sources of capital due to a decrease in the cost of equity.

Another important empirical work on the influence of liberalization at firm-level was conducted by Schmukler and Vesperoni (2006). To measure the financial liberalization, they have used the stock market liberalization dates of different countries along with other variables to measure the interaction of bond and equity markets as a source of finance for the firms. Their results report a positive and significant relationship between financial liberalization and the debt-to-equity ratio in East Asian countries. The variables used to measure access to foreign bond and equity markets also show a positive effect on debt-equity ratio. Similarly, Mohtadi and Agarwal (2004) examine the development of financial markets and their role in financing choices for firms. They use separate proxies for the stock market and banking sector development along with short-term and long-term loans. The results show that equity market development favors the equity financing of the firm while credit market development favors debt financing over equity. Moreover, credit market development has a more significant impact compared to stock market development. Their findings also suggest that firms avoid financing through the stock

market due to limited demand while preferring the long-term debt market to avoid speculations in the stock markets.

The country-level study by Laeven (2003), on the emerging markets in Asia and Latin America, shows that financial liberalization has a different effect on small and large firms. The smaller firms faced severe financial constraints before the liberalization process but were relaxed afterward, whereas the large firms were partially constrained throughout the liberalization period as they have better cash flows position as compared to small firms. On the contrary, Driffield and Pal (2001) report that large firms have to face more financial constraints than smaller firms in the Asian countries like Indonesia, Thailand, and Korea. They relate these findings to the internal and external shocks during the liberalization across the countries which could not be estimated due to different institutional and economical restrictions in countries.

Theoretically, financial reforms are supposed to provide equal chances for firms to access both the international and domestic markets for the source of capital but there are few strings attached to this that deny access. Firstly, as the existing financial system starts developing in stages, this triggers the financing behavior of the firms under liberalization. For a developing country, the stages in financial development include the growth of local banks, then the financial institutions, and lastly the security markets and foreign banks which may become a source of external funds (World Bank 1990). Secondly, as argued by Schmukler and Vesperoni (2006) that firms in countries with more developed financial markets are less sensitive to financial liberalization. This means that countries with developed financial sectors will experience similar financial instruments after integration that is already available in the domestic markets.

2.7   Critical Review of Literature:

Financial globalization has significantly increased over the years. To many countries, financial integration is regarded as a benefit as it provides alternatives for portfolio diversification and expansion of domestic markets, firms, and investors. With access to world capital markets, the investors get compensated with high risk-adjusted returns. However, the argument is that when countries share their capital markets, they also share international risk. This sharing gets riskier in case of adverse shocks that might hit the countries or a region that is integrated. Nevertheless, large countries with stable economies and the potential to absorb the shock will survive and take that as an opportunity to further grow its economy (Obstfeld 1992).

Financial openness has recently gained a lot of interest for researchers, academicians, and policymakers over the last few decades. Most countries have encouraged the opening of borders for the international flow of capital in both developed and developing economies. However, sudden cash flow reversals may be costly, especially for countries with weak regulatory systems as they have to face higher cross-border risks (Lane & Milesi-Ferretti 2018).

The argument on the benefits of international capital flows and its potential to harm the economy have varied. Particularly after the global financial crises of 2007 -2008, the roles of financial liberalization in financial and economic stability have been closely analyzed. Among the policymakers and researchers, there has been a lot of discussion on the increased levels of integration across borders and its related risks and opportunities. The debate mainly revolves around the feasibility and limiting the volume of capital inflows and outflows. Moreover, for the stakeholders, understanding the frequencies between financial integration and crises is important, as having substantial knowledge on this issue will help define the policies on cross-border flows.

Some studies have linked financial globalization as a reason for the banking crises. Bonfiglioli (2008); Gourinchas & Obstfeld (2012) and Caballero (2015) all investigate the relationship between integration and banking crises and report that financial integration increases the systematic banking crises in a country. Some other literature blames capital controls as a cause of financial crises. They argue that at the micro-level, due to higher capital demands in the economy, banks might take on more risk in their portfolios. This goes against the purpose of capital controls to some extent (Kahane 1977). However, at the macro-level, there exists strong evidence that international capital flows and restrictions contribute significantly to both economic stability and global contagion (Fernandez et al., 2015).

Having these contradictory arguments in the literature, motivate us to examine the impact of capital flows in the form of financial integration on the capital structure of the firms. Although some of the countries do impose restrictions on the capital flows to control the exchange rates and prevent the economy from any external shocks, however, these restrictions may affect future investments and the growth of the economy which is striving for cash flows. Hence there is a need to study this impact and critically evaluate it, especially in the emerging markets which are already competing with the developed economies and struggling for finances.

2.7.1   The impact of Financial Integration on the Economy:

Theoretically, integration exists in two different dimensions as mentioned in the previous sections i.e. firm-level integration called internationalization and country-level integration in the form of credit of equity market integrations. However, this integration influences the economic growth of the country through three different channels i.e. improvement in the flow of capital, diversification of risk in the form of portfolios, and risk sharing among investors from different financial markets (Ibrahim 2016). To date,

there is no mutual consensus in the literature about the impact of financial integration and the economy as a whole. For example, some studies report that financial integration has a positive impact on economic growth and the performance of companies (Levine 2001; Schmukler & Vesperoni 2006; Lucey & Zhang 2011; Tongurai & Vithessonthi 2023). On the contrary, some studies report a negative impact of financial integration on the country's economy (Ahmed. 2016). Furthermore, some studies have reported an insignificant relation between financial integration, growth, and firm performance (Edison et al., 2002; Ahmed & Mmolainyane 2014). Hence this section provides a critical review on the past literature, while identifying some of the important contributions in the past, there limitations and how those gaps motivated us to do a comprehensive study while making a strong contribution to the current literature.

2.7.1.1 Criticism of the studies showing a positive impact of financial integration:

This section shows that financial integration has a positive impact on a country's economy as it promotes capital flows, diversify the risk for the investors, increase competition among the finance provider, and allows the firms to raise low cost loans. Thus, financial integration plays a direct role in fostering economic growth while complementing other factors like an increase in a firm's performance, improvement in financial institutions, and development of financial markets. Therefore the policies that promote financial integration can influence positively to the other factors of the economy and vice versa. For instance, Bailliu (2000) examines the effect of financial integration on the economic growth of 40 countries. Instead of using the traditional method of financial development i.e. FDI, the author uses broader measures to gauge the impact of the financial development of the country. It uses the private capital flow and the deposits of money assets kept in the banks by the foreigners to capture the level of integration. Using a dynamic GMM technique, the study concludes that capital

inflows influence economic growth but only for countries where financial development has reached a certain level. The results also suggest that the domestic financial sector plays a vital role in ensuring that capital inflows contribute to all sectors of the economy. Although, the author uses a different approach to capture the level of financial development of a country, however ignoring FDI might give out some biased results. Moreover, the quality of financial institutions, that plays an important part in financial development, was ignored in this context.

Global financial integration also participates in the economic growth of the country through improvement in the domestic financial markets and financial institutions. Levine (2001) finds evidence of growth after the domestic market liberalized. This liberalization results in the removal of restrictions on international portfolios that enhances stock market liquidity, promote capital flows, and provide opportunity to the firms to raise low cost loans to finance their projects with negative NPV's. Moreover, the study also concludes that the presence of foreign banks makes the domestic market more competitive for investors that foster financial stability, and provide access to more financial products and services. However, this study made a good contribution to the literature, but the author ignored the potential threats and challenges that a country may face when foreign banks take over the domestic market as competition for the domestic banks, unequal distribution of resources, cross-border risk, and regulatory challenges. These threats might result in global crises which the world experienced in 2008-2009.

Giannetti et al., (2002) work also highlights the benefits of financial integration on the growth of the economy and firm performance. Applying a simple OLS approach to the manufacturing sector of European countries, the paper concludes that the first step towards country growth is the openness of financial markets to foreigners. This gradual growth of the economy takes the domestic country to a level where it can compete and

integrate with other countries and take benefits of integration. Moreover, the results also suggest that the underdeveloped members in the European region are the main beneficiary of financial integration as it streamlines their regulatory environment and promotes financial reforms. However, the results of this study may not be generalized to all European regions as it only considers the manufacturing sector of the economies. Furthermore, the study didn't use any measure to gauge the level of financial institutions and the implementation of laws which could provide more support to the results.

Most of the previous literature report that many emerging countries liberalize their economies in the late 90s. However, academicians and researchers realized the importance of liberalization after the Asian crises of 1998. Most importantly, the researchers started to realize that the quality of financial institutions plays a significant role in the economic development of a country. To address this, Bekaert et al., (2005) take a sample of 95 countries and investigates the impact of financial integration on firm performance and its growth. His findings indicate that financial integration (i.e. equity market and capital account liberalization) positively affects economic growth that promotes firms performance. Moreover, this relation depends on the quality of the institutions of each country. Although, this paper gives a detailed and comprehensive view by using different macro and micro-level variables to conclude the results, however, the author only used the equity market to gauge the integration effect. Furthermore, as the quality of institutions is an important factor that affects the level of integration, the implementation of rules and regulations cannot be ignored in this context. Considering these limitations of the study we included the "Common law" and the 'rule of law" in our study which gives a better insight to this subject.

Using panel data from 80 countries, and covering a period of 30 years i.e. 1976 – 2007, Shen et al., (2010) investigated the relationship between international capital flows and a firm's growth while accounting for conditional variables that previous

literature has ignored. The paper uses both foreign direct investment and foreign portfolio investment to gauge the level of financial integration of the country and reports that FDI has a positive impact on growth as it promotes capital flows. However, FPI shows a negative impact on the sample countries which suggests that financial integration in some emerging countries attracts high risk. Moreover, the results of macro-level variables like banking liberalization and higher corruption levels mitigate the positive impact of FDI on a country's growth. For robustness, the study also uses the crisis period and confirms the same results. Although, the paper uses some macro level variables to verify the results of previous literature, however, the micro level control variables of a firm that may also effect its growth were not considered in the study. Moreover, advanced-level regression models could also be used to verify the results.

As financial liberalization gradually seems to benefit the firms in emerging economies in the form of the availability of low cost financing, some experts argue that this may result in potential risks one of which is maturity risk. Schmukler & Vesperoni (2006) investigate how financial globalization affects the debt maturity structure in emerging economies. Taking a sample of seven emerging economies, the result indicates that the firms which can access international equity and bond markets experience a significant increase in long term debt and longer maturity periods. However, the domestically financed firms indicate a shortening maturity period after the financial liberalization. Moreover, these results are more significant in the economies which are less developed. The author concludes that this short term maturity is because of the weak regulatory environment due to which the foreign lenders are not ready to lend for long term. Although the paper makes a good contribution to the previous literature, however including some measures to gauge the level of regulatory environment or the implementation of laws in the sample countries would have made

the results more interesting. Furthermore, adding more emerging countries and using different methodologies to overcome the endogeneity could add further to the literature.

To further study the impact of financial reforms on the debt maturity structure of the firms, Fan et al., (2012) and Agca et al., (2015) extended the work of Schmukler & Vesperoni (2006). Fan et al., (2012) using a sample of 39 developed and developing countries found that the country's legal structure and level of corruption have a significant influence on a firm's leverage and debt maturity structure. According to him, firms in countries with high corruption tend to use less equity and more debt, especially in the short term. On the contrary, a low level of corruption and better enforcement of laws leads to higher equity financing and more long-term loans. However, the findings of this study give a general conclusion and didn't take financial reforms and level of integration that were further addressed by Agca, S., et al, (2015). In this study, the author explores cross-country panel data from 38 countries while using financial openness and financial reforms as the main variables. The results suggest that credit market integration results in long term debt maturity in developed countries as it reduces the cost of loans due to an increase in availability. Moreover, in emerging markets, access to international debt markets results in short-term loans only especially for financial constraint firms. This is because of the weak intuitional setup in emerging markets that makes it difficult for firms to benefit from credit market integration. The results of this study provide substantial evidence for the belief that credit market integration in emerging markets would only favor the companies to raise loans for the short term. However, the study didn't account for the stock market integration factor which also explains a significant portion in defining the capital structure of the firms. Considering this gap our study includes both the credit and equity market integration and its impact on the debt maturity of the firms operating in emerging markets.

Most of the previous literature either focuses on the impact of equity market integration or credit market integration on the financing decisions of the firms. Ignoring either market may misinterpret the results. Lucey & Zhang (2011) realized this gap and investigates the impact of both the credit and equity market integration on the capital structure of the firms assuming that these integrations provide substantial proof of reducing the cost of raising finance from the previous literature. Examining a sample of 24 emerging markets and using a wide range of country and firm level control variables, the results conclude that credit market integration is positively associated with a firm's leverage while the equity market is negatively related. The result also indicates that credit market integration results in short term maturity of loans only in emerging markets. Moreover, high-growth and large firms take more benefit from financial integration as compared to low-growth and small firms. Although this study provides a good understanding of the concept of integration and its impacts on a firm's behavior, however, the study ignores the regulatory and institutional environment of the countries especially the level of corruption which is the main root cause of weak regulatory system in emerging markets (Thakur et al., 2021). Moreover, the study also ignores the firm level integration that comes in the form of foreign sales of the company which gives a firm access to foreign markets (Wang et al., 2020). Considering these gaps, our study extends this to the next level while including all the levels of integration while also taking a level of corruption that influence the regulatory environment of the country.

Gonenc & de Haan (2014) give a new insight into the literature related to financial development and liberalization. According to the author, firm internationalization (foreign sales or foreign assets) also works as an integration into other markets. A firm involved in foreign sales or has foreign assets can get access to other markets that local firms cannot access. This access to foreign markets can give the firms an opportunity to

raise more finance that is available at low cost across the borders. Exploring a sample of thirty-one countries from 1991-2006, the results indicate that firm internationalization corresponds positively with the debt ratio of the firms. This evidence suggests that firms with more growth opportunities get access to foreign markets in the form of foreign sales and gets hand to low cost financing option that is not available in their home country. The same results are predicted by Wang et al., (2020) while comparing U.S.-based MNCs with domestic U.S.-based firms. Using a Monte Carlo approach the study results also indicate that MNCs use a higher level of debt as compared to domestic firms due to lower cost of capital available to these MNCs as a result of internationalization. Although, these studies also contribute to the literature, however, this level of integration still needs a detailed comprehensive analysis using the firm and country level control variables. Moreover, how the regulatory environment and the quality of financial institutions may affect this relationship is still to be investigated. These gaps in the literature work as a motivation of our study and we provide a good contribution to the existing literature.

Financial integration is a growing phenomenon. It has gained more recognition in the last few years due to the importance of its implications for policymakers. A recent paper by Tongurai & Vithessonthi (2023) investigates the impact of financial openness on the financial development of 164 countries. The financial development was tested in three different divisions i.e. banking sector, stock market, and bonds market. The result indicates that financial openness has a strong positive relationship with the banking sector and stock market development while the bond market is negatively correlated. The results imply that integration improves the availability of funds in the banking sector and stock markets and allows the firms to raise low cost loans to finance their projects. These results partially align with our study objectives. Although the study provides a better understanding for the policymakers to formulate the policies that

facilitate the integration process, however, the study didn't include any measures to gauge the level of financial regulation of the country which plays an important part in financial development. Moreover, the author could have used the robustness check while including the major financial crises and their impact on financial development. This would have given better insight to the policymakers and previous literature.

2.7.1.2 Criticism of the Studies showing a negative impact of financial integration:

This section shows there is either a negative or no impact of financial integration on economic growth and firm performance. This implies that policies undertaken to liberalize the economy don't show any significant effect on the country's economy. Edison et al., (2002) investigate the effect of financial integration on 57 countries. Using different techniques they report that financial integration in the selected countries has no impact on the economic growth even after controlling for financial, political, legal, and institutional factors. Although, this study realized the importance of legal and institutional variables in financial integration, however, the study period selected in this study was too early as most of the countries liberalize their economies in the late 90s and the impact of their liberalization may not be evident in this study period. However, the same technique was used by Imbs (2006) to explore the real effect of financial integration. The study only concludes that integration increases the correlation between consumption and GDP.

Ahmed (2011) working on 25 African countries investigates the impact of national and international financial integration on its economy and firms growth. Using a GMM technique, the study found no evidence between financial openness and economic growth. They conclude that international financial integration doesn't have a significant impact on local firms while domestic integration and good local institutions can fulfill the requirements of the firms internally. Hye & Wizarat (2013) applying the ARDL

models find that there is no long-term effect of integration on the economic growth in Pakistan. However, the short-term effect does exist.

Some studies also show an adverse impact of integration on a country's economy. They suggest that the implementation of liberalization policies and the opening of capital accounts negatively influence economic activity in the country. For example, Ahmed (2013) investigates the role of financial openness and the growth of the country. Using a sample of 21 African countries and dynamic panel models, the study concludes that liberalization has a strong negative impact on the country's economy. Their findings suggest that liberalization results in the destabilization of the economy increases cross-border risk, and causes welfare loss. Extending the same study, Ahmed (2016) shows evidence that macroeconomic factors like inflation, legal structures, and the quality of institutions can make this relation positive to some extent.

Another study investigates the role of financial development on the economic growth of India, a major emerging country. Singh et al., (2023) instead of using traditional models to explore this asymmetric relation, the author applied more flexible models to capture the relationship between financial development, trade openness, and foreign investments. The result indicates a negative relationship between financial development and economic growth of the country both in the short and long run. However, trade liberalization works as a positive contributor to the economy. These results imply that a country like India, which is dominated by the banking sector, may not attain the level of economic growth while expanding the financial sector only. The economy needs to increase trade openness together with technological advancements to support its growth prospects. Moreover, the results support the fact that high-quality institutions and enforcement of rules and regulation plays a major role in financial development.

Considering these contradictory results motivates us to study this relation in detail, especially for emerging markets. Although this relation is stronger in developed countries due to developed legal and financial structures, however, the emerging markets are still weak in this aspect. Hence our study focuses on emerging markets and investigates the impact of levels of financial integration on firms' capital structuring considering the micro, macro, legal, and institutional factors altogether to get a better insight and contribute to the current literature.

2.8   Theoretical Framework

Capital structure means how a firm structure its capital considering the sources of finances available. It shows how the companies finance their assets with a combination of debt and equity. The theory of capital structure has been developing since the foundation was set by Modigiliani and Miller (1958). Since then, three different groups in the past literature can be identified which are: i) theories that suggest an optimal combination of equity and debt; ii) theories that suggest an optimal hierarchy in raising funds, and iii) theories that propose that capital structure of the firm is irrelevant. A lot of research is been conducted on these approaches to reach some conclusion but still are indecisive due to variations in factors and economic conditions of different countries affecting the firm financing behavior.

Besides the other factors mentioned earlier in this study, some theoretical antecedents provide further explanations for the variation in corporate financing and the cost of equity and debt capital. This section takes us through the research that focuses on the relationship between financial integration and the financing alternatives of the firms. The initial arguments on the capital structure have been under the assumptions of perfect capital markets with no corporate taxes, no transaction costs and the value of the firm does not

depend on its capital structure (Modigliani and Miller, 1958). However, the studies following this argument strongly believe in the idea that there is a tax advantage against the debt to a certain extent, after which it is counterbalanced by the cost related to bankruptcy and financial distress.

The tax shield argument was rejected by Miller (1977), concluding that the tax advantage is zero. According to him, the tax advantage for debt financing at the firm-level is offset by the tax disadvantage of debt at a personal level. In search of further arguments pertaining to the choice of debt over equity, the literature has focused on the trade-off theory of cost related to leverage and its benefits. In the work following, Jensen and Meckling (1976) suggest that the capital structure choices of the firm depend on the agency cost that relates to the relationship between the stakeholders, especially the shareholders and bondholders. This agency cost argument was further explored and the variation in capital structure choices for the firms was linked to information asymmetry among the managers and shareholders (Myers 1984)

Other than the agency and asymmetry issues, the researchers also linked the capital structure choices to the changes in demand and supply of financial markets in a particular industry and country (Maksimovic and Zechner 1991). This argument states that the business environment in which the firm operates influences its financing structure. Moreover, competitive strategies adopted by the firms guide their investment decisions (Chandler 1962), and the investment choices influence their choice of financing (Williamson 1988). Although a large amount of literature continues to emerge, still the optimal level of capital structure that balances the cost and benefits of financing is still indecisive. Nevertheless, the theoretical approach has suggested that taxes, agency cost, cost of bankruptcy, firm products, and the business environment in which a firm operates all have a potential impact on the financing choices of a firm. However, there is still a

need to develop a consensus on which factors are the main contributors to firm financing choices. The existing work highlights some of the theories that try to reach some definitive conclusions about the financing choices of firms.

2.8.1 Trade-off theory

During the 1970s, the general view regarding the optimal capital structure level was to balance the tax advantage of the loan with the present value of bankruptcy (Bradley *et al.,* 1984). The optimal mix of debt-equity is based on the assumption that a firm sets its target ratio that maximizes its value by minimizing the cost of taxes, bankruptcy, and agency costs. In the early stages of development, this theory suggests balancing the tax benefit of debt and the cost of bankruptcy however, in the later debates it focuses on the adjusting target debt ratio due to its transaction costs.

According to Bradley *et al.*, (1984), the firm target debt ratio is generally influenced by firm specific factors which include: variability of firm value, level of the cost of financial distress, and the amount of non-debt tax shield. However, the later studies have also included asset tangibility, growth opportunities, firm size, profitability, and levels of investments as the determinants of debt ratio (Gilson 1997). In another approach, the historical average of the debt ratio has been taken as the target ratio. Marsh (1982) argues that as the required information is not available, the firms have to take the best estimates from their past experience to calculate the average target debt ratio. For this reason, some empirical studies use industry averages to measure debt ratios (Gatward and Sharpe 1996). In the context of emerging markets, this approach does seem to hold to some extent due to higher information asymmetry and agency cost problems.

2.8.2 Pecking order theory

In contradiction to the trade-off theory, the pecking order theory proposes a hierarchy of funds instead of focusing on optimal capital structure (Myers and Majluf, 1984). According to this theory, a firm is already operating at its target capital structure, and any changes in the debt ratio are driven by the need for external funds rather than trying to reach an optimal capital structure. This need for external funds is referred to as deficit financing which arises due to the shortage of investments or paying dividends. This theory, focusing on the hierarchy of funds, proposes that the securities with the lowest information cost i.e., debt will be the first priority followed by the securities with the highest information cost i.e., equity. Taking this theory further, Myers and Majluf, (1984) also argue that this pattern of financing overcomes the problem of under-investment caused by a lack of information.

In the context of emerging markets, the information asymmetry may vary with time. Before financial liberalization, the allocation of loans and asset substitutions was not a problem as the government would select the projects and monitor the performance of the firms to provide them with further credit for expansion. However, after liberalization, as the loans became available across the borders and at a cheaper cost, it leads to subsidized loans to large firms only due to their past performance. This concludes that high profitability has a positive relationship with the firm debt ratio.

Theoretically, the information asymmetry problem should reduce after liberalization because the banks and institutional investor takes the role of allocating and monitoring the credit. But it might not reduce, especially in the emerging markets, due to weak institution setup and the banks are not capable of solving information asymmetry problems as they lack adequate research and monitoring skills. Therefore, in countries with weak regulations and a lack of accounting standards, liberalization might magnify

adverse selection problems and increase information asymmetry. As a result, firms in emerging markets will have more reliance on internal finance, while one with future growth opportunities will have access to less external finance. Booth *et al*., (2001) work on emerging countries reported a negative relationship between growth and debt ratio. Moreover, profitable firms use less debt in emerging markets due to higher information asymmetry problems, weak financial institutions, and the immature nature of long term loans.

So, the proposed hypothesis under this theory will be: as liberalization results in the reduction of financing and information cost, so the firms will prefer debt over equity. Moreover, large firms will be able to access cheaper loans due to high profitability and better performance.

2.8.3   Agency Cost Theory

Agency cost theory also highlights the financing patterns of the company without emphasizing the hierarchy of financing choices. According to agency cost theory (Jensen and Meckling 1976), capital structure decisions are made to minimize the agency costs of debts and equity. The theory suggests that the decision to issue debt or external equity depends on the agency conflicts that exist between the managers, shareholders, and bondholders. The theory suggests that conflict occurs when the managers get involved in projects with negative NPV which results in the wastage of free cash flows. Moreover, author defines free cash flows as cash flows that are in excess of the cash required to finance projects with positive NPVs. As the managers seem to be partial owners, they have the authority to expand the business beyond its optimal size and to invest in negative NPV projects. Stulz (2009) shows that the issuance of debt can limit the manager's authority and reduce the agency's cost. Moreover, in case of debt issuance, the management will be monitored by the creditors as they need to make sure that they are

repaid on time, otherwise, they will enforce the firm to declare bankruptcy if in case they are unable to pay the loans.

However, Zwiebel (1996) arguing on agency conflict concludes that the use of debt to limit managers' involvement depends on the manager's entrenchment. According to the author, it's the manager's discretion to decide the optimal capital structure of the firm. The entrenched manager will always prefer less debt in the desire to reduce the risk to protect their inexperienced human capital or to reduce the pressure associated with debt occurrence which results in a heavy amount of cash outflows. Conversely, Novaes and Zingales (1995) argue that managers with an entrenchment motive may increase the debt beyond the optimal level to avoid hostile takeover attempts. They further argue that managers looking to extend their job tenure may opt for optimal debt. This implies that when a disciplinary mechanism comes with a higher cost, managers opt for lower debt while the lower cost of a disciplinary mechanism results in higher debt to avoid a takeover.

In the context of emerging markets where the corporate controls are poor with weak financial institutions and a lack of legal protection available to foreign investors, this theory predicts that firms with lower growth opportunities and high free cash flows will allow the managers to reduce the debt and issue equity. This is to avoid the pressure linked with the occurrence of debt and the threat of bankruptcy.

So, the testable hypothesis against the agency theory framework in this study will be that: financial liberalization opens up new financing options for the countries but considering the dynamics of emerging markets, firms will prefer equity over debt to avoid agency costs associated with foreign debts.

2.8.4 Resource-based Theory

The resource-based theory is an economic theory that suggests that management determines the best available resources a firm can exploit to achieve a competitive advantage over competitors. This proposes that all firms are heterogeneous as they have heterogeneous resources which makes them unique among others. It focuses on the firm internal resources to identify those assets and competencies which can deliver a superior competitive advantage to the firm. A basic concern arising from the resource-based view is that all resources available to the firms are not the source of sustainable competitive advantage. Thus, the management has to look deep inside to identify the potential resources that could be imitated and substituted to get the best competitive advantage out of them.

Financial Integration can work as a potential source of advantage for the firms in reducing their financing cost and taking up those projects which were shelved due to lack of finances. Internationalization or foreign sales can be used by the firms to exploit other markets in search of cheaper loans that can work as an advantage over other competitors. Moreover, the country-level integration (equity and credit markets) also works as a tool to access low-cost financing and to initiate projects having negative NPVs. If the management can put some extra effort into identifying and understanding the benefits arising from market integration and look for potential opportunities which can reduce their cost of capital, this will get them an extra advantage over other competitors in the shape of more profits.

2.8.5 Institutional and Legal Perspective

Besides the theories of capital structure, the literature also suggests that the institutional and legal framework of the country also affects its financing choices. The institutional factors consist of the implementation of accounting standards, the protective

rights of shareholders and creditors, enforcement of the law, and bankruptcy procedures. The previous studies also argue that bankruptcy procedures and the right of shareholders and creditors affect the supply of international finance in the country. Moreover, most countries especially in Asia have inherited their legal systems, which vary in their legislative procedures which leads to different rights for creditors and shareholders in case of bankruptcy. For instance, in Malaysia, Pakistan, Korea, and Thailand, the creditors have priority claims over employees in case of bankruptcy, while in India, employees have the first claimants' rights over creditors (Thorburn 2000).

These differences in the legal structure make the creditor insecure to lend in some countries as they do not see any benefit of entering into a formal bankruptcy due to a lack of debt recovery procedures. For instance; countries following the common law i.e. Malaysia and Pakistan do not file for formal bankruptcy in the courts and there are more likely chances for an out-of-court settlement. The situation could be worse if corporate governance regulations are not practiced in the country. The empirical literature related to the legal economic structure of the country has used some subjective variables to measure the legal and regulatory system. In this regard, La Porta *et al*., (1997) provide the most persuasive argument which says that differentiating the countries on the efficiency of their legal system and the law they follow is more useful in predicting their financial system. Following La Porta *et al*., (1997), this study differentiates the countries based on the common law they have adopted and then analyzes how that effectively participates in the financing decisions of the firms operating in those countries.

2.9   Conceptual Framework

Independent Variables
Integration:

Firm level Integration:
- Internationalization

Country level Integration:
- Equity Market Integration
- Credit Market Integration

Corruption:

Control Variables:

- Firm Specific Factors
- Size, Growth, Tangibility, Profitability, NDTS

- Country Specific Factors
- Credit Dev, Stock Dev, GDP, Inflation

Dependent Variables

- Firm Leverage

- Debt Maturity

Legal Variables:

- Common Law
- Rule of Law
- Regulatory Quality

Figure 2-2 Conceptual Framework

2.10   Hypothesis Development

In this section, we will develop hypothesis based on existing literature already discussed in chapter 2. This analysis will improve our study in understanding the levels of integration and their impact on a firm's capital structure.

2.10.1   Internationalization and capital structure

Previous research shows two different channels by which integration may affect capital structure decisions. Firstly, the level of internationalization a firm is involved in i.e., foreign sales. Foreign sales work as an entry pass to other countries which permits access to the foreign market from where they can get access to low-cost loans not available in their home country and finance their growing operations. Fatemi (1984) working on the benefits of international diversification reports that multinational companies take benefit from diversification which helps them to reduce the present value of bankruptcy costs while increasing debt usage. Burgman (1996) work on multinational firm's capital structure shows contrary results. According to him, higher debt holdings lead to higher monitoring cost, hence reduce the level of leverage in the companies. Lee & Kwok (1988) and Chen *et al*., (1997) both investigate the impact of international activity and international factors on capital structure. They conclude that domestic firms have higher debt ratios as compared to multinational firms. Moreover, multinational firms are positively related to the degree of internationalization. Kwok & Reeb (2000) suggest that the internationalization of the firm is attached to its home country risk factor which affects its leverage. If there is an increase (decrease) in the risk, the traditional theory of capital structure suggests that debt utilization will decrease (increase).

Gonenc & de Haan (2014) finds that the internationalization and usage of debt depend on the level of capital market development of the country. When a firm from an emerging country moves into international markets to promote its sales, it can gain access to debt

that was not available in its own country. In this way, the firms operating in these countries with weak capital markets are more likely to increase their debt when they get access to loans at a lower cost.

Financial liberalization also affects debt maturity in emerging economies. Assessing the international markets open up new financing options for domestic firms. According to Schmukler & Vesperoni (2006) when a developed country integrates with the world, the debt maturity extends to the long term as the lender is confident about the rules and regulations followed in the developed market. However, when an emerging country integrates with the international markets to access long term loans, the debt maturity shifts to short term due to a lack of information asymmetry. Moreover, the weak laws and regulations in a emerging country do not allow lender to lend for the long term. Demirguc-Kunt & Maksimovic (1999) work on the role of institutions in defining debt maturity also suggests that firms enjoy a longer duration of debt where the legal systems are more integrated. Fauver *et al.,* (2003) investigates the cross country diversification of 35 countries and concludes that countries with weak legal system are negatively related to credit market integration and debt maturity. Moreover, the countries following the Common laws have stronger creditor protection rights and enjoy longer maturity periods as compared to German and French laws. This leads us to our first hypothesis i.e., to test the impact of internationalization on the leverage of the firms operating in emerging economies.

H1a: Firm internationalization is positively associated with the leverage of the firms operating in emerging economies.

H1b: Firm internationalization is associated with the debt maturity of firms in emerging markets.

2.10.2 Financial Integration and Capital Structure

Second, the level of integration is the integration of a country's capital markets i.e., credit and equity markets. Financial market integration enhances the financial services in the local country, allows access to global markets, and permits foreign equity ownership. (e.g. Levine & Zervos 1996; Giannetti *et al.*, 2002). This globalization has offered new horizons for the financial markets and has provided more financing options, especially for emerging countries where the sources of finance are scarce.

Theories from the literature suggest where resources are scarce, market integration gives new hope of life to the financial markets. As financial integration moves to a higher level, it is expected to provide more financing options for the firms while decreasing the cost of capital. This decline is driven due to some positive outcomes of integration as global risk-sharing, improved information efficiency, diversification potential, better corporate governance, and increased efficiency among financial markets and institutions. (e.g., Stulz 2009; Claessens *et al.*, 2001; Doidge *et al.*, 2004; Hooy & Lim 2013).

An important impact of financial integration is a reduction in the cost of capital. This decrease in the financing cost has been supported by many researchers in the past. Bekaert & Harvey (2000) and Henry (2000) exploring the emerging equity markets while using a market-level analysis, report a decrease in the cost of equity for the firms after the markets are liberalized. Booth *et al.*, (2001) working on 10 emerging markets, reports that the company changes its capital structure and shifts from equity to debt financing after the market integration. This is due to the loans available at reduced costs available in foreign markets. Analyzing the emerging markets, Patro & Wald (2005) also investigate the firm characteristics and their impact on market liberalization concluding that stock returns increase during market liberalization while there is a decrease in mean return and dividend yields after liberalization.

Comparing both the equity and credit markets, Giannetti *et al.,* (2002), working on corporate financing and economic growth in European countries, conclude that market integration benefits the countries by providing cheaper financing options to their firms that help them grow successfully. Moreover, equity market integration has a negative impact on a firm's leverage; whereas, credit market integration results in low debt costs available from foreign markets which positively affects firms' leverage. Lucy & Zhang (2011), work was different from previous authors as its focus was on emerging markets only. The author explores the impact of financial integration on 24 emerging markets and suggests that an increase in equity and credit market integration results in higher use of equity and debt respectively. Moreover, institutional variables like common law, regulations, and some macroeconomic factors also have a strong impact on firms' financing decisions. In the light of above findings, the credit market integration of a country will result in more debt due to its reduced cost while equity market integration will result in more equity and less debt. So, the next hypothesis this study will be testing is:

H2a: The degree of credit market integration is positively related to leverage in emerging markets.

H2b: The degree of equity market integration is negatively related to leverage in emerging markets.

2.10.3   Financial Integration and Debt Maturity

As discussed in section 3.1 and proposed by our first hypothesis, the firms getting access to foreign markets due to foreign sales may have access to cheaper long term loans not available in their home country, while the maturity of the loan will be short term due

to cross border risk, lack of information asymmetric and weak rules and regulations for the creditors in emerging markets.

The empirical evidence also suggests that country level integration i.e., integration of credit and equity markets is likely to affect the maturity of debt in emerging economies. As the integration moves to higher levels, it is expected to increase the financing options for the firms operating in the country. This increase in financing options is more likely to reduce the cost of debt as the current contract in the domestic market can be broken due to more competition in the markets. Though with the increase in integration firms are going to take additional debts but this debt will be extended for short term period only (Barclay & Smith 1995).

When a firm from a developed country integrates with the international markets, it may get access to financing with longer maturities. However, when an emerging market integrates with the international markets, they will be able to access loans for short terms only. This is because the weak financial and legal infrastructure in the emerging country will allow the creditor to issue short-term debt so that it can monitor the behavior of the borrower (Schmukler & Vesperoni 2006). Moreover, if the foreign lenders are risk avoiders as compared to local investors, the maturity of the debt will shift to the short term because foreign lenders will charge more interest rates on long term issuance than the local investors.

The evidence also suggests that financial integration results in more competition in the domestic markets which benefits the corporate firms financing decisions. Working on domestic financial liberalization and market openness, Agca *et al*., (2007) suggests that with more competition coming from credit market integration, domestic lenders are more likely to reduce the maturity of debt as the prevailing relationship can be broken due to more open opportunities in the market now. Moreover, his results on equity market

integration conclude that equity market integration will make equity more attractive and companies will try to shift from debt to equity financing as it can be used as a long-term financing. Atawnah et al., (2023) explore foreign competition and its effect on a firm's debt maturity structure for the period 1993 – 2012. The results conclude that foreign competition has a strong positive association with short-term debt. Moreover, this relation is more pronounced in firms with higher information asymmetry issues and lack of monitoring by the institution which keeps them at high risk. This also proves that lenders only lend for the short term as they are not confident about the true financial position of the debtor.

Other than the integration factors, some institutional variables like legal framework, common law, and rules and regulation to protect the creditor's interest also affect the maturity of the debt structure. In this regard, Fan *et al*., (2012), proposed that countries which follow the Common law and have strong protection laws for creditors will be able to secure the loan for a long-term duration as compared to a country with weak laws. Furthermore, the duration of the loan also depends on the size and tangibility of the company, as the creditor always wants to secure the loan against the collateral (Agca *et al*., 2015). This discussion leads to our next hypothesis i.e.:

H3a: The degree of credit market integration is positively related to debt maturity in emerging markets.

H3b: The degree of equity market integration is negatively related to debt maturity in emerging markets.

2.10.4 Financial Integration and Corruption

Corruption is considered to be crucial factor in designing the country's legal system, resource allocation, and corporate behavior (Fan *et al*., 2012). This corruption affects the

capital structure decisions of the companies in different ways. Initially, the investors intend to invest in the company to regain their capital based on the criteria specified in the contract (Leland & Pyle 1977). Thus, even if the contract is complete but cannot be performed, the creditor gets its capital and interest back with little right of recourse. Shleifer & Vishny (1993) conclude that in highly corrupt countries, the investors suffer a high risk of not getting their capital back. This higher risk among the investors makes it difficult for the banks to offer credits or to increase the standard of credit in a way that increases the cost of obtaining external funds. Hence, this corruption leads to a decrease in banks' credit (La Porta *et al.*, 1997).

Weill (2011) working on Russian banks report that an increase in corruption in Russia results in the blockage of banks' credit. This is because the banks were only lending to business connected networks that were not able to pay back on maturity. This resulted in unfair distribution of finances while the companies which deserve loans couldn't access that due to lack of strong references. Hence the Russian economy couldn't reach the level of development due to the use of public powers in favor of personal gains. De Carvalho (2009) investigates the corporate data from Brazil and finds that corruption prevents firms from securing bank loans. Moreover, other than judicial corruption, firms also face credit corruption when they apply for bank credit. Stiglitz and Weiss (1981) highlight the adverse selection caused by asymmetric information between the banks and debtors which leads to credit rationing. This further suggests that some of the debtors opt to pay a higher interest rate to the banks which is in excess of the official rate. This works as a bribe to motivate bank officers to obtain credit. If the debtors are successful in bribing the bank officers in receiving the bank's credit, this corruption will increase the company's credit from banks. Chen *et al.*, (2013), use entertainment expenses to measure the level of corruption in the Taiwan Corporate financial index and finds that corruption helps companies to secure bank credit. Fan *et al.*, (2012) and Fungacova *et al.*, (2015)

investigating the cross countries' data report similar findings. They report a positive correlation between a country's corruption level and a company's bank credit receipts and a negative correlation between corruption level and long-term bank credits.

The previous literature has highlighted the significance of corruption, and its impact on the financial development of the country. A general consensus on corruption is that it acts as a tax on international investments (Wei 2000). According to Globerman & Shapiro (2003), higher levels of corruption weaken the institutional quality in European countries. These weak institutions discourage foreign investment and hinder financial development. Although some of the optimistic theories about efficiency related to corruption suggest that there still exists a wide range of evidence that corruption has a negative impact on the economic and financial development of the country. The number of factors that contribute to this negative impact include the reduction in foreign direct investments, foreign aid, and weak financial and economic activities. Some of the authors even concluded that these negative effects are worsened if this corruption is disorganized and uncoordinated (Bardhan & Mookherjee (2006). However, analyzing the level of corruption is a complex issue that differs across many disciplines and hence beyond the scope of this research. However, with the growing line of literature regarding the impact of corruption in different disciplines, the unchallenged conclusion is that corruption is bad for economic development in a country.

Among other regulatory indices, this work particularly focuses on the role of corruption, which may act as a hurdle in the integration of the financial markets while also preventing the foreign investor to invest due to a lack of confidence in the host country. Although corruption is part of all countries, it is particularly more common in emerging countries with weak legal institutions and judiciary systems that make law enforcement more difficult in case of any conflict (Hellman 2000). Corruption makes it

difficult for foreign investors looking for opportunities to diversify their risk and get better returns in transition economies. Moreover, with the prevailing level of corruption, the financing opportunities of the host country are reduced as the local lenders will have the monopoly to lend the loans at the cost of their choice.

With the negative consequences that may exist due to the presence of corruption in the country, Diamond (2004) argues that lenders will be better off by structuring the debt for the short term instead of long term. Moreover, in case of any bad news, the short term debt can work as a monitoring tool for the firms and a threat of spoiling the firms' credibility which gives the lenders the benefit to enforce their contracts timely. In the same way, the borrowers will be ready to pay the lenders on time to preserve their reputation. In an ideal condition, firms will end up borrowing from multiple borrowers in short term. Hence, other things being equal, in an environment with the existence of corruption, where enforcement cost is high, short term debt serves as a tool for lenders to enforce their contracts and impose penalties on the borrowers if they default. Thus we have the following hypothesis:

H4a: Corruption level has a significant impact on the leverage of the firms operating in emerging economies.

H4b: Firms operating in countries with a high perceived level of corruption tend to use short-term debt instead of long-term debt.

Most of the existing work combines a number of institutional and regulatory indicators to measure the quality of institutions in the country (Claessens & Van Horen 2008; Lensink *et al.,* 2008). This study also focuses on the corruption variable as the main variable that may hinder financial development and integration among the countries. However, some of the authors argue that only corruption cannot be taken as a variable to

measure the regulatory quality of the country due to its multifaceted phenomenon. Considering this fact, this study also takes "rule of law" and "regulatory quality" as alternative measures to examine the institutional quality and how it may affect the integration level of the country.

2.10.5 Financial Integration and Legal Systems

The legal system faced by the countries plays an important role in the external financing of the business. According to La Porta *et al*., (1997, 1998, and 2000), not only does the credibility and the information disclosure of the company help them in getting external finance, but the legal system faced by the company also plays a big part. Their work also suggests that the contents of the law and its implementation in protecting the interest of stakeholders are of utmost importance for financial market development. Qian and Strahan (2007) report that foreign banks are more sensitive to the legal requirements of the country because their lending to local firms is directly related to the creditor protection rules. Beck *et al*., (2008) finds that firms operating in countries with poor legal environments use less external credit, especially small firms. In countries with weak enforcement of laws, financial instruments with short-term maturities are more likely to dominate. La Porta *et al*., (1998) find a significant difference in investor protection rights across developed and developing countries and conclude that a legal system based on Common law provides better protection to investors than those following civil law. This suggests that countries with common law are more likely to use external equity and a longer period of debt as the supplier will be more protected in case of default by the borrower.

The relationship between the regulatory environment and the cost of capital has been discussed in the past by a few researchers. Lombardo and Pagano (2002) show that better disclosures of the facts reduce the monitoring cost of investors, hence reducing their costs.

Moreover, the well-functioning legal system protects the interest of foreign investors, which helps the firms to raise more external funds. These external funds reduce the risk premiums for the investors which lowers the cost of raising new capital. Hail and Leuz (2006) reports that countries with strong regulations and enforcement mechanism end up with a lower cost of capital. La Porta *et al*., (2008) finds that better legal institutions and the security system of equity markets help to protect the rights of outside investor, which lowers the chances of fraud and reduces the risk premiums. Moreover, better institutional quality enhances capital growth and provides stability to the firms. Younas (2011) also finds that improvement in the legal system and institutional quality increases capital mobility in the economy. He also reports that weak institutional setups make investments riskier in emerging countries and investors look for portfolios that can guarantee back their investments rather than higher returns. Agnello *et al.,* (2015) conclude that financial openness is related to structural reforms in the country. They report that the level of financial integration decides how much financial reforms are required in the economy.

Based on these arguments, the impact of financial integration is said to be more significant in countries with better legal environments. Hence our hypotheses are designed as follows:

H4c: The positive effect of credit market integration on firms' leverage is more evident in countries with an efficient legal environment.

H4d: The negative effect of equity market integration on firms' leverage is more evident in countries with an efficient legal environment.

H4e: The positive effect of credit market integration on debt maturity is more evident in countries with a weak legal environment.

2.10.6 Financial Integration and Financial Crises

A Global financial crisis (GFC) 2007 -2008 is considered one of the worst crises in the history of finance leading to high recessions and creating adverse impacts on financial capital markets. Even though globalization benefits the firms in emerging economies in the form of high competition, increased trade, and easy access to low-cost capital yet this globalization has some severe damaging effects on the economies of emerging markets (Harrison & Widjaja (2014). Despite the fact that the global crises have mostly affected the developed economies (Imbs 2010; Bekaert *et al.,* 2014), this effect can also be seen in emerging economies as most of the developed markets are usually trading partners in emerging markets.

After the financial crisis, most emerging countries put restrictions on their markets to reduce the effect of these crises on their financial markets (Fernandes (2011). Firms are not allowed to borrow and lend capital from foreign markets. Most internationalized firms have to cut down their foreign sales as of low demand and find different ways to consume their extra supplies. Therefore, this global crisis not only affects internationalized firms because of restrictions on trade, but it also impacts domestic firms indirectly due to the extra supply created by internationalized firms. So, this leads us to our hypothesis:

H5a: Financial crises have a significant impact on the leverage of firms in emerging economies.

H5b: Financial crises have a significant impact on the debt maturity of firms in emerging economies.

2.10.7 Additional Hypothesis

Financial Integration and Interactive effects

The previous discussion revolves around the direct impact of financial integration on the firm financing choices. However, this subsection will discuss some assumptions under which financial integration may have varying impacts. These include three categories: firm with growth opportunities, firm size, and country's legal system.

2.10.7.1 High and Low Growth Firms

Our first assumption predicts that firms with more growth opportunities will need more finance and would take more benefit from market integration. Rajan and Zingales (1998) report that industrial sectors with greater growth prospects require more external finance to grow faster. Their results suggest that financial development supports the firms in external financing by lowering the costs of finances. This means that due to the integration of markets, more external funding is available than before and at a lower cost, and this lower cost of capital converts many negative NPV projects into positive NPV projects in the long run. Henry (2000) also finds high growth in the firms following the liberalization in emerging markets. Working on emerging markets, Gupta and Yuan (2009) also reveal that firms that are more externally dependent and have better growth prospects grow faster after the country's liberalization. This discussion leads to our next hypothesis which assumes that firms willing to grow faster need more external cash which comes as a benefit of financial integration.

H6a: The positive effect of credit market integration on a firm's leverage is more evident in high-growth firms than in low-growth firms.

H6b: The negative effect of equity market integration on a firm's leverage is more evident in high-growth firms than in low-growth firms.

2.10.7.2 Large and Small Firms

Do all the firms looking for capital financing can get benefits from financial integration? And the answer is obviously 'No'. This is because the market situation, the company's profitability, and investors' interest all hinders the capital to flow toward profitable projects (Stiglitz and Weiss (1981). According to Merton (1987), investors invest in firms which are familiar to them. By familiar, the author means that lenders and investors prefer those firms which share rich information with all their stakeholders. Many previous studies use a firm's size as a proxy for information availability. Kang and Stulz, (1997) conclude that foreign investors hold more share of large firms as compared to small firms. Bailey *et al*., (1999) indicate that good information from large firms calls for high price premiums for foreign investors. Moreover, foreign banks are more likely to lend to firms with more open information which is usually the case in large firms (Berger *et al*., (2001). Christoffersen *et al*., (2006) and Mian (2006) also revealed that larger firms have a tendency for large price fluctuations after liberalization takes effect. Furthermore, the greater the geographical distance between the foreign banks' headquarter and the local branches, the more likely chance that these banks will avoid firms with information difficulty which are usually small firms. All this discussion concludes that large firms have better access to external finance. Our next hypothesis is:

H6c: The positive effect of credit market integration on firms' leverage is more evident in large firms than in small firms.

H6d: The negative effect of equity market integration on firm leverage is more evident in large firms than in small firms.

Conclusion:

This chapter provides a detail overview of the previous literature that relates to market integration and its different dimensions affecting the economy. Initially it highlights the barriers that hinder countries from getting integrated with the other markets. However, once the capital controls are relaxed and the financial constraints are removed, the country moves towards liberalized economy, while reaping the benefits of integration. One of these key impacts are reduction in cost of equity and debt as evident from the literature.

Moreover, the role of legal variables especially the corruption and its impacts on foreign investments, firm value, financial development and the cost of financing is also discussed in detail in the first part. The thorough critical review of the previous studies offers a valuable insights into the relationship between financial integration and economic variables. Their limitation are also provided that worked as a source of motivation for this study.

The subsequent discussion is on the measures that are being used for the financial integration in the previous literature. It further highlights some of the theories of capital structure that help in determining the financing behavior of the firms. The chapter ends with the development of hypothesis that will be tested in this study in the next chapters. These hypothesis aims to add a further understanding of the dynamics surrounded by financial integration and its implications on the economy.

CHAPTER 3: DATA AND METHODOLOGY

3.1 Introduction

The purpose of this section is to present the data and variables selected for our methodology. The structure of this chapter is as follows: In the first section, we discuss the selection criteria of our sample emerging markets. We then present the main integration variables used in the study and the measures to calculate them. All these variables will be used in the next chapter to formally test and analyze the impact of market integration on the firm's capital structure. The second section of this chapter relates to the methodologies used to test the relationship among the variables. All the estimation models used together with some preliminary tests are part of this section. The section ends with concluding remarks.

3.2 Data

3.2.1 Sample selection and Criteria

Our sample initially consists of publicly listed non-financial firms in 24 emerging economies categorized by MSCI Emerging market index-Appendix (Table 8-1). Taiwan and Korea were dropped from the sample due to the non-availability of data. As per the previous research on capital structure, the firms in the financial sector and utilities were also excluded from our sample as they are subject to different regulations and their operating characteristics and financial statements are also different. Our final sample, after excluding the non-financial firms and missing values, resulted in an unbalanced panel of 9563 firms from 22 countries covering the study period of twenty-six years from 1990 – 2015 (Table 8-1). There are three reasons for selecting this time period: firstly, the proxy taken for financial integration variable ends tills 2015, secondly most of the emerging economies liberalized their financial markets by the end of 90's (Bekaert 1995), and lastly, two major financial crises occurred during this time

period.

This work only includes data till 2015 because the financial integration measure taken for this study is not available beyond that. However, the objective of the study can still be achieved during this period as two financial crises occurred, and the previous studies have examined how the company's financing decisions changed before and after the crises. Moreover, there have been no significant event in the past seven years except the Covid-19 for which the data is not long enough for good analysis. Therefore, the main objective of the study will be fulfilled within this specified period.

3.2.2   Variable Description

3.2.2.1   Dependent Variables

The data on all firm-level variables are taken from DataStream. We use two different measures for leverage. One is the LEV-1, defined as the ratio of total debt (short term and long term) over total assets (D*to*Assets) while, LEV-2, is the ratio of long-term debt over total assets (LTD*to*Assets). Debt maturity (DMAT) is defined as the ratio of short-term debt to total debt (STD*to*Assets).

3.2.2.2   Independent Variables

i.   Measurement of Internationalization

Past researchers have used different proxies to measure internationalization i.e. Foreign sales (Gonenc & de Haan 2014), foreign assets (Mansi & Reeb 2002), and a number of geographical segments (Sullivan 1994). Following Gonenc & de Haan 2014, if a firm successfully gets access to an international market in the form of foreign sales, it will help them explore further opportunities coming with internationalization. So, we

use the foreign sales to total sales ratio to measure the firm level integration, as it also allows for better scrutiny and details analysis of the data.

ii.   Measurement of Financial Integration

With the world getting more globalized, financial markets are getting more attention. This attention has ignited the process of financial openness as the investors are more willing to explore the foreign markets. Many different variables are developed to measure the process of integration. These variables are mostly divided into two categories: namely the *de jure* measures and the *de facto* measures. De jure measures show the changes in policy and the legal restrictions imposed on cross-border capital movements while the de facto reflect the use of global capital markets and resources by the country. The next section explains the type of the variable used to measure the integration level of the country.

iii.   Quantitative Measures:

Feldstein and Horioka (1980) were the first to introduce a quantitative measure for measuring the financial openness of the country and accessing its capital mobility. This measure focused on the correlation between savings and investments in an economy to indicate the level of capital movements. Though the measure is simple and easy to calculate, it invites a lot of practical criticism. Firstly, this method can be used in a repressed economy while in an open economy, there need not be any link between them. Secondly, there can be a high correlation between savings and investments depending on the economic conditions of the country, while this high correlation can be artificially created by the state to target its current account (Bayoumi 1990).

After the criticism of this approach, some new measures were introduced to closely gauge the impact of financial liberalization. Haque and Montiel (1991), suggest that

liberalization can be measured by considering the internal and external interest rates and the deviation from interest rate parity. Edison and Warnock (2001) used a more realistic approach to measure openness. They used IFCI investible index by S&P to identify the development of the country's stock market, which is the ratio of stocks held by foreigners to total market capitalization. The increase in this ratio shows the opening of markets for foreigners. Many later researchers used this approach to measure the integration level of a country. Similarly, some other studies including Chanda (2005) have used the sum of actual capital inflows and outflows of the country to GDP while others have used the sum of the portfolio of investment assets and liabilities to GDP. Some limitations attached to these approaches are: for Edison and Warnock (2001), it covers the openness of countries' stock markets and their progression over time but it lacks the liberalization of other financial sectors like banks; while for Chanda (2005), the capital flows may vary from year to year depending on the adjustments in equity values.

Levine and Zervos (1996) proposed two measures of stock market development. One is used to measure the trading value ratio i.e., ratio of the traded value of shares to GDP, while the other is used to measure the size of the market i.e., ratio of the total value of shares traded by the market capitalization. Both these measures are used to measure the internal liberalization of the country while the major criticism of this approach is that it completely ignores the integration of the country's financial system across borders. Though all these measures have some shortcomings, still they are being widely used depending on the economy as they can be considered as the closest proxy to cover the impact of countries' liberalization.

iv.   Qualitative Measures:

The qualitative measures for financial liberalization work as an event study approach using the *de facto* event dates which indicate the changes in the policies of the financial

sector of a country. The first comprehensive study in this regard was conducted by Bandiera *et al*., (2001) using both the internal and external liberalization dates to study its impact on savings. Other earlier studies using qualitative measures for different countries was done by Henry (2000), Bekaert & Harvey (2000), and Creane *et al*., (2003). All these studies have used short-term and longer estimation windows to measure the effect of stock market openings on foreigners.

The main criticism of these qualitative measures is that the liberalization occurs in sequence and the researchers have to focus on one or more dates to study its impact using different working windows. For instance, Henry (2000) and Bekaert & Harvey (2000) only limited their research to the first date of market openings while ignoring future events. While Bandiera *et al*., (2001) considering the broader scope covered all the event dates related to liberalization but didn't cover the magnitude of this event and applied equal weights to all events. As liberalization takes place with a series of events and involves different steps for the country to completely integrate its financial system with other countries, so using a qualitative approach to measure the liberalization may not produce the actual results expected by the researchers (Errunza and Miller 2000).

This thesis uses two different approaches. The first one is to look into a country's financial liberalization factors considering its local stock and credit market development. The stock market development is calculated as: Stock market capitalization over GDP; while credit market development is calculated as: Domestic private credit money deposit in banks and other institutions by GDP. The data is extracted from financial structure database maintained by World Bank. While moving to the next step where liberalization results in the integration of a country's financial markets with international markets, we use stock and credit market integration as our main variables which are discussed in the next section.

v. Credit Market Integration Measure:

To measure credit market integration, this study uses *de facto* measures following Beck and Demirguc-Kunt (2009). The data was extracted from the financial structure database maintained by World Bank. The proxy used to measure credit market integration (CRINT) was: Arithmetic mean of outstanding international debt plus outstanding loans from non-resident banks over GDP.

vi. Equity Market Integration Measure:

To measure equity market integration (EQINT), one of the traditional methods is to use a dummy variable for each country with a relevant event such as an official announcement of market liberalization. This method has been criticized by a number of authors as it doesn't capture the true picture of that real event. The major criticism is that the government may allow market liberalization when the economy is growing while it may levy barriers on foreign investment when there are chances of getting adverse effects from foreign markets. To proxy the equity market integration, our selection was based on two important considerations: firstly the proxy should truly depict the dynamic nature of the country integration level, secondly, the measure is easily available and covers sufficient years of data for most of the countries available in our study sample. To measure the level of financial market integration, this study uses the *de facto* measure proposed by Lane and Milesi-Ferretti (2018) (LMF). It is calculated with the sum of the country's foreign equity assets and liabilities and the foreign direct investments assets and liabilities as a share of the country's GDP. The idea behind using this measure given by LMF is the degree of capital flows in a country depicts the level to which a country restricts cross-border transactions. The data to construct the LMF measure was obtained

from the External Wealth of Nations Mark II database. Even though this database covers almost all the countries in our sample but the data is only available till 2015. So our last objectives (RO-2, RO-3 & RO-4) covers the period of 1990 – 2015 only.
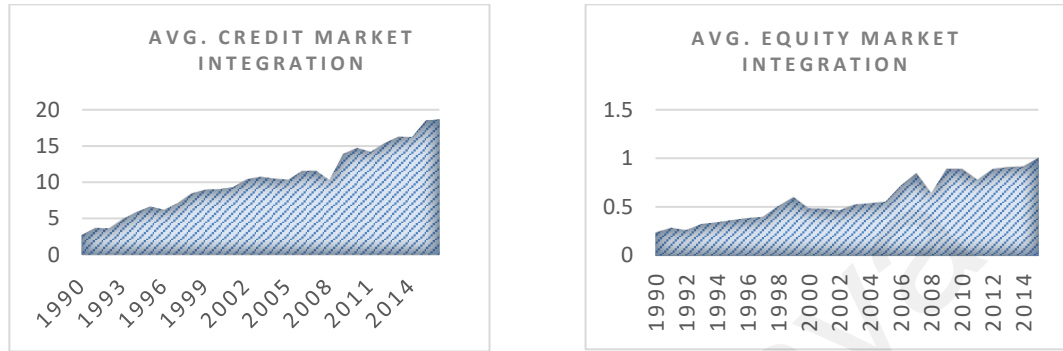
Figure 3-1 Average increase in credit and equity market integration over the years in emerging markets *(Source: External wealth of nations by LMF)*

vii.   Corruption Measure:

Aseidu and Freeman (2009) point out that the control of corruption index compiled by the World Bank and the corruption perception index (CPI) published by Transparency International (TI) are the two most commonly used indexes available to measure corruption. In this work, we have used the control of the corruption index by the World Bank in our main model for the following reasons. Firstly, as per the experts, the CPI only measures the level of corruption in the public sector, while the control of corruption index by the World Bank takes both the public and private sectors into consideration (Rohwer 2009; June et al., (2008)). Secondly, the control of corruption index includes data from more secure sources as compared to the CPI index and in doing that, it controls for the errors in individual variables which makes this index more accurate and reliable to measure corruption (Lambsdorff 2005; June et al., (2008)). Thirdly, the World Bank index gives different weights to the data sources according to their importance instead of

giving equal weight to each source as is the case with Transparency Index (Knack 2007). Lastly, the WB index improves the statistical uncertainty in the TI index by limiting "standard error" as an indicator of uncertainty accompanying each point estimate (Knack 2007). The original Control of Corruption index measures the level of corruption in various countries ranging from -2.5 to +2.5. For our convenience, we rescaled it from 0 to 10, with "0" for the countries with the lowest level of corruption and "10" being the highest.
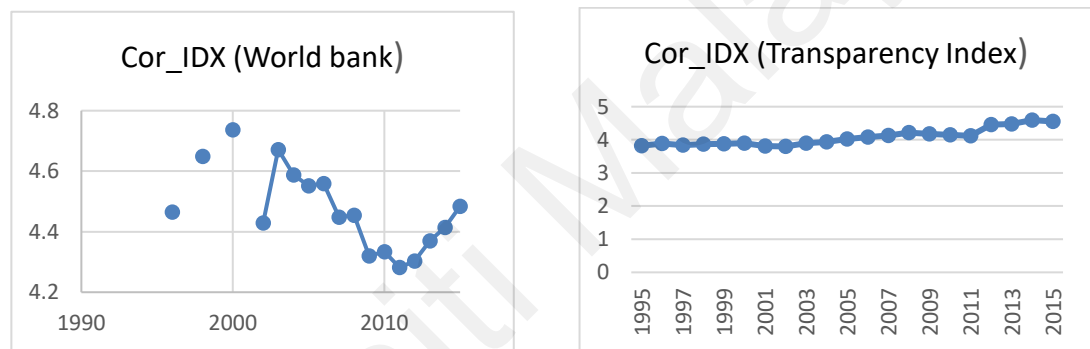
Figure 3-2 Average levels of corruption for 22 emerging markets according to the World Bank and Transparency Index

3.2.2.3 Control Variables

(a) Firm Level Control Variables

After the work of Modigliani and Miller (1958), an extensive effort has been carried out on finding the right capital mix which determines the firm's capital structure. This development is evident from both empirical and theoretical perspectives. Two of the theories widely discussed in the context of capital structure are the trade-off and pecking order theory. Trade-off theory determines the optimal debt structure of the firm

considering the trade-off between the cost and benefit of borrowing while keeping assets and investments constant. The costs considered in the literature are agency cost (Myers 1977), bankruptcy cost (Scott 1977), and non-debt tax shield (DeAngelo and Masulis, 1980). The major benefit of debt financing is the saving of tax due to the tax shield. The pecking order theory suggests that, due to information asymmetry, the firms move towards a financial hierarchy. First, they tend to use their retained earnings and then move toward external funds. In external funds, they prefer debt over equity as equity has a higher cost due to information asymmetry (Myers 1984). Building on these theories, several firm-level attributes have been discussed in the literature that may influence capital structure choices (e.g. Titman and Wessels 1988; Rajan and Zingales 1995; Wald 1999). Previous studies also show that, not for a specific company, the firm level measures are also significant in the regional and international context. For example, Rajan and Zingales (1995) explored the capital structure determinants of the firms in G7 countries and concluded that the determinants are almost the same as for the US firms. Wald (1999), analyzing the same pattern of leverage in Germany, Japan, France, the UK, and the US, reports similar findings as Rajan and Zingales (1995).

Extracting from the past capital structure literature, we include a number of firm-level control variables as follows:

i.   Size: The SIZE of the firm is measured as the natural log of total assets. According to the trade-off framework, the companies set a target debt-to-assets ratio and plans to achieve it. More specifically, the company's capital structure moves towards that target which trade-off the bankruptcy costs with the tax advantage of debt. Firm size can be used as a proxy for the likelihood of bankruptcy, and the literature suggests that larger firms are less likely to face this financial distress. If that's the case then firm size may be positively

related to leverage. According to Titman and Wessels (1988), small firms tend to acquire more debt as compared to large firms. Moreover, they might prefer short-term debt over the long term because it costs those more to issue equity and acquire long term. So, our hypothesis is:

Hypothesis: Firm size is positively related to firms' leverage.

ii. Growth: GROWTH is measured as total assets minus total equity plus the market value of equity over total assets. More leveraged firms have the option to invest in different suboptimal projects to expropriate the wealth received from debt holders (Jensen and Meckling 1976; Myers & Majluf 1984). Higher growth firms lead to higher agency costs between shareholders and bondholders as they have more investment prospects (Titman and Wessels 1988). Hence, firms with higher growth prospects prefer low leverage while seeking equity financing for new projects instead of debt financing.

Hypothesis: Firm growth is negatively related to firms' leverage.

iii. Tangibility: Assets TANG are measured as net property, plant, and equipment divided by total assets. According to Jensen and Meckling (1976), a firm with more tangible assets is more likely to use more debt as assets can be used as collateral, minimizing the lender's risk. Myers and Majluf (1984) also suggest that more tangible assets work as an advantage to selling debt secured by assets. This asset tangibility works as a proxy for collateral in case of bankruptcy. Hence, firms with more tangible assets that can be used as collateral are more likely to issue more debt.

Hypothesis: Assets tangibility of a firm is positively related to its leverage.

iv. Profitability: PROFIT is measured as earnings before interest and taxes divided by total assets. According to the pecking order hierarchy, a firm prefers internal financing over external. And if external finance is required, the firm issues safety stock first i.e. debt, then hybrid securities like convertible bonds, and lastly equity if required. Hence, one can expect that more profitable firms are more likely to raise less debt as they can fulfill the finance requirement through retained earnings.

Hypothesis: Firms' profitability is negatively related to firms' leverage.

v. Non-Debt Tax Shield: NDTS is measured as depreciation and amortization over total assets. Deduction of tax for depreciation is an alternative to the tax benefits of debt financing (DeAngelo & Masulis 1980). Hence, firms with large tax shields are likely to include less debt in their capital structure.

Hypothesis: NDTS is negatively related to firms' leverage.

(b) *Country-level Control Variables*

Previous literature also emphasizes the impact of country-level variables on capital structure. The earlier research by Rajan and Zingales (1995) concludes that although firm-level variables play an important part in determining capital structure, institutional factors like bankruptcy laws, tax code, development of equity and bonds markets, and ownership structure also have a strong influence. Demirguc-Kunt and Maksimovic (1999), working on a large data set of 30 countries also report that the difference in laws and financial institutions among the countries explains a major part of capital structure. Booth *et al.*, (2001) exploring 10 emerging economies, indicates that country-level variables affect

emerging markets in the same way as developed economies. Moreover, the origin and institutional setup of a country are of the same importance as other explanatory variables.

Our study considers two different aspects of country-level variables: At first,, we include the financial market development i.e. stock market and credit market development, while GDP and inflation are also taken as a macro level variables that may influence the firm financial decisions. And the second aspect consider the legal environment which is measured by the constitutional law followed by the country, its rule of law, and regulatory quality. All these macro-level and legal variables are used by previous studies and are expected to have a significant relation with firms leverage and its maturity.

Combining all the country-level variables used in the study are summarized as follows. Credit-market development (CRDEV): is a ratio of domestic private credit money deposits in banks and other institutions by GDP; and Equity market development (EQDEV): is a ratio of stock market capitalization over GDP. For controlling macroeconomic conditions: The natural log of GDP per capita and inflation (INF) rate will be considered. With respect to the legal framework, a dummy variable is constructed (LEGAL), which takes a value of "one", if the country follows Common Law and zero otherwise while the rule of law and regulatory quality data is taken from the world bank database.

Variables Summary

Dependent Variables			Exp Sign
Leverage (LEV-1)	Total debt including short term and long term divided by total assets	Gonenc & Haan (2014); Kats (2017)	
Leverage (LEV-2)	Long-term debt over total assets.	Lucey & Zhang 2011	
Debt Maturity (DMAT)	Short-term debt over total debt	Schmukler & Vesperoni (2006);	
Independent Variables			
Internationalization (INTN)	Foreign sales to total sales	Gonenc & Haan (2014)	+
Equity market Integration (EQINT)	Sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP.	Lane & Milesi-Ferretti (2007)	-
Credit market Integration (CRINT)	Mean of outstanding international debt plus outstanding loans from non-resident banks over GDP	Lucey & Zhang (2011)	+
Control Variables – Firm Level			
Size	Natural log of total assets	Fernandes (2011);	+/-
Tangibility	Net property, plant, and equipment divided by total assets	Ağca et al., (2007)	+
Growth	Total assets minus total equity plus the market value of equity over total assets	Ağca et al., (2007)	+/-
Non-debt tax shield (NDTS)	Depreciation and amortization to total assets	Lucey & Zhang (2011)	-
Profitability	Earnings before interest and taxes divided by total assets	De Jong et al., (2008)	+/-
Control Variables – Country Level			
Credit market development(CRTD)	Domestic private credit money deposit in banks and other institutions by GDP	Gonenc & Haan (2014)	+
Equity market development(EQTD)	Stock market capitalization over GDP	Gonenc & Haan (2014)	-
GDP	Natural log of GDP per capita	Zhang et al., (2014)	+
Inflation (INF.)	Inflation rate	Fan et al., (2010);	+
Legal Variables			
Code of Corruption (Cor_IDX)	The level of corruption in a country.	World Bank Database.	-
Legal System (LAW)	Dummy variable: 1 for Common law and zero for non-Common.	Fauver et al., 2003;	+
Rule of Law (RL)	Implementation of laws in a country.	World Bank Database.	+
Regulatory Quality (RQ)	The quality of rules and regulations in the country.	World Bank Database.	+

Table 3-1 Variable Description

3.3 Methodology

This section provides the empirical methodology used to examine the impact of variables discussed in the study. It initially discusses descriptive statistics and some summarized graphs representing our data. Then it presents the preliminary test conducted to check the validity of the data and lastly the econometric models used for testing the causal relationship among the variables.

3.3.1 Descriptive Statistic

Table 8-2 in the appendix- reports the descriptive statistics of all the firm-level variables for the period 1990-2015. A total of 9,563 non-financial firms from 22 emerging countries were selected for this study. On average, the firms have used 23.4% of total debt to finance their assets, out of which 12.6% on average firms use long term debt while only 14.5% use short term debt (maturity) for financing. The highest mean values for the usage of total debt were observed in Indonesia (31.01%) and India (30.49%) while the Chinese firms (21.2%) take an averagely of more long term loans as compared to other countries. However, Indian firms are engaged in more short term loans (40.2%). The lowest debt ratio is observed in South Africa (16.85%) only. For Internationalization (INTN), the average was 0.360 for the whole sample, which means that almost 36% of the total firms are involved in foreign sales. The highest country contributing was China (56.9%) and Chile (50.7%) while the lowest foreign sales were recorded in Malaysia (20.44%). The average size of the firms for the whole sample is 9.107% with the largest firms mean is in Hungary (18.119) and the smallest size firms in Turkey (5.281). In terms of growth, the average growth of the sample firms over the period is 43.2%, while the tangibility in terms of financial assets backing up in case of bankruptcy is also about 40.8%. The mean profitability stands at 8.7% throughout the sample firms and 3.9% of the firms take benefit of a tax-shield in case of debt utilization. The summary shows a

wide range of differences in leverage and internationalization across emerging economies.

The descriptive statistics of country level variables are presented in Table 8-3 for the period 1990-2015. The results of the full sample show that the average GDP and INF among the emerging countries are about 4.232% and 6.478% respectively. Among them, the country with the highest GDP is Qatar (9.70%) followed by China (8.9%) while the highest Inflation can be seen in Turkey (23.77%) and Russia (10.89%). In terms of main integration variables in the full sample, the credit market integration has a mean of 9.89% while equity market integration stands at 70.6%. The highest credit market integration is seen in Greece (37.81%) and the Hungry (21.80%) while the lowest were observed in Pakistan (0.92%) and India (1.17%). The highest equity integrated market during the period are Hungary (2.329%) and the lowest recorded in Pakistan (0.116%). Overall results show that equity markets are more integrated and developed among emerging markets.

3.3.1.1 Dependent Variables

The results of descriptive statistics for all the variables used in the study are already discussed in Tables 8-2 and table 8-3. This section provides the extended analysis for both our dependent and independent variables including the graphical presentation (figure 3-3 – Figure 3-10) used in the study. After filtering the data and excluding the financial firms we were left with a total of 9563 firms from 22 emerging markets. These firms were then arranged in a way to get the average year wise data for all the firms operating in the countries on yearly basis. Table 8-4 in the appendix presents the year wise data for all the main variables used in the study. The results of the main dependent and independent variables are also plotted in the figure below to predict the true picture of the results.
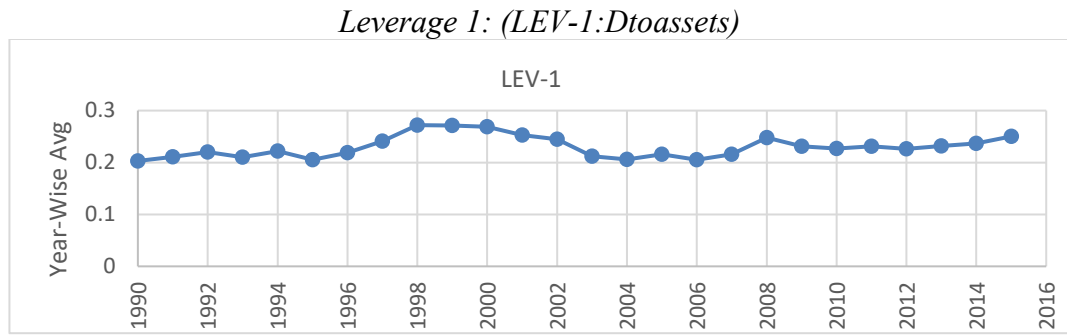
Figure 3-3 Average for LEV-1 (TD to T.Assets)

Figure 3-3: The graph shows the overall trend of LEV-1 for all the firms operating during the sample period on year-wise basis.LEV-1 is calculated as total debt to total assets (Source: DataStream). The result shows the increasing trendof total debt for the firms operating in emerging markets over the years. It is also evident from the graph that during the Asian crises (1998 – 2000) and financial crisis (2008 – 2009) the firms were taking more loans, while it dropped in the post crisesperiod. However, we can see an upward trend in the last few years.

Leverage 2: (LEV-2: LTDtoT.Assets)
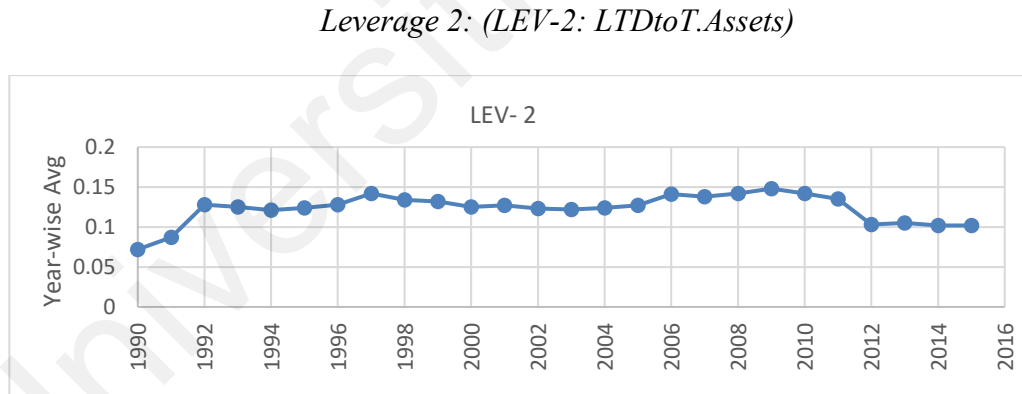
Figure 3-4 Average for LEV-2 (LTD toT.Assets)

Figure 3-4: The graph shows the overall trend of LEV-2 for all the firms operating during the sample period on year-wise basis.LEV-2 is calculated as Long Term debt to total assets (Source: DataStream). The result shows the increasing trend of long term debt for the firms operatingin emerging markets over the years. The graph also shows some evidence that firms were taking more loans during the crises period specially the Asian

crises (1998 –2000). However, we can see a downwardtrend after the financial crises of 2008-2009.

Maturity; (STDtoTDebt)
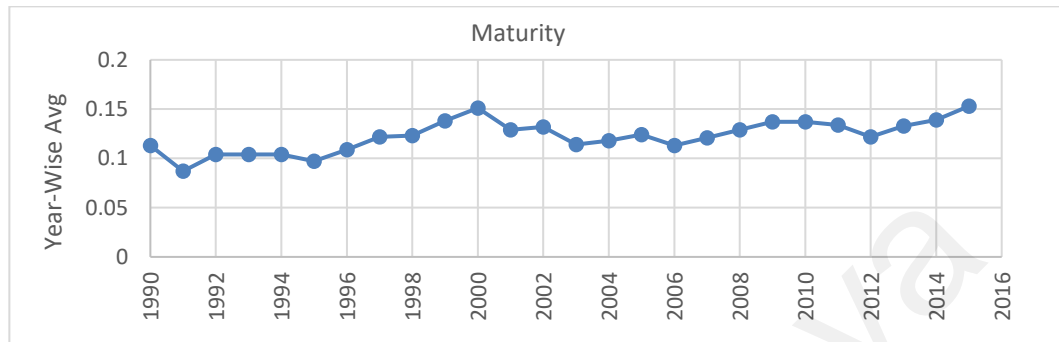
Figure 3-5 Average for DMAT (STD to T.Debts)

Figure 3-5: The graph shows theoverall trend of Maturity for all the firms operating during the sample period on year-wise basis. Maturity is calculated as Short Term debt to total assets (Source: DataStream). The resultshows slightly increasing trend of short term debt for the firms operating in emerging markets over the years. The graph also shows some evidence that firms were taking more short term loans after the crises period specially the Asian crises (1998 – 2000). However, we can see an upward trend in the last few years.

3.3.1.2 Independent Variables

The results of our main independent variables are also shown in Table 8-4. This includes internationalization, credit market integration, and equity market integration. The result shows the average year wise data for all the firms operating in the emerging markets. The results are also presented in graphical form to get the true picture of the results.

Internationalization (INTN):
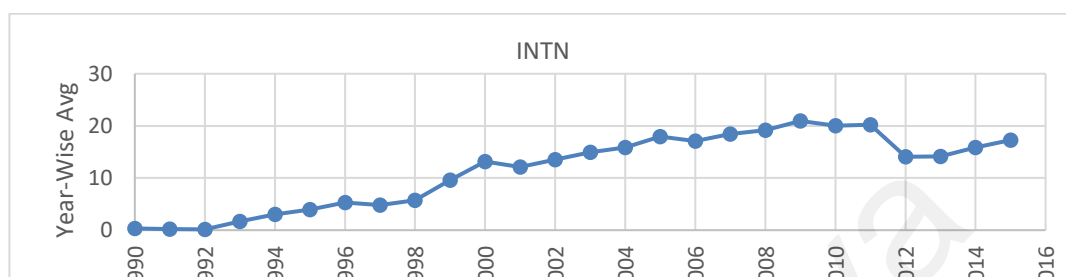
Figure 3-6 Average for INTN

Figure 3-6: The graph shows the average trend of Internationalization for all the firms operating during the sample period on year-wise basis. INTN is calculated as foreign sales to total sales (Source: DataStream). The result shows a sharp increase in the foreign sales of the firms over the years. However, it is evident that financial crises (2008-2009) resulted in a sharp decrease in the foreign sales in the post crises period for about two years. The upward trend in the last few years shows that firms sees potential in internationalizing and getting benefit across the borders.

Credit Market Integration (CRINT):
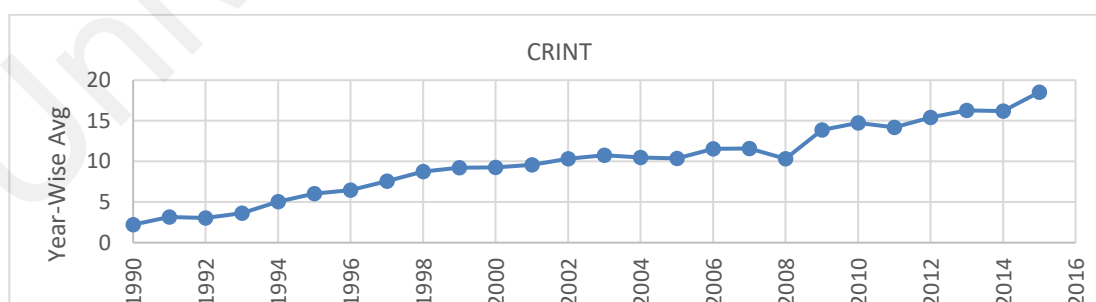
Figure 3-7 Average for CREDIT Integration

Figure 3-7: The graph shows the average trend of CREDIT for all the firms operating during the sample period on year-wise basis (Source: Financial Structure Database by World Bank). The result shows an increasing trend in the credit market integration in all

the countries over the years. Moreover, a slight dip in the trend is evident during the period of financial crises (2008-2009). The overall result shows that countries credit markets are getting more integrated over the period of time as it results in number of benefits including decrease in cost of capital for firms.

Equity Market Integration (EQINT):
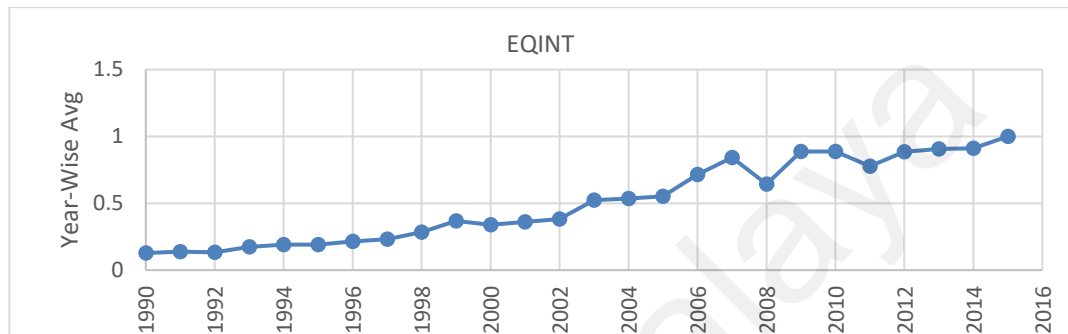
Figure 3-8 Average for EQUITY Integration

Figure 3-8: The graph shows the average trend of EQUITY for all the firms operating during the sample period on year-wise basis (Source: External Wealth of Nations Mark II). The result shows an increasing trend in the equity market integration in all the countries over the years. Moreover, a sharp dip in the trend is evident during the period of financial crises (2008-2009). The overall result shows that countries equity markets are getting more integrated over the period of time as it results in number of benefits including decrease in cost of capital for firms.

Corruption (Corr_IDX):
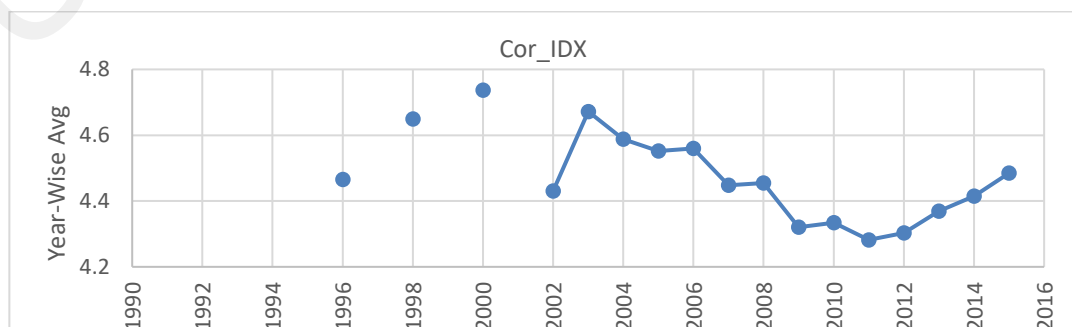
Figure 3-9 Average for Cor_IDX by WB

Figure 3-9: The graph shows the average trend of corruption level calculated by World Bank, for all the countries on year-wise basis from 1990- 2015 (Source: World Bank Database). The initial data for first few years is unavailable, however we can see an increasingtrend initially till 2002 but it declined drastically before the financial crises till 2011. The last few years shows that level of corruption is again increasing in the emerging markets.

Corruption Index by Transparency Index
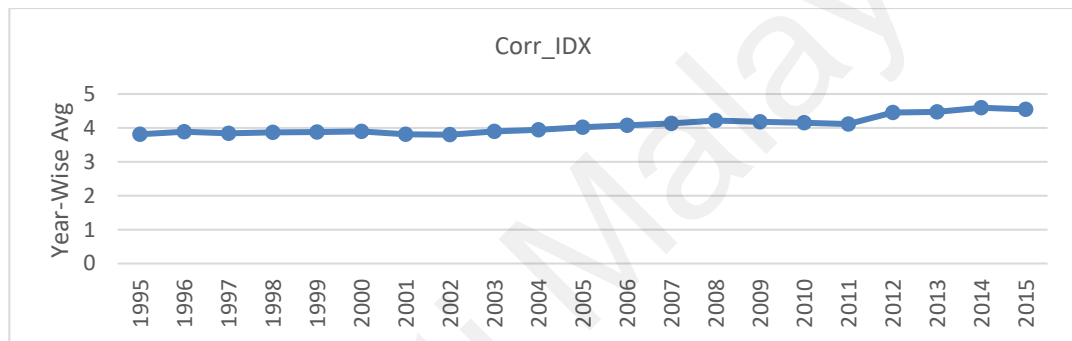
Figure 3-10 Average for Cor_IDX by TI

Figure 3-10: The graph shows the average trend of corruption level calculated by Transparency Index, for all the countries on year-wise basis from 1995-2015 (Source: Transparency International). The graph shows a gradual increase in the level ofcorruption over the years.

3.3.2 Correlation Matrix

Table 8-5 in the appendix - reports the correlation coefficients among variables. Panel-A consists of all the firm-level variables. Leverage is positively correlated with Internationalization, size, growth, tangibility, and NDTS, while negatively correlated with a firm's profit. Maturity is positively correlated with all the firm-level variables except profitability. The highest correlation can be seen between growth and leverage which suggests that firms with growth opportunities have high leverage in their capital

structure. Panel-B represents the correlation coefficient of all the country-level variables. Leverage is positively correlated with CRINT and negatively correlated with EQINT, while negatively correlated with both equity (EQDEV) and credit (CRDEV) market development variables. Maturity also shows a negative correlation with all the variables including equity and credit market integration. For other macro-level variables, GDP is negatively correlated to both leverage and maturity, while inflation has a positive relation. The highest correlation can be seen among the equity market integration variable and equity development variable which proposes that there is a chance of multicollinearity between these variables which will be treated during the regression test afterward.

3.4 Econometric methodologies for measuring financial integration

This thesis analyzes the causal relationship between the variables of interest. To test this causal relationship, we have initially used regression techniques while generalized methods of moments (GMM) have been used as a robustness test. The following section discusses these methods.

3.4.1 OLS Regression

In practical research, scholars always inquire about the impact of the independent variable (x) on the dependent variable (y). As like in our research we examine whether the changes in financial integration (x) of a country lead to changes in the capital structure (y) of the firms. Hence, it would be interesting to investigate the relation between these variables and to what extent 'y' and 'x' are related. This relation can be described by the following equation:

$$y_{it} = \alpha + \beta x_{it} + \varepsilon_{it} \qquad \text{(Equation: 3.1)}$$

Where y_{it} represents the dependent variable, x_{it}- is the independent variable, the subscript *i,t*- denotes the *i-th* firm at time *t* (for panel data); α is called the constant

(Intercept); β is the slope – which measures the effect of x on y; and $\boldsymbol{\varepsilon}_{it}$ is the error term for i-th firm at time t. The equation shows a linear relationship between y and x.

The method commonly used to test the relationship between dependent and independent variables is the ordinary least square method (OLS). It helps in estimating the appropriate values of α and β Coefficients. This thesis also relies on OLS initially to estimate the regression models. The main purpose of OLS is to minimize the residual sum of squares. Theoretically, in order to validate the hypothesis results from OLS, five assumptions are made: i) the mean of error terms is zero; ii) the variance of error terms is constant over all values of $x_{i,t}$; iii) the error terms are independent of each other; iv) no relationships exist between the error term and corresponding $x_{i,t}$; v) the error terms are normally distributed. If all the above assumptions are fulfilled, then the OLS estimator results are reliable, unbiased, and efficient. Furthermore, to verify the results of OLS and to make sure how well the variation in the dependent variable is explained by the explanatory variable, the goodness of fit test is used for this purpose, also called R^2. The value of R^2 ranges from zero to one, where a higher value implies that everything being equal, the model fits the data better.

Equation - 3.1, represents a simple regression model which only includes one independent variable i.e. changes in the dependent variable (y) are only explained by a single explanatory variable (x). However, according to the finance theories, it is most likely that ' y' is affected by more than one explanatory variable. As in our case, other than financial integration, the capital structure of the firms could be influenced by many other firms and country-level characteristics such as size, growth, tangibility, profitability, GDP, Inflation, and legal structure. To measure the effect of these variables, we add more explanatory variables to the right side of equation-3.1:

$$y_{i,t} = \alpha + \beta_1 x_{1i,t} + \beta_2 x_{2i,t} + \beta_3 x_{3i,t} + \beta_k x_{ki,t} + \mu_{it} \quad \text{(Eq.:3.2)}$$

where, $x_{1i,t}, x_{2i,t}, x_{ki,t}$ are explanatory variables that may affect y, while $\beta_1, \beta_2, \beta_k$ are the slope parameters which measure the effect of explanatory variables on y. In simple words, each β signifies a partial effect of x on y, while excluding the effect of all other explanatory variables. Equation: (3.2) can also be written as:

$$y_{i,t} = \beta o + Control\ Variables_{i,t} + \mu_{it} \text{ (Eq.: 3.3)}$$

Where y_{it} represents the dependent variable for the i-th firm at time t; $Control\ Variables_{i,t}$ is the factor comprising both the firm- and country-level control variables; and μ_{it} is the error term for i-th firm at time t.

In the case of multiple regression, researchers suggest two other statistics which are of interest to the readers, i.e. f-test and the adjusted R^2. F-test is used to examine the significance of all coefficients simultaneously while adjusted R^2 indicates the degree of freedom related to adding more explanatory variables (Brooks et al., 2002).

3.4.2 Panel regression analysis

Panel data consist of both the cross-sectional and time series dimensions. It gives more information than pure cross sectional and time series data while allowing for more degrees of freedom and permitting efficient estimates. It enables the researchers to study the variation of dependent variables in response to the adjustments in independent variables (Brooks *et al*., 2002). In the next chapter, we will use panel data regression models to study the relationship between financial integration and capital structure decisions of firms in emerging markets. The basic form of a panel regression model is as follows:

$$y_{i,t} = \alpha + \beta_1 x_{1i,t} + \beta_2 x_{2i,t} + \beta_3 x_{3i,t} + \beta_k x_{ki,t} + \varepsilon_{it} \quad \text{(Eq: 3.4)}$$

Where $y_{i,t}$ is the dependent variable, the subscript i shows cross-sectional units (i.e. firms, years, and countries), and t shows the time t (i.e. months, quarters, and years). , $x_{1i,t}, x_{2i,t}, x_{ki,t}$ are explanatory variables that may affect y, while $\beta_1, \beta_2, \beta_k$ are the slope parameters which measure the effect of explanatory variables on y. In simple words, each β signifies a partial effect of x on y, while excluding the effect of all other explanatory variables. α is the constant and ε_{it} is the error term.

The simple method to estimate the coefficients of Eq. 3.4 is to apply the OLS regression which is widely used in literature for the large panel dataset (Agca *et al.*, 2007; Mishkin 2007; Mittoo and Zhang 2008). However, this pooled OLS further extends to two other alternatives one of which are fixed effects (FE) also called as least-square dummy variable (LSDV) regression model. This is written as:

$$y_{i,t} = \alpha_i + \beta_1 x_{1i,t} + \beta_2 x_{2i,t} + \beta_3 x_{3i,t} + \beta_k x_{ki,t} + \varepsilon_{it} \qquad \text{(Eq.: 3.5)}$$

FE model as shown in Eq.: 3.5 puts into account the exact nature of each cross-sectional unit i.e. each cross-section i has its unique intercept α_i (dummy). According to Gujarati (2022), FE or LSDV models consider the individuality of units and are simple to use, but they could be expensive to use in terms of the degree of freedom if there are more cross-sectional units. Moreover, FE models may come with multicollinearity issues and they lack the strength to identify the effect of time-invariant variables. Gujarati (2022) also highlighted that "if the dummy variables are unable to present the true knowledge about the model, then why not express this lack of knowledge through the disturbance term ε_{it} ?. This leads us to a second approach called as random effect model (REM). In random effect, instead of considering α_i as fixed, we now assume it to be a random variable. The intercept in random effect can be seen as follows.

$$\alpha_i = \alpha + \mu_i \qquad \text{(Eq.: 3.6)}$$

The error term in Eq.: 3.6 reflects the differences in the intercept of each company. Substituting Eq.: 3.6 into Eq.: 3.5, we get:

$$y_{i,t} = \alpha_i + \beta_1 x_{1i,t} + \beta_2 x_{2i,t} + \beta_3 x_{3i,t} + \beta_k x_{ki,t} + \mu_i + \varepsilon_{it} \qquad \text{(Eq.: 3.7)}$$

The basic advantage of using the random effect model is that it uses lesser degrees of freedom and the individual differences are considered random instead of fixed. However, the drawback is that it doesn't require any correlation between the regressors and the μ_i. This may result in inconsistent estimates (Gujarati & Porter 2022).

3.4.3   Preliminary tests

In the previous sections, we discussed the panel data methodology and the regression models used to measure our estimates as per our research objectives. This section shows the preliminary tests conducted for our research to check the validity of our data and find the best technique which suits our models.

Our sample consists of 9563 selected companies from 22 emerging markets over the period of 26 years i.e. 1990 – 2015. As the time period of each firm is different, we have unbalanced panel data. We apply panel data analysis to investigate the firm level data across countries and time. Panel data suggests that firms are heterogeneous, whereas time series and cross section data cannot control for individual heterogeneity which may end up in biased results. Hence panel data is considered a better methodology to control the heterogeneity of the firms. Moreover, as panel data combines both the cross section and time series data within the same model, it gives more informative results, more efficiency, more degree of freedom, and less collinearity among the variables. Comparing it with cross-section data, panel data results in more accurate estimates while reducing

collinearity between the explanatory variables. However, in our panel data, since there were more variables added in cross section, this problem of collinearity is less likely to occur. To verify the multicollinearity issue in our data, a variance inflation factor (VIF) test is performed between the independent variables, and the results are presented below:

Variables	VIF
Credit Integration	8.93
Credit Development	8.65
GDP	2.76
Tangibility	1.48
NDTS	1.41
Equity Development	1.39
Inflation	1.28
Equity Integration	1.19
Size	1.15
Growth	1.12
Internationalization	1.11
Profit	1.11
Mean VIF	**2.63**

Table 3-2 Variance Inflation Factor

The above table shows the results of the VIF analysis. This test is useful in determining the multicollinearity among the independent variables (Maddala 1992). The VIF values of all the variables are less than 10, which verifies that no collinearity problem exists among our variables.

The most commonly used panel data models are the Pooled regression model, the fixed effect model, and the random effect model. Pooled model is the simplest model assuming that the coefficients are constant i.e. both the intercept and slope are the same across the

firms and periods. This model implies that cross sections are identical and the null hypothesis assumes that the data set is homogeneous. (Asteriou and Hall 2007).

The fixed effect model is more common than the pooled regression model because it permits us to analyze the difference from one country/firm and period to another. This model allows different intercepts for each firm/country and period. The fixed effect model is also known as least-square dummy variables. It contains different dummies for each group which allows the model to have separate constants for each group.

To decide whether the pooled or fixed effect model is more suitable for our estimates, we should apply a standard F-test. The null hypothesis is that all the constants are the same (Homogeneous). The F-Test for all our models was significant (Prob > F = 0.0000), which means that all firm effects are equal to zero. So, we reject the pooled regression and opt for a fixed effect model.

Although, using the dummies for firm and country specific in fixed effect model, increases the model fitness but, at a cost of fewer degrees of freedom which might result in unfair conclusions. This loss of a degree of freedom can be overruled by using the random effect model. Random effect assumes that the intercept is a random variable and not fixed as like in the fixed model. Moreover, the random effect considers two types of disturbances (i.e. firm specific μ_t and time specific $\varepsilon_{i,t}$), while the fixed effect only considers time specific disturbances. However, one disadvantage to the random effect model is that it needs specific assumptions for the disturbance of random factors. So in conclusion the major difference between the fixed and random effect models is that: the fixed effect assumes that each period differs in its intercept term while the random effect assumes that each period differs in its error term (Asteriou & Hall 2007).

To decide between the fixed and random effect models, we apply the Hausman test. This test was proposed by Hausman (1978), and assumes that the observed and unobserved regressors are correlated. In fixed effects, the estimators are consistent even if they are correlated with the individual effect. However, in random effect, the estimators are not consistent. So, our null hypothesis (H_0) in this case is that random effects are efficient and consistent while the alternative hypothesis (H_1) is the random effects are inconsistent (i.e. fixed effects are consistent). If the results of Hausman are significant we reject the H_0 – hence the results of fixed effect are consistent for our model. The results of the Hausman test for our models are presented in the below table.

Firm Level (Internationalization) Table 4.1		Chi-square statistic	Prob.
LEV-1		35.24	0.0000
LEV-2		6.761	0.0000
Maturity		44.12	0.0145
Country Level (CREDIT - EQUITY) Table 4.2		Chi-square statistic	Prob.
LEV-1		34.812	0.0000
LEV-2		8.043	0.0051
Maturity		31.862	0.0352
Main Model (Firm and Country level Integration)		Chi-square statistic	Prob.
LEV-1 (Table 4.3)	Model 1	3.518	0.0245
	Model 2	67.63	0.0057
	Model 3	48.55	0.0000
	Model 4	10.24	0.0175
LEV-2 (Table 4.4)	Model 1	3.895	0.0000
	Model 2	70.46	0.0017
	Model 3	59.54	0.0257
	Model 4	1.224	0.0421
Maturity (Table 4.5)	Model 1	2.214	0.0000
	Model 2	14.87	0.0277
	Model 3	59.27	0.0070
	Model 4	112.8	0.0041

Table 3-3 Results of Hausman Test

The above table: 3-3 shows the results of Hausman test. The test is applied to all the models discussed in the last chapter. According to the test, we reject the null hypothesis which assumes that the random effect model is consistent. As per the results fixed effect best suits our models.

3.4.4 Generalized Method of Moments

The ordinary least square (OLS) estimation technique may produce unsatisfactory results as it suffers from severe econometric biasedness. First, the O.L.S. technique doesn't consider the unobserved heterogeneity among the variables and assumes that all regressors are exogenous. Second, multicollinearity may also exist as all the variables might not be strictly exogenous and may be correlated with the error term. Moreover, having more variables in the econometric model increases the chances of multicollinearity (Getzmann *et al*., 2014). Third, our estimates might be affected by reverse causality (e.g. not only does profitability affect firm leverage, but a firm's leverage may also affect firm profitability). Fourth, most of the data in finance are influenced by past movements, especially in the case of capital structure decisions, so we need a lagged dependent variable to analyze its behavior on our dependent variable (leverage) over time. All these issues can be addressed using the generalized method of movement (GMM) technique. The GMM estimation technique can accommodate a large number of cross-sectional observations (N) and a small number of periods (T) (Osterrieder *et al*., 2020). Moreover, this approach also assumes that heteroscedasticity and serial correlation does exist within the individuals but not across the firms. Therefore, GMM is a better technique to address the potential problem of heteroskedasticity, autocorrelation, and endogeneity.

Endogeneity is a major concern in our model because of using more explanatory variables. Earlier studies working on the determinants of capital structure decisions have faced the same problem, which usually results in inconsistent and biased estimates

(Wintoki *et al.*, 2012). To overcome this problem, researchers include instrumental variables in the model which are associated with endogenous explanatory variables and are not related to the error term. Although instrumental variables produce large standard errors than OLS estimation, still, the results of estimated parameters are more consistent (Wooldridge 2006).

To address the potential endogeneity issue, following (Arellano and Bond, 1991; Blundell and Bond, 1998), we use a system generalized methods of moments (GMM) estimator. System GMM is the most recommended method to be used when the data in your panel is unbalanced as difference GMM is found to be weak in identifying the gaps (Blundell & Bond, 1998). Moreover, system GMM always provides consistent results with efficient estimates when the instruments used are weak (Bond & Windmeijer, 2002). That's because system GMM adjusts the results of estimators from both the first-difference and level forms. In our study, we found that results from sys–GMM were more efficient as compared to other regression techniques (i.e. OLS, GLS, and difference GMM). We have used this estimation technique for robustness check.

3.5 Empirical Estimation Models

3.5.1 The effect of Internationalization on corporate leverage

Our first basic model is to test the causal relationship between firm-level integration i.e. Internationalization (INTN) and capital structure. This model includes only the firms with foreign sales in the sample.

Model 1a:

$$Leverage_{it} = \beta_{it} + \beta_{it}INTN_1 + \beta_{it}Size_2 + \beta_{it}Growth_3 + Tang_4 + Prof_5 + \beta_{it}NDTS_6 + \beta_{it}GDP_7 + \beta_{it}Inf_8 + \varepsilon$$

Model 1b:

$$\text{Maturity}_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{Size}_2 + \beta_{it}\text{Growth}_3 + \text{Tang}_4 + \text{Prof}_5 + \beta_{it}\text{NDTS}_6 + \beta_{it}\text{GDP}_7 + \beta_{it}\text{Inf}_9 + \varepsilon$$

Where leverage (LEV-1, LEV-2) and maturity are the dependent variables. INTN''
represents the firm-level integration while internal control variables are size, growth,
tangibility, profitability, and non-debt tax shield. GDP and inflation are taken as macro-
level control variables.

3.5.2 The effect of Credit and Equity market integration on corporate leverage.

The second model investigates the relationship between the country level integrating factors and the capital structure decision. The effect of the country's equity and credit market will be tested against the leverage of the firm and its maturity. The model is designed as:

Model 2a:

$$\text{Leverage}_{it} = \beta_{it} + \beta_{it}\text{EQINT}_1 + \beta_{it}\text{CRINT}_2 + \beta_{it}\text{Size}_3 + \beta_{it}\text{Growth}_4 + \text{Tang}_5 + \text{Profit}_6 + \beta_{it}\text{NDTS}_7 + \beta_{it}\text{CRDEV}_8 + \beta_{it}\text{EQDEV}_9 + \beta_{it}\text{GDP}_{10} + \beta_{it}\text{Inf}_{11} + \varepsilon$$

Model 2b:

$$\text{Maturity}_{it} = \beta_{it} + \beta_{it}\text{EQINT}_1 + \beta_{it}\text{CRINT}_2 + \beta_{it}\text{Size}_3 + \beta_{it}\text{Growth}_4 + \text{Tang}_5 + \text{Profit}_6 + \beta_{it}\text{NDTS}_7 + \beta_{it}\text{CRDEV}_8 + \beta_{it}\text{EQDEV}_9 + \beta_{it}\text{GDP}_{10} + \beta_{it}\text{Inf}_{11} + \varepsilon$$

Where, leverage (LEV-1, LEV-2) and maturity are the dependent variables. EQINT
stands for equity market integration calculated as a sum of a country's foreign equity
assets and liabilities and the foreign direct investment assets and liabilities as a share of
the GDP. CRINT stands for credit market integration which is calculated as a mean of
outstanding international debt plus outstanding loans from non-resident banks over

GDP. According to the literature, our second and third hypothesis suggests that both equity (negative) and credit (positive) markets of a country have a strong impact on the leverage of the firms operating in that country. To test this hypothesis we have used size, growth, tangibility, profitability, and NDTS as firm-level control variables and credit market development (CRDEV), equity market development (EQDEV), GDP, and INF as a country-level control variable.

3.5.3 Main Model: Internationalization and Integration.

The main objective of the study is to test whether internationalization or market integration plays an important role in firms' capital structure decisions. For this purpose, the study has tested two different models: first which test the impact of internationalization on firm leverage and its maturity, and the second test the market integration (i.e. credit and equity market integration) on firm leverage and maturity. Our results strongly support the previous literature and conclude that both the firm level integration (i.e. internationalization (INTN)) and the country level integration (i.e. credit and equity market) have a strong positive impact on firm leverage. Our next model equates both variables together with other control variables and tests its impact on leverage and maturity. This model includes all the firms from our sample. The main objective to equate the model is to investigate the level of integration that has the strongest impact on firm financing decisions.

Model 3a:

$$\text{Leverage}_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{EQINT}_2 + \beta_{it}\text{CRINT}_3 + \beta_{it}\text{Size}_4 + \beta_{it}\text{Growth}_5 + \text{Tang}_6 + \text{Profit}_7$$
$$+ \beta_{it}\text{NDTS}_8 + \beta_{it}\,\text{CRDEV}_9 + \beta_{it}\text{EQDEV}_{10} + \beta_{it}\text{GDP}_{11} + \beta_{it}\text{Inf}_{12} + \varepsilon$$

Model 3b:

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$$\text{Maturity}_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{EQINT}_2 + \beta_{it}\text{CRINT}_3 + \beta_{it}\text{Size}_4 + \beta_{it}\text{Growth}_5 + \text{Tang}_6 + \text{Profit}_7$$
$$+ \beta_{it}\text{NDTS}_8 + \beta_{it}\text{CRDEV}_9 + \beta_{it}\text{EQDEV}_{10} + \beta_{it}\text{GDP}_{11} + \beta_{it}\text{Inf}_{12} + \varepsilon$$

Where "leverage" and "maturity" are the dependent variables. "INTN" stands for internationalization. "EQINT" stands for equity market integration calculated as a sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP. "CRINT" stands for credit market integration which is calculated as a mean of outstanding international debt plus outstanding loans from non-resident banks over GDP. 'Size', 'growth', 'tangibility', 'profitability', and 'NDTS' as a firm level control variables and credit market development (CRDEV), equity market development (EQDEV), GDP and INF as a country level control variables.

3.5.4 Corruption and Legal Origin

The role of corruption and legal systems in the financial development of the country have been explained in the previous sections in detail. This model extends our main model (Model 3) after including the corruption (Cor_IDX), rule of law (RL), and regulatory quality (RQ) to investigate the impact of these variables on our dependent variables.

Model 4a:

$$\text{Leverage}_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{EQINT}_2 + \beta_{it}\text{CRINT}_3 + \beta_{it}\text{Cor\_IDX}_4 + \beta_{it}\text{Size}_5 + \beta_{it}\text{Growth}_6$$
$$+ \text{Tang}_7 + \text{Profit}_8 + \beta_{it}\text{NDTS}_9 + \beta_{it}\text{CRDEV}_{10} + \beta_{it}\text{EQDEV}_{11} + \beta_{it}\text{GDP}_{12} + \beta_{it}\text{Inf}_{13}$$
$$+ \beta_{it}\text{LAW}_{14} + \beta_{it}\text{RL}_{15} + \beta_{it}\text{RQ}_{16} + \varepsilon$$

Model 4b:

$$\text{Maturity}_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{EQINT}_2 + \beta_{it}\text{CRINT}_3 + \beta_{it}\text{Cor\_IDX}_4 + \beta_{it}\text{Size}_5 + \beta_{it}\text{Growth}_6$$
$$+ \text{Tang}_7 + \text{Profit}_8 + \beta_{it}\text{NDTS}_9 + \beta_{it}\text{CRDEV}_{10} + \beta_{it}\text{EQDEV}_{11} + \beta_{it}\text{GDP}_{12} + \beta_{it}\text{Inf}_{13}$$
$$+ \beta_{it}\text{LAW}_{14} + \beta_{it}\text{RL}_{15} + \beta_{it}\text{RQ}_{16} + \varepsilon$$

Where "leverage" and "maturity" are the dependent variables. "INTN" stands for internationalization. "EQINT" stands for equity market integration calculated as a sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP. "CRINT" stands for credit market integration which is calculated as a mean of outstanding international debt plus outstanding loans from non-resident banks over GDP. "COR_IDX" stands for code of corruption. 'Size', 'growth', 'tangibility', 'profitability' and 'NDTS' as a firm level control variables and credit market development (CRDEV), equity market development (EQDEV), GDP and INF as a country level control variables. "LAW" stands for the law adopted by the country which is "1" if a country follows Common law and "zero" otherwise. RL stands for rule of law and RQ stands for regulatory quality.

3.5.5 Financial Crises

Model 5a:

$$\text{Leverage}_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{EQINT}_2 + \beta_{it}\text{CRINT}_3 + \beta_{it}\text{Size}_4 + \beta_{it}\text{Growth}_5 + \text{Tangibility}_6 + \text{Profitability}_7 + \beta_{it}\text{NDTS}_8 + \beta_{it}\text{CRDEV}_9 + \beta_{it}\text{EQDEV}_{10} + \beta_{it}\text{GDP}_{11} + \beta_{it}\text{Inf}_{12} + \beta_{it}\text{Crises} + \varepsilon$$

Model 5b:

$$Maturity_{it} = \beta_{it} + \beta_{it}\text{INTN}_1 + \beta_{it}\text{EQINT}_2 + \beta_{it}\text{CRINT}_3 + \beta_{it}\text{Size}_4 + \beta_{it}\text{Growth}_5 + \text{Tangibility}_6 + \text{Profitability}_7 + \beta_{it}\text{NDTS}_8 + \beta_{it}\text{CRDEV}_9 + \beta_{it}\text{EQDEV}_{10} + \beta_{it}\text{GDP}_{11} + \beta_{it}\text{Inf}_{12} + \beta_{it}\text{Crises} + \varepsilon$$

Where, "leverage" and "maturity" are the dependent variables. "INTN" stands for internationalization. "EQINT" stands for equity market integration calculated as a sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP. "CRINT" stands for credit market integration which is calculated as a mean of outstanding international debt plus outstanding loans from

non-resident banks over GDP. 'Size', 'growth', 'tangibility', 'profitability' and 'NDTS' as a firm level control variables and credit market development (CRDEV), equity market development (EQDEV), GDP and INF as a country level control variables. "Crises" stand for financial crises (Asian Crises and Global Financial Crises).

CHAPTER 4: RESULTS AND DISCUSSIONS.

4.1   Introduction

The aim of this chapter is to investigate the impact of financial integration on firms'

leverage and debt maturity in emerging markets. We conduct empirical test using four

different models explained in the previous chapter. We also consider number of firm and

country level variables in our analysis. We further investigate the interactive effects of

various variablesdiscussed in the study. In the next part, we focus on Asian crises (1997)

and Global financial crises (2007-2008) to understand how firms adjust their financing

during these crises period. Lastly, additional tests are conducted to check the reliability

of our findings.

4.2   The Basic Model

We started with the baseline regression model to investigate the relation between the

financial integration variables and firms' capital structure.

$$Y_{i,c,t} = \alpha + \alpha_i + \alpha_c + \alpha_t + \beta_1 FINTG_{c,t} + \beta_2 X_{i,c,t} + \beta_3 N_{c,t} + \varepsilon_{i,c,t} \qquad (6.1)$$

Where, $Y_{i,c,t}$ is the dependent variable representing firms' leverage and debt maturity.

The subscripts i, c, and t represent firm, country, and a year respectively. α_i, α_c and α_t

are dummy variables used for the firm, country, and years. $FINTG_{c,t}$, are the primary

financial integrating variables of interest in the study. $X_{i,c,t}$ and $N_{c,t}$ denotes the firm-level

and country-level control variables. Further details of all these variables are available in

section 3.2 of chapter-3. The initial estimation method is pooled ordinary least square

(OLS) method with standard errors clustered by years, firms, and country to deal with

potential serial correlation.

4.3   Effect of Internationalization (firm-level) on capital structure

Our initial results on firm-level integration (companies with foreign sales) are shown in table - 4.1. The leverage is a dependent variable measured as total debt to total assets in Model (1), and long-term debt to total assets in Model (2). Model (3) reports the results of maturity, a dependent variable calculated as short-term debt to total debt.

The results of firm-level integration (i.e., internationalization; INTERN), are positive and significant in Models (1) and (2), which confirm that internationalization has a strong impact on firms' leverage in emerging economies. These results are consistent with our **H1a**, which suggests that foreign sales work as an entry pass to foreign markets where firms can easily access cheaper loans and revise their capital structure due to changes in cost. Moreover, the results of maturity in Model (3) are also positive (0.0007) and significant at 10 percent with internationalization. Thus, we support our **H1b**. The evidence shows that firms getting access to cheaper loans from foreign markets usually engage in shorter loan tenure. This is due to foreign credit suppliers not being confident enough regarding the other market's rules and regulations and not being willing to grant longer-term credit. These results coincide with Mansi and Reeb (2002) and Gonenc & de Haan (2014).

Our results on control variables are consistent with previous theories. The firm-level variables suggest that firm size (SIZE), growth (GROWTH), and tangibility (TANG) are positively significant with firm leverage, while profitability (PROFIT) and non-debt tax-shield (NDTS) are negatively significant in both model (1) and model (2). These results indicate that larger firms with high tangible assets and better growth prospects can borrow more as they are more stable and have lower bankruptcy chances. And firms with lower profitable position uses more debt to finance their operations. The negative relation of a non-debt tax shield with leverage indicates that using a tax shield for debt becomes less

critical when the firms have other alternatives. For debt maturity, larger firms with more growth opportunities and higher asset tangibility tend to have higher short-term debt maturity. These results coincide with Hour & Dincergok (2021) and concludes that firms which are more diversified with a presence in more than one country tend to employ more debt as they can access the global markets with low interest rates which domestic firms cannot do. Moreover, the liquidity, tangibility, and non-debt tax ratio are important determinants of capital structure in the firms engaged in foreign activity.

Leverage seems to have a positive relationship with inflation, signifying that firms tend to take out more loans during high inflationary periods. Moreover, GDP also shows a positive relationship with long-term and short-term debt, indicating that improvement in the economy leads to more reliance on long-term financing. Results also conclude that inflation has a negative impact on debt maturity.

Table 4-1 Impact of Internationalization on Leverage and Maturity

Table 4.1: Impact of Internationalization on corporate leverage and debt maturity: Fixed Effect.			
	Model 1	**Model 2**	**Model 3**
Variables	**LEV-1** (D*to*Assets)	**LEV-2** (LTD*to*Assets)	**DMAT** (STD*to*TD)
INTERN	0.009	0.0001	0.0007
	(0.006)***	(0.0006)**	(0.0009)*
Firm-Level Variables			
SIZE	0.0374	0.011	0.013
	(0.0381)***	(0.002)***	(0.003)***
GROWTH	0.0556	0.277	0.5455
	(0.0119)***	(0.017)***	(0.028)***
TANG	0.0128	0.131	0.102
	(0.0116)***	(0.010)***	(0.013)***
PROF	-0.0699	-0.003	0.009
	(0.0160)***	(0.009)**	(0.015)*
NDTS	-0.0106	-0.242	-0.181
	(0.0322)**	(0.058)***	-0.089
Country-Level Variables			
GDP	0.0158	0.0007	0.004
	(0.0022)***	(0.0002)**	(0.0002)*
INF	0.0008	0.0009	-0.0002
	(0.0021)*	(0.0001)***	(0.0001)**
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
No. of Observations	45313	45313	42564
R-square	35.03	26.97	17.49

Table 4.1: This table reports the results of fixed effects for corporate leverage and debt maturity. **LEV-1** is the ratio of total debt to total assets in model-1, while LEV-2 is the long-term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; **SIZE** is the natural log of total assets; **GROWTH** is calculated as total assets minus total equity plus the market value of equity over total assets; **TANG** is the ratio of net property, plant, and equipment divided by total assets; **PROF** is the ratio of earnings before interest and taxes over total assets; **NDTS** is calculated as depreciation and amortization over total assets; **GDP** and **INF** stand for the logarithm of gross domestic product per capita and inflation rate; **CRDEV** is the ratio of credit money deposit in banks and other institutions by GDP; **EQDEV** is calculated as stock market capitalization over GDP. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.4 Effect of Financial integration (Country-Level) on capital structure

Our second equation tests the relation between country-level integration variables and their impact on firms' leverage and debt maturity. For that purpose, the credit and equity markets are the main independent variables. The results in table - 4.2 show that credit market integration has a strong positive impact on firms' leverage while the equity market is negatively correlated. This suggests that if a country's credit market is integrated with other countries, the firms in that country take advantage of that and increase their long-term loans available at a low cost. Similarly, if a country's equity market is integrated,

the firms switch from long-term loans to equity financing to fulfill their finance requirements. The results are in alignment with our predicted hypotheses *H2a* and *H2b*. These results are consistent with Giannetti & Ongena (2009), where the author concludes that getting access to foreign banks results in increased leverage of the firms operating in European markets. Moreover, the results of debt maturity in model 3 report a positive relationship with the credit market while with equity it is negatively correlated. The results are consistent with *H3a* and *H3b* and conclude that with an increase in credit market integration, the maturity of the debt reduces to the short term as the creditors are insecure to lend for a long term in the new market.

The results of control variables suggest that firm size, growth, and tangibility are positively related to firm leverage and its maturity, while profitability and tax shied are negatively associated with firm debt. Moreover, at the macro-level, like equity integration, stock market development is negatively correlated with leverage while credit market development, GDP, and Inflation all are positively related. This concludes that leverage is higher for countries having high inflation and high GDP per capita. The details and further discussion of the results are presented in the next section with our main model.

Table 4-2 Impact of Credit and Equity Integration on Leverage and Maturity

Table 4.2: Impact of Credit and Equity market Integration on corporate leverage and debt maturity: Fixed Effect.			
	Model 1	Model 2	Model 3
Variables	**LEV-1** (D*to*Assets)	**LEV-2** (LTD*to*Assets)	**DMAT** (STD*to*TD)
CREDIT	0.0116	0.001	0.001
	(0.0036)***	(0.0001)***	(0.004)***
EQUITY	-0.0218	-0.006	-0.028
	(0.0836)***	(0.003)*	(0.0094)**
Firm-Level Variables			
SIZE	0.0366	0.012	0.014
	(0.0412)***	(0.001)***	(0.003)***
GROWTH	0.0303	0.266	0.549
	(0.0156)***	(0.003)***	(0.027)***
TANG	0.0132	0.131	0.101
	(0.0153)***	(0.004)***	(0.013)***
PROF	-0.0715	-0.004	0.009
	(0.0159)***	(0.004)	(0.153)
NDTS	-0.0142	-0.236	0.163
	(0.0908)*	(-0.024)***	(0.088)*
Country-Level Variables			
GDP	0.0038	-0.0001	0.003
	(0.0023)**	(0.0001)**	(0.003)***
INF	0.0016	0.0001	0.0001
	(0.021)**	(0.0008)***	(0.0001)*
CRDEV	0.0041	0.0002	0.0003
	(0.0012)***	(0.0004)***	(0.0001)**
EQDEV	-0.0035	-0.0006	-0.006
	(0.005)***	(0.0002)**	(0.0006)*
Year FE	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Country FE	Yes	Yes	Yes
No. of Observations	46355	46361	43540
R-square	32.25	28.68	20.53

Table 4.2: This table reports the results of fixed effects for corporate leverage and debt maturity. **LEV-1** is the ratio of total debt to total assets in model-1, while LEV-2 is long term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; **SIZE** is the natural log of total assets; **GROWTH** is calculated as total assets minus total equity plus the market value of equity over total assets; **TANG** is the ratio of net property, plant, and equipment divided by total assets; **PROF** is the ratio of earnings before interest and taxes over total assets; **NDTS** is calculated as depreciation and amortization over total assets; **GDP** and **INF** stand for the logarithm of gross domestic product per capita and inflation rate; **CRDEV** is the ratio of credit money deposit in banks and other institutions by GDP; **EQDEV** is calculated as stock market capitalization over GDP. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.5   Main Model and Discussion

The results of our main equation are presented in table 4.3 – table 4.5 which tests for the combined effect of firm and country-level integrating variables (All firms included). Considering the three dependent variables being tested in this study, we divide the analysis into three sub-tables. table: Table 4.3:- LEV-1 (DtoAssets), Table 4.4:- LEV 2 (LTDtoAssets), and Table 4.5:- DMAT (STDtoAssets). Model-1 in each table represents the results of the main integration variables being used in the study. Model-2 examines the effect of corruption along with the integration variables. Model-3 tests the legal perspective (Legal, Rule of law, and Regulatory quality) along with other variables of the study, and Model-4 is the final model which combines all the integration, legal, and corruption factor and tests its relation with our dependent variables.

Though we have already tested the integration variables separately in the previous sections (Table: 4.1; Table: 4.2), the main purpose for combining these variables is to analyze which level of integration works as the cheapest source and has the strongest impact on the firm's leverage operating in emerging markets. For this purpose, we have used Internationalization (INTERN), a firm-level integration that considers foreign sales as an entry pass to foreign markets and gets access to foreign loans. For country-level integration, we have used credit market (CREDIT) and equity market (EQUITY) integration, which considers the openness of credit and equity markets of the country to foreign investors. Both these variables are tested and the results are reported in table-4.3.

4.5.1   Dependent: Total debt and Long term debt.

The results in table-4.3 (LEV-1) and table-4.4 (LEV-2) show the outcome of fixed effects with our dependent variables. Most of the results in these tables are the same. INTERN is positive and significant in all the models, which reconfirms that firms having foreign sales have a strong positive impact on their total debt. This supports our *H1a* and

concludes that foreign activity works as an entry pass to foreign markets where firms can explore cheaper financing options not available in their native country (Hour & Dincergok 2021)

The results of country-level integration, i.e., credit (CREDIT) and equity (EQUITY) market integration, are similar to the model tested in the last section. Credit market integration shows a positive relation to leverage in all the models while equity market integration is negatively correlated (i.e., more equity market integration results in a lower level of leverage and more equity as the cost of equity decreases), hence supporting our *H2a* and *H2b*. This shows that credit market integration results in low-cost loans giving an advantage to the firms in raising cheaper debt while equity market integration results in more finance through equity as firms reduce their long-term loans. This also concludes that penetration in other markets works as a catalyst for increased leverage. The results are consistent with Lucey and Zhang (2011), where the authors conclude that both credit and equity market integration of a country result in an increase of finances in emerging markets as they are exposed to cheaper financing options. However, the results contradict with Tongurai & Vithessonthi, (2023) which shows that liberalization has a positive relation with equity markets and banking system while negative with bond markets. This negative relation of bond market is mostly find in countries which are bank dominated. By comparing the two main variables, we conclude that country level integration results in lowering the cost of financing and has a stronger influence on the capital structure of the firms as compared to firm level integration.

The results of corruption in Model-2 and Model-4 show that countries having a high level of corruption is negatively significant with firm leverage. The negative values support our proposed hypothesis *H4a* which predicts that a higher corruption level makes it difficult for countries to attract foreign investors (Doan et al., 2023). This also works

as a hurdle for firms looking for cheaper financing options as foreign investors are not ready to lend for longer-term periods.

Our results on control variables are consistent with previous theories and empirical studies. The firm-level variables suggest that firm size (SIZE), growth (GROWTH), and tangibility (TANG) are positively significant with firm leverage, while profitability (PROFIT) is negatively significant. These results are in alignment with Schmukler & Vesperoni (2006), which shows that larger firms with high tangible assets and better growth prospects can borrow more as they are more stable with a lower risk of bankruptcy. And firms with lower profitable position uses more debt to finance their operations (Laeven 2003). The negative relation of a non-debt tax shield with leverage indicates that using a tax shield for debt becomes less critical when the firms have other alternatives (Ahsan et al., 2022). Furthermore, where the firms are under the full support of the state (like in China), paying taxes might not have the same importance as in other countries.

For country-level variables, the leverage is positively related to credit market development (CRDEV) while negatively significant to equity market development (EQDEV) which is consistent with Gonenc & de Haan (2014). This indicates that information transmission from these markets is useful for creditors (Demirguc-Kunt and Maksimovic, 1999), so firms can secure more loans. However, the LEV-1 (Total debts) seems to have a negative relationship with inflation (Table 4.3) while positive with LEV-2 (LTD) – (Table 4.4), signifying that firms in emerging countries tend to take more long term loans during high inflationary periods. However, GDP shows a positive relationship with total debt in table 4.3, and while negative relation with long term debts in table 4.4 indicates that improvement in the economy leads to less reliance on long term debt financing (Dalci 2018).

Our Model-3 adds some specific legal variables in the study which include LEGAL (dummy variable for countries following Common law or otherwise), RL (Rule of Law), and RQ (Regulatory Quality). As we are considering the financial integration perspective of emerging countries, which allows investors to invest across borders in search of better returns. In this context legal factors have great importance as to know how these countries protect the interest/stake of foreign investors. The results in Model-3 and Model-4 show that countries that follow Common law have a positive significant relationship with firm's total debt. This supports our *H4c.* That is because the countries following Common law have strong investor protection rights and proper implementation of laws due to which foreign investors are more confident to risk their investment across borders (Fauver *et al*., 2003). Moreover, the results of rule of law (RL) and regulatory quality (RQ) are also positively significant with the debt. This shows that firms can secure more loans if they are operating in a country with a strong implementation of laws and better regulatory quality. This is in line with Casino-Martinez et al., (2023) which concludes that improving the institutional environment in the context of trusted institutions and efficient judiciary laws can overcome the financing issue for all the firms.

4.5.2   Dependent: Debt maturity

Table 4.5 presents the results of our third dependent variable i.e. debt maturity, calculated as short term debt over total debt. The results in all the models show that the relationship between firm internationalization (INTERN) and the short term debt to total debt is positive and statistically significant at almost 5 percent. So, we accept our *H1b.* The evidence concludes that emerging-country firms that internationalize are able to secure less-costly debt financing for short term period (Gonenc & de Haan 2014).

In the case of country-level integration variables, the estimates of credit market integration (CREDIT) in all the models are positive and the coefficients are statistically

significant at a 5% level, while the equity market integration (EQUITY) shows a negatively significant relation with debt maturity. Hence, we support our ***H3a*** and ***H3b.*** This evidence confirms that as credit integration increases among the countries, the maturity of debt shifts to the short term as the suppliers of debt are not confident in giving out long terms loans to the new countries with a weak legal framework. According to Fan *et al.*, (2012), the positive relationship between maturity and the credit market is because of two reasons; firstly, if the country has a weak legal system and the creditor's rights are not protected, the lenders will not be ready to lend for the long term; Secondly, the size and the tangibility of the company also matters for the creditor as they are looking for collateral to secure their loan. Moreover, the equity market integration allows the firm to raise more equity than debt because it is cheaper compared to loans (Yu *et al.,* 2010).

The results on the control variable show some mixed evidence. The size and tangibility of the firms are negatively correlated with their debt maturity while growth is positively significant. This concludes that emerging-market firms with smaller sizes and lower tangibility have more short term debt as they cannot secure collateral against long term loans (Fan *et al.*, 2012). However, firms with positive growth are able to raise more debt with short maturity. Both profitability and non-debt tax shield estimates are positive but the coefficient is insignificant in all models. In country-level variables, firms operating in countries with higher GDP and better credit development markets have more short term debt in their capital structure. This indicates that improvement in the economy leads to less reliance on long-term financing sources (Dalci 2018). However, equity market development attracts more equity instead of raising debt either long term or short term. The results are consistent with Schmukler and Vesperoni (2006), and Atawnah *et al.,* (2023) who conclude that that foreign competition has a strong positive association with short-term debt. Moreover, this relation is more pronounced in firms with higher

information asymmetry issues and lack of monitoring by the institution which keeps them at high risk.

Our results of corruption in Model-2 and Model-4 show a positive relationship with debt maturity. This support our proposed hypothesis **H4b** that higher corruption level, lack of regulations, and improper implementation of law makes it difficult for the foreign investor to take benefit of market integration, and the firms operating in those countries are only able to secure loans with short term maturity. This also suggests that these countries with the poor legal environments are not able to support their corporations in getting cheaper finances which could have been available otherwise. Furthermore, Model-3 and Model-4 in table 4.5 show the results of legal variables and their impact on firm's debt maturity. Firms in emerging countries that follow Common law show a negatively significant relation with short term debt. This according to Fauver *et al*., (2003) is because the Common law has strong investor protection rights which save their investment from default risk. Hence countries not following the common law are usually able to secure loans for short term. Moreover, the estimates of rule of law (RL) and regulatory quality (RQ) are also negative and significant. This evidence concludes that countries with poor rule of law and weak regulatory quality are only able to secure short term loans. Hence supporting our **H5e**. Moreover, foreign investor is not willing to lend for long terms in countries where the rules to safeguard the investor interest are not properly implemented and followed.

Table 4-3 Impact of Integration on Leverage- 1.

Table 4.3: Impact of Financial Integration on corporate leverage 1: Fixed Effect.				
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
	Dependent Variable: LEV-1 (D to Assets)			
INTERN	0.0005	0.0005	0.0006	0.0006
	(0.0006)**	(0.0006)**	(0.0006)**	(0.0006)**
CREDIT	0.0102	0.0117	0.0103	0.010
	(0.0036)***	(0.0036)***	(0.0037)***	(0.0037)***
EQUITY	-0.0325	-0.0266	-0.0296	-0.0251
	(0.0605)**	(0.0520)***	(0.0514)***	(0.0522)**
Cor_IDX		-0.0116		-0.0684
		(0.0237)*		(0.0342)**
Firm-Level Variables				
SIZE	0.0180	0.0218	0.0237	0.0238
	(0.0293)***	(0.0322)***	(0.0322)***	(0.0320)***
GROWTH	0.0509	0.0548	0.0526	0.0521
	(0.0253)***	(0.0358)***	(0.0358)***	(0.0358)***
TANG	0.01925	0.0173	0.0169	0.0174
	(0.0195)***	(0.0125)***	(0.0124)***	(0.0124)***
PROF	-0.0601	-0.055	-0.0569	-0.0567
	(0.0172)**	(0.0171)***	(0.0172)***	(0.017)*
NDTS	-0.0204	-0.0229	-0.0225	-0.0209
	(0.0152)**	(0.0194)*	(0.0101)*	(0.0100)**
Country-Level Variables				
GDP	-0.0065	-0.0068	-0.0063	-0.0064
	(0.0019)***	(0.0021)***	(0.0022)***	(0.0021)**
INF	0.0059	0.0065	0.0080	0.0072
	(0.0019)***	(0.0020)***	(0.0020)***	(0.0021)***
CRDEV	0.0018	0.0008	0.0006	0.0003
	(0.001)**	(0.0012)*	(0.0012)**	(0.0012)*
EQDEV	-0.0022	-0.0019	-0.0024	-0.0024
	(0.0003)**	(0.0003)***	(0.0003)***	(0.0003)**
LAW			0.0150	0.0151
			(0.0228)***	(0.0065)**
RL			0.0236	0.0246
			(0.0454)***	(0.0477)***
RQ			0.0173	0.0078
			(0.0378)*	(0.0357)**
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
No. of Observations	42555	38951	38904	38904
R-square	45.68	42.68	41.05	41.01

Table 4.3: This table reports the results of fixed effects for **LEV-1** only. It is calculated as the ratio of total debt to total; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; **SIZE** is the natural log of total assets; **GROWTH** is calculated as total assets minus total equity plus the market value of equity over total assets; **TANG** is the ratio of net property, plant, and equipment divided by total assets; **PROF** is the ratio of earnings before interest and taxes over total assets; **NDTS** is calculated as depreciation and amortization over total assets; **GDP** and **INF** stand for the logarithm of gross domestic product per capita and inflation rate; **CRDEV** is the ratio of credit money deposit in banks and other institutions by GDP; **EQDEV** is calculated as stock market capitalization over GDP. **LAW** represents the Common Law take as a dummy variable. **RL** and **RQ** is for Rule of law and Regulatory quality. **Cor_IDX** is the corruption index. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

Table 4-4 Impact of Integration on Leverage- 2

Table 4.4: Impact of Financial Integration on corporate leverage 2: Fixed Effect.				
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
	Dependent Variable: LEV-2 (LTD*to*Assets)			
INTERN	0.0007	0.0008	0.0008	0.0008
	(0.0006)*	(0.0004)**	(0.0004)*	(0.0004)**
CREDIT	0.0009	0.0006	0.0005	0.0009
	(0.0003)**	(0.0001)***	(0.0001)***	(0.0001)**
EQUITY	-0.0241	-0.0227	-0.0226	-0.019
	(0.0080)***	(0.0042)***	(0.0042)***	(0.0043)***
Cor_IDX		-0.0048		-0.0154
		(0.0020)**		(0.0024)**
Firm-Level Variables				
SIZE	0.0224	0.0245	0.0248	0.0254
	(0.0030)***	(0.0013)***	(0.0013)***	(0.0013)***
GROWTH	0.2732	0.273	0.2717	0.2711
	(0.0169)***	(0.0034)***	(0.0034)***	(0.0034)***
TANG	0.1189	0.1216	0.1226	0.1234
	(0.0104)***	(0.0046)***	(0.0046)***	(0.0046)***
PROF	-0.0094	-0.0058	-0.0072	-0.0065
	(0.0101)*	(0.0048)*	(0.0048)*	(0.0048)*
NDTS	-0.234	-0.244	-0.2436	-0.2414
	(0.0599)***	(0.0267)***	(0.0267)**	(0.0267)***
Country-Level Variables				
GDP	0.0003	0.0003	0.0002	0.0002
	(0.0002)*	(0.0002)*	(0.0002)*	(0.0002)**
INF	-0.0002	-0.0004	-0.0001	-0.0003
	(0.0001)*	(0.0001)***	(0.0011)*	(0.0001)*
CRDEV	0.0001	0.0001	0.0001	0.0002
	(0.0001)*	(0.0007)***	(0.0007)**	(0.0007)***
EQDEV	-0.0008	-0.0008	-0.0006	-0.0004
	(0.0005)*	(0.0003)	(0.0003)*	(0.0003)**
LAW			0.012	0.0021
			(0.0020)***	(0.0002)**
RL			0.0173	0.0217
			(0.0024)*	(0.0025)***
RQ			0.0001	0.0063
			(0.0024)***	(0.0026)**
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
No. of Observations	38951	38951	38904	38904
R-square	16.91	16.89	16.45	16.14

Table 4.4: This table reports the results of fixed effects **LEV-2**. It is calculated as long term debt to total assets; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; **SIZE** is the natural log of total assets; **GROWTH** is calculated as total assets minus total equity plus the market value of equity over total assets; **TANG** is the ratio of net property, plant, and equipment divided by total assets; **PROF** is the ratio of earnings before interest and taxes over total assets; **NDTS** is calculated as depreciation and amortization over total assets; **GDP** and **INF** stand for the logarithm of gross domestic product per capita and inflation rate; **CRDEV** is the ratio of credit money deposit in banks and other institutions by GDP; **EQDEV** is calculated as stock market capitalization over GDP. **LAW** represents the Common Law take as a dummy variable. **RL** and **RQ** is for Rule of law and Regulatory quality. **Cor_IDX** is the corruption index. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

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Table 4-5 Impact of Integration on Debt Maturity.

Table 4.5: Impact of Financial Integration on debt maturity: Fixed Effect.				
Variables	**Model 1**	**Model 2**	**Model 3**	**Model 4**
	Dependent Variable: DMAT (STD*to*TD)			
INTERN	0.0007	0.0007	0.0007	0.0006
	(0.0009)*	(0.0008)*	(0.0008)*	(0.0008)**
CREDIT	0.0013	0.001	0.0009	0.0008
	(0.0004)***	(0.0004)**	(0.0004)**	(0.0004)*
EQUITY	-0.0275	-0.0276	-0.0256	-0.0229
	(0.0093)***	(0.0086)***	(0.0082)***	(0.0079)***
Cor_IDX		0.0022		0.0111
		(0.0051)*		(0.0044)**
Firm-Level Variables				
SIZE	-0.0144	-0.0162	-0.016	-0.0173
	(0.0037)***	(0.0038)***	(0.0038)***	(0.0038)***
GROWTH	0.5454	0.5613	0.5621	0.5626
	(0.0284)***	(0.029)***	(0.0291)***	(0.0291)***
TANG	-0.1006	-0.0998	-0.1	-0.1007
	(0.0133)***	(0.0134)***	(0.0135)***	(0.0134)***
PROF	0.01	0.0085	0.0091	0.0086
	(0.0158)	(0.0161)	(0.0161)	(0.0161)
NDTS	0.1786	0.1223	0.1171	0.1156
	(0.0894)**	(0.101)	(0.101)	(0.1014)
Country-Level Variables				
GDP	0.0003	0.0003	0.0006	0.0006
	(0.0003)	(0.0003)	(0.0003)**	(0.0003)**
INF	0.0001	0.0001	-0.0001	0.0001
	(0.0001)	(0.0002)	(0.0002)	(0.0002)
CRDEV	0.0003	-0.0001	0.0001	0.0001
	(0.0001)*	(0.0001)	(0.0001)	(0.0001)
EQDEV	-0.0005	-0.0009	-0.0001	-0.0002
	(0.0006)	(0.0001)	(0.0006)	(0.0006)
LAW			-0.1322	0.051
			(0.0041)*	(0.0001)
RL			-0.0133	-0.0164
			(0.0058)**	(0.0056)***
RQ			-0.0128	-0.0172
			(0.0058)**	(0.0056)***
Year FE	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
No. of Observations	42551	38948	38901	42551
R-square	19.08	16.95	15.54	15.58

Table 4.5: This table reports the results of fixed effects for debt maturity. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; **SIZE** is the natural log of total assets; **GROWTH** is calculated as total assets minus total equity plus the market value of equity over total assets; **TANG** is the ratio of net property, plant, and equipment divided by total assets; **PROF** is the ratio of earnings before interest and taxes over total assets; **NDTS** is calculated as depreciation and amortization over total assets; **GDP** and **INF** stand for the logarithm of gross domestic product per capita and inflation rate; **CRDEV** is the ratio of credit money deposit in banks and other institutions by GDP; **EQDEV** is calculated as stock market capitalization over GDP. **LAW** represents the Common Law take as a dummy variable. **RL** and **RQ** is for Rule of law and Regulatory quality. **Cor_IDX** is the corruption index. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.6   Interactive effect of integration on capital structure

To find the interactive effect with firm characteristics, we multiply INTN, CRINT, and EQINT by the dummy variables of high growth firms, low growth firms, large firms, small firms, and law respectively. For high-growth firms and large firms, we use an average value of growth (GROWTH) and firm size (SIZE) at the top 25% percentile, while for low growth firms and small firms we take an average value of the lowest 25% percentile. To get better estimates for our results, we include growth and size dummy variables against the original values of firm size and growth opportunities. For LAW, we directly multiply the integration variables with the legal system dummy (LEGAL).

Table 4.6 reports the result of integration variables and interactive terms. Panel-A shows that companies which are classified as large firms and have more growth opportunities are more likely to raise more debt. The positive coefficients in model-1 and model-2 (high growth: 0.0019 and 0.007; large firms: 0.0016 and 0.009; all significant at 1%) signifies that foreign sales can help a company raise more finance because of Internationalization. However, the negative coefficient (-0018) of low-growth multinational firms shows that they are unable to secure more debt, while the results of small firms are insignificant. Model-3 presents the results of debt maturity which reports a negatively significant coefficient for large firms with high growth opportunities while a positive relation with small firms and low growth. This concludes that large firms with more growth prospects can secure loans with extended maturities as compared to low growth firms. Furthermore, the coefficients of LAW in model-1 (0.0045) and model-2 (0.0074) are positive and significant showing that firms operating in countries with efficient legal systems are more likely to raise more leverage with extended debt maturities. However, the results of INTN*Law are negative and significant in model-3. This signifies that countries not following the common law even though they are involved in foreign sales will be able to secure short term loans only. This supports our hypothesis

that Common laws come with strong creditor protection laws and efficient regulatory systems.

Panel-B shows the regression results of interactive terms with credit market integration (CREDIT). The results in Model 1 and Model 2 show a positive impact of CREDIT integration on the leverage of the high growth firms with coefficients of 0.0016 and 0.0007 at a 1% level of significance. However, the low growth firms signify a negative relation to leverage with the coefficients -0.0013 and -0.006 at a 1% level of significance. This is in line with our *H6a* which proposes that an increase in credit market integration brings more debt finance to high-growth firms, while this doesn't benefit the low growth firms. However, the results for equity market integration in Panel-C indicate that both the high-growth and low-growth firms have a negative relation with EQUITY. The coefficients indicate that the firms have tilted more toward equity financing after the equity market integrates. This supports our *H6b* which predicts a negative relation of high growth firms with EQUITY. Moreover, the results of large firms are also negative with leverage. These results conclude that firms in emerging economies with high growth opportunities take full advantage of both credit and equity market integrations in their respective countries to achieve their growth prospects. However, the results of debt maturity in Model-3 show that due to weak legal systems in emerging markets, the loans only stand for the short term, which was proposed by *H6c* of integrating variables and aligns with Atawnah et al., (2023).

The results for the impact of CREDIT on leverage are positive for large firms with a coefficient of 0.0012 at a 1% level of significance but negative for small firms with a coefficient of -0.00041 and -0.0015 at 10% and 1% significant level respectively. Moreover, for EQUITY, the results are negatively significant for large firms with coefficients -0.0047 and -0.006 significant at 1%, while the relationship is insignificant

for small firms. The results are consistent with *H6d* and *H6e,* concluding that large firms tend to take more advantage of external financing when the financial integration of markets moves to higher levels. However, the results of debt maturity in Model 3 are significant for large firms with a coefficient of 0.006 at a 5% significant level while it is not significant for small firms. This aligns with our *proposed hypothesis,* which shows that large firms are able to borrow for the short term only due to information asymmetry in emerging economies.

We find adequate evidence for *H5g* in model-1 and model-2, showing that the positive impact of CREDIT increases with legal efficiency. The positive coefficients of 0.0016 and 0.0014 significant at 1% shows that the countries following the Common law system are legally more efficient in their regulations and firms operating in these countries can secure more debt with an increase in credit market integration. This also proves that credit market integration can only be effective for debt financing if the country has strong rules and regulations to protect creditor rights. The results of debt maturity in model-3 show a negatively significant relation with short-term maturity which concludes that firms can extend their debt maturity if they are operating in a country with more efficient creditor protection rules and information asymmetry. However, the results of EQUITY in Panel-C show a negative relation with legal efficiency that is proposed by *H5h* in the interactive hypothesis. The negative coefficients -0.0019 and -0.0128 show that a sound legal system discourages local firms to issue more equity when equity market integration moves to higher levels. This is possibly due to two reasons: Firstly, a limited number of sample countries and less variation in the LAW variable give us less freedom to investigate the interactive effects. Secondly, the difference in institutional structures in countries can overlap each other and their interaction with financial integration can work on financing in different ways. In our study, countries following Common law may have more efficient legal systems and more developed financial intermediaries as well. It is most likely that

firms operating in countries with more developed financial systems are less sensitive to financial integration as compared to firms in emerging markets.

Continuing with the interaction results, Panel-D provides the results of interactive variables with a corruption index (Corr_IDX). The result shows that although corruption is negatively significant with total debt and long term loans in previous results, however high growth firms can still manage to access more loans and increase their long term financing as its shows a positive relation. This according to Du (2008), the growth firms use their connections to get access to the financial resources available in their country and use a bribe to avail those finances at a cheaper cost as compared to other companies. This is also evident from the negative results of debt maturity with high growth firms. The countries with high corruption are only able to get finance for short term however, the high growth firms usually spend extra resources in the form of bribes or use connections to get long term financing. Moreover, the results of low growth, large and small firms are in alignment with our previous results as they show a negative relationship between total debt and long term debt. The result of maturity is positive with that of low growth and small firms as they are only able to get financing for a short term in high corruption countries.

Table 4-6 Interactive effects of Integration on Leverage and Maturity

Table 4.6: Interactive effects of Financial Integration on corporate leverage and debt maturity: Fixed Effect.			
	Model 1	**Model 2**	**Model 3**
Variables	**LEV-1** (D*to*Assets)	**LEV-2** (LTD*to*Assets)	**DMAT** (STD*to*TD)
Panel A: Internationalization			
INTERN	0.0069	0.0009	0.0008
	(0.0042)**	(0.0004)***	(0.0005)*
INTERN*High growth Firms	0.0019	0.0072	-0.0035
	(0.2237)***	(0.0023)***	(0.0029)*
INTERN*Low growth firms	-0.0018	-0.0007	0.0242
	(0.2321)***	(0.0024)	(0.0030)***
INTERN*Large firms	0.0011	0.009	-0.0095
	(0.2819)***	(0.0029)***	(0.0036)***
INTERN*Small firms	0.0063	-0.0052	0.012
	(0.3691)	(0.0033)	(0.0047)**
INTERN*Law	0.0045	0.0074	-0.0095
	(0.322)*	(0.033)**	(0.0041)*
Observations	42551	42551	42551
Panel B: Credit Market Integration			
CREDIT	0.0061	0.0008	0.0015
	(0.0328)**	(0.0001)***	(0.0002)***
CREDIT*High growth firms	0.0016	0.0007	0.0003
	(0.0377)***	(0.001)***	(0.0001)*
CREDIT*Low-growth firms	-0.0013	-0.0006	0.0005
	(0.0428)***	(0.0001)***	(0.0001)***
CREDIT*Large firms	0.0012	0.0002	0.0006
	(0.0446)***	(0.0004)**	(0.0005)**
CREDIT*Small firms	-0.0004	-0.0015	0.0016
	(0.0233)*	(0.0002)***	(0.0003)
CREDIT*Law	0.0016	0.0014	-0.0006
	(0.0341)***	(0.0003)***	(0.0004)*
Observations	42555	42555	42555

This table reports the results for interactive terms. **LEV-1** is the ratio of total debt to total assets in model-1, while **LEV-2** is long term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP. For brevity, we only report the estimates of financial integration variables and corresponding interaction terms. We use clustered standard errors by firms. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

Panel C: Equity Market Integration			
EQUITY	-0.0208	-0.0089	-0.0141
	(0.3889)***	(0.0056)*	(0.0070)*
EQUITY*High growth firms	-0.0454	-0.0343	-0.0023
	(0.2783)***	(0.0029)***	(0.0036)*
EQUITY*Low-growth firms	-0.0270	-0.0147	-0.0236
	(0.2451)***	(0.0026)***	(0.0032)***
EQUITY*Large firms	-0.0471	-0.006	0.0247
	(0.4786)***	(0.0054)*	(0.0037)*
EQUITY*Small firms	0.0012	-0.0044	0.0072
	(0.3927)	(0.0042)	(0.0053)
EQUITY*Law	-0.0019	-0.0128	0.0037
	(0.5592)**	(0.0069)*	(0.0086)
Observations	42555	42555	42551
Panel D: Corruption			
Corr_IDX	-0.0023	-0.0013	0.0029
	(0.0023)**	(0.0022)*	(0.0017)*
Corr_IDX*High growth firms	0.0102	0.0075	-0.0029
	(0.0023)***	(0.0011)***	(0.0017)**
Corr_IDX*Low growth firms	-0.0075	-0.0038	0.0019
	(0.0022)***	(0.0010)***	(0.0018)*
Corr_IDX*Large Firms	-0.0018	-0.0006	0.0007
	(0.0009)**	(0.0009)	(0.0010)
Corr_IDX*Small Firms	-0.0029	-0.0047	0.0047
	(0.0011)***	(0.0013)***	(0.0012)***
Observations	38951	38951	38948

This table reports the results for interactive terms. **LEV-1** is the ratio of total debt to total assets in model-1, while **LEV-2** is long term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt. **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP. **Corr_IDX** is the corruption index. For brevity, we only report the estimates of financial integration variables and corresponding interaction terms. We use clustered standard errors by firms. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.7   Financial Crises

This section provides the results of pre and post crises periods and their impact on the financing behavior of the firms. We take into account the Asian crises first that had a major setbacks in Asian countries. The second section considers the global financial crises that affected almost all the developed and developing countries of the world. The results are presented in table 4.7 and table 4.8.

4.7.1 Asian Crises 1997

In mid-1997, an economic crisis, which occurs as a result of weak financial systems linked with volatile global capital movements brought about by the liberalization of financial markets, took place in eight Asian countries. It includes Thailand, China, Indonesia, India, Malaysia, Philippines, Japan, and South Korea. These countries were initially praised for the rapid economic growth resulting from their sound economic policies. However, after the crises, many studies concluded that when financial reforms are carried out without a coherent strategy and proper infrastructure that support the reforms, financial crises can result. Moreover, if the countries are to benefit from financial integration and free capital movement, they must build a strong financial system that can determine the intensity of the panic capital movements and absorb the shocks to keep the economy stable and ongoing.

Our work in this regard is to investigate the impact of financial crises on the financing behavior of firms. We initially investigate the pre-crisis integration level of the selected countries and compared it with the post crises integration level and report how the level of integration and the level of significance changes pre-post crises. Considering the countries affected by the Asian crises and the limitation of our data, we only selected Thailand, Indonesia, India, Malaysia, Philippines, and South Korea for these tests. For the pre-crises period, we have selected the first seven years i.e. 1990 – 1996, while for port crises we have selected eighteen years i.e. 1998 – 2015. The results are presented in table 4.7.

The pre-crises result shows that in the early 90s, the firms in these emerging markets were not benefiting from firm level integration. This is evident from the non-significant results of internationalization. Moreover, from country level integration results it could be concluded that only equity market integration was significant at 10% while credit

market integration results are also not significant with total and long term debt. These results coincide with the previous literature (Neaime 2012) which shows that most of the emerging countries liberalized their economies in the late 90's due to which the foreign investors were not aware of the cross border investments and the companies were not open to the financing options during that time. However, only the equity markets were integrated to some extent which allowed the firms to raise more equity at a low cost.

The post-crises period in our result shows that the countries were quick in recovering from the crises and have made sound financial reforms that helped them to move forward and take benefits from market integrations. The results of internationalization show that firms with foreign sales were able to secure more loans but with short maturities. The positive coefficient for maturity (0.0006) concludes that after crises the cross-border investor is not confident to lend loans for long term maturity. Hence supporting our H1b. The credit market integration after the crisis period also shows a positive and significant relationship with the leverage of the firms. These results from the credit market conclude that the countries made major reforms after the crises to overcome the shocks of volatility for free capital movement across borders and were able to take benefit of market integrations (Lee 2003). The results of maturity also support our hypothesis i.e. foreign investors are not willing to lend for long term in emerging countries that have recently recovered from crises. The equity market coefficient is the highest among the other coefficients of integration for both models. This reconciles with the results of our main models that conclude that though credit market integration allows the firms to access more loans but equity market integration is the cheapest source available to the firms operating in emerging markets.

Table 4-8 Asian Crises and Integration

Table 4.8: Asian Crises and Financial Integration			
Variables	**Model 1**	**Model 2**	**Model 3**
	LEV-1 (D*to*Assets)	**LEV-2 (LTD*to*Assets)**	**DMAT (STD*to*TD)**
Panel A: Pre-Crises Asian (1990 - 1996)			
INTERN	-0.0073	0.0004	-0.0007
	(0.0416)	(0.0006)	(0.0005)
CREDIT	0.0303	-0.0013	0.0014
	(0.0151)	(0.0010)	(0.0011)
EQUITY	-0.0455	-0.0433	0.0432
	(0.0134)*	(0.0692)*	(0.072)
R- Square	59.23	22.75	21.66
Observations	706	706	706
Panel B: Post-Crises Asian (1998 - 2015)			
INTERN	0.0054	0.0002	0.0006
	(0.0063)*	(0.0006)*	(0.0009)*
CREDIT	0.0127	0.001	0.001
	(0.0379)**	(0.0003)***	(0.0004)**
EQUITY	-0.0247	-0.0665	-0.0034
	(0.0512)**	(0.0049)*	(0.0057)
R- Square	42.78	27.49	33.24
Observations	9516	9516	9516

This table reports the results for pre and post Asian crises. **LEV-1** is the ratio of total debt to total assets in model-1, while **LEV-2** is long term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP;. For brevity, we only report the estimates of financial integration. We use clustered standard errors by firms. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.7.2 Global Financial Crises (2007 – 2008)

To study the effect of the global financial crisis of 2007-2008, we divide our sample into pre-crisis and post-crisis periods. For pre-crises, we have analyzed the first 17 years of our sample period i.e. 1990-2006 which consists of 11429 observations only. While for post-crisis we have 7 years in our sample i.e. 2009-2015 which consists of 25000 observations which is double the observations in the pre-crisis period. After the valid results of the Hausman test, the results of fixed effects are presented in table-4.8.

The results of internationalization show some mixed effects on firms' leverage before crises. Foreign sales don't have a significant impact on the firm's total debt while the long-term loans are positively significant at the 10% level. However, both the total debt and long-term debt in model-1 and model-2 is positively significant at 5% levels after crises. This could be because of two reasons: Firstly, as most of the multinational firms were operating in developed countries, they were reluctant to operate in or trade with emerging markets due to which the foreign sales were not that efficient; secondly, as the MNC's started operating in emerging markets due to great growth potential and deeper market integration resulted in more finance requirements for these companies as they have to utilize more debt. For that reason, they relied on their head office which operates in a country with a better financing option. Moreover, the results of debt maturity (-0.0009) also show that before the crises the firms were allowed to use extended loans with greater maturity but after the crises, the positive coefficient of 0.0003 indicates that the debt is only issued for short terms due to risk factor and weak regulatory environment in emerging economies. The results coincide with Duran & Stephen (2020) that examines the MNCs of different countries and concludes that capital structure policy of both the domestic and MNCs is the same before crises. However, there is a significant increase in the debt level of MNCs after crises as they are exposed to higher level of political and exchange rate risk that leads to higher cost of debt. Hence they have to look for option across the border to take benefit of low cost finance which local firms cannot access.

The results of credit and equity market integration are also presented with regard to the pre-post crises period. As most of the countries in emerging markets started opening their financial markets in the late 90s, the results show the positively significant effect of credit market integration on firms' total debt and long-term loans. While the results are negative and significant in the case of equity markets both before and after the crisis period. This reconciles with the result of our main model which shows that the credit

market integration of a country allows access to more debt at a cheaper rate while equity market integration encourages financing through new equity. The results are more significant after the crisis period which indicates that though most of the countries have faced severe financial crisis issues in their economies still firms are taking huge benefits from these integrations in lieu of cheaper and low-cost loans. The coefficients of debt maturity (Pre-crises: -0.0031; Post-crisis: 0.002) also prove that firms could get extended loans before the crises but now the loans are only for the short term.

Table 4-9 Financial Global Crises and Integration

Table 4.9: Financial crises and Financial Integration: Fixed Effect.			
Variables	**Model 1**	**Model 2**	**Model 3**
	LEV-1 (D*to*Assets)	LEV-2 (LTD*to*Assets)	DMAT (STD*to*TD)
Panel A: Before Crises (1990-2006)			
INTERN	0.0148	0.0009	-0.0009
	(0.0086)	(0.0009)*	(0.0001)*
CREDIT	0.0146	0.001	-0.0031
	(0.0375)**	(0.0004)*	(0.0005)*
EQUITY	-0.0602	-0.0342	0.0191
	(0.0199)***	(0.0088)***	(0.0019)
R-Square	50.99	25.82	17.35
Observations	11429	11429	11427
Panel B: After Crises (2009-2015)			
INTERN	0.0074	0.0003	0.0003
	(0.0044)**	(0.0001)**	(0.0005)**
CREDIT	0.0188	0.002	0.002
	(0.031)**	(0.0003)***	(0.0003)***
EQUITY	-0.0249	-0.0058	0.0063
	(0.0146)***	(0.0092)*	(0.0106)
R-Square	37.19	21.61	22.54
Observations	25075	25075	25073

This table reports the results for pre and post financial crises. **LEV-1** is the ratio of total debt to total assets in model-1, while **LEV-2** is long term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT** denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and **EQUITY** denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP;. For brevity, we only report the estimates of financial integration. We use clustered standard errors by firms. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.8   Robustness Checks

To verify the previous results, we conduct additional tests for robustness. We use the generalized method of movement (GMM) technique (Arellano & Bond, 1991) and the

improved model by Blundell and Bond (2000). The GMM estimation technique can accommodate many cross-sectional observations (N) and a small number of time periods (T) (Osterrieder et al., 2020). Moreover, this approach also assumes that heteroscedasticity and serial correlation do exist within the individuals but not across the firms. Therefore, GMM is a better technique for addressing the potential problems of heteroscedasticity, autocorrelation, and endogeneity.

For robustness, we recalculated our findings from Table- 4.3. Firstly, to address the potential problem of heteroscedasticity, autocorrelation and endogeneity that might exist in our previous model, we use the GMM technique as an alternate model to validate our previous results. We re-estimated our regression models using one-year lagged explanatory variables which suggest that previous years integration decisions may affect future decisions on capital structure.

The results of GMM are presented in table: 4-10 which are similar to those reported in our earlier findings, with minor variations in control variables. The results support the fact that Internationalization and credit market integration has a strong positive impact on the leverage of the firms but with short term maturity. However equity markets are negatively correlated with the firms leverage. Moreover, the firms in the countries with higher level of corruption are able to secure less loans due to corrupt financial and regulatory system which works as a biggest hurdle for the firms to grow and compete with the market giants.

The second robustness check relates to sensitivity analysis of our previous results. We use alternative measures of financial integration for equity and credit markets using the updated and extended version of the External Wealth of Nations Mark II database by Lane and Milesi-Ferretti (2018). For credit market integration, we use gross stocks of portfolio debt investment over GDP, and for equity market integration we use gross stock of portfolio equity investment over GDP. Also, we have used the corruption perception

index (CPI) by Transparency international as an alternative to measure corruption (table: 4-11). Furthermore, we also recalculated the results of interactive variable with these new alternative measures of credit and equity market integration (table: 4-12)

The results of table: 4-11 using the new integration proxies for credit and equity market also coincides with our previous results. The credit market integration is positively significant with firms leverage while equity is negatively correlated. The results conclude that integration of credit markets allow the firms to raise more debt but with short maturity due to lack of confidence of the creditors to lend for long terms in emerging markets. However, integration of equity markets encourages less debt and higher equities. Moreover, the alternate proxy of corruption also shows that higher corruption levels of a country discourages long term loans due to corrupt regulatory environment within the country. The results of interactive variables in table: 4-12 also confirms the previous results. Only high-growth and large firms are able to take more loans from credit market integration while others have to struggle to satisfy their financing needs through other options.

The third robustness check is with the concern that the results of our study may be affected by sample biasness. For that we conduct a sub-sample analysis while dropping China and India, as they constitute a major portion (about half of sample firms) in our sample countries. We exclude these two countries to verify the results from our previous model.

The results of table: 4-13, a sub sample check while excluding China and India from the population also reconciles with the previous results. Even after dropping almost 50 percent of the sample firms the results confirms that both the internationalization and credit integration works as a source of cheaper financing for the firms in emerging markets to raise more debt, while equity market integration promotes equity financing.

Table 4-10 Robustness Check with lag of one year (GMM Results)

Variables	Impact of Financial Integration on corporate leverage and debt maturity: Robustness Check with lag of one year.		
	Model 1 **LEV-1** (D*to*Assets)	**Model 2** **LEV-2** (LTD*to*Assets)	**Model 3** **DMAT** (STD*to*TD)
INTERN	0.0055	0.0007	0.0001
	(0.0052)**	(0.0006)*	(0.0006)*
CREDIT	0.0535	0.0012	0.0006
	(0.026)***	(0.0004)***	(0.0003)*
EQUITY	-0.0167	-0.0114	-0.0081
	(0.0584)**	(0.0061)*	(0.0080)*
Corr_IDX	-0.0445	-0.0007	0.00627
	(0.0271)*	(0.0031)*	(0.0033)*
Firm-Level Variables			
SIZE	0.0458	0.0051	0.0125
	(0.0328)***	(0.0054)*	(0.0042)***
GROWTH	0.0498	0.2977	0.8095
	(0.0305)***	(0.0262)***	(0.0164)***
TANG	0.0196	0.1404	-0.1155
	(0.0165)***	(0.0149)***	(0.0159)**
PROF	-0.0193	-0.0112	-0.0397
	(3.4781)*	(0.0167)*	(0.014)**
NDTS	-0.0108	-0.2828	0.1332
	(0.0151)**	(0.123)	(0.0640)*
Country-Level Variables			
GDP	0.0276	0.0004	-0.0002
	(0.0178)**	(0.0002)**	(0.0002)*
INF	0.0068	-0.0005	0.0003
	(0.0200)***	(0.0002)**	(0.0002)
CRDEV	0.0071	-0.0003	0.0005
	(0.0107)***	(0.0001)*	(0.0001)*
EQDEV	-0.0049	0.0006	0.0004
	(0.0038)**	(0.0003)*	(0.0004)
LAW	0.075	1.0849	-0.056
	(0.0899)**	(0.1555)***	(0.0807)*
RQ	0.0764	0.0043	-0.008
	(0.0265)*	(0.0032)	(0.0807)
RL	0.0131	0.0097	-0.0057
	(0.0360)***	(0.0043)*	(0.0042)*
No of Obs.	38904	38904	38901
No of Groups	6449	6449	6449
No of Instruments	59	59	59
AR1	0	0	0
AR2	0.458	0.173	0.107

This table reports the results of GMM for corporate leverage and debt maturity with a lag of one year. LEV-1 is the ratio of total debt to total assets in model-1, while LEV-2 is long term debt to total assets in model-2. DMAT is the ratio of short-term debt to total debt; INTERN is the ratio of foreign sales to total sales; CREDIT denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and EQUITY denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; SIZE is the natural log of total assets; GROWTH is calculated as total assets minus total equity plus the market value of equity over total assets; TANG is the ratio of net property, plant, and equipment divided by total assets; PROF is the ratio of earnings before interest and taxes over total assets; NDTS is calculated as depreciation and amortization over total assets; GDP and INF stand for the logarithm of gross domestic product per capita and inflation rate; CRDEV is the ratio of credit money deposit in banks and other institutions by GDP; EQDEV is calculated as stock market capitalization over GDP. LAW is a dummy variable with '1' for the countries following Common law; RQ is the regulation quality; RL is the rule of law and CC is the code of corruption. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

Table 4-11 Robustness Check with New credit and equity market variables

Variables	Table 7-7: Impact of Financial Integration on corporate leverage and debt maturity: Robustness Check with new credit and equity market variables		
	Model 1 LEV-1 (D*to*Assets)	**Model 2** LEV-2 (LTD*to*Assets)	**Model 3** DMAT (STD*to*TD)
INTERN	0.0042	0.0007	0.0001
	(0.0050)*	(0.0006)*	(0.0006)*
CREDIT2	0.0971	0.0067	0.0054
	(0.8670)***	(0.0098)*	(0.0098)**
EQUITY2	-0.1814	-0.0501	-0.0265
	(0.1786)**	(0.0123)**	(0.0107)*
Corr_IDX	-0.1673	-0.0009	0.00621
	(0.2666)*	(0.0033)*	(0.0033)**
Firm-Level Variables			
SIZE	0.5248	0.0045	0.0123
	(0.3954)*	(0.0054)*	(0.0043)**
GROWTH	3.3107	0.3003	0.8101
	(0.724)***	(0.0265)***	(0.0164)***
TANG	1.47	0.1423	0.1161
	(0.5739)***	(0.0150)***	(0.0159)**
PROF	-1.979	-0.0105	-0.0394
	(0.2556)*	(-0.0166)	(0.0146)**
NDTS	-1.3983	-0.2795	0.1318
	(0.1577)*	(0.123)**	(0.0633)*
Country-Level Variables			
GDP	-0.0424	0.0007	-0.0003
	(0.0193)*	(0.0002)*	(0.0002)
INF	0.0167	-0.0004	0.0008
	(0.0199)	(0.0002)**	(0.0002)
CRDEV	0.0012	-0.0002	-0.0005
	(0.0108)*	(0.0001)*	(0.0001)*
EQDEV	-0.0006	0.0004	0.0003
	(0.0035)	(0.0003)*	(0.0004)
LAW	0.558	0.1045	-0.0711
	(0.0984)**	(0.1555)***	(0.0795)**
RQ	0.4032	0.0036	-0.0082
	(0.2749)*	(0.0033)	(0.0033)**
RL	-0.5809	0.0115	-0.0046
	(0.3824)	(0.0044)*	(0.0042)
No of Obs.	38904	38904	38901
No of Groups	6449	6449	6449
No of Instruments	59	59	59
AR1	0	0	0
AR2	0.318	0.192	0.262

This table reports the GMM results for corporate leverage and debt maturity. **LEV-1** is the ratio of total debt to total assets in model-1, while **LEV-2** is long term debt to total assets in model-2. **DMAT** is the ratio of short-term debt to total debt; **INTERN** is the ratio of foreign sales to total sales; **CREDIT2** denotes credit market integration calculated as gross stocks of portfolio debt investment over GDP and **EQUITY2** denotes equity market development calculated as gross stock of portfolio equity investment over GDP; **SIZE** is the natural log of total assets; **GROWTH** is calculated as total assets minus total equity plus the market value of equity over total assets; **TANG** is the ratio of net property, plant, and equipment divided by total assets; **PROF** is the ratio of earnings before interest and taxes over total assets; **NDTS** is calculated as depreciation and amortization over total assets; **GDP** and **INF** stand for the logarithm of gross domestic product per capita and inflation rate; **CRDEV** is the ratio of credit money deposit in banks and other institutions by GDP; **EQDEV** is calculated as stock market capitalization over GDP. **LAW** is a dummy variable with '1' for the countries following Common law and "zero" otherwise; **RQ** is the regulation quality; **RL** is the rule of law and **CC** is the corruption perception index code by the Transparency index. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

Table 4-12 Robustness Check Interactive variables

Variables	Model 1 LEV-1 (D*to*Assets)	Model 2 LEV-2 (LTD*to*Assets)	Model 3 DMAT (STD*to*TD)
Interactive effects of Financial Integration on corporate leverage and debt maturity: Robustness Check			
Panel A: Credit Market Integration			
CREDIT2	0.0151	0.01516	0.061
	(0.052)***	(0.0046)***	(0.0062)*
CREDIT2*High growth firms	0.0195	0.0991	-0.119
	(0.0231)***	(0.0020)***	(0.0027)**
CREDIT2*Low-growth firms	-0.0138	-0.0006	-0.1309
	(0.0228)***	(0.0020)***	(0.0027)*
CREDIT2*Large firms	0.0139	0.0019	-0.0352
	(0.0480)**	(0.0042)	(0.0057)
CREDIT2*Small firms	0.0044	-0.0113	0.0335
	(0.0452)*	(0.0040)**	(0.0054)*
CREDIT2*Law	0.0833	0.0189	-0.0773
	(0.0854)*	(0.0076)**	(0.0103)**
Observations	49632	49641	49622
Panel B: Equity Market Integration			
EQUITY2	-0.0646	-0.0104	-0.002
	(0.0703)*	(0.0060)*	(0.0081)*
EQUITY2*High growth firms	-0.0210	-0.1229	0.1818
	(0.0335)***	(0.0029)***	(0.0038)*
EQUITY2*Low-growth firms	-0.0123	-0.0724	-0.1466
	(0.0230)***	(0.0024)***	(0.0032)***
EQUITY2*Large firms	-0.0166	0.0115	0.0121
	(0.0587)**	(0.0050)*	(0.0067)*
EQUITY2*Small firms	0.0091	-0.0111	0.0361
	(0.0560)	(0.0048)*	(0.0064)
EQUITY2*Law	-0.0214	0.0089	-0.0475
	(0.0937)**	(0.0081)	(0.0108)
Observations	49632	42555	42551

This table reports the results for interactive terms. LEV-1 is the ratio of total debt to total assets in model-1, while LEV-2 is long term debt to total assets in model-2. DMAT is the ratio of short-term debt to total debt; CREDIT2 denotes credit market integration calculated as gross stocks of portfolio debt investment over GDP and EQUITY2 denotes equity market development calculated as gross stock of portfolio equity investment over GDP. For brevity, we only report the estimates of financial integration variables and corresponding interaction terms. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

Table 4-13 Robustness Check without China and India

	Model 1	Model 2	Model 3
Impact of Financial Integration on corporate leverage and debt maturity: Fixed Effect without Chinese and Indian firms			
Variables	**LEV-1** (D*to*Assets)	**LEV-2** (LTD*to*Assets)	**DMAT** (STD*to*TD)
INTERN	0.0016	0.0001	0.0055
	(0.0055)*	(0.0005)**	(0.0007)**
CREDIT	0.0898	0.0002	0.0057
	(0.0184)***	(0.0001)*	(0.0025)**
EQUITY	-0.0033	-0.01	-0.0022
	(0.0375)**	(0.0038)**	(0.0052)
Corr_IDX	-0.0343	-0.0166	0.0135
	(0.0267)**	(0.0027)***	(0.0037)***
Firm-Level Variables			
SIZE	0.023	0.039	0.0324
	(0.0266)***	(0.0027)***	(0.0037)***
GROWTH	0.0116	0.2397	0.461
	(0.0464)***	(0.0047)***	(0.0067)***
TANG	0.0351	0.0855	-0.0481
	(0.0617)***	(0.0063)***	(0.0086)***
PROF	-0.0355	-0.0156	-0.0158
	(0.0639)**	(0.0065)**	(0.0089)*
NDTS	-0.0140	-0.1505	-0.0458
	(0.0419)**	(0.0349)***	(0.0483)
Country-Level Variables			
GDP	-0.0681	0.0008	0.0007
	(0.0240)**	(0.0002)**	(0.0003)*
INF	0.0011	0.0005	-0.0001
	(0.0116)***	(0.0001)*	(0.0001)
CRDEV	0.0341	0.0007	0.0003
	(0.0065)***	(0.0006)	(0.0009)**
EQDEV	-0.0226	-0.0002	-0.0006
	(0.0045)**	(0.000)**	(0.0006)
LAW	0.095	0.0199	-0.0561
	(0.0422)**	(0.3215)***	(0.0279)**
RQ	0.0048	-0.0046	-0.014
	(0.0291)*	(0.0029)	(0.0040)***
RL	0.0209	0.0172	-0.0105
	(0.0279)**	(0.0028)***	(0.0039)***
R-square	48.18	18.01	23.82

This table reports the results of fixed effects for corporate leverage and debt maturity. LEV-1 is the ratio of total debt to total assets in model-1, while LEV-2 is long term debt to total assets in model-2. DMAT is the ratio of short-term debt to total debt; INTERN is the ratio of foreign sales to total sales; CREDIT denotes credit market integration calculated as the mean of outstanding international debt plus outstanding loans from non-resident banks over GDP and EQUITY denotes equity market development calculated as the ratio of the sum of a country's foreign equity assets and liabilities and the foreign direct investment assets and liabilities as a share of the GDP; SIZE is the natural log of total assets; GROWTH is calculated as total assets minus total equity plus the market value of equity over total assets; TANG is the ratio of net property, plant, and equipment divided by total assets; PROF is the ratio of earnings before interest and taxes over total assets; NDTS is calculated as depreciation and amortization over total assets; GDP and INF stand for the logarithm of gross domestic product per capita and inflation rate; CRDEV is the ratio of credit money deposit in banks and other institutions by GDP; EQDEV is calculated as stock market capitalization over GDP. LAW is a dummy variable with '1' for the countries following Common law; RQ is the regulation quality; RL is the rule of law and Corr_IDX is the code of corruption. For brevity, we do not report the estimates of country, industry, and year dummy variables. Standard errors are clustered by firm s. The values of standard errors are shown in brackets. Significant-level: *** stands for significant at 1%; ** stands for significant at 5%; * stands for significant at 10%.

4.9   Summary of the Results of proposed hypothesis

	Hypothesis	Results
H1a	Firm internationalization is positively associated with the leverage of firms operating in emerging economies.	Supported
H1b	Firm internationalization is associated with the debt maturity of firms in emerging markets.	Supported
H2a	The degree of credit market integration is positively related to leverage in emerging markets.	Supported
H2b	The degree of equity market integration is negatively related to leverage in emerging markets.	Supported
H3a	The degree of credit market integration is positively related to debt maturity in emerging markets.	Supported
H3b	The degree of equity market integration is negatively related to debt maturity in emerging markets.	Supported
H4a	Corruption level has a significant impact on the leverage of the firms operating in emerging economies.	Supported
H4b	Firms operating in countries with a high perceived level of corruption tend to use short-term debt instead of long-term debt.	Supported
H5a	Financial crises have a significant impact on the leverage of the firms in emerging economies.	Supported
H5b	Financial crises have a significant impact on the debt maturity of the firms in emerging economies.	Supported

Conclusion

In this chapter, we have shown how the levels of financial integration affect the capital structure decisions of the company. Particularly, we address some of the shortcomings of previous work focusing on financial integration and its impact on corporate leverage and its debt maturity structure. We consider both the firm-level integration (i.e. Internationalization) and country-level integration (credit and equity market integration) over time and control for a number of micro and macro factors. We construct a large panel data set comprising of more than 9563 companies from 22 emerging markets from the year 1990-2015. Our results suggest that financial integration has a strong impact on firms financing decisions. We find that a rise in a firm's internationalization activity and an increase in the country's credit and equity market integration leads to higher use of debt and equity, respectively. The effect is significant from an economic perspective as well. Moreover, this effect is more significant for high-growth and large firms as compared to low-growth and small firms. We also conclude that creditors lend more to firms operating in countries with an efficient legal system and lower levels of corruption during the integration process.

CHAPTER 5: CONCLUSION

The growing challenges and opportunities arising from globalization have embarked on many reforms of financial markets and institutions in emerging markets. Over the last two decades, these emerging markets have become increasingly integrated with the world markets and have enjoyed the positive impact of financial integration such as more private investments, enhanced financing options, reduced cost of capital, and higher economic growth. However, these markets still need to adjust themselves to the growing global financial system to achieve better economic benefits from financial integration.

To test the benefits arising from financial integration, this study investigates the impact of market integration factors on the capital structure of the non-financial firms operating in 22 emerging economies listed under the Morgan and Stanley emerging market index. For this purpose, two major integrating factors were considered for testing the relation; firstly what the literature suggests as internal integration (i.e. Internationalization), and secondly; external integration (i.e. credit and equity market) together with micro and macro-level control variables. Three different models were developed to test the hypothesis. The first was designed to test the individual impact of internationalization on leverage while the second model tested the impact of both equity and credit market-level integration on firms' leverage. The third model tests the combined effect of both the internal and external integration factors and investigates the cheapest source of financing available to the firms operating in emerging markets. Moreover, some institutional variables which include the level of corruption, legal system, rule of law, and regulatory quality were also part of our study objectives (Model 4) as they strongly determine the level of integration in a country.

Our initial results for RO-1 suggest that internationalization has a positive impact on firms' leverage and debt maturity. These results reconcile with Mansi and Reeb (2002)

and Gonenc & de Haan (2014) concluding that foreign sales work as an entry pass to other countries which permits access to the foreign market from where they can get low-cost loans and finance their growing operations. Moreover, our results from RO-2 i.e., country-level integration show that credit market integration has a positive impact on firms' leverage. This suggests that firms prefer more debt if the credit market of the country is more integrated with global markets due to which they can get access to cheaper loans not available in their markets. Furthermore, as the credit markets are positively related to leverage, debt maturity also shows a positive association with short-term debt which proves that due to the poor legal system and lack of investor protection rights in emerging markets, the lenders are not comfortable in giving out long term loans and they prefer the short term to secure their investment. The results of equity market integration indicate a negative relationship between a firm's leverage and its maturity which supports both of our research hypotheses. The inverse relationship is in line with Giannetti *et al*., (2002) for leverage, which shows that due to strong stock market integration among emerging markets, firms opt for more equity than debt, hence shortening the debt maturity.

The main contribution of this study comes through the results of our independent variable, which confirms that country-level integration has a stronger influence on a firm's capital structure decisions (RO-3). The results confirm the dominance of the pecking order theory and suggest that after the utilization of internal funds, the company looks for cheaper sources of external financing, and financial market integration could work as one of the sources to provide low-cost financing. Moreover, the results also conclude that firms take more benefit from equity market integration which highlights that debt markets in emerging markets are still underdeveloped, hence limiting the firm's ability to utilize the stock market as the main source of financing. Furthermore, the level of corruption in a country has a negative impact on the firm's leverage suggesting that a

higher corruption level makes it difficult for the countries to attract foreign investors (RO-4). This also works as a hurdle for the firms looking for cheaper financing options as foreign investors are not ready to lend for longer term periods which is evident from the results of maturity.

The results of control variables show that firms with large sizes, more growth opportunities, and higher tangibility can get more benefit from this integration. The institutional variables used in this thesis show that countries that have adopted Common law are taking more benefits from integration as investors' rights are more secure in these countries which gives them more confidence in investing. Moreover, the results of rule of law (RL) and regulatory quality (RQ) are positively significant with the leverage concluding that firms can secure more loans if they are operating in a country with a strong rule of law and better regulatory quality. Lastly, the firms move towards more integration in post-crisis periods and take more loans as compared to the pre-crises period (RO-5).

5.1   Implications for policymakers and investors

An increase in financial integration in the last few years has highlighted its importance for policymakers in emerging markets. The last financial crisis of 2007-2008 raised some serious concerns about globalization that introduces an extra systematic risk factor in the domestic markets, thus exposing emerging markets to more financial distress. Stiglitz (2000) finds that "More developed economies have a strong built-in stabilizer as a safety cushion which can absorb the financial shocks better. Poor countries not only lack this automatic stabilizer, but due to weak institutional settings they face severe funding constraints which exacerbate fluctuations." This requires that the global integration process should be carefully monitored by policymakers, especially in emerging economies. In ideal conditions, financial integration reduces the cost of capital, improves

ass*et al*location, and contributes to economic growth, while at the same time, it brings financial instability and fragility. So in simple words, emerging markets instead of enjoying the benefits of integration may suffer from the cost of integration. Considering this, we suggest that the policymakers in emerging markets should take measures to improve the institutional and governance issues as a first step before financial integration takes place.

For researchers, our study offers valuable insights in the field of capital structuring. Firstly, it highlights the new era of interest i.e. integration and how it plays an important role in shaping capital structure decisions. Secondly, our work emphasizes that the effect of integration may vary depending on the levels of integration involved. This allows researchers to explore the diverse nature of integration in different context. Thirdly, the study reveals that the integration of emerging market into developed markets and the integration of developed market into emerging markets both hold significant importance to be explored in the future. Lastly, to study the transition of an economy from liberalization to integration also gives an interesting avenue to be explored by the researchers.

In robust testing, we find that increase in credit (equity) market integration leads to higher (lower) leverage in emerging countries. The result is more significant in firms with higher growth firms as compared to firms with low growth options. In this regard, the growth opportunity of the firm shows its requirement of raising new funds. Hence, financial integration helps the firm in reducing the cost of capital (debt and equity) and provides more supply of funds in the markets. The policymakers should design such policies which encourage financial integration as it helps the local firms to raise more external funds for their projects and provide them with growth opportunities in long run. However, this assumed benefit of integration comes with some exceptions. This

integration works as a wedge between large and small firms as large firms seem to obtain more debt and issue more equity compared to small firms. Our results present a good picture of how financial integration benefits firms. Lower monitoring costs, better creditor and shareholder protection rights, and transparent information enable the firms to better enjoy financial integration. The direct implication is that, if the firms can improve the quality of corporate governance, they might be able to secure more external funds to achieve higher growth. Moreover, according to Doidge et al., (2007), improvement in corporate governance by the firms could be costly if the country they are located in lacks strong institutional infrastructure and governance. Therefore, in emerging markets, the first preference for the policymakers should be to improve the quality of governance and institutions in the country to get the benefits of financial liberalization. This conclusion is in line with the earlier suggestions on contending with greater global financial integration.

5.2   Research Limitations

This section shows some of the limitations of this thesis. Firstly, we have only used the long term markets i.e. equity and credit market integration to investigate the country-level integration of the country. However, the financial markets also consist of other short-term components like money markets but they are not part of our study. That's because the firms are usually looking for long term financing to finance their future projects. Short term markets may not be able to facilitate the firms as they only provide loans for short period of time. Moreover, all these markets have different working mechanisms, different structures, and multiple driving forces. Hence, the conclusions drawn based on these long term markets may not reflect the true picture of the financial market of that country and there is a need to incorporate the short term markets as well to cater the true essence of market integration. Some other works such as Baele *et al.,* (2004) and Vo (2009) explored

integration in other financial markets and they can be viewed as further reading to our study. Moreover, the availability of data for the measurement of credit and equity markets are only available till 2015 which also limited our research results till 2015.

Secondly, the theoretical justification for the impact of financial integration on capital structure decisions is two folded. One side proposes that financial integration attracts international funds, which provides better financing options to firms in emerging markets. The other side suggests that financial integration reduces the cost of capital for firms. This reduction in the cost could be due to several other reasons such as international risk sharing, increased competition, and market efficiency, diversification potential, improved corporate governance, and a better information environment. With these possible reasons, we do not exactly know which reason exerts its effect during integration to reduce the cost of capital for the firms in this thesis. Future research may identify the potential reasons and reveal their interaction with financial integration and theories of capital structure.

5.3 Future Research

Although this thesis tries to contribute to the financial integration available literature, still there is a need for further research to better understand the dynamics of the financial integration process and its interaction with various micro and macro-level factors. In light of possible improvements and the limitations discusses earlier in this chapter, we would suggest further avenues for future research.

First, there is a need to refine the theoretical models of market integration. According to Bekaert and Harvey (2003), "the integration process is extremely complicated and there is no established model that covers all the aspects of the integration process. For instance, there are general models of economies that describes their integrated states and segmented

states, but there is no refined model which specifically displays the economic condition where the country moves from segmented to integrated status." Hence there is a need for more sophisticated models which could detect the status of a country's economy and identify its integrated position in the international markets.

Second, it is necessary to cope with the time-varying nature of financial integration as the results may be influenced by diverse economic conditions, investor sentiments, estimation models, and selected time periods. Besides this, as the current research focuses on firm-level and country-level integration, there is relatively less effort made to investigate the industrial effect across the countries. Very few studies have explored the country versus industry effect, especially examining the driving force behind the industries (Brooks & Del Negro 2004; Ciner 2006). Moreover, it would be more interesting to investigate sector-level integration using the new econometric methods available. This analysis will provide further information for foreign investors and policymakers.

Third, in this study, we explore how the liberalization of credit and equity markets affects the capital structure decisions of firms in emerging markets. However, the question may arise whether market openness also affects the return correlation among the integrated countries. Moreover, if the returns are correlated, are the effects similar among the countries? It would be interesting research to look into the differential in returns of various countries especially considering the country level characteristics such as legal and regulatory environment, macroeconomic factors, and level of corruption.

Fourth, although we have done robust testing to verify the impact of financial integration on capital structures, still our results leave a few unanswered questions for future researchers. One question is how long it takes for the financial integration to start showing effects after the opening of the country market. For instance, financial

integration may not start functioning immediately after the opening of the country's market. The analysis in our study only provides the overall effect of the integration process, without highlighting the timings of integration taking effect. Future work could be done while considering the effective opening dates of the markets and then investigating how the capital structure decisions respond to that. Another question related to this is at what level of integration the corporate financing is impacted. In reality, the integration of a country may be relatively high in some periods, while may drop to low levels in other periods. For instance, many countries reinstated their capital controls after the Asian crises to stabilize their local markets. Hence, we may assume that the magnitude of integration may vary across the countries with different timings.

REFERENCES

Abad, P., Chuliá, H., & Gómez-Puig, M. (2010). EMU and European government bond market integration. *Journal of Banking & Finance, 34*(12), 2851–2860.

Agca, S., De Nicolò, G., & Detragiache, E. (2007). Financial reforms, financial openness, and corporate borrowing: International evidence: *International Monetary Fund*.

Ağca, Ş., De Nicolò, G., & Detragiache, E. (2015). Financial reforms, financial openness, and corporate debt maturity: International evidence. *Borsa Istanbul Review, 15*(2), 61-75.

Agénor, P. R., & Haque, N. U. (1996). Macroeconomic management with informal financial markets. *International Journal of Finance & Economics*, 1(2), 87–101.

Agnello, L., Castro, V., Jalles, J. T., & Sousa, R. M. (2015). Fiscal consolidation and financial reforms. *Applied Economics*, 47(34–35), 3740–3755.

Ahluwalia, M. S. (1996). Structural adjustment and reform in developing countries. In *The International Monetary and Financial System: Developing-Country Perspectives* (pp. 193–228).

Ahmed, A. D. (2011). International financial integration, investment and economic performance in Sub–Saharan African countries. *Global Economy Journal*, 11(4): 1–28.

Ahmed, A. D. (2013). Effects of financial liberalization on financial market development and economic performance of the SSA region: an empirical assessment. *Economic Modelling*, 30: 261–273.

Ahmed, A. D. (2016). Integration of financial markets, financial development and growth: Is Africa different? *Journal of International Financial Markets, Institutions and Money*, 42: 43–59.

Ahmed, A. D. & Mmolainyane, K. K. (2014). Financial integration, capital market development and economic performance: empirical evidence from Botswana. *Economic Modelling*, 42: 1–14.

Ahmed, A., Zainudin, R., & Shaharuddin, S. S. (2022). Financial integration and capital structure decisions of listed firms: Evidence from China. *International Journal of Emerging Markets, (ahead-of-print)*.

Alesina, A. F., Grilli, V. U., & Milesi-Ferretti, G. M. (1993). The political economy of capital controls. National Bureau of Economic Research Cambridge, Mass., USA.

Alfaro, L., Kalemli-Ozcan, S., & Volosovych, V. (2007). Capital flows in a globalized world: The role of policies and institutions. *Capital controls and capital flows in emerging economies: Policies, practices, and consequences,* (pp. 19–72). University of Chicago Press.

Alm, J., & Buckley, R. (1998). Are government revenues from financial repression worth

the costs? *Public Finance Review*, *26*(3), 187–213.

Amore, M. D., & Bennedsen, M. (2013). The value of local political connections in a low-corruption environment. *Journal of Financial Economics*, *110*(2), 387–402.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies*, *58*(2), 277–297.

Asiedu, E., & Freeman, J. (2009). The effect of corruption on investment growth: Evidence from firms in Latin America, Sub-Saharan Africa, and transition countries. *Review of Development Economics, 13*(2), 200–214.

Asteriou, D., & Hall, S. G. (2007). Applied Econometrics: A modern approach, revised edition. *Hampshire: Palgrave Macmillan, 46*(2), 117–155.

Atawnah, N., Zaman, R., Liu, J., Atawna, T., & Maghyereh, A. (2023). Does foreign competition affect corporate debt maturity structure? Evidence from import penetration. *International Review of Financial Analysis*, *86*, 102539.

Baele, L., Ferrando, A., Hördahl, P., Krylova, E., & Monnet, C. (2004). Measuring European financial integration. *Oxford review of economic policy*, *20*(4), 509–530.

Bailey, W., Chung, Y. P., & Kang, J. K. (1999). Foreign ownership restrictions and equity price premiums: What drives the demand for cross-border investments? *Journal of financial and quantitative analysis, 34*(4), 489-511.

Bailliu, J. N. (2000). Private capital flows, financial development, and economic growth in developing countries (No. 2000–15). Bank of Canada.

Bandiera, O., Caprio, G., Honohan, P., & Schiantarelli, F. (2000). Does financial reform raise or reduce saving? *Review of Economics and statistics*, *82*(2), 239–263.

Barari, M., (2004). Equity market integration in Latin America: A time-varying integration score analysis. *International Review of Financial Analysis 13*, 649–668.

Barclay, M. J., & C. W. Smith Jr. (1995). The Maturity Structure of Corporate Debt. *Journal of Finance*, *50*, 609–631.

Bardhan, P., & Mookherjee, D. (2006). Decentralization, corruption and government accountability. *International Handbook on the Economics of Corruption*, *6*(1), 161–188.

Barr, D.G., & Priestley, R., (2004). Expected returns, risk and the integration of international bond markets. *Journal of International Money and Finance, 23*, 71–97.

Barro, R. J., Mankiw, N. G., & Sala-i-Martin, X. (1992). Capital mobility in neoclassical models of growth. National Bureau of Economic Research.

Barros, L. A. B. d. C., & Di Miceli da Silveira, A. (2007). Overconfidence, managerial optimism and the determinants of capital structure. *Available at https://ssrn.com/abstract=953273*.

Barth, J. R., Lin, C., Lin, P., & Song, F. M. (2009). Corruption in bank lending to firms: Cross-country micro evidence on the beneficial role of competition and information sharing. *Journal of Financial Economics*, *91*(3), 361–388.

Bayoumi, T. (1990). Saving-investment correlations: Immobile capital, government policy or endogenous behavior? *Staff Papers, 37*(2)*, 360–387.*

Beck, T. (2003). Financial and legal institutions and firm size. *World Bank Publications.*

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2009). Financial institutions and markets across countries and over time-data and analysis. *World Bank Policy Research Working Paper* (4943).

Beck, T., Demirgüç-Kunt, A., & Martinez Peria, M. S. (2008). Bank financing for SMEs around the world: Drivers, obstacles, business models, and lending practices. *World Bank Policy Research Working Paper*, (4785).

Bekaert, G. (1995). Market integration and investment barriers in emerging equity markets. *World Bank Economic Review, 9*(1), 75–107.

Bekaert, G., & Harvey, C. R. (2000). Foreign speculators and emerging equity markets. *Journal of Finance*, *55*(2), 565–613.

Bekaert, G., Ehrmann, M., Fratzscher, M., & Mehl, A. (2014). The global crisis and equity market contagion. *The Journal of Finance*, *69*(6), 2597–2649.

Bekaert, G., Harvey, C. R., & Lundblad, C. (2001a). Emerging equity markets and economic development. *Journal of Development Economics*, *66*(2), 465–504.

Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth? *Journal of Financial Economics*, *77*(1), 3–55.

Bekaert, G., & Harvey, C.R., (1995). Time varying world market integration. *Journal of Finance,* 50, 467–509.

Bekaert, G., Harvey, C.R., Lundblad, C., & Siegel, S., (2007). Global growth opportunities and market integration. *Journal of Finance,* 62, 1081–1137.

Berger, A. N., Klapper, L. F., & Udell, G. F. (2001). The ability of banks to lend to informationally opaque small businesses. *Journal of Banking & Finance*, 25(12), 2127–2167.

Bertrand, M., Schoar, A., & Thesmar, D. (2007). Banking deregulation and industry structure: Evidence from the French banking reforms of 1985. *The Journal of Finance*, *62*(2), 597–628.

Blejer, M. I., & Sagari, S. B. (1988). Sequencing the liberalization of financial markets. *Finance and Development*, *25*(1), 18–35.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, *87*(1), 115–143.

Blundell, R., & Bond, S. (2000). GMM estimation with persistent panel data: an application to production functions. *Econometric Reviews*, *19*(3), 321–340.

Bond, S. R., & Windmeijer, F. (2002). Finite sample inference for GMM estimators in linear panel data models. *Journal of Econometrics, 109*(2), 389-424.

Bonfiglioli, A. (2008). Financial integration, productivity and capital accumulation. *Journal of International Economics*, *76*(2), 337–355.

Bonin, J.P., Hasan, I., & Wachtel, P. (2005). Bank performance, efficiency and ownership in Transition countries. *Journal of Banking & Finance*, *29*(1), 31 – 53.

Booth, L., Aivazian, V., Demirguc-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance*, *56*(1), 87–130.

Bougatef, K. (2016). How corruption affects loan portfolio quality in emerging markets? *Journal of Financial Crime*, *23*(4), 769–785.

Boyd, J., & Smith, B. (1996).The coevolution of the real and financial sectors in the growth process. *World Bank Economic Review, 10*(2), 371–396.

Bracker, K., & Koch, P.D., (1999). Economic determinants of the correlation structure across international equity markets. *Journal of Economics and Business, 51*, 443–471.

Bradley, M., Jarrell, G. A., & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. *The Journal of Finance*, *39*(3), 857–878.

Brooks, R. D., Faff, R. W., & McKenzie, M. (2002). Time Varying Country Risk: An assessment of alternative modelling techniques. *The European Journal of Finance*, *8*(3), 249–274.

Brooks, R., & Del Negro, M. (2004). The rise in comovement across national stock markets: Market integration or IT bubble? *Journal of Empirical Finance*, *11*(5), 659–680.

Brouwer, G. (2005). Monetary and financial integration in Asia: Empirical evidence and issues. *Asia Economic Cooperation and Integration*, 269–293.

Bruno, M. (1992). Stabilization and reform in Eastern Europe: A preliminary evaluation. *Staff Papers, 39*(4), 741–777.

Burgman, T. A. (1996). An empirical examination of multinational corporate capital structure. *Journal of International Business Studies*, *27*(3), 553–570.

Caballero, J. (2015). Banking crises and financial integration: Insights from networks science. *Journal of International Financial Markets, Institutions and Money, 34*, 127–146.

Caprio, G. (1998). *Banking on crises: Expensive lessons from recent financial crises.* World Bank, Development Research Group, Finance.

Carrieri, F., Errunza, V., & Hogan, K., (2007). Characterizing world market integration through time. *Journal of Financial and Quantitative Analysis, 42*, 915–940.

Casino-Martínez, A., López-Gracia, J., & Mestre-Barberá, R. (2023). The regulatory environment and financial constraints of private firms in the European Union. *Global Finance Journal*, *55*, 100798.

Cetorelli, N., & Strahan, P. E. (2006). Finance as a barrier to entry: Bank competition and industry structure in local US markets. *The Journal of Finance*, *61*(1), 437–461.

Chambet, A., & Gibson, R., (2008). Financial integration, economic instability and trade structure in emerging markets. *Journal of International Money and Finance,* 27, 654–675.

Chanda, A. (2005). The influence of capital controls on long run growth: Where and how much? *Journal of Development Economics, 77*(2), 441–466.

Chandler, A. D. (1962). Strategy and structure; Chapters in the history of the industrial empire. *Cambridge Mass.*

Chang, C., Chen, X., & Liao, G. (2014). What are the reliably important determinants of capital structure in China? *Pacific-Basin Finance Journal*, 30, 87–113.

Chari, A., & Henry, P.B., (2004). Risk sharing and asset prices: Evidence from a natural experiment. *Journal of Finance, 59*, 1295–1324.

Chelley-Steeley, P. (2004). Equity market integration in the Asia-Pacific region: A smooth transition analysis. *International Review of Financial Analysis, 13*(5), 621-632.

Chen, C. J., Cheng, C. A., He, J., & Kim, J. (1997). An investigation of the relationship between international activities and capital structure. *Journal of International Business Studies*, *28*(3), 563–577.

Chen, N. (2011). Securities laws, control of corruption, and corporate liquidity: International evidence. *Corporate Governance: An International Review*, *19*(1), 3–24.

Chen, P. (2018). Understanding international stock market comovements: A comparison of developed and emerging markets. *International Review of Economics & Finance*, *56,* 451–464.

Chen, Y., Liu, M. & Su, J. (2013). Greasing the wheels of bank lending: Evidence from private firms in China. *Journal of Banking & Finance*, *37*(7), 2533–2545.

Cheung, Y.-W., Chinn, M.D., & Fujii, E., (2006). The Chinese economies in global context: The integration process and its determinant. *Journal of the Japanese and International Economics, 20*, 128–153.

Chinn, M. D., & Ito, H. (2002). Capital account liberalization, institutions and financial development: Cross country evidence. National Bureau of Economic Research Cambridge, Mass., USA.

Chinn, M. D., & Ito, H. (2006). What matters for financial development? Capital controls, institutions, and interactions. *Journal of Development Economics*, *81*(1), 163–192.

Cho, Y. J. (1986). Inefficiencies from financial liberalization in the absence of well-functioning equity markets. *Journal of Money, Credit and Banking*, *18*(2), 191–199.

Christoffersen, P., Chung, H., & Errunza, V. (2006). Size matters: The impact of financial liberalization on individual firms. *Journal of International Money and Finance*, *25*(8), 1296–1318.

Ciner, C. (2006). A further look at linkages between NAFTA equity markets. *The Quarterly Review of Economics and Finance, 46*(3), 338–352.

Claessens, S., Demirguc-Kunt, A., & Huizinga, H., (2001). How does foreign entry affect domestic banking markets? *Journal of Banking and Finance,* 25, 891– 911.

Claessens, S., & Van Horen, N. (2008). Location decisions of foreign banks and institutional competitive advantage. *Available at https://ssrn.com/abstract=904332.*

Creane, M. S., Mobarak, M. A. M., Sab, M., & Goyal, R. (2003). *Financial development and growth in the Middle East and North Africa*. International Monetary Fund.

Cuervo-Cazurra, A. (2006). Who cares about corruption? *Journal of International Business Studies*, *37*(6), 807–822.

Dalci, I. (2018). Impact of financial leverage on profitability of listed manufacturing firms in China. *Pacific Accounting Review*, *30*(4), 410–432.

Danso, A., & Adomako, S. (2014). The financing behavior of firms and financial crisis. *Managerial Finance, 40*(12), 1159–1174.

Dass, N., V. Nanda, & S. C. Xiao. (2016). Public corruption in the United States: Implications for local firms. *The Review of Corporate Finance Studies, 5*(1), 102–138.

De Carvalho, A.G. (2009). The effect of institutions on the external financing of Brazilian firms. *Revista Brasileira de Finanas*, *7*(1), 1–27.

De Jong, A., Kabir, R., & Nguyen, T. T. (2008). Capital structure around the world: The roles of firm-and country-specific determinants. *Journal of Banking & Finance*, *32*(9), 1954–1969.

DeAngelo, H., & Masulis, R. W. (1980). Optimal capital structure under corporate and personal taxation. *Journal of Financial Economics*, *8*(1), 3–29.

Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The determinants of capital structure: Evidence from the Asia Pacific region. *Journal of Multinational Financial Management*, *14*(4–5), 387–405.

DeFusco, R.A., Geppert, J.M., & Tsetsekos, G.P., (1996). Long-run diversification potential in emerging stock markets. *The Financial Review,* 31, 343–363.

Demetriades, P. O., & Luintel, K. B. (1997). The direct costs of financial repression: Evidence from India. *Review of Economics and Statistics*, *79*(2), 311–320.

Demirguc-Kunt, A. & Maksimovic, V. (1999), Institutions, financial markets, and firm debt maturity. *Journal of Financial Economics, 54*(3), 295–336.

Demirgüç-Kunt, A., & Maksimovic, V. (1996). Stock market development and financing choices of firms. *The World Bank Economic Review*, *10*(2), 341–369.

Demirgüç-Kunt, A., & Maksimovic, V. (1998). Law, finance, and firm growth. *The Journal of Finance*, *53*(6), 2107–2137.

Demirguc-Kunt, A., Laeven, L., & Levine, R. (2003). Regulations, market structure, institutions, and the cost of financial intermediation. National Bureau of Economic Research Cambridge, Mass., USA.

Diamond, D.W. (2004). Presidential address, committing to commit: Short term debt when enforcement is costly. *The Journal of Finance*, *59*(4), 1447–1479.

Diamond, D. W., & Rajan, R. G. (2002). Bank bailouts and aggregate liquidity. *American Economic Association*, *92*(2), 38–41.

Diamond, L., & Morlino, L. (2004). The quality of democracy: An overview. *Journal of Democracy, 15*(4), 20–31.

Doan, A. T., Truong, B. T., Nguyen, C. C., Nguyen, P. T. N., Truong, H. Y., & Le, A. T. (2023). Corruption and corporate leverage in an emerging economy: The role of economic freedom. *Annals of Public and Cooperative Economics*, *94*(2), 599–629.

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2007). Why do countries matter so much for corporate governance? *Journal of Financial Economics*, *86*(1), 1–39.

Doidge, C., Karolyi, G.A., & Stulz, R.M., (2004). Why are foreign firms listed in the US worth more? *Journal of Financial Economics,* 71, 205–238.

Driffield, N., & Pal, S. (2001). The East Asian crisis and financing corporate investment: Is there a cause for concern? *Journal of Asian Economics*, *12*(4), 507–527.

Drobetz, W., & Wanzenried, G. (2006). What determines the speed of adjustment to the target capital structure? *Applied Financial Economics*, *16*(13), 941–958.

Du, J. (2008), Corruption and corporate finance patterns: An international perspective. *Pacific Economic Review*, *13*(2), 183–208.

Duran, M. M., & Stephen, S. A. (2020). Internationalization and the capital structure of firms in emerging markets: Evidence from Latin America before and after the financial crisis. *Research in International Business and Finance*, *54*, 101288.

Edison, H. J., & Warnock, F. E. (2003). A simple measure of the intensity of capital controls. *Journal of Empirical Finance*, *10*(1–2), 81–103.

Edison, H. J., Levine, R., Ricci, L. & Slok, T. (2002). International financial integration and economic growth. *Journal of International Money and Finance*, *21*(6), 749–776.

Edison, H.J., Klein, M.W., Ricci, L.A., & Slok, T. (2004). Capital account liberalization and economic performance: Survey and synthesis. *IMF Staff Papers, 51*(2), 220–256.

Egger, P. & Winner, H. (2007). How Corruption Influences Foreign Direct Investment: A Panel Data Study. *Economic Development and Cultural Change, 54*(2), 459–486.

Errunza, V., Losq, E., & Padmanabhan, P., (1992). Tests of integration, mild segmentation and segmentation hypotheses. *Journal of Banking and Finance, 16,* 949–972.

Errunza, V.R., & Miller, D.P., 2000. Market segmentation and the cost of capital in international equity markets. *Journal of Financial and Quantitative Analysis*, 35, 577–600.

Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The Review of Financial Studies*, *15*(1), 1–33.

Fan, J. P., Titman, S., & Twite, G. (2012). An international comparison of capital structure and debt maturity choices. *Journal of Financial and Quantitative Analysis*, *47*(1), 23–56.

Fatemi, A. M, (1984). Shareholder benefits from international diversification. *Journal of Finance*, *39*(5), 1325–1344.

Fauver, L., Houston, J., & Naranjo, A. (2003). Capital market development, international integration, legal systems, and the value of corporate diversification: A cross-country analysis. *Journal of Financial and Quantitative Analysis, 38*(1), 135–158.

Feldstein, M., & Horioka, C. (1980). Domestic saving and international capital flows. *The Economic Journal*, *90*(358), 314–329.

Fernandes, N. (2011). Global convergence of financing policies: Evidence for emerging-market firms. *Journal of International Business Studies*, *42*(8), 1043–1059.

Fernández, A., Klein, M. W., Rebucci, A., Schindler, M., & Uribe, M. (2015). Capital control measures: A new dataset (No. w20970). *NBER Working paper Series*.

Fisman, R. (2001). Estimating the value of political connections. *American Economic Review*, *91*(4), 1095–1102.

Flavin, T.J., Hurley, M.J., & Rousseau, F., (2002). Explaining stock market correlation: A gravity model approach. *The Manchester School,70*(S1), 87–106.

Flood, R.P., & Rose, A.K., (2002). Uncovered interest parity in crisis. *IMF Staff Papers, 49*(2), 252–266.

Foerster, S.R., & Karolyi, G.A., (1999). The effects of market segmentation and investor recognition on asset prices: Evidence from foreign stocks listing in the United States. *Journal of Finance, 54*(3), 981–1013.

Forbes, K.J., & Rigobon, R., (2002). No contagion, only interdependence: Measuring stock market comovements. *Journal of Finance, 57*(5), 2223–2261.

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: Which factors are reliably important? *Financial Management*, *38*(1), 1–37.

Fry, M. J. (1997). In favor of financial liberalisation. *The Economic Journal*, *107*(442), 754–770.

Fungáčová, Z., Kochanova, A. & Weill, L. (2015). Does money buy credit? Firm-level evidence on bribery and bank debt. *World Development*, *68*, 308–322.

Galindo, A. J., Micco, A., & Serra, C. M. (2003). Better the devil that you know: Evidence on entry costs faced by foreign banks. *Inter-American Development Bank, Working Paper, 477*.

Gatward, P., & Sharpe, I. G. (1996). Capital structure dynamics with inter-related adjustment: Australian evidence. *Australian Journal of Management*, *21*(2), 89–112.

Gelos, R. G., & Werner, A. M. (2002). Financial liberalization, credit constraints, and collateral: Investment in the Mexican manufacturing sector. *Journal of Development Economics, 67*(1), 1–27.

Getzmann, A., Lang, S., & Spremann, K. (2014). Target capital structure and adjustment speed in Asia. *Asia‐Pacific Journal of Financial Studies*, *43*(1), 1–30.

Ghosh, S. (2006). Did financial liberalization ease financing constraints? Evidence from Indian firm-level data. *Emerging Markets Review*, *7*(2), 176–190.

Ghosh, S., & Wolf, H., (2000). Is there a curse of location? Spatial determinants of capital flows to emerging markets. In *Capital flows and the emerging economies: Theory, evidence, and controversies,* (pp. 137–156).

Giannetti, M. (2002). Rule of law, risk sharing, and the cost of funds. *Risk Sharing, and the Cost of Funds (February 2002)*.

Giannetti, M. (2003). Do better institutions mitigate agency problems? Evidence from corporate finance choices. *Journal of Financial and Quantitative Analysis*, *38*(1), 185–212.

Giannetti, M., & Ongena, S. (2009). Financial integration and firm performance:

Evidence from foreign bank entry in emerging markets. *Review of Finance*, *13*(2), 181–223.

Giannetti, M., Guiso, L., Jappelli, T., Padula, M., & Pagano, M. (2002). Financial market integration, corporate financing and economic growth. European Commission. *Economic papers,* No. 179.

Gilson, S. C. (1997). Transactions costs and capital structure choice: Evidence from financially distressed firms. *The Journal of Finance*, *52*(1), 161–196.

Giovannini, A., Iacopetta 1, M., & Minetti, R. (2013). Financial markets, banks, and growth: Disentangling the links. *Revue de l'OFCE*, *5*, 105–147.

Glen, J., & Pinto, B. (1995). Capital markets and developing country firms. *Finance & Development*, *32*, (40–40).

Globerman, S., & Shapiro, D, (2003). Governance infrastructure and US foreign direct investment. *Journal of International Business Studies, 34*, (19–39).

Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value? *The Review of Financial Studies, 22*(6), 2331–2360.

Gonenc, H., & de Haan, D. J. (2014). Firm internationalization and capital structure in developing countries: The role of financial development. *Emerging Markets Finance and Trade*, *50*(2), 169–189.

Gong, T., & Wu, A.M. (2012). Does increased civil service pay deter corruption? Evidence from China. *Review of Public Personnel Administration, 32*(2), 192–204.

Gopalan, S., & Sasidharan, S. (2020). Financial liberalization and access to credit in emerging and developing economies: A firm-level empirical investigation. *Journal of Economics and Business*, 107, 105861.

Gourinchas, P. O., & Obstfeld, M. (2012). Stories of the twentieth century for the twenty-first. *American Economic Journal: Macroeconomics*, *4*(1), 226–265.

Grilli, V., & Milesi-Ferretti, G.M., (1995). Economic effects and structural determinants of capital controls. *IMF Staff Papers, 42*(3), 517–551.

Guha–Khasnobis, B., & Bhaduri, S. N. (2000). A hallmark of India's new economic policy: Deregulation and liberalization of the financial sector. *Journal of Asian Economics*, *11*(3), 333–346.

Guiso, L., Sapienza, P., & Zingales, L. (2006). The cost of banking regulation: National Bureau of Economic Research Cambridge, Mass., USA.

Gujarati, D.N. & Porter, D.C. (2022). *Basic Econometrics*. McGraw-Hill/Irwin.

Gupta, N., & Yuan, K. (2009). On the growth effect of stock market liberalizations. *The Review of Financial Studies*, *22*(11), 4715–4752.

Hail, L., & Leuz, C. (2006). International differences in the cost of equity capital: Do legal institutions and securities regulation matter? *Journal of Accounting Research*, *44*(3), 485–531.

Haldane, A., & Hall, S. (1991). Sterling's relationship with the Dollar and the Deutschmark 1976–89. *Economic Journal, 101*(406), 436–443.

Han Kim, E., & Singal, V. (2000). Stock market openings: Experience of emerging economies. *Journal of Business, 73*(1), 25–66.

Haque, N. U., & Montiel, P. J. (1991). How mobile is capital in developing countries. *Finance and Development,* September, 38–39.

Haramillo, F., Schiantarelli, F., & Weiss, A. (1996). Capital market imperfections before and after financial liberalization: An Euler equation approach to panel data for Ecuadorian firms. *Journal of Development Economics*, *51*(2), 367–386.

Hardouvelis, G.A., Malliaropulos, D., & Priestley, R. (2006). EMU and European stock market integration. *The Journal of Business, 79*(1), 365–392.

Harris, J. R., Schiantarelli, F., & Siregar, M. G. (1994). The effect of financial liberalization on the capital structure and investment decisions of Indonesian manufacturing establishments. *The World Bank Economic Review*, *8*(1), 17–47.

Harrison, B., & Widjaja, T. W. (2014). The determinants of capital structure: Comparison between before and after financial crisis. *Economic Issues*, *19*(2), 55–82.

Hartmann, P., Heider, F., Papaioannou, E., & Lo Duca, M. (2007). The role of financial markets and innovation in productivity and growth in Europe. *ECB Occasional Paper (72).*

Harvey, C.R. (1995). Predictable risk and returns in emerging markets. *Review of Financial Studies, 8*(3), 773–816.

Hasnan, S. (2000). Indonesia–Corporate Governance and Finance in East Asia. In *Asian Development Bank, Corporate Governance and Finance in East Asia: A Study of Indonesia, Republic of Korea, Malaysia, Philippines, and Thailand* (pp. I-1 to II-13). Asian Development Bank. Manila.

Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica: Journal of the Econometric Society*, 1251–1271.

Havrylchyk, O. (2006). Efficiency of the Polish banking industry: Foreign versus domestic banks. *Journal of Banking & Finance*, *30*(7), 1975–1996.

Heaney, R., Hooper, V., & Jaugietis, M. (2002). Regional integration of stock markets in Latin America, *Journal of Economic Integration*, 745–760.

Hellman, J. S. (2000). *Measuring governance, corruption and state capture: How firms and bureaucrats shape the business environment in transition economies* (Vol.2312). World Bank Publications.

Henry, K. (2007). Addressing extreme disadvantage through investment in capability development. *Economic Round-Up,* (Spring 2007), 1–13.

Henry, P. B. (2000). Do stock market liberalizations cause investment booms? *Journal of Financial Economics, 58*(1–2), 301–334.

Henry, P. B. (2000). Stock market liberalization, economic reform, and emerging market equity prices. *The Journal of Finance*, *55*(2), 529–564.

Hooy, C. W., & Lim, K. P. (2013). Is market integration associated with informational efficiency of stock markets? *Journal of Policy Modeling*, *35*(1), 29–44.

Hoskisson, R.E., Eden, L., Lau, C.M., & Wright, M. (2000), Strategy in emerging economies, *Academy of Management Journal*, *43*(3), 249–267.

Hour, A. I. A., & Dinçergök, B. (2021). The Impact of Corporate Strategies on Financial Leverage: Evidence from Turkish-Listed Firms. *İşletme Araştırmaları Dergisi, 13*(4), 3635–3651.

Huang, R., Tan, K. J. K., & Faff, R. W. (2016). CEO overconfidence and corporate debt maturity. *Journal of Corporate Finance*, *36*, 93–110.

Hunter, D.M., (2006). The evolution of stock market integration in the post-liberalization period - A look at Latin America. *Journal of International Money and Finance, 25*(5), 795–826.

Huyghebaert, N., & Wang, L. (2010). The co-movement of stock markets in East Asia: Did the 1997–1998 Asian financial crisis really strengthen stock market integration? *China Economic Review, 21*(1), 98-112.

Hye, Q. M. A. & Wizarat, S. (2013). Impact of financial liberalization on economic growth: A case study of Pakistan. *Asian Economic and Financial Review*, *3*(2): 270–282.

Ibrahim, S., Mazlina A., Azman–Saini, W., & Zakaria, M. F. M. (2016). Financial integration–growth nexus: A quantile regression analysis. *Journal of Economic Integration,* 531–546.

Imbs, J. (2006). The real effects of financial integration. *Journal of International Economics*, *68*(2): 296–324.

Imbs, J. (2010). The first global recession in decades. *IMF Economic Review*, *58*(2), 327–354.

Jadiyappa, N., Vanga, N. R., & Krishnankutty, R. (2016). Financial liberalization and capital structuring decisions of corporate firms: Evidence from India. *Economics Letters,* 149, 33–37

Jahanzeb, A., Bajuri, N. H., & Ghori, A. (2015). Market power versus capital structure determinants: Do they impact leverage? *Cogent Economics & Finance*, *3*(1), 1017948.

Javorcik, B. S., & Wei, S-J. (2009). Corruption and cross-border investment in emerging markets: Firm-level evidence. *Journal of International Money and Finance*, *28*(4), 605–624.

Jayaratne, J., & Strahan, P. E. (1996). The finance-growth nexus: Evidence from bank branch deregulation. *The Quarterly Journal of Economics*, *111*(3), 639–670.

Jensen, M.C. & W.H. Meckling. (1976), Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.

Jensen, N. M., Li, Q., & Rahman, A. (2010). Understanding corruption and firm responses in cross-national firm-level surveys. *Journal of International Business Studies, 41*(9), 1481–1504.

Jiang, T., & Nie, H. (2014). The stained China miracle: Corruption, regulation, and firm performance. *Economics Letters*, *123*(3), 366–369.

Jiang, W. & Li, B. (2006). Financial development and debt financing of firms. *China Accounting Review*, *2*, 255–276.

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic Dynamics and Control, 12*(2–3), 231–254.

Johnson, R., & Soenen, L. (2003). Economic integration and stock market co-movement in the Americas. *Journal of Multinational Financial Management, 13*(1), 85–100.

June, R., Chowdhury, A., Heller, N., & Werve, J. (2008). A User's Guide to Measuring Corruption. United Nations Development Program (pp. 1–81).

Kahane, Y. (1977). Capital adequacy and the regulation of financial intermediaries. *Journal of Banking & Finance*, *1*(2), 207–218.

Kaminsky, G., & Schmukler, S. L. (2002). Emerging market instability: Do sovereign ratings affect country risk and stock returns? *The World Bank Economic Review*, *16*(2), 171–195.

Kang, J. -K., & Stulz, R. M. (1997). Is bank-centered corporate governance worth it? A cross-sectional analysis of the performance of Japanese firms during the asset price deflation: National Bureau of Economic Research Cambridge, Mass, USA.

Karacadag, C. (2003). Financial system soundness and reform. *China: Competing in the Global Economy,* 149–172.

Kasa, K. (1992). Common stochastic trends in international stock markets. *Journal of Monetary Economics, 29*(1), 95–124.

Kayo, E. K., & Kimura, H. (2011). Hierarchical determinants of capital structure. *Journal of Banking & Finance*, *35*(2), 358–371.

Khaki, A. R., & Akin, A. (2020). Factors affecting the capital structure: New evidence from GCC countries. *Journal of International Studies*, 13(1).

Khan, M., Shah, M. S., Haq, F., & Shah, S. Z. A. (2014). Determinants of capital structure in non-financial companies of Pakistan. *Journal of Poverty, Investment and Development*, 6, 20–28.

Khémiri, W., & Noubbigh, H. (2021). Joint analysis of the non-linear debt-growth nexus and capital account liberalization: New evidence from sub-Saharan region. *The Quarterly Review of Economics and Finance*, *80*, 614–626.

Khurana, I. K., Martin, X., & Pereira, R. (2006). Financial development and the cash flow sensitivity of cash. *Journal of Financial and Quantitative Analysis*, *41*(4), 787–808.

Kim, S.J., Lucey, B.M., & Wu, E. (2006). Dynamics of bond market integration between established and accession European Union countries. *Journal of International Financial Markets, Institutions, and Money,* 16(1), 41–56.

Kim, S.J., Moshirian, F., & Wu, E. (2005). Dynamic stock market integration driven by the European Monetary Union: An empirical analysis. *Journal of Banking & Finance, 29*(10), 2475–2502.

Kimuyu, P. (2007). Corruption, firm growth and export propensity in Kenya. *International Journal of Social Economics*, *34*(3), 197–217.

Klein, M.W., & Olivei, G.P. (2008). Capital account liberalization, financial depth, and economic growth. *Journal of International Money and Finance, 27*(6), 861–875.

Knack, S. (2007). Measuring corruption: A critique of indicators in Eastern Europe and Central Asia. *Journal of Public Policy*, *27*(3), 255–291.

Knudsen, A., & Lopatin, N. (2023). Credit constraints and spillover effects of financial market liberalization: Case of Colombia. *The Quarterly Review of Economics and Finance*, *87*, 132–141.

Köksal, B., & Orman, C. (2015). Determinants of capital structure: Evidence from a major developing economy. *Small Business Economics*, *44*(2), 255–282.

Korczak, P., & Bohl, M.T. (2005). Empirical evidence on cross-listed stocks of Central and Eastern European companies. *Emerging Markets Review, 6*(2), 121–137.

Kose, M. A., Prasad, E. S., & Terrones, M. E. (2006). How do trade and financial integration affect the relationship between growth and volatility?. *Journal of International Economics*, *69*(1), 176–202.

Kose, M. A., Prasad, E., Rogoff, K., & Wei, S. J. (2009). Financial globalization: A reappraisal. *IMF Staff Papers*, *56*(1), 8–62.

Kwok, C. C., & Reeb, D. M. (2000). Internationalization and firm risk: An upstream-downstream hypothesis. *Journal of International Business Studies*, *31*(4), 611–629.

Kwon, E. (2004). Financial liberalization in South Korea. *Journal of Contemporary Asia*, 34(1), 70–101.

La Porta, R., & Lopez-de-Silanes, F. (1998). Capital markets and legal institutions. *Beyond the Washington Consensus: Institutions Matter,* 73–92.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The economic consequences of legal origins. *Journal of Economic Literature*, *46*(2), 285–332.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R.W. (1997). Legal determinants of external finance. *Journal of Finance*, *52*(3), 1131–1150.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R.W. (1998). Law and finance. *Journal of Political Economy*, *106*(6), 1113–1155.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics,* 58(1-2), 3–27.

Laeven, L. (2003). Does financial liberalization reduce financing constraints? *Financial Management*, 5–34.

Lagoarde-Segot, T., & Lucey, B.M. (2007). Capital market integration in the Middle East and North Africa. *Emerging Markets Finance and Trade, 43*(3), 34–57.

Lambsdorff, J.G. (2005). The methodology of the 2005 corruption perceptions index. *Transparency International and the University of Passau (Germany). Retreived from http://ww1.transparency.org/cpi/2005/dnld/methodology.pdf*.

Lane, P. R., & Milesi-Ferretti, G. M. (2018). The external wealth of nations revisited: International financial integration in the aftermath of the global financial crisis. *IMF Economic Review*, *66*(1), 189–222.

Lauridsen, L. S. (1998). The financial crisis in Thailand: Causes, conduct and consequences? *World Development*, *26*(8), 1575–1591.

Lee, C. H. (2003). *Financial liberalization and the economic crisis in Asia.* Routledge.

Lee, K. C., & Kwok, C. C. (1988). Multinational corporations vs. domestic corporations: International environmental factors and determinants of capital structure. *Journal of International Business Studies, 19*(2), 195–217.

Lee, C., & Ng, D. T. (2006). Corruption and International Valuation: Does virtue pay? *Journal School Research Paper,* (41–06).

Leff, N. H. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist*, *8*(3), 8–14.

Leland, H.E., & Pyle, D.H. (1977), Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance*, *32*(2), 371–387.

Lensink, R., Meesters, A., & Naaborg, I. (2008). Bank efficiency and foreign ownership: Do good institutions matter? *Journal of Banking & Finance*, *32*(5), 834–844,

Levine, R. (2001). International financial liberalization and economic growth. *Review of International Economics*, *9*(4), 688–702.

Levine, R., & Zervos, S. (1996). Stock market development and long-run growth. *The World Bank Economic Review, 10*(2), 323–339.

Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. *American Economic Review*, 537-558.

Lin, M. C. (2005). Returns and investor behavior in Taiwan: Does overconfidence explain this relationship? *Review of Pacific Basin Financial Markets and Policies, 8*(03), 405–446.

Lindner, T., Klein, F., & Schmidt, S. (2018). The effect of internationalization on firm capital structure: A meta-analysis and exploration of institutional contingencies. *International Business Review, 27*(6), 1238–1249.

Liu, S. (2007). International cross-listing and stock pricing efficiency: An empirical study. *Emerging Markets Review, 8*(4), 251–263.

Lombardo, D., & Pagano, M. (2002). Law and equity markets: A simple model. *Convergence and Diversity,* 343–362.

Love, I. (2003). Financial development and financing constraints: International evidence from the structural investment model. *The Review of Financial Studies*, *16*(3), 765–791.

Lucey, B. M., & Zhang, Q. (2011). Financial integration and emerging markets capital structure. *Journal of Banking & Finance*, 35(5), 1228–1238.

Lui, F. T. (1985). An Equilibrium Queuing Model of Bribery. *Journal of Political Economy, 93* (4), 760–781.

Machek, O., & Kubíček, A. (2018). The relationship between ownership concentration and performance in Czech Republic. *Journal of International Studies*, 11(1).

Maddala, G. S., & Lahiri, K. (1992). *Introduction to econometrics (Vol.2)*. Macmillan, New York.

Maksimovic, V., & Zechner, J. (1991). Debt, agency costs, and industry equilibrium. *The Journal of Finance, 46*(5), 1619–1643.

Manova, K. (2008). Credit constraints, equity market liberalizations and international trade. *Journal of International Economics*, *76*(1), 33–47.

Mansi, S. A., & Reeb, D. M. (2002). Corporate international activity and debt financing. *Journal of International Business Studies*, *33*(1), 129–147.

Marsh, P. (1982). The choice between equity and debt: An empirical study. *The Journal of Finance, 37*(1), 121–144.

Masih, A. M., & Masih, R. (1999). Are Asian stock market fluctuations due mainly to intra-regional contagion effects? Evidence based on Asian emerging stock markets. *Pacific-Basin Finance Journal, 7*(3-4), 251–282.

Mauro, P. (1995), Corruption and growth. *The Quarterly Journal of Economics, 110*(3), 681–712.

McKinnon, R. I. (1991). Financial control in the transition from classical socialism to a market economy. *Journal of Economic Perspectives, 5*(4), 107–122.

McLean, R. D., Zhang, T., & Zhao, M. (2012). Why does the law matter? Investor protection and its effects on investment, finance, and growth. *The Journal of finance, 67*(1), 313-350.

Merlo, V., & Wamser, G. (2014). Debt shifting and thin-capitalization rules. *CESifo DICE Report, 12*(4), 27–31.

Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information.

Mian, A. (2006). Distance constraints: The limits of foreign lending in poor economies. The *Journal of Finance*, *61*(3), 1465–1505.

Miller, M.H. (1977). Debt and Taxes. *Journal of Finance, 32*(2), 261–275.

Mishkin, F. S. (2007). Is financial globalization beneficial? *Journal of Money, Credit and Banking*, *39*(2-3), 259–294.

Mishkin, F. S. (2009). Globalization, macroeconomic performance, and monetary policy. *Journal of Money, Credit and Banking*, *41*, 187–196.

Mitton, T. (2006). Stock market liberalization and operating performance at the firm level. *Journal of Financial Economics*, *81*(3), 625–647.

Mittoo, U. R., & Zhang, Z. (2008). The capital structure of multinational corporations: Canadian versus US evidence. *Journal of Corporate Finance*, *14*(5), 706–720.

Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, *48*(3), 261–297.

Mody, A., & Murshid, A. P. (2005). Growing up with capital flows. *Journal of International Economics*, *65*(1), 249–266.

Mohtadi, H., & Agarwal, S. (2004). Stock market development and economic growth: Evidence from developing countries. *Department of Economics, University of Wisconsin-Milwaukee, Milwaukee, WI, 53201*.

Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of financial economics*, *5*(2), 147–175.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 574–592.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.

Naaborg, I., Scholtens, B., De Haan, J., Bol, H., & De Haas, R. (2004). How Important are foreign banks in the financial development of European transition countries?. *Journal of Emerging Market Finance*, *3*(2), 99–123.

Neaime, S. (2012). The global financial crisis, financial linkages and correlations in returns and volatilities in emerging MENA stock markets. *Emerging Markets Review*, *13*(3), 268–282.

Nenova, T. (2003). The value of corporate voting rights and control: A cross-country analysis. *Journal of Financial Economics, 68*(3), 325–351.

Novaes, W., & Zingales, L. (1995). Capital structure choice when managers are in control: Entrenchment versus efficiency. National Bureau of Economic Research Cambridge, Mass., USA.

Obstfeld, M. (1986). *Capital mobility in the world economy: Theory and measurement.* In Carnegie-Rochester Conference Series on Public Policy, 24, 55–103, North-Holland.

Obstfeld, M. (1992). Risk-taking, global diversification, and growth. National bureau of economic research.

Ocampo, J. A. (2003). Capital account and countercyclical prudential regulations in developing countries. *From Capital Surges to Drought: Seeking Stability for Emerging Economies,* (pp. 217–244).

Osterrieder, D., Palia, D., & Wu, G. (2020). Panel regression estimators in corporate finance: A plea for efficiency. *Rutgers Business School*, 1–67.

Park, J., & van der Hoorn, H. (2012). Financial crisis, SWF investing, and implications for financial stability. *Global Policy*, *3*(2), 211–221.

Patro, D. K., & Wald, J. K. (2005). Firm characteristics and the impact of emerging market liberalizations. *Journal of Banking & Finance*, *29*(7), 1671–1695.

Pill, H., & Pradhan, M. (1997). Financial liberalization in Africa and Asia. *Finance and Development*, *34*, 7–10.

Portes, R., & Rey, H. (1998). The euro and international equity flows. *Journal of the Japanese and International Economies, 12*(4), 406–423.

Portes, R., & Rey, H. (2005). The determinants of cross-border equity flows. *Journal of International Economics, 65*(2), 269–296.

Portes, R., Rey, H., & Oh, Y. (2001). Information and capital flows: The determinants of transactions in financial assets. *European Economic Review, 45*(4-6), 783–796.

Pretorius, E. (2002). Economic determinants of emerging stock market interdependence. *Emerging Markets Review, 3*(1), 84–105.

Pukthuanthong, K., & Roll, R. (2009). Global market integration: An alternative measure and its application. *Journal of Financial Economics, 94*(2), 214–232.

Qian, J., & Strahan, P. E. (2007). How laws and institutions shape financial contracts: The case of bank loans. *The Journal of Finance,* 62(6), 2803–2834.

Quinn, D. P., & Inclan, C. (1997). The origins of financial openness: A study of current and capital account liberalization. *American Journal of Political Science,* 771–813.

Quinn, D., (1997). The correlates of change in international financial regulation. *American Political Science Review,* 91(3), 531 –551.

Rajan, R., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, *50*(5), 1421–1460.

Rajan, R., & Zingales, L. (1998). Financial development and growth. *American Economic Review*, 88(3), 559–586.

Reeb, D. M., Mansi, S. A., & Allee, J. M. (2001). Firm internationalization and the cost of debt financing: Evidence from non-provisional publicly traded debt. *Journal of Financial and Quantitative Analysis*, *36*(3), 395–414.

Rohwer, A. (2009). Measuring corruption: A comparison between the transparency international's corruption perceptions index and the World Bank's worldwide governance indicators. *CESifo DICE Report*, 7(3), 42–52.

Schianteralli, F., Atiyas, I., Caprio, G., Harris, J & Weiss, A. (1994). Credit where it is due? A review of the macro and micro evidence on the real effects of financial reform. Cambridge University Press.

Schmukler, S. L., & Vesperoni, E. (2006). Financial globalization and debt maturity in emerging economies. *Journal of Development Economics*, *79*(1), 183–207.

Schoubben, F., & Van Hulle, C. (2004). The determinants of leverage: Differences between quoted and unquoted firms. *Tijdschrift voor Economie en Management*, *49*(4), 589–622.

Scott, J. H. (1977). Bankruptcy, secured debt, and optimal capital structure. *The Journal of Finance, 32*(1), 1–19.

Senior, I. (2006). Corruption- the World's Big C. *IEA Research Paper,* (61).

Silva Serrasqueiro, Z. M., & Rêgo Rogão, M. C. (2009). Capital structure of listed Portuguese companies: Determinants of debt adjustment. *Review of Accounting and Finance, 8*(1), 54–75.

Sheikh, N. A., & Wang, Z. (2010). Financing behavior of textile firms in Pakistan. *International Journal of Innovation, Management and Technology*, *1*(2), 130.

Shen, C. H., Lee, C. C. & Lee, C. C. (2010). What makes international capital flows promote economic growth? An international cross-country analysis. *Scottish Journal of Political Economy*, 57(5), 515–546.

Sheng, H. C., & Tu, A .H. (2000). A study of cointegration and variance decomposition among national equity indices before and during the period of the Asian financial crisis. *Journal of Multinational Financial Management, 10*(3-4), 345–365.

Shleifer, A. & Vishny, R. W. (1993). Corruption, *The quarterly journal of economics*, *108*(3), 599–617.

Singh, S., Arya, V., Yadav, M. P., & Power, G. J. (2023). Does financial development improve economic growth? The role of asymmetrical relationships. *Global Finance Journal*, 56, 100831.

Skalická, M., Zinecker, M., & Meluzin, T. (2017). Private Equity Fund Structures in Czech Republic within the Framework of the New Institutional Economics. *Institute of Economic Research, Working Papers*.

Smith, K.L., (2002). Government bond market seasonality, diversification, and cointegration: International evidence. *The Journal of Financial Research, 25*(2), 203–221.

Solnik, B., & Roulet, J. (2000). Dispersion as cross-sectional correlation. *Financial Analysts Journal, 56*(1), 54–61.

Stavárek, D., Repkova, I., & Gajdosova, K. (2012). Theory of financial integration and achievements in the European Union. *Financial Integration in the European Union,* (pp. 1–31).

Stiglitz, J. E. (1994). Economic growth revisited. *Industrial and Corporate Change, 3*(1), 65–110.

Stiglitz, J. E. (2000). Capital market liberalization, economic growth, and instability. *World Development*, *28*(6), 1075–1086.

Stiglitz, J.E. & Weiss, A. (1981), Credit rationing in markets with imperfect information. *American Economic Review*, *71*(3), 393–411.

Stiroh, K. J., & Strahan, P. E. (2003). Competitive dynamics of deregulation: Evidence from US banking. *Journal of Money, Credit and Banking*, 801–828.

Strýčková, L. (2017). The practice of capital structure choice in the Czech Republic: A comparative study based on the global data. *Journal of International Studies, 10*(2).

Strýčková, L. (2019). Debt policy of companies in Czech Republic. *Journal of International Studies*, *12*(3), 183–197.

Stulz, R.M. (2005). The limits of financial globalization. *The Journal of Finance*, *60*(4), (1595–1638).

Stulz, R.M. (2009). Globalization, corporate finance, and the cost of capital. *Global Corporate Governance* (pp. 106–134), Columbia University Press.

Sufian, F. & Kamarudin, F. (2016). Determinants of efficiency in the Malaysian banking

sector: Does bank origins matter? *Intellectual Economics*, *10*(1), 38–54.

Sullivan, D. (1994). Measuring the degree of internationalization of a firm. *Journal of International Business Studies*, *25*(2), 325–342.

Tan, Y., Wanke, P., Antunes, J., & Emrouznejad, A. (2021). Unveiling endogeneity between competition and efficiency in Chinese banks: A two-stage network DEA and regression analysis. *Annals of Operations Research*, *306*(1-2), 131–171.

Tanzi, V. (1998). Corruption around the world: Causes, consequences, scope, and cures. *IMF Staff Papers*, *45*(4), 559–594.

Thakur, B. P. S., Kannadhasan, M., Charan, P., & Gupta, C. P. (2021). Corruption and firm value: Evidence from emerging market economies. *Emerging Markets Finance and Trade, 57*(4), 1182-1197.

Thorburn, K. S. (2000). Bankruptcy auctions: Costs, debt recovery, and firm survival. *Journal of Financial Economics*, *58*(3), 337–368.

Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of finance, 43*(1), 1–19.

Tongurai, J., & Vithessonthi, C. (2023). Financial openness and financial market development. *Journal of Multinational Financial Management*, 67, 100782.

Treisman, D. (2000). The causes of corruption: A cross-national study. *Journal of Public Economics, 76*(3), 399–457.

us Swaleheen, M. (2008). Corruption and saving in a panel of countries. *Journal of Macroeconomics, 30*(3), 1285–1301.

Vo, X .V., (2009). International financial integration in Asian bond markets. *Research in International Business and Finance, 23*(1), 90–106.

Vo, X. V. (2017). Determinants of capital structure in emerging markets: Evidence from Vietnam. *Research in International Business and Finance, 40*, 105–113.

Voutsinas, K., & Werner, R. A. (2011). Credit supply and corporate capital structure: Evidence from Japan. *International Review of Financial Analysis*, *20*(5), 320–334.

Wald, J. K. (1999). How firm characteristics affect capital structure: An international comparison. *Journal of Financial research*, *22*(2), 161–187.

Wang, X. (2022). Capital account liberalization, financial dependence and technological innovation: Cross-country evidence. *Journal of Banking & Finance,* 145, 106642.

Wang, Z., Ettinger, M., Xie, Y., & Xu, L. (2020). The cost of capital: US-based multinational corporations versus US domestic corporations. *Global Finance Journal, 44*, 100443.

Watson, J. (1980). The stationarity of inter-country correlation coefficients: A note. *Journal of Business Finance and Accounting, 7*(2), 297–303.

Wei, S. J. (2000). How Taxing is corruption on international investors? *Review of Economics and Statistics, 82*(1), 1–11.

Weill, L. (2011). How corruption affects bank lending in Russia. *Economic Systems*, *35*(2), 230–243.

Weill, L. (2011). Does corruption hamper bank lending? Macro and micro evidence. *Empirical Economics*, 41, (25–42).

Williamson, O. E. (1988). Corporate Finance and Corporate Governance. *Journal of Finance*, *43*(3), 567–591.

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, *105*(3), 581–606.

Wooldridge, J. M. (2006). Cluster-sample methods in applied econometrics: An extended analysis. *Michigan State University Mimeo*.

Wu, M., Huang, P., & Ni, Y. (2017). Capital liberalization and various financial markets: Evidence from Taiwan. *The Quarterly Review of Economics and Finance*, 66, 265–274.

Xu, Z., & Pal, S. (2022). The effects of financial liberalization on productivity: Evidence from India's manufacturing sector. *Journal of Management Science and Engineering*, *7*(4), 578–588.

Yang, J., Khan, M. M, & Pointer, L. (2003). Increasing integration between the United States and other international stock markets? A recursive cointegration analysis. *Emerging Markets Finance and Trade, 39*(6), 39–53.

Yang, J., Min, I., & Li, Q. (2003). European stock market integration: Does EMU matter? *Journal of Business Finance and Accounting, 30*(9-10), 1253–1276.

Yayi, C. L. (2023). Central bank independence, financial openness, and cross-border flows of capital. *Economics Letters*, 225, 111042.

Yeyati, E. L., Schmukler, S. L., & Van Horen, N. (2009). International financial integration through the law of one price: The role of liquidity and capital controls. *Journal of Financial Intermediation*, *18*(3), 432–463.

Younas, J. (2011). De facto financial openness and capital mobility. *Economics Letters*, *112*(1), 60–62.

Young, M.N., Peng, M.W., Ahlstorm, D., Bruton, G.D., & Jiang, Y. (2008). Corporate governance in emerging economies: A review of the principal-principal perspective. *Journal of Management Studies*, *45*(1), 196–220.

Yu, I.-W., Fung, K.-P., & Tam, C.-S., (2010). Assessing financial market integration in Asia-Equity markets. *Journal of Banking & Finance, 34(*12), 2874–2885.

Zeume, S. (2017). Bribes and firm value. *The Review of Financial Studies*, *30*(5), 1457–1489.

Zhang, Q., Beekes, W., & Brown, P. R. (2014). Financial integration and the transparency of firms in emerging capital markets. *Available at https://ssrn.com/abstract=2168243*.

Zwiebel, J. (1996). Dynamic capital structure under managerial entrenchment. *The American Economic Review*, 1197–1215.