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ESSAYS ON FINANCIAL REGULATION AND SUPERVISION

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Abstract

This thesis consists of three distinct topics in the global financial regulatory system. The first topic examines the global financial regulatory system from the vantage point of equitable economic governance. In 1974, the UN General Assembly adopted a landmark resolution proclaiming the establishment of a "New International Economic Order". One of the basic goals of this declaration was to enhance the voice and participation of developing countries in the international economic decision-making process based on norms of equitable governance. More than four decades have passed since its adoption. We reflect on the last 43 years of the global financial regulatory system in light of the notion of equitable governance as envisioned by the "New International Economic Order".

The second part raises the overlooked problem of banking supervisory and regulatory agencies' risky discretionary actions. Building upon a cross-country bank regulation data, we examine the influence of legal and institutional variables on the likelihood of supervisory agencies' risky discretionary actions. Our findings show that the probability of risky discretionary action of regulatory agencies is estimated to be more likely in countries where the banking regulatory authority has low political independence and corrective power. A lower requirement to obtain banking license; a shorter tenure of supervisors' appointment; and a higher private monitoring index are also associated with a higher probability of regulatory agencies' risky discretionary actions. The findings contribute to bring regulatory authorities within the spectrum of banking stability analysis.

The third part examines the impact of restricting banks' engagement in "non-traditional" banking activities (securities, insurance, and real estate activities) on the likelihood of a country experiencing a banking crisis. A bulk of theoretical and empirical literature provide the aggregate

impact of restricting non-traditional banking activities on banking development, efficiency, and stability without making any distinction as if all of them bear homogenous consequences. With respect to banking stability, our cross-country analysis shows that only restrictions on securities and real estate activities appeared to have a significant impact on the likelihood of developing a banking crisis. Our result offers no support to the view that restricting banks from insurance activities play a significant role in mitigating the likelihood of a country experiencing a banking crisis. The results of this paper give a pause to the numerous research works providing an over generalized policy prescription of tightening or loosening non-traditional banking activities across the board using an aggregate measure of activity restrictions.

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List of Abbreviations

AML/CFT: Anti-Money Laundering and Countering Financing of Terrorism

BCBS: Basel Committee for Banking Supervision

BIS: Bank of International Settlement

CPIM: Committee on Payments and Markets Infrastructure

FATF: The Financial Action Task Force

FIO: The Federal Insurance Office

FSAP: Financial Sector Assessment Program

FSB: Financial Stability Board

FSF: Financial Stability Forum

IADI: International Association of Deposit Insurance

IAIS: International Associations of Insurance Supervisors

ICPs: Insurance Core Principles

ICRG: International Co-operation Review Group

IFIs: International Financial Institutions

IMF: International Monetary Fund

IOSCO: International Organization of Securities Commission

ISSBs: International Standard Setting Bodies

NAIC: The National Association of Insurance Commissioners

NCCT: Non-Cooperative Countries and Territories

WB: World Bank Group

CHAPTER ONE

1 Global Financial Regulation in the "New International Economic Order": The Unfulfilled Promise of Equitable Economic Governance

1.1 Introduction

In the decades following the second world war, the international economic order was completely dominated by a minority of Western States. This time was considered inequitable when evaluated through the eyes of the global economic realities emerged in the late 1960s and early 1970s (Mahiou, A., 2011). In response to the growing disjunction, a "New International Economic Order" (NIEO) was heralded in 1974 following two resolutions adopted by the UN General Assembly: "the Declaration on the Establishment of a New International Economic Order" (resolution 3201 (S-VI) (referred hereinafter to as "the declaration") and "the Programme of Action on the Establishment of a New International Economic Order" (resolution 3202 (S-VI)).

The declaration emphasizes the need for "active, full and equal" participation of all states in the "formulation and application of all decisions that concern the international community" (resolution 3201, par. 3). It also affirms the need to enhance the voice and participation of developing countries in international economic decision-making and norm-setting. The realization of this new economic order is founded on the full respect of the principle of equitable economic governance as explicitly stated in the declaration (Resolution 3201, par. 4).

In the context of international financial regulations, the declaration of NIEO coincides with the collapse of the Bretton Wood's fixed exchange rate that marked the emergence of a new financial system and regulatory developments (Giovanoli M., 2000). 43 years after the collapse of the Bretton Wood's system, the regulation of international finance is now dictated by scattered bodies

with a varying representation and legal status. The present paper examines this period in order to reflect on the success or failings of the notion of equitable economic governance in the global financial regulatory system.

Our analysis sheds light on different aspects that are important with respect to equitable economic governance. In broader terms, our assessment shows that the notion of equitable economic governance as envisioned by the NIEO appears to have been largely ignored by the global financial regulatory system. The reforms made over the years concerning the idea that the global financial regulatory system needs to be structured to enhance the voice and participation of developing countries is still superficial rather than practical.

The discussion in the upcoming sections, therefore, proceeds as follows. The second section discusses the UN resolutions proclaiming the "New International Economic Order". It also briefly surveys the support or opposition expressed by different countries during the adoption process. The third part explores the global financial regulatory system that has emerged since the declaration of NIEO. Section four provides a critical analysis of informal networks relevant in the regulatory architecture of global finance from a vantage point of equitable economic governance. Section five analyzes whether the idea of "equitable economic governance" itself is still a relevant notion to the current diverging economic realities and structure of financial markets. The last part draws conclusions.

1.2 The New International Economic Order

The economic order in the aftermath of WWII represented by the IMF, the WB, and the GATT and completely dominated by a minority of developed states was considered inequitable when evaluated through the new global economic and political realities that emerged in the late 1960s

and early 1970s (Mahiou, A., 2011). The system was essentially designed at a time when most of the developing countries did not even exist as sovereign states. For the majority of states emerging from decolonization, it was less attractive to advance ideas of equitable representation in international economic decision-making and norm-setting.

Accordingly, new claims of equitable economic governance started to emerge with the establishment of the G-77 in the mid-1960s[1] (Chatterjee, S. K. 1991). A huge stride is taken in this regard when a "New International Economic Order" (referred hereinafter to as "NIEO") was heralded in 1974 following two resolutions adopted by the UN General Assembly: "the Declaration on the Establishment of a New International Economic Order" (resolution 3201 (S-VI) and "the Programme of Action on the Establishment of a New International Economic Order" (resolution 3202 (S-VI)). It provides the need for a just and equitable relationship between developed and developing countries in the "formulation and application of all decisions that concern the international community" (Resolution 3201, par. 3).

NIEO reaffirmed the long-standing principle of sovereign equality rooted in the natural law arguments of 17th and 18th Century[2] (Dickinson, E.D.; 1920, and Gaubatz, K.T., 2012). Much of the natural law arguments of sovereign equality are broadly sounded in Emer De Vattel's analogy of "equality of states and equality of men", which reads:

> "since men are naturally equal, (...), nations composed of men, (...), are naturally equal, and inherit from nature the same obligations and rights. Power or weakness does not in this

[1] Proceedings of the UN Conference on Trade and Development held in 1972 "stressed the urgency to establish generally accepted norms to govern international economic relations and recognized that it is not feasible to establish a joint order and a stable order as long as a charter to protect the rights of all countries (…) is formulated" (UNCTD, 1972).

[2] The realization of this new economic order is founded on full respect for the long list of principles stated in the declaration. See U.N.G.A Res. A. Res. 3201 (S-VI), par. 4, for the full list of principles.

respect produce any difference. A dwarf is as much a man as a giant; a small republic is no less a sovereign state than the most powerful kingdom" (Emer De Vattel, The Law of Nations; p.75).

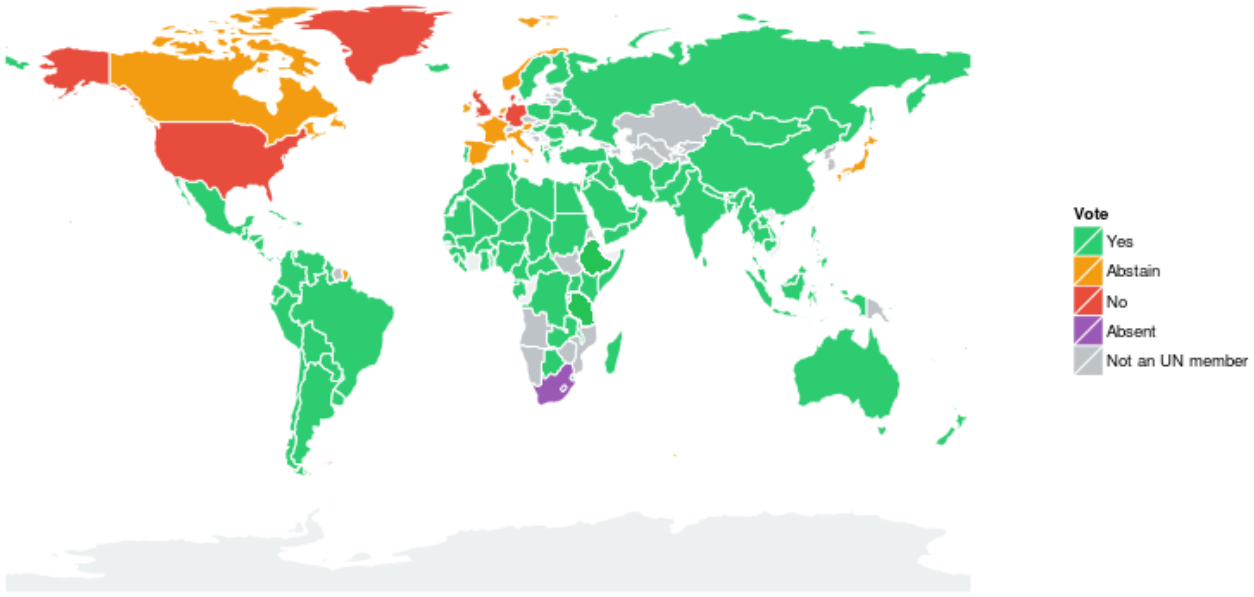
The naturalists' conception of sovereign equality finally became a positive law in the UN Charter (Art. 2(1) of the UN Charter and General Assembly Resolution, 2625 (XXV)). The explicit inclusion of the principle in the Charter was not absolute as the same document allows few states to have a privileged permanent status in one of the key organs of the UN- the Security Council (See Art. 23 of the UN Charter). Similarly, the world economic order that emerged in the aftermath of WWII was dominated by few Western Powers that were led by the United States (Allen, L., 2005 & Mahiou A, 2011).

Actual claims of equalization started to emerge from the disenfranchised members of the global community in the late 1960s and early 1970s. The claims, however, didn't get the blessing of all countries. An apparent divide between developed and developing countries was on display at the UN General Assembly during the adoption of the resolutions constituting NIEO. Although the resolution proclaiming the New International Economic Order (Resolution 3201 (S-VI)) and its program action (Resolution 3202 (S-VI)) were adopted by the General Assembly without vote, there were dissenting opinions from delegates of some countries (ILM, 1974, p. 715). More specifically, delegates from the US, France, the Federal Republic of Germany, Japan, and the UK expressed their reservations towards the contents of the Resolutions (UN Document A/PV.2229).

The Charter of Economic Rights and Duties of States which tries to formulate international economic norms as an integral part of NIEO, on the other hand, was voted by the General Assembly (Resolution 3281 (XXIX)). It was passed by 120 votes to six, with 10 abstentions. All

the negative votes and abstains came from developed countries. In specific terms, the US, Denmark, Belgium, Luxembourg, Germany, and the UK voted against the resolution. Austria, Netherlands, Israel, Spain, Japan, France, Italy, Canada, Ireland, and Norway on their part abstain. Figure 1 shows the different votes during the adoption of the resolution.

Fig. 1: Votes on adopting Charter of Economic Rights & Duties of States.



Source: United Nations General Assembly voting data. The map reflects the 2015 borders. Sovereign states created after 1974 appeared in the figure as non UN member states.

The illustration of the parties who supported and opposed the declaration of NIEO in the UN General Assembly give a good perspective of the division between developed and developing countries on the issue. One can easily discern that the majority of votes that lead to its adoption come from a group of least developed and developing countries. NIEO surfaced potential confrontations on the issue of equitable economic governance between economic blocks. In response, developed economies seem to have resorted to alternative paradigms in the decades that

follow in order to curb the enthusiasm created by NIEO and to avoid potential confrontations thereof. Carter, J. (2009), for instance, claims that the thousands of bilateral investment treaties signed between capital exporting countries and capital importing countries have been used as an instrument to cripple the aspirations of "equitable economic governance" asserted in the declaration. In the same way, we argue in the present paper that informal networks established in the course of the past four decades have essentially played the same role in the specific area of international financial regulation.

1.3 International Financial Regulation and NIEO

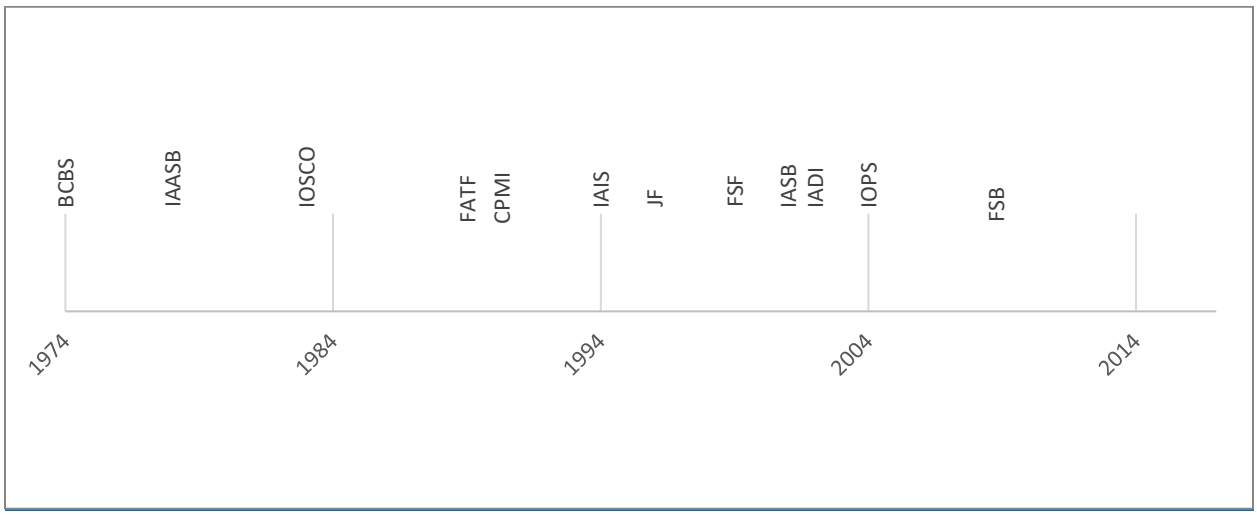
The declaration of NIEO coincides with the collapse of the Bretton Wood's fixed exchange rate. This time marked the emergence of a new financial system and regulatory development (Giovanoli, M., 2000). In general, the global financial regulatory system that has emerged since the declaration of NIEO manifests two important characteristics. First, the system demonstrates the establishment of multiple regulatory forums that make policy recommendations or non-binding rules with global implications. Figure 2 shows the timeline of the main forums established during this period and ones that have played a critical role in providing principles, standards and best practices for the global financial regulatory system.

Second, almost all the regulatory institutions established during this period (as depicted in Fig. 2) are informal networks, meaning that they are not constrained by the tenets of traditional international organizations. They embrace arrangements of process informality[3], actor

[3] Process informality refers to the cross-border cooperation between authorities in a forum other than traditional international organization context (Berman A. & Wessel R., 2012). Almost all of them are products of private acts without the requirement of a binding founding treaty (Zaring D.,1998). The Basel Committee is the product of the G10 central bank governors; IOSCO is formed by a bill of the Quebec National Assembly; the National Association of Insurance Commission (NAIC) established IAIS as a non-for-profit corporation for the State of Illionis; the G-7 Summit held in Paris in July 1989 gave birth to the FATF; and the FSF was established by the G-7 Finance Ministers and Central Bank Governors with no robust institutionalization feature of international organizations.

informality[4], flexibility, and voluntary compliance[5]. The proliferation of these regulatory bodies, which are not necessarily constrained by defined and anticipated rules, gives rise to a number of institutional issues in the international domain.

Fig. 2: A timeline of the main forums established since the declaration of NIEO in the global financial regulatory system.



It is noteworthy that the presence of these informal networks in the regulation of international finance is not a passive one. They have become the actual stipulators of much of the international financial regulation (IFR). Currently, for example, more than 260 instruments are internationally accepted as being relevant for the stability of the financial system; 224 of which are produced by informal networks (FSB, Compendium of Standards 1982-2017). This massive active presence of informal networks in IFR affects a wide range of countries, companies, and people but without bearing the force of law and without even being considered as proper sources of international law

[4] It refers to actors other than traditional diplomatic actors (such as regulators or agencies).
[5] The output of informal networks, by and large are non-binding instruments left to the prerogative of regulators to take and suit to their national regulatory objectives.

(Berman A. & Wessel R., 2012). Hence, they shall not be seen merely as a patchwork of informal forums' generating non-binding rules.

This work conceived the informal networks established in the course of the past four decades to regulate international finance as devoid of any reference to the declaration of NIEO. This doesn't mean that the institutional choice of informal networks as an approach to regulate international finance, is incorrect from an international lawmaking point of view. It does not also mean that the UN instruments declaring NIEO shall be abided by informal networks since General Assembly resolutions are commonly non-binding (Brower, C. N., & Tepe, J. B., 1975). The intuition, rather, is to critically revisit the openness of these forums to the notion of equitable economic governance.

The theme of equitable governance is frequently referred to in the Charter of Economic Rights and Duties of States.[6] In particular, Article 10 of the Charter broadly framed the theme, which reads:

> "All States are juridically equal and, as equal members of the international community, have the right to participate fully and effectively in the international decision-making process in the solution of world economic, financial and monetary problems (…)".

Though the meaning of equitable governance is often undisputed, identifying its conceptual parameters in clear terms is desirable in order to provide an effective assessment of its reception. At a minimum, two parameters of equitable governance can be drawn from the wordings of the aforementioned provision. First, the recognition of the judicial equality of all states. This norm entitles sovereign states the power of prescription, adjudication, and enforcement within the confines of their jurisdiction (Walzer, 1977). As such, it requires an implicit or explicit consent of

[6] One can easily see this from the wordings of Article 4, 10, 12 and 24 of the Charter

states in order to transfer these powers to supra-national regulatory institutions. It affirms the right of states to participate in international decision-making with global implications.

Second, the full and effective participation of states in decision making and norm setting. This norm goes beyond mere access to membership since membership by itself does not suffice to claim a genuine reception of an equitable governance structure. It emphasizes the right to participate fully and effectively in international economic decision-making and norm-setting. This challenges hegemony or superpower status in international rulemaking. In the upcoming section, we raise specific examples of informal networks to examine the extent to which they enhance the voice and participation of developing countries.

1.4 Assessing Equitable Governance Approaches in Practice

There are a multiplicity of institutions in the global financial regulatory system. Due to the multiplicity of institutions, it is challenging to make a generalized assessment of the system as a whole. Most of them, however, share some commonalities in the way they organize themselves and discharge their activities. Accordingly, we have chosen only five representative regulatory bodies for closer consideration. We will examine the Financial Stability Board (FSB), Basel Committee on Banking Supervision (BCBS), International Organization of Securities Commission (IOSCO), the Financial Action Task Force (FATF) and International Association of Insurance Supervisors (IAIS) from the diverse organizations active in the sector.

We have selected these bodies for three reasons. First, they are representatives of the broader phenomenon of the global financial regulatory system in terms of membership composition, and rulemaking. Second, they represent the three main regulatory pillars of international finance: the

banking, insurance, and securities sector. Third, when combined together they contribute more than 73% of the regulatory standards, where a tangible influence of such rules has shaped the regulatory structure of global finance.

1.4.1 The Basel Committee on Banking Supervision (BCBS)

The origin of the Basel Committee on Banking Supervision (hereinafter referred Basel Committee or BCBS) can be traced back to the financial market turmoil that occurred immediately after the breakdown of the Bretton Woods system (Alexander K., 2016, & BIS; 2015). It came into existence at the end of 1974, the same year that the NIEO was proclaimed.

Over the years, the Committee has become the main stipulator of international banking regulation and supervision. It has issued a huge number of regulatory instruments: 118 Standards, 128 Guidelines and 44 Sound practices that are relevant to the regulation of cross-border banking activities. Some of these standards consolidated in the form of Basel I, Basel II and Basel III have significantly shaped the international banking regulation sphere due to their broad application. As with any standard-setting bodies lacking the force of law, all instruments produced by the Committee are non-binding by their nature and their implementations are left to the prerogative of states. Surprisingly, so many countries have implemented these standards without having proper representation in the Committee[7] (Grynberg, R., & Sacha S., 2006).

Though the Basel Committee draws standards and guidelines with global implications, the voice and participation of developing countries remained peripheral for a great deal of time.[8] At the

[7] Grynberg and Sacha (2006) attributed the wide dissemination of Basel Standards in non-member jurisdictions to the shadow role played by the IMF and WB. Because, the IMF and WB incorporated compliance with some of the standards produced by the Basel Committee into their lending conditionality.

[8] BCBS membership is limited to organizations with direct banking supervisory and central banks (BCBS Charter, art. 4).

moment of its establishment, for instance, the committee comprised the G10 countries plus Luxemburg, and Switzerland. Interestingly, except for Sweden and Switzerland, all the constituting members of the Basel Committee either voted against or abstained during the adoption of the Charter, which outlined the "New International Economic Order" based on equity, sovereign equality, interdependence, common interest and cooperation among all States.

Moreover, the committee was, in its earliest years, very much under the influence of a few member jurisdictions (Goodhart C., 2011). In terms of active participation of parties, Basel I was in practice a product of two or three major powers of the Committee (Pattison J. C., 2006). The two financial giants of the global economy (the US and UK), were the actual stipulators of the Capital agreement in Basel I. The active engagement of its member jurisdictions, however, has improved through the years with the creation of the Basel Standards.[9]

The exclusive membership of the BCBS has 'usually been kept away from the fanfare of high politics' (Alexander K, 2016). It has remained closed to outsiders for more than three decades. It was only in 2009 and later in 2014 that the Basel Committee made some modifications to expand its member jurisdictions. Currently, the Basel committee comprises 28 member jurisdictions. The expansion of membership, as noted by Nout Wellink (BCBS's chairman between 2006-11), was aimed at "enhancing the Committee's ability to carry out its core mission of strengthening regulatory practices and standards worldwide" (BCBS, 2009). The expansion of membership has broadened the representation of countries in the committee, despite being too little and too late. There still exists significant room for improvement in order to enhance the voice and participation of developing countries.

[9] Basel II, for instance, engages a significant number of BCBS jurisdictions in its creation (Pattison J. C., 2006;446). The same is true for Basel III.

The Charter of the Committee leaves the possibility of admitting new members open to the discretion of its constituting members. The Committee's plan of future expansion, if any, however, may not reach a large segment of developing countries. According to Article 4 of the BCBS Charter, accepting new member jurisdictions is dependent on the 'importance of their national banking sector to international financial stability'. This approach ignores half of the problem of financial stability. The majority of developing countries may not have a banking sector strong enough to disrupt the stability of global finance. This does not, however, mean that their banking sector is insulated from the effects of a financial crisis emanating from developed countries. The idea of international financial stability is no less important to developing countries than developed countries.

1.4.2 The International Organization of Securities Commissions (IOSCO)

The International Organization of Securities Commissions (IOSCO) is the leading standard-setter for the supervision of the international securities market. The issue of equitable governance can be examined in the three time periods of the IOSCO's evolutionary path in which the organization experienced major changes in its governance structure: the period from its inception to the first major expansion reform of 1996; the period from 1996 to the 2012 reform (considered as the golden age of equitable governance within IOSCO); and the period which runs from 2012 onwards.

At its inception, IOSCO was an exclusive forum of the countries in the Western hemisphere rather than the worldwide organization it is now (Sommer Jr, A.A., 1996). This period runs from its formation in 1974[10] to the time IOSCO structured itself as a recognized not-for-profit association

[10]The origin of IOSCO can be traced back to 1974 where the Inter-American association of Securities commissions gathered together in view of forming a forum for 'consideration of securities regulation matters' (Sommer Jr, A.A. 1996). IOSCO formally recognized by Quebec law in 1987 and Quebec hosted the General Secretariat of the

registered under Quebec Law in 1987(IOSCO, 2015b). The rapid development of the securities market in different parts of the world caused the IOSCO to open its door for new members. Nevertheless, it had maintained a distinction between its original members and newly joining members up until 1996 to reflect its Inter-American origin.

In 1996, the IOSCO introduced a reform that revoked the distinction existing between Charter members and other members. It was a significant gesture of recognition of the equality of its constituting members. The reform was also relevant in terms of equitable and inclusive global governance as it took an important step to enhance the voice and participation of emerging economies in its internal decision-making process. The Executive Committee which was the key decision-making organ of the IOSCO, for instance, had a balanced representation of developed markets and emerging markets through the "Technical Committee" and "the Emerging Markets Committee" respectively. Table 1 demonstrates the balance of representation in the Committee.

The new institutional structure introduced in 2012, however, vanished the good days of inclusive governance which was in place since 1996. This reform was justified by the desire for an effective and efficient governance structure and decision-making process (IOSCO, 2011a). The reform proposal suggested that the distinction between developed markets and emerging markets is an "unattractive structure" that failed to respond to the dynamic nature of the securities market. In specific terms, the reform proposal provided that

> "…the current structure (pre-2011 organizational structure of IOSCO), which is built on a distinction between the interest of members in developed markets (represented by the Technical

organization during that time. Then after, IOSCO registered under Spanish law in 1999 which resulted the relocation of its General Secretariat's headquarter in to Madrid. (Marcacci A.,2012)

> Committee) and emerging markets (represented by the Emerging Markets Committee), is no longer sound." (IOSCO, 2011b; emphasis added).

The reform established a new principal decision-making body called the IOSCO Board. This board erodes the horizontal equality of members compared that was found with its predecessor. Table 1 illustrates the lack of inclusiveness and geographical balance of the newly established decision-making organ.

Table 1: Comparing the composition of the Executive Committee and the IOSCO Board

The Executive Committee	The IOSCO Board	
pre-2012	Transition Period (2012-2014)	Post 2014
19 members	*32 members*	*34 members*
○ Chair of the Technical Committee (Representing developed economies) ○ Chair of the Emerging Committee (representing Emerging markets) ○ The Chairs of the four Regional committees ○ One ordinary member elected by each Regional Committees from their members ○ Nine ordinary members elected by the Presidents' Committee	○ 18 Technical Committee members (representing developed markets); ○ Chair and Vice-chair of the Emerging Markets Committee ○ Chairs of the four regional Committees ○ Two ordinary members elected by regional Committees from their members	○ 18 members from jurisdictions with the largest market; ○ The Chairs and vice-chairs of the Growth and Emerging markets Committee; ○ The Chairs of the four regional markets committees; ○ Two members elected by the GEM Committee from its membership; ○ Two members elected by each of the four regional committees from their members

Source: IOSCO Annual Report 2011; IOSCO Annual Report 2014; and Resolution of the Presidents' Committee on the composition of the IOSCO Board (Resolution 5/2013) as amended by Resolution 2/2015.

From the table, we can easily discern that the new structure ensures a substantial increase in the representation of developed markets[11]. After the reform, developed markets constitute around 52% of the seats in the IOSCO Board, which by itself makes the quorum. On the other hand, the Emerging Market members accounting for more than 80% of IOSCO's membership have a disproportionate formal representation of 11% in the IOSCO Board.[12] This huge gap of representation between large markets and emerging markets might have a negative repercussion on the interests and voice of the latter in the deliberations of the IOSCO Board.

Moreover, the disproportionate representation of the largest markets is even more problematic when evaluated with the simple majority rule that is required to pass a decision in the IOSCO Board. The fact that more than half of the members of the Board are from largest markets means that: a) emerging markets cannot advance any proposal unless it gets the blessing of the largest markets; b) largest markets collectively can always adopt a decision in the IOSCO Board; and c) largest markets collectively can always veto any proposal. By this, one can deduce that the reform has crippled the effective participation of emerging markets in the decision-making process of the IOSCO Board.

1.4.3 International Association of Insurance Supervisors (IAIS)

IAIS is a pillar institution in the supervision and regulation of insurance activities. It was established as a not-for-profit corporation for the State of Illinois in 1994[13] by 68 Charter Members.

[11] IOSCO members nominated based on market size: Australia, Brazil, Canada (2 members), China France, Germany, Hong Kong, India, Italy Japan, the Netherlands, South Korea (2 members), Spain, Switzerland, United Kingdom, United States (two members) (Annex A to Resolution 5/2013).

[12] Chair & vice-chair of GEMC and two members elected by the GEMC from its members.

[13] The origin of IAIS 'can be traced back to the 1980s when insurance regulatory officials from various countries began to meet at the Summer Meeting of the National Association of Insurance Commissioners (NAIC)' (IAIS, 2015).

The IAIS is a relatively inclusive institution as evidenced by its large member jurisdictions (not only from developed economies but also emerging markets and poor countries). Now it covers nearly 200 jurisdictions from 140 countries across the globe (IAIS, 2016).

Flamée (2013) described the organizational structure of IAIS as an open system which allows a constructive dialogue in the making of standards, principles, and guidelines. The General Meeting is the highest decision-making organ of the association in which all members of the IAIS are entitled to have a representative to attend. In principle, the decisions in this body are passed on a one member, one-vote basis.[14] This arrangement which seems equitable, at first glance, however, maintains multiple votes for a handful of member jurisdictions as can be discerned from the disparity of the 200 member jurisdictions from the 140 countries constituting the IAIS.

The US is the most represented country in terms of votes. It is represented by three organizations: the Federal Insurance Office (FIO); the Federal Reserve; and the National Association of Insurance Commissioners (NAIC) which constitute around 56 US jurisdictions. The NAIC doesn't have the right to vote, but it may designate up to a maximum of 15 of its members to exercise their right of voting, at any one time (IAIS By-Laws, art 6(4)). As voting members, the FIO and Federal Reserve get one vote each. This gives the US 17 votes in total, the highest number of votes assumed by any single country. Table 2 highlights the distribution of votes in the IAIS.

Table 2: distribution of votes in the IAIS

[14] It makes decision through two-third majority and simple majority depending on the matter brought for deliberation. Amending the By-Laws; changing the location of offices of the Association; adopting principles, standards and guidelines not adopted by the executive committee all need a two third majority vote. The remaining tasks of the General meeting which sought voting pass through a simple majority of members casting a vote (IAIS, 2015b). Pre-1996, voting in IAIS was allowed per country, but not member jurisdiction (IAIS, 2015).

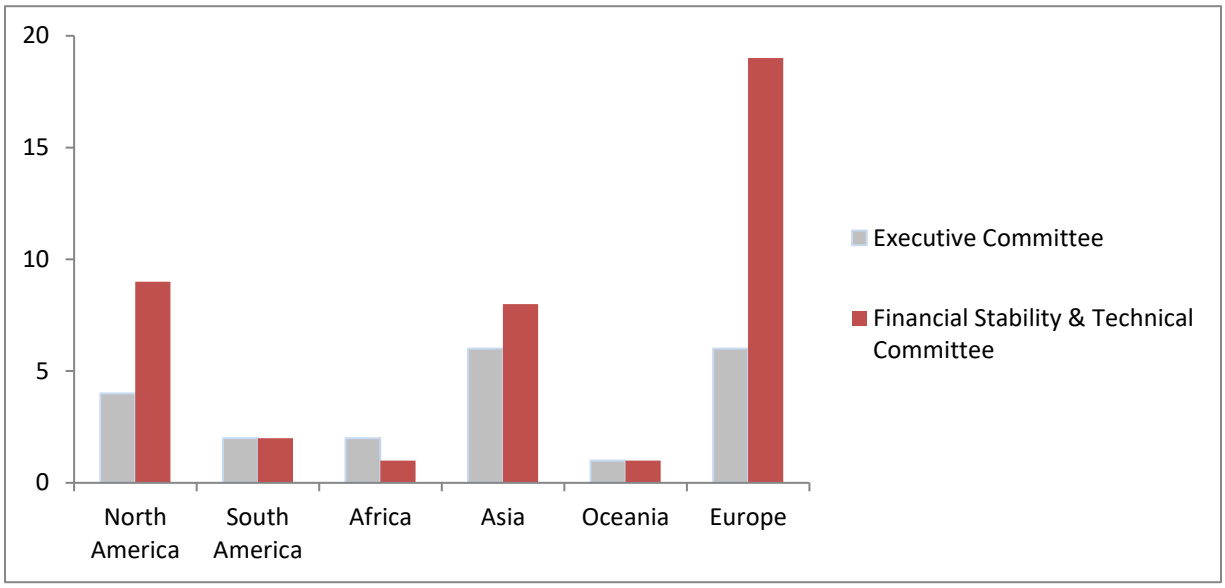
Member Country	No. of votes
US	17
Canada and Australia	Each has 3 votes
Belgium, Finland, Germany, Netherlands, UK, Malaysia, Papua New Guinea and UAE	Each has 2 votes
Remaining member states of IAIS	Each has 1 vote

Source: author's own calculation and European Parliament, available at http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542197/IPOL_STU(2015)542197_EN.pdf

Though the General Meeting is the highest decision-making body within the IAIS, most activities and organizational decisions go through the Executive Committee (IAIS By-Laws, art. 14(6)). The Executive Committee shall be composed of a minimum of nine and a maximum of twenty-four voting members. It undertakes the task of developing international principles, standards, guidance and other documents related to insurance supervision, financial stability, systemic risk, and micro-prudential supervision and surveillance (IAIS By-Laws. Art. 14(13) (a)). This committee heavily relies on the assistance of the Financial Stability & Technical sub-committee to discharge its activities.

IAIS By-Laws provide that the Executive Committee and its sub-committees shall consider an appropriate representation of the different geographic areas and different insurance markets in their composition (IAIS By-Laws, art 13(5), art 14(4) cum. 15(3)). This explicit reference to geographical rotation in representation lends much to the quest towards equitable governance which is often missed in other informal networks (IAIS, 2015). Figure 3 shows the current composition of the Executive Committee and the Financial Stability & Technical Committee.

Fig. 3: Geographical Representation in IAIS's Executive Committee and Financial & Technical Committees



Source: author's calculation and IAIS Committee and Subcommittee Membership List, updated May 2016

Despite the explicit reference to the balance of geographical representation, the actual representation of jurisdictions in the Executive Committee and its sub-committee is still far from being balanced, as presented in the figure above. For instance, Europe alone constitutes nearly 47.5% of the membership share in the Financial Stability and Technical Committee. This bias in favor of Western Europe and North America can also be observed in the composition of other sub-committees within the IAIS (IAIS, 2016).

1.4.4 The Financial Action Task Force (FATF)

The FATF was established in 1989 in response to the international drug trade that misuses the Banking sector and other financial institutions. The FATF, at the time of its establishment, had 16 original members- the 1989 Paris G7/8 Summit Participants (United States, Japan, Germany,

France, UK, Italy, Canada, and the Commission of the European Communities) and other eight jurisdictions not participating in the Summit (Sweden, Netherlands, Belgium, Luxemburg, Switzerland, Austria, Spain, and Australia). Despite being a relatively small network, the FATF engages in issues concerning the vast majority of countries. It has developed international standards, guidance papers, and best practices to improve the national and international framework against money laundering.[15]

Given the global mandate of the institution, a higher degree of participation and balanced geographical representation is desired to ensure its legitimacy. Accordingly, it has expanded its membership to 37 members in the course of 28 years.[16] The irony is that the 40+9 Recommendations drawn by the FATF have been endorsed by more than 154 non-member countries (FATF, 2012).

The success of FATF in non-member countries is attributed to a number of reasons. The formal endorsement of FATF Recommendations by the IMF, WB and the UN Security Council, in particular, has contributed significantly to the dissemination of the standards in large parts of the world. In 2005, the UN Security Council Resolution 1617, for instance, strongly urges all Member States to implement the comprehensive international standards of FATF. The Boards of the IMF and WB likewise have also "recognized the FATF Recommendations as the international standards against money laundering and terrorist financing" and endorsed the implementation of the

[15] The recommendations, guidelines and best practice papers produced by the institution are not intended to create any legal rights or obligations; instead, they aimed at forming international standards deemed appropriate of protecting the international financial system. (FATF, 2012, par. 48).

[16] Argentina, Italy, Australia, Japan, Austria, Kingdom of the Netherlands, Belgium, Luxembourg, Brazil, Mexico, Canada, New Zealand, China, Norway, Denmark, Portugal, European Commission, Republic of Korea, Finland, Russian Federation, France, Singapore, Germany, South Africa, Greece, Spain, Gulf Co-operation Council, Sweden, Hong Kong- China, Switzerland, Iceland, Turkey, India, United Kingdom, Ireland and United States (see Annex A of FATF Mandate 2012-2020).

Recommendations in member jurisdictions (FATF, 2006; and Wouter, W, H, et al, 2007). Moreover, the strong partnership forged between the FATF and the FATF-Style Regional Bodies (FSRBs) have also contributed to the broad dissemination of the 40+9 recommendations in non-member jurisdictions.[17]

Calling upon non-member jurisdictions to implement the Recommendations of FATF, however, puts a majority of developing countries into what is often referred to as "latent coercion". This is to mean that as a powerful group the FATF influences the action of non-member jurisdictions. This divide between the coercer and the coercee emanates from the strong economic power that the FATF has over non-member jurisdictions. Take for instance the relationship between the FATF member jurisdictions and a non-member country with a weak economy, which essentially depends on the financial assistance of the former. A threat by FATF members to cut any financial ties in case the non-member country deviates from the FATF Recommendations is a credible threat given the vulnerability of the latter.[18] The existence of credible threats forces the weak state in a position where actions other than the one expected by the FATF would entail a higher cost than the benefit it might get from non-compliance.

Similarly, the coercion against non-member jurisdictions may also come from the FATF as a club of strong states. The relatively strong power that FATF has over non-member states whose interest is fragmented is a typical feature of this scenario. Noncompliance with FATF standards, for example, could trigger sanctions by and from international organizations and financial institutions. This is a latent coercion often sheered with the "interests of the international community" while

[17] The FATF has been working with FSRBs since the mid-1990s. So far, nine regional groups have been recognized by the FATF as FSRBS, all of which now get the status of associate membership. The high-level principles and objectives which governs the relationship between the FATF and FSRBs explicitly provides that "FATF and FSRBs are free-standing organizations" and "the FATF is the only standard-setting body" (FATF, 2012b).

[18] This is the type of measure that Recommendation 21 of FATF allows penalizing non-cooperative jurisdictions.

subtly shaping the international regulatory system in favor of the few (Cohen, J. L., 2006). It resembles the so-called "imperial lawmaking process" where the global regulatory structure is mimicking the hegemon's policy interests.

1.4.5 The Financial Stability Board

Reforming the international financial regulatory architecture was, once again, at the center of deliberation in the wake of the 2008 financial crisis (Clarke W., 2014). As the Asian financial crisis triggered the creation of the Financial Stability Forum (FSF), the 2008 financial crisis also caused a number of regulatory reforms, of which the establishment of the Financial Stability Board (FSB) is a part. It was a new branding of the FSF with an expanded membership, broader mandate, and better institutional structure.

When the Financial Stability Forum was established in 1999, it had an exclusive membership structure. It consisted only of the G-7[19], International Financial Institutions[20], and International Standard Setting Bodies.[21] The membership was eventually expanded to delegates from Australia, Hong Kong, the Netherlands, Singapore, and Switzerland (Clarke W., 2014). Developing and least developed countries, however, did not have space in the deliberation of the FSF. This limited membership policy was constantly attacked due to legitimacy reasons.

In 2009, when the Financial Stability Board replaced the FSF, membership was expanded to the G-20 members in view of enhancing the voice and participation of developing countries. Currently,

[19]Canada, France, Germany, Italy, Japan, United Kingdom, and the United States. The original members also include Australia, Hong Kong, Singapore, Switzerland and the Netherlands.
[20] IMF, WB, and ECB
[21] BCBS, IAIS, IOSCO, AND IASB.

the FSB is constituted by 25 member jurisdictions[22], four International Financial Institutions[23] and six International Standard-Setting, Regulatory, Supervisory and Central Bank Bodies[24]. FSB's membership expansion is significant in terms of gathering big economies together. The FSB represents 70% of the world population and 90% of the world GDP.

Nevertheless, the figures of world population and GDP shares provided, tell us little as to the actual representation of developing countries in the FSB. The high share of GDP and population that the FSB considers representative of the global community come from very few member jurisdictions. Brazil, Russia, India, and China, for instance, contributed for nearly 40% of the world population share. Similarly, the G-8 countries accounted for 65% of the World GDP. As such, the expansion of membership by the FSB hasn't really enhanced the voice and participation of developing countries.

The exclusive membership policy of the FSB is not a problem *per se.* It is an issue because the FSB makes policy recommendations or regulatory standards with global implications. The implementation of FSB's policy documents not only in member jurisdictions but also in non-member states[25] is an explicit retreat from the aspiration of equitable economic governance

[22]Argentina, Australia, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Mexico, Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Turkey United Kingdom, United States and European Union. The Charter of the FSB under Article five cumulative with Annex A, enumerates an exhaustive list of current members which in fact will be reviewed periodically in light of its objectives.

[23] Bank for International Settlements (BIS), International Monetary Fund (IMF), Organization for Economic Co-operation and Development (OECD) and World Bank.

[24] Basel Committee on Banking Supervision (BCBS), Committee on Payment and Settlement Systems (CPSS), Committee on the Global Financial System (CGFS), International Accounting Standards Board (IASB), International Association of Insurance Supervisors (IAIS) and International Organization of Securities Commissions (IOSCO).

[25] The process of instilling the policy initiatives of FSB in members and non-members jurisdiction is taken care by the Regional Consultative Groups.

provided by the NIEO. The majority of developing countries are pressured to comply with the FSB's regulatory arrangements without having a vote on what those arrangements are.

In sum, the discussions made in this section show the implicit and explicit retreat of the global financial regulatory system from the principle of equitable economic governance. Annex I sums up the prevailing informal networks discussed in this section with respect to (effective) participation and decision-making rules.

1.5 Relevance of Equitable Governance in International Finance Today

The previous section emphasized that the notion of equitable economic governance as envisioned by the NIEO appears to have been largely ignored by the prevailing global financial regulatory system. Not surprisingly, the specific informal networks taken into closer consideration have tended to compromise the voice and participation of developing countries in decision-making and norm-setting. One may consider this assessment merely as a normative exercise with little practical importance for the existing realities of international finance. However, in this section, we argue that today the issue of equitable governance is very important in international financial regulation more than it was 43 years ago.

Growing interconnectedness of the financial sector: The second wave of globalization, as presented by Baldwin and Martin (1999) has resulted in a higher cross-border capital flow and interconnectedness in the financial system. This expansion in market interconnectedness has enormously complicated global financial regulation and supervision (Zaring D., 2012). One of the main changes that have come into the picture, and one that triggers the need for equitable governance, is the dramatic increase in the share of total bank assets at foreign-owned banks. Barth et al (2013) provide that the average percentage of bank assets in foreign-owned banks increased

to 49.34 percent in 2011 up from 30.1 percent in 1999. Among the 117 countries and jurisdictions surveyed by the World Bank in 2011, 113 countries have reported a certain percentage of foreign-owned bank assets. Iceland, Ethiopia, Qatar, and Syria were the only countries in the survey to report zero percent of foreign-owned assets (WB, 2013).

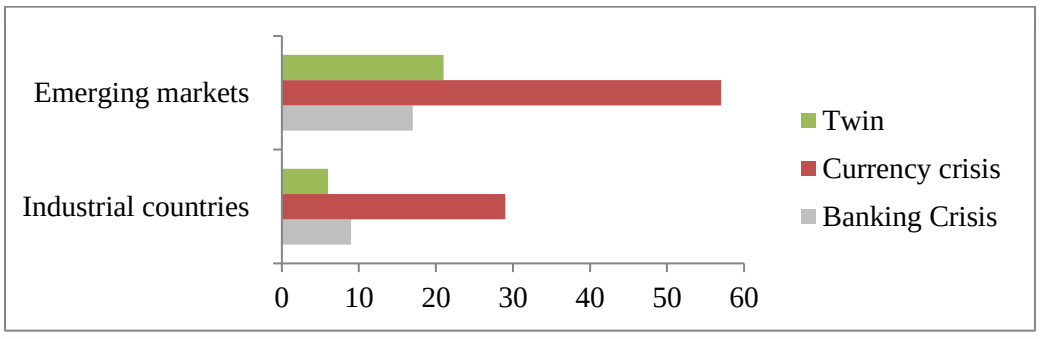
From 1999 to 2011, nearly 76 percent of the countries experienced an increase in the share of foreign-owned assets (Barth et al, 2013, & WB, 2013). This massive increase indicates the growing interconnectedness of the financial system, in which large or small; rich or poor countries around the globe have a direct or indirect interest. It has made the issue of global financial stability a concern for all states across the board (Alexander K., et al; 2006). At this point, the current fairly dominant role of few developed countries in the regulatory system of international finance is problematic as it may undermine the genuine interest of a large number of emerging economies.

The spillover effect of a financial crisis: In such a global environment, the spillover effect of a financial crisis is hardly denied (Alexander K., 2016, Schmuker, S. L., et al; 2004, & Obstfeld M., 1998). From a historical perspective, there have been a number of financial crises and shocks that occurred in a given country but were felt in so many other areas that have contributed little or nothing to the turmoil. The Mexican crisis (1994-95); the Asian Crisis (1997-98) and the 2008 global financial crisis had a spillover effect to many countries, with different levels of severity and scope (Bordo M. D. & Murshid A.P., 2000). Following the 2008 global financial crisis, for instance, the Brazilian Real fell 25% against the dollar; the Philippines FDI inflow was 60% less than what it was before the crisis and the Bombay Stock Exchange fell seven percent despite the fact that they contributed little or nothing to the cause (Fukuda-Parr, S., 2009).

In addition, in their extensive work, Bordo et al (2000) found that most financial crises are followed by "downturns lasting on average two to three years and costing five to ten percent of GDP". This global recession effect often accompanied by the fall in commodity prices, market contraction and a decline in private capital flow enormously hit developing and emerging economies (Fukuda-Parr, S., 2009). Nevertheless, clear cases of effective representation to protect the interests of emerging economies as aspired by the NIEO is absent in the existing global financial regulatory system.

Growing occurrence of a financial crisis in emerging markets: Bordo et al (2011) have observed that the occurrence of banking and currency crisis was relatively high during the last quarter of the 20th Century (Bordo M. et al; 2011). After the collapse of the Bretton Woods system, the frequency of banking and currency crises were double that of the Bretton Woods period (1945-1971) (Bordo, et al, 2000). As a matter of fact, most of those banking and currency crises happened in low income developing and emerging economies rather than in industrialized countries.

Fig. 4: Number of Crises distributed by market: 1973-1997



Source: Bordo et al, 2000 & Boro and Eichengreen; 2002

The figure suggests that the problem of a financial crisis is not merely a matter of industrialized countries, but a phenomenon that affects all. This purports arguments to oppose global financial regulatory systems excluding or limiting the effective participation of emerging economies.

The Growing importance of emerging markets: the landscape of the financial system has changed in the past four decades. A number of emerging economies which were marginal in the financial system now have acquired a prominent role. If experience is any guide, the financial sector development witnessed in China alone, demonstrates the growing importance of emerging markets over the years. In terms of total assets, for instance, China has become the largest single banking jurisdiction in a comparative perspective (Schoenmaker and Veron, 2016). Table 3 compares the banking system of China with that of the US and Euro area.

Table 3: Comparing banking systems, 2015

Banking system	Total Asset (trillion)	Domestic Assets (trillion)	Activity Abroad %	Asset/GDP, Top 3, %
China	€ 28.2	€ 26.9	4.3	76.9
Euro area	€ 27.7	€ 22.7	18.0	50.1
United States	€ 14.3	€ 13.1	8.8	28.7

Source: Schoenmaker and Veron, 2016

The prominence of China in the global financial system is too large to ignore. Four of the 30 global systematically important banks (G-SIBs) are also residing in China.[26] Veron (2016) made a compelling case that the pace of financial development in China requires a concomitant change in

[26] Industrial and Commercial Bank of China Limited, Agricultural Bank of China, Bank of China, and China Construction Bank (FSB, 2016).

the global regulatory system. The growing importance of emerging economies, in general, challenges the existing regulatory architecture of global finance which still gravitates towards the North Atlantic.

Dreaming of a global financial regulatory structure without enhancing the effective participation of stakeholders like China is not a sustainable path. Most regulatory networks in international finance have made some improvements by expanding membership to G-20 and a handful of other countries following the late financial crisis. The Financial Stability Board, Basel Committee and other bodies hosted by the Bank for International Settlement are good examples in this regard. In practice, however, these regulatory frameworks still retain a bias in favor of Western Europe and North America (Veron, 2016).[27]

In general, the changing realities of global finance make the notion of equitable economic governance perhaps more important today than it was decades ago. In recent years, a number of discussions have arisen concerning the voice and participation of developing countries in international economic decision-making and norm-setting based on the notion of equitable economic governance (UN resolutions 71/236, 64/209, 65/167, 67/217, and 69/227). Nevertheless, the continued discussion on the idea that global economic governance needs to be structured in order to broaden and strengthen the voice and participation of developing countries is still superficial rather than practical.

[27]Veron 2016, explored the governance and operation of 17 institutions which are relevant for the regulation of global finance. Surprisingly, the top positions in 16 of those institutions are controlled by Western Europe and North America. The other one is hold by Japan.27 This may not necessarily lead to bias against unrepresented states, but it is a fair point to raise in terms inclusive governance.

1.6 Conclusions

It is fair to say that the past 43 years of the international financial regulatory architecture are a complex era characterized by a multiplicity of informal regulatory forums having a different status and level of significance. This period coincides with the declaration of a "New International Economic Order" which provides the need for "active, full and equal" participation of all states in the "formulation and application of all decisions that concern the international community" (resolution 3201, par. 3). This work brought this period of international financial regulation within the perspective of equitable international economic governance. Our discussion sheds light on different aspects that are of importance with respect to equitable economic governance.

First, exclusive membership and unrepresented states: part of the development in global financial regulation manifest the establishment of informal networks that embark on global regulatory issues, while being very exclusive in their membership policies. The FSB, FATF and the Basel Committee discussed in this work are good examples of this scenario. They are forums where big economies gather, with little or no representation of economically weak countries. The exclusive membership policy of these bodies is not a problem *per se*. The problem comes when such bodies embark on global regulatory tasks reaching beyond their member jurisdictions. Improvements have been made over the years to enhance the voice and participation of developing countries in the decision-making process. The expansion, however, is too little compared to the wide implementation of their rules and the diverse global financial agendas they undertake.

Second, universal membership and the lack of full and effective participation of developing countries in the decision-making process: at first glance, the open membership policy of informal networks like IAIS and IOSCO gives the impression that they are inclusive and equitable in their governance structures. Indeed, the IAIS and IOSCO By-Laws make explicit reference to the

balanced geographical representation of different regions in their decision-making organs. In favor of inclusive governance, they also provide a "one member, one vote" rule in the general meeting or plenary, where all members are represented.

Though the General Meeting/plenary of these institutions have an inclusive representation of all member states, most activities of IAIS/IOSCO go through a small organ established in their internal structure often referred to as the Executive Committee/Board. The general assembly delegates most of its power to the Executive Committee/Board to discharge all relevant organizational decisions. The discussion made on IAIS and IOSCO revealed that the Executive Committee/Board is heavily dominated by strong economies. The actual representation of emerging markets in these committees is practically insignificant in terms of actual decision-making power.

Third, the partnership of informal networks with IMF and WB: The partnership of informal networks with treaty-based bodies like the IMF and WB is worth noting in terms of assessing the dissemination of regulatory standards in developing countries. A number of regulatory standards produced by informal networks are an integral part of the Financial Sector Assessment Program (FSAP), which is an initiative jointly run by the IMF and WB to evaluate countries' regulatory and supervisory compliance. The extended structural apparatus and legitimacy of the WB and IMF give them a considerable advantage to disseminate the standards to as many developing countries as possible. The shadow role of the WB and IMF was of great significance in assisting the implementation of non-binding regulatory rules of international finance in developing countries despite the concerns of legitimacy on the making of those rules.

In sum, the global financial regulatory system that emerged in the past four decades is quite different from that aspired by the NIEO. Quite surprisingly, 43 years have passed and no new economic order has arisen in the global financial regulatory system to replace the dominance of few developed countries in decision-making and norm-setting. Despite the changing realities in the financial system, the voice and participation of developing countries is still peripheral. It is not also clear whether the global financial regulatory system reforms itself in the foreseeable future to enhance the voice and participation of developing countries in the international economic decision making and norm-setting process. Further work is needed to fully understand the implications of ignoring the notion of "equitable governance" in the global financial regulatory system.

Annex I: Summary of the main informal networks with respect to participation and decision-making rules

Institutions	Participation	Decision-making rules	Effective Participation
BCBS	Exclusive membership (28 members so far): expansion is conditioned upon the importance of the banking sector to international financial stability (BCBS Charter art. 4).	Takes decision based on consensus	Member states have effective participation in the decision-making process.
IOSCO	Relatively inclusive membership: 210 members of which 126 ordinaries, 20 associates, and 64 Affiliates	In principle, decision is made through a simple majority of members in attendance. Each ordinary member has one vote.	The US, Japan, Canada, and the UK have more representation than other members of the presidents' committee. Emerging markets accounting for 80% of membership have a representation of less than 11% in the IOSCO Board.
IAIS (1994)	Relatively inclusive membership: reaches more than 140 countries.	Decision in the general meeting passed through 2/3 majority or simple majority depending on the matter. Employs one member one vote.	Disproportionate representation of states. a) General Meeting: The US is the most represented state with 17 votes. Canada and Australia each has 3 votes. Belgium, Finland, Germany, Netherlands, UK, Malaysia, Papua New Guinea and UAE each have 2 votes. b) Europe controls more than 47% of the seats in the Financial Stability and Technical sub-committee
FATF (1989)	Exclusive membership: 37 formal members. FATF standards, however, get implemented in more than 154 non-member jurisdictions.	Consensus	Member states have effective participation in the decision-making process
FSB	Exclusive membership: 25 formal member jurisdictions.	Consensus	Member states have effective participation in the decision-making process despite the unequal distribution of seats in the plenary.

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CHAPTER TWO

2 Risky Discretionary Actions and Accountability of Banking Supervisory and Regulatory Authorities

2.1 Introduction

Who shall be empowered to monitor and discipline banks? The answer to this question harbors a strong theoretical divide in the area of banking regulation and supervision. The two main contending views, namely of the "public interest" and the "private interest" establish the boundaries for this debate (Barth et al, 2006). They frame their arguments in favor of empowering the public regulatory authorities or the private market to discipline and monitor banks. Indeed, the appropriate design of prudential bank regulations shall go well beyond the confines of these opposing blocks (Allen et al, 3013).

Although the impact of empowering banking supervisory authorities on bank development, efficiency and stability is essentially inconclusive, one can easily see their expanded power in monitoring and disciplining banks (Barth, Caprio, and Levine, 2006). Empowering regulatory agencies, at times with higher discretionary power, gives the impression that the "the public interest view" of banking regulation and supervision is taken for granted (Barth et al, 2008, p. 71). Following the late global financial crisis, for instance, well over 39% of countries responding to the WB bank regulation survey found to have increased the power of their banking supervisory agency. Perhaps, the regulatory agencies are putting too much effort controlling the private sector; and placing little effort in looking inward to identify and address potential problems emanating from themselves.

Empowering banking regulatory authorities is not a problem *per se,* but doesn't necessarily mean that they will work to maintain the soundness of the financial system. The incentives of regulatory authorities and their bureaucrats may diverge from those of the public or those that "boost a sound financial system" (Caprio, G., & Levine, R. 2002; Shleifer A. 2005 & Barth et al, 2006 & 2008). In a sense, the power entrusted to banking supervisory and regulatory authorities is not risk-free. What is more concerning is the tendency of granting them with a higher discretionary power for which they are not accountable. The main argument of this paper is that when banking regulatory and supervisory agencies are not accountable for their actions, some of their discretionary decisions may generate negative consequences (referred hereinafter as "risky discretionary action") depending on the institutional, legal and structural variables present in the banking system.

Building on the World Bank's survey on bank regulation and supervision, we examine the impact of institutional, legal and structural variables on banking regulatory agencies' risky discretionary actions. There is formidable challenge to distill all the institutional, legal, and structural covariates that influence the risky discretionary actions of banking supervisory and regulatory authorities. While acknowledging the challenge, the present work provides a list of explanatory variables which constitutes variable of interest, banking sector specific controls and country-specific controls (see Table 2 for a brief description of variables).

The present work contributes to the existing empirical cross-country analysis of banking regulation and supervision in three ways. First, while the post-global financial crisis literature and reform agenda have drawn a lot of attention on the private sector, this paper points to banking supervisory and regulatory agencies as they are also intrinsic to the banking system and play a role in ensuring a sound banking system. Second, prior studies focus on the discussion of empowering

or disempowering banking regulatory and supervisory agencies with little or no emphasis on accountability thereof. Third, though a number of theoretical works considered banking supervisory agencies as less benign, empirical works are scant.

Our cross-country analysis shows that there is a significant association between the institutional, legal, and structural variables of interest and the probability of banking regulatory agencies' risky discretionary actions, for which they are not accountable. More specifically, the probability of risky discretionary action of regulatory agencies is estimated to be more likely in countries where the banking regulatory authority has low political independence and prompt corrective power. A lower requirement to obtain a banking license; a shorter tenure of supervisors' appointment; and a higher private monitoring index are also associated with a higher probability of regulatory agencies' risky discretionary actions.

The remaining part of the paper is structured as follows. Section two reviews the relevant literature and provides a brief theoretical framework. Section three gives empirical specifications and data. It also provides data sources and summary statistics. Section four reports the empirical results and the discussions thereof. The last part forwards concluding remarks.

2.2 Official supervisory power, discretion, and accountability

While the exact cause of the late global financial crisis remains a debated issue, several regulatory reforms have been introduced in prudential banking regulation. The reform efforts put tremendous focus on "the private sector and what the private sector did wrong" in terms of inducing the crisis system (Claessens, S., & Kodres, L. E. 2014, and Allen et al, 3013). The banking regulatory and supervisory authorities, however, get little or no blame in most jurisdictions (Wellink M., 2009 & Claessen, S., & Kodres, L. 2014).

In broad terms, banking supervisory and regulatory authorities refers to the body/agency that supervises commercial banks for prudential prupose. Practices differ from country to country as to which specific body is entrusted with the power of supervising commercial banks. In most jurisdiction this power is assumed by the Central Bank, or a single bank supervisory agency, or multiple bank supervisory agencies including the central bank, or multiple bank supervisory agencies excluding the central bank (WB, 2013).

For good or ill, banking supervisors and regulators have a broader mandate in the banking sector. They are responsible for detecting, assessing and monitoring "activities and practices that expose banks to excessive risk" (Barth et al, 2006). Following the late global financial crisis, some countries have introduced reforms to mitigate the official supervisory power of their banking regulatory agencies, while some others increase or keep it intact. What is worrying is that, on balance, there are a lot more countries that increase the discretionary power of their banking supervisory agencies. Comparing the pre and post crisis period, for instance, we see that 39 percent of countries participating in the World Bank survey increased the discretionary power of their regulatory agencies.

To the extent that banking supervisory and regulatory authorities influence the health of the banking system, and to the extent that we rely on them, it is certainly important to align their incentives with those of the public or with those that boost sound banking system. In this line of thought, policy choices that shape the power of banking regulatory agencies matter in order to make sure that the concerned regulatory bodies are using their power to promote the "public interests" and other objectives they are tasked with (Levine, R., 2005 & 2011). In the ideal government system, where a functioning checks and balances present, one can easily give support to the public interest view and put trust on the conduct of regulatory agencies. In reality, however,

there are few mechanisms to gear the incentives of banking regulatory authorities with those of the public or in extreme cases with those that "boosts the functioning of banks" (Caprio, G., & Levine, R. 2002; Shleifer A. 2005 & Barth et al, 2006 & 2008). One may even see them as less benign (Stigler G. J., 1971; Shleifer A., & Vishny R., 1998; Djankove et al, 2002, and Ferri, G., & Neuberger, D. 2015). In fact, it would be a romantic fantasy to have a complete trust and reliance on them. No regulatory framework is perfect, no institution is perfect, nor are the banking supervisory and regulatory authorities. Scrutiny of these authorities is equally essential to ensure a functioning banking system.

The official supervisory and discretionary power entrusted to banking supervisors and regulators is not risk-free depending on the institutional, legal and structural variables present in every country (North, 1991 & Plosser C., 2014). As such, regulatory agencies intended to monitor and discipline banks; themselves may be a source of risky discretionary actions. To borrow the words of Barth et al (2006),

> "Too much trust may be accorded to *public supervisory and regulatory authorities* [emphasis added] and too little attention devoted to the potential abuse of this trust or to inefficiencies introduced by excessive reliance on supervision".

With this thought in mind, the present paper tries to explore the banking supervisory and regulatory agencies' risky discretionary power and its contributing factors. One caveat is that there is no conventional proxy to indicate the absence or presences of risky discretionary actions of these agencies. In this work, we use a measure of whether banking supervisors and regulators are liable for their actions as a proxy for risky discretionary actions. A dummy dependent variable equal to 1 is used if the banking supervisory and regulatory authority of a country is not legally liable for its actions and zero otherwise (WB, 2013).

The justification is that the presence or absence of liability of regulators can influence the incentive to take an immediate action when an infraction happens. It may also spur regulators to discharge their activities effectively. As such, if banking supervisors and regulators are not accountable for their actions, it is not unreasonable to expect that the official supervisory and discretionary powers entrusted to them bear risky decisions that have an impact on the health of the banking system.

In most countries, if an infraction of any prudential regulation is found in the course of supervision, regulatory authorities are required to report and take mandatory actions[28] (Barth et al, 2011). Somewhat surprisingly, the failure of regulatory authorities in taking immediate actions, even when it is required, brings no legal liability in most jurisdictions.[29] On this point, data collected from 141 countries shows that only 23 countries have a legal framework which holds regulators liable for their actions (Barth et al, 2011). The issue here is that to the extent that the *de jure* liability prescription influences the conduct of regulatory agencies; it might also rightly mirror their risky discretionary actions. Moreover, if banking supervisors are not liable for their actions then the power entrusted to them will qualify as discretionary power. Conceptually, discretionary power requires us to rely on the judgment of supervisors or experts. The question is does this discretion be persued responsibly all the time. The point of view taken in this work is that discretionary power inherently involves a risk of abuse (also referred here as "risky discretionary actions").

There is a formidable challenge to distill all the institutional, legal, and structural covariates that influence the risky discretionary actions of banking supervisory and regulatory agencies. While

[28] If an infraction of any prudential regulation found more than 127 countries require it to be reported and more than 105 countries require mandatory action to be taken (Barth et al, 2013).

[29] The late financial crisis was partly attributed to the failure of regulators in taking immediate actions "even when it was apparent or should have been apparent that banks and other financial institutions were taking on too much risk, for example, by issuing mortgages covering 100 percent or more of the value of real estate, issuing mortgages to subprime borrowers who would never be able to manage to service their mortgage debt, and leveraging excessively by investment banks in particular" (Barth, J.R., Prabha, A. P., & Wihlborg, C. 2014; 13).

acknowledging the challenge, the present work provides a list of explanatory variables (see Table 2 for a brief description of variables). A brief discussion of these factors in relation to the contending theories of banking supervision and regulation follows.

Political independence of supervisory authorities: The degree to which the supervisory authority is independent of government and market influence is one of the issues with which policymakers must deal. When resolving banking problems, the activities of banking supervisory agencies might face political interference (Abiad A. et al 2010 & Gadinis 2013). Granting independence to these agencies may "enhance their ability to enforce actions" without being constrained by political considerations (Giddy, 1994, Abrams and Taylor, 2001). In the context at hand, if regulatory agencies are not granted with a higher level of independence, their discretionary power might be used to the benefit of a certain political end.

H1: Stipulating the political independence of banking supervisory and regulatory authorities has a negative influence on their risky discretionary actions.

Issuing a banking license: Almost all countries provide a list of requirements to allow or deny entry into the banking system, of course with a varying degree of intensity. Based on the provided requirements, regulatory agencies screen applicants to assure that they are competent before giving them the banking license (Barth et al, 2013). By putting tight entry requirements, regulatory authorities can buffer the banking system from undesirable and undeserving bankers that could be a potential threat to bank stability (Djankove et al, 2002). Stated differently, easing entry requirement might keep the option open for undeserving bankers to get licensed through other means. The implication of tightening or easing entry requirements on the conduct of regulatory authorities, however, is inconclusive. According to the "public interest view" of banking

regulation, stricter regulation of entry is associated with superior outcome (Djankove et al, 2002). In contrast, public choice theories of "regulatory capture" (Stigler 1971) and "tollbooth" (McChesney 1987; Shleifer and Sishny 1998) viewed higher entry requirements as a fruitful ground for bureaucrats and politicians to extract rent. There remains the empirical question whether a stringent entry requirement, as measured by the number of legal documents sought to issue a banking license, in fact, mitigates the risky discretionary actions' of the body overseeing the licensing.

H2: A stringent requirement of entry into the banking system is negatively associated with regulatory agencies' risky discretionary actions.

Promptness in responding to problems: in principle, banking supervisory and regulatory agencies are empowered to monitor and correct banks. Once banks breach certain minimum regulatory threshold, however, the promptness of regulatory agencies in addressing the issue is not the same across the board. In most legal systems the law defines the powers that regulatory agencies have to launch automatic enforcement actions, such as interventions[30] (Bart et al, 2004, 2006, 2013). If banking regulators and supervisors have discretionary power in making such key decisions, they may use it for personal gain to "extract rent from the banking industry" or to favor a particular insolvent bank (Hosono, K, et al, 2004). Ensuring promptness in responding to problems is viewed as a mechanism to mitigate the discretionary power of banking supervisors and regulators when the situation of troubled banks goes below the required threshold (Barth et al, 2006). Besides,

[30] This variable is based on several questions : (1) Can the supervisory authority force a bank to change its internal organizational structure? (2) Are there any mechanisms of cease and desist type orders, whose infraction leads to the automatic imposition of civil and penal sanctions on the bank's directors and managers? (3) Can the supervisory agency order the bank's directors or management to constitute provisions to cover actual or potential losses? (4) Can the supervisory agency suspend the director's decision to distribute dividends? (5) Can the supervisory agency suspend the director's decision to distribute bonuses? (6) Can the supervisory agency suspend the director's decision to distribute management fees?

ensuring promptness in banking regulation is also expected to limit excessive risk-taking and lower the probability of insolvency (Hosono, K., et al 2004).

H3: Banking supervisory and regulatory agencies' promptness in responding to problems exerts a negative influence on their risky discretionary actions.

Private oversight: The importance of market discipline is emphasized to ensure a sound banking system. Barth, Caprio, and Levine found a negative relationship between corruption and countries that promote private oversight in banking regulation and supervision (Capiro and Lavine, 2002). Although a higher private oversight is associated with "countries with more open, competitive, democratic political systems that effectively constrain executive power", it does not necessarily imply a lower official supervisory power or an improved financial system (Barth et al, 2006; & Levine, 2011). Empowering private oversight in a banking system where the supervisory authority also enjoys a higher official supervisory power multiplies the key substantive issues that both the private and public sector interact with. The repeated interaction, in turn, may lead to a potential "regulatory bias", meaning that banking supervisory and regulatory agencies becoming too willing to adopt the concerns of the financial industry as their own (Barth et al, 2012).

H4: private monitoring puts positive influence on the risky discretionary action of supervisory agencies entrusted with a higher official supervisory power.

Supervisor Tenure of Appointment: Individual government bureaucrats ultimately represent regulatory and supervisory bodies. They make the actual interpretation and enforcement of the national and international regulatory instruments, without whom the official supervisory authority

itself becomes meaningless. However, they do not have the same incentive as the private sector or to some extent the regulatory agency they belong with.

The manner in which banking supervisors are appointed and the terms of appointment[31] thereof may have broader implications on the appearance and decision making of regulatory agencies. Terms of appointment set too short or too long could provide an incentive for supervisors to exploit the discretionary decision-making power for personal gain, or at least to calculate their future career prospect depending on their plan to enter the banking sector (Barth et al, 2006). With this thought in mind, the variable measures the average tenure of a professional bank supervisor[32] and it is expected that a longer tenure of appointment will reduce the likelihood of risky discretionary actions.

H5: Long tenure of appointment is negatively related to the risky discretionary actions of banking supervisory and regulatory agencies.

2.3 Empirical Specifications and Data

2.3.1 Data

Banking regulation data is constructed based on the World Bank survey and Barth et al (2013) database on bank regulation and supervision compiled from responses of official supervisory and regulatory authorities in 180 countries.[33] Four bank regulation and supervision surveys were

[31] Banking supervisors and regulators tenure of appointment differ across countries. In Italy, for instance, the tenure of appointment is lifelong, while countries like Brazil a very short term of appointment is very likely (Barth J, et al 2006).

[32] Tenure of supervisors is found to be statistically and positively significant in explaining the bank efficiency (Barth J, 2013b).

[33] The World Bank conducted four surveys on banking regulation and supervision which were released in 1999, 2003, 2007, and 2012.

carried out by the WB and for the purpose of this work, the last survey released in 2012 will be used. Specific banking sector data is collected from the Global Financial Development Database of World Bank. In order to account for macroeconomic and institutional factors that may exist among the regulatory jurisdictions under consideration, this paper relies on data of the World Development Indicator and the World Governance Indicator as compiled by Kaufman Daniel and Aart Kray (2015). Information on the income classification and regional classification of countries is collected from the IMF and WB respectively.

Considering the availability of data, this paper constructs a sample of 90 countries for which a complete data on the variables of interest is found. The analysis excludes: (a) countries that did not participate in WB fourth survey on bank regulation and supervision, (b) countries that participated in the survey, but where one or more measure of variable interest is not provided or missing. The data sources of all variables and description of their scale are provided in Table 2.

2.3.2 Methodology

Given the discrete values of the dependent variable, this paper employs a qualitative response model, specifically a maximum likelihood binary logit (Greene W. 2008). This model specifies that a set of variables of interest gathered in a vector X explains the likelihood of the binary dependent variable. The representations provided herein under are taken from Greene W. (2008).

$$Prob\ (Y = 1|X) = F(X, B)$$

$$Prob\ (Y = 0|X = 1 - F(X, B)$$

In the issue at hand, an identification of a set of factors that influences risky discretionary actions is carried out as has been discussed in the previous section. These variables of interest are

regulatory and supervisory indexes of countries and the maximum likelihood model can be specified as

$$logit(y_j) = a_0 + \beta x_{1j} + \delta x_{2j} + \theta x_{3j} + \varepsilon_j \quad (1)$$

Where the subscript *j* denotes the country, y_j is banking supervisory and regulatory agency's risky discretionary actions of the country *j*, $x_{1j}$is the vector of variables of interest, x_{2j} is a vector of banking sector specific control variables, x_{3j} is a vector of country specific controls, and ε_j is an error. Overall, this paper's empirical questions are raised as follows:

$$\begin{aligned} logit(ACNTBLE_j) = a_0 &+ \beta_1 POLIND_j + \beta_2 ENTRYREQ_j + \beta_3 PVTMONT_j + \\ &\beta_4 PROMPTACT_j + \beta_5 SUPTENURE_j + \delta_1 BNKCONAST_j + \\ &\delta_1 BNKDEPOTOGDP_j + \delta_3 CENTBANKASSTTOGDP_j + \\ &\theta_1 KKZECOMEAN_j + \theta_2 KKZGOVMEAN_j + \varepsilon_j \end{aligned} \quad (2)$$

The correlation among the explanatory variables is checked and the result shows no serious issue of multicollinearity. All the correlation coefficients of the variables of interest are below 0.16, which makes it sound to include all of them simultaneously in the model. The country-specific controls of governance indicators (KKZGOVMEAN), economic freedom (KKZECOMEAN) and the share bank deposits to GDP (BNKDEPOTOGDP) are generally highly correlated but they do not *per se* affect the coefficients of the variables of interest (Wooldridge J., 2013, pp. 85-6). The different estimates show no difference on the value of the variables of interest. A correlation matrix of independent variables is presented in Table 3. Summary statistics is presented in Table 1. In addition to the country and sector-specific controls employed, we also checked the endogeneity problem that may emanate from reverse causality or omitted variable problem in the estimation analysis. This will be discussed in section 2.4.2.

Table 1: Summary statistics of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
ACCTBLE	141	0.82979	0.37716	0	1
POLIND	141	1.056738	0.714873	0	3
ENTRYREQ	143	7.816184	0.457954	5	8
PVTMONT	115	7.826087	1.384506	4	11
PROMPTACT	138	4.478261	2.107399	0	6
SUPTENURE	111	8.60991	3.977367	1	21
KKZECOMEAN	156	61.34615	10.06969	28.6	89.3
KKZGOVMEAN	162	0.000369	0.913349	-1.8671	1.9333
BNKCONAST	121	71.18397	19.48129	11.6	100
BNKDEPOTOGDP	155	54.89206	47.77874	4.81	339.69
CENTBANKASSTTOGDP	145	5.005862	8.354645	0	63.2

Note: Definition of the variables is provided in Table 2.

Table 2: Variable Description

Variable	Description	
Accountable for their actions- *de jure* (ACNTBLE)	No legal liability of banking supervisors and regulators for their actions: dummy=1 if they are not liable, 0 if they are liable. From Barth et al 2013 & The World Bank, 2013	Proxy for risky discretionary actions
Political independence of supervisory authority (POLIND)	The degree to which the supervisory authority is independent from government and legally protected from the banking industry. Scale of 0-3 where higher values indicate greater independence. From Barth et al 2013 & The World Bank, 2013	*H1*
Entry into banking requirement (ENTRYREQ)	The degree of stringency of requirements to grant banking license. Scale of 0-8 where higher values indicate more stringency. From Barth et al 2013 & The World Bank, 2013	*H2*

Prompt corrective power (PROMPTACT)	Whether the law establishes predetermined levels of bank solvency deterioration that force automatic actions, such as intervention. Scale of 0-6 where higher values indicate more promptness in responding to problems. From Barth et al 2013 & The World Bank, 2013	*H3*
Private Monitoring Index (PVTMONT)	Measures whether there incentives/ability for the private monitoring of firms, with higher values indicating more private monitoring. Scale of 0-12 where higher values indicate more private oversight. From Barth et al 2013	*H4*
Supervisor Tenure (SUPTENURE)	The average tenure of a professional bank supervisor. Scale: pure number (Years). Barth et al 2013 & The World Bank, 2013	*H5*
Bank concentration asset (BNKCONAST)	The degree of concentration of total assets in the five largest commercial banks. The World Bank, 2013, Barth et al, 2013	Control
BNKDEPOTOGDP	The share of bank deposits to GDP (percent). Global Finacial Development Database of World Bank	Control
CENTBANKASSTTOGDP	The share of central bank asset to GDP (percent). Global Financial Development Databse of World Bank	
Income level	Categorical variable. WB income level classification	Control
Regions	Categorical variable. IMF region classification	Control
World Governance Indicators (KKZGOVMEAN)	Composite of six governance indicators (2011 data): voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and corruption. Individual factors are weighted equally to determine overall score of economic freedom. Higher values correspond to better governance outcomes. Averaged over 2007-2011 periods. World Bank – Governance Indicators (Kaufmann et al 2012) & Teorell, et al, QOG Dataset, version 6Apr11	Control
Economic freedom (KKZECOMEAN)	Composite of 10 specific institutional factors, some as composites of even further detailed and quantifiable components: business freedom, trade freedom, fiscal freedom, freedom from government, monetary freedom, Investment freedom, Financial freedom, Property rights, Freedom from corruption, and Labor freedom. Averaged over 2007-2011 periods. Heritage Foundation	Control

Table 3: Correlation among independent variables

	POLIND	ENTRYREQ	PVTMONT	PROMPTACT	SUPTENURE	KKZECOMEAN	KKZGOVMEAN	BNKCONAST	BNKDEPOTOGDP	CENTBANKASSTTOGDP
POLIND	1									
ENTRYREQ	-0.1671	1								
PVTMONT	0.1008	0.0042	1							
PROMPTACT	-0.0577	0.0628	-0.1015	1						
SUPTENURE	0.0292	-0.0652	0.0989	-0.086	1					
KKZECOMEAN	0.1133	0.1113	0.2717	-0.0297	0.0809	1				
KKZGOVMEAN	-0.0161	-0.0284	0.3081	-0.1263	-0.0375	0.7152	1			
BNKCONAST	0.0803	-0.1246	-0.2456	0.1204	-0.3269	-0.1418	0.1103	1		
BNKDEPOTOGDP	0.0054	-0.0187	0.1317	-0.0149	0.0353	0.4572	0.6292	0.0207	1	
CENTBANKASSTTOGDP	-0.014	0.1407	0.1011	0.1244	0.0556	0.001	0.0205	-0.0074	-0.04	1

2.4 Empirical Results and Discussion

2.4.1 Main results

An empirical analysis is conducted to estimate the likelihood of risky discretionary actions of banking supervisors and regulators based on the institutional and prudential regulatory structure of the countries in consideration. The estimation also includes control variables to account for specific banking sector and country realities. Table 4 presents the empirical results from the regression analysis.

Table 4: Results

VARIABLES	1	2	3	4
POLIND	-0.123***	-0.139***	-0.129**	-0.172***
	(0.0330)	(0.0311)	(0.0502)	(0.0434)
ENTRYREQU	-0.258**	-0.247*	-0.232*	-0.260***
	(0.125)	(0.139)	(0.128)	(0.0920)
PVTMONT	0.0869***	0.0939***	0.0938***	0.129***
	(0.0200)	(0.0255)	(0.0183)	(0.0227)
PROMPTACT	-0.0327***	-0.0340**	-0.0318**	-0.0554**
	(0.0115)	(0.0137)	(0.0155)	(0.0253)
SUPTENURE	-0.0226**	-0.0218**	-0.0197**	-0.0235***
	(0.0112)	(0.0108)	(0.00770)	(0.00788)
BNKCONAST			0.00144	0.00439
			(0.00444)	(0.00582)
BNKDEPOTOGDP			0.00332***	0.00716***
			(0.00104)	(0.00145)
CENTRBANKASSTTOGDP			0.0132***	0.00971***
			(0.00480)	(0.00376)
KKZECOMEAN		0.00249		0.00993
		(0.00612)		(0.00638)
KKZGOVMEAN		-0.0470		-0.281**
		(0.0569)		(0.133)
Observations	90	80	67	67
Pseudo R-squared	0.2038	0.1962	0.2852	0.3790

See Table 1 for variable definitions. The dependent variable is risky discretionary actions. The coefficient estimates are transformed to represent the marginal effects. Region- clustered Robust Standard errors in parentheses. Statistical significance: *** p<0.01, ** p<0.05, * p<0.1

The first column reports the results of a model with only the variables of interest. The second and third columns show the results of regression when country-specific and bank-specific controls are included, respectively. The fourth column reports the results of all explanatory variables.

The result shows that there is a significant association between the institutional and legal variables of interest and the risky discretionary action of banking supervisors and regulators. The risky discretionary action of banking supervisors and regulators is estimated to be more likely in countries where the concerned banking regulatory authority has low political independence and prompt corrective power. Besides, a lower requirement to obtain banking license; a shorter tenure of supervisors' appointment; and a higher private monitoring index are also associated with a higher probability of regulatory agencies' risky discretionary actions.

Results for prompt corrective power appear to have a negative influence on the risky discretionary actions of banking supervisory and regulatory authorities. It supports the idea that ensuring promptness in responding to banking sector problems reduces the discretionary power of banking supervisors and regulators to take measures motivated by rent-seeking behavior (Hosono, K, et al, 2004). Another possible interpretation of this result is that increasing the discretionary power of supervisory authorities can also be used to keep the flexibility needed to introduce *ex-post* measures without being constrained by the requirements of predetermined rule-based regulatory structure. In this sense, the risky discretionary actions would be the cost of flexibility that regulatory jurisdictions seem willing to accept. In the sample taken for analysis, 19 jurisdictions

were found with no legally established levels of bank solvency deterioration that requires the prompt action of banking supervisory and regulatory authorities.[34]

Results for the political independence of supervisory authority (POLIND) show a negative link with risky discretionary actions as hypothesized in the theoretical part of this paper. The result supports Oritani (2010) view that ensuring the independence of the banking supervisory authority can guard against decisions targeting short-term political interest. From the final sample of countries investigated in this work, on balance, few countries have a banking supervisory and regulatory authority with no or little political independence. However, in the aftermath of the late financial crisis, Kim et al (2014) reported that supervisory authorities have become "less independent as the size of credit to the government grows".

The result for supervisor tenure (SUPTENURE) is interesting. Countries with a higher average tenure of appointment are associated with lower risky discretionary actions. Analyzing banking supervisory and regulatory agencies' risky discretionary actions is an abstraction, so to speak, as they are not valid sources of preferences. But individual bureaucrats are. Acknowledging individual bureaucrats as a valid source of preferences, this result ultimately magnifies the key role they can play in shaping the decision making and overall appearance of banking supervisory and regulatory authorities. One possible explanation for this result is that determining the tenure of appointment as too short, may incentivize corruption or create a sense of insecurity in a way that

[34] The list includes some countries with big financial centers such as Poland, Malaysia, France, Portugal, Israel, Spain, Switzerland, and Belgium.

leads supervisors to calculate their future career prospect in the banking sector.[35] This result is consistent with Barth et al (2006).

As for the requirements to issue a banking license (ENTRYREQ), the result shows that low stringency is associated with the likelihood of risky discretionary actions. The potential explanation of the result is that leniency in granting a banking license gives flexibility for regulatory authorities to evaluate entry applications on a case by case basis. This flexibility may open the door for regulatory agencies to issue a license for undeserving entities based on considerations other than public interest or the health of the banking system. The result for the private monitoring index shows a positive effect on risky discretionary actions. This result is best explained by its interaction with the official supervisory power. The positive and significant interaction term of private monitoring and official supervisory power suggest that a higher private oversight implies a likely risky discretionary action in countries where the supervisory agency also enjoys a higher official supervisory power.

2.4.2 Robust checks: instrumental variables

In addition to the country and sector specific controls employed, we also checked the endogeneity problem that may emanate from reverse causality or omitted variable problem in the estimation analysis. In other words, the banking supervisory agencies' risky discretionary actions may influence the institutional, legal and structural elements of the banking system. Given the "separation of power principle", it would be remote to expect banking supervisory and regulatory authority to influence the prudential regulatory environment in the direction of being more open

[35] However, a longer tenure of appointment as it stands alone shall not be construed as favorable thing *per se* since it can also be source of other factors that determine institutional outcome.

to the risky discretionary power of authorities. As such, the possibility of reverse causality would not be a pressing issue. An omitted variable problem could exist, however. In the area of banking regulation and development, the existing literature considers a number of possible instrumental variables for institutional quality, which include, *internal*, legal origin, average latitude, and ethnic fractionalization (Acemoglu et al. 2001, Beck et al, 2006, Barth et al., 2009, Barth et al, 2013b, Houston et al, 2011, & T.Kim et al, 2013). We use the average latitude and ethnic fractionalization as an instrument though the regression did not find their endogeneity. The results of the instrumental variables regression are reported in Annex I.

2.5 Conclusion

Banking supervisory and regulatory authorities intended to monitor and discipline banks; may themselves be the source of problem. While acknowledging the imperfection of the legal and institutional framework, this paper raises the overlooked problem of banking supervisory and regulatory agencies' risky discretionary actions. Building upon a cross-country bank regulation data, we examine the influence of legal and institutional variables on the likelihood of supervisory agencies' risky discretionary actions. On the basis of the empirical analysis conducted, we find that supervisor tenure of appointment, political independence of supervisory authorities, prompt corrective power, private oversight, and entry requirements all put a significant impact on the risky discretionary actions of banking supervisory and regulatory authorities. We are of the view that empirical results presented in this work have to be seen in light with the ultimate goal of finding a banking regulatory and supervisory authority that ensures a stable banking system. Overall, the result provides a relevant support to be wary of the discretionary power of banking supervisory

and regulatory authorities and to bring them within the spectrum of banking stability and regulatory reform.

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Annex I: Results for the Ivprobit

VARIABLES	MH	MH
PVTMONT	0.570***	0.899***
	(0.151)	(0.313)
ENTRYREQ	-0.691*	-0.857
	(0.408)	(0.605)
POLIND	-0.472***	-0.883***
	(0.121)	(0.249)
PROMPTACT	-0.110*	-0.286**
	(0.0575)	(0.126)
SUPTENURE	-0.0869**	-0.0949*
	(0.0351)	(0.0516)
KKZECOMEAN		0.0681**
		(0.0318)
KKZGOVMEAN		-1.602**
		(0.676)
BNKCONAST		0.0386
		(0.0305)
BNKDEPOTOGDP		0.0353***
		(0.0111)
CENTBANKASSTTOGDP		0.0302
		(0.0377)
Constant	3.700	-4.987
	(4.469)	(8.171)
Observations	71	57

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

CHAPTER THREE

3 Towards the Disaggregation of the Regulatory Restriction of "Non-traditional" Banking Activities: Its Impact on Banking Crises Analysis

3.1 Introduction

This paper examines the impact of activity restrictions on the likelihood of a banking crisis. Activity restriction in the context of this work refers to the extent to which jurisdictions allow or prohibit a bank from engaging in non-traditional banking activities, i.e. securities, insurance, and real estate activities. The theoretical and empirical works on activity restriction with respect to banking efficiency, development and stability are subjected to conflicting views. On one hand, the commonly referred to "public interest view" of bank regulation and supervision argued that restricting banks from engaging in diverse activities contributes to reduce the creation of big financial institutions considered "too big, complex, and interconnected to fail", and incidentally the conflict of interest that may arise thereof (Barth, J. R., et al; 2004; 2006; 2013 Laeven and Levine, 2007, & John, John, and Saunders, 1994). Empirical findings supporting this view suggest that a higher level of activity restriction leads to a lower probability of developing banking crisis (Čihák, M., Demirgüç-Kunt, et al, 2012, Caprio G et al 2014 & Kim et al, 2013), a lower insolvency risk (Agoraki et al, 2009), and a higher profit efficiency (Pasiouras et al, 2009).

In contrast, a separate body of theoretical framework often referred to as "the private interest view" embraces the idea of allowing banks to engage in diverse economic activities owing to economy of scale (Haubrich and Santos, 2005), diversification of risks (Eisenbeis and Wall; 1984; Kwan and Laderman; 1999; & Laeven and Levine, 2007), and bank development and stability (Barth et al 2004). A body of research in favor of this view emphasizes that a higher level of activity

restriction may lead to a lower banking sector efficiency (Barth et al, 2013), a lower cost efficiency (Pasiouras et al, 2009), and a higher government power which is associated with the exacerbation of the risk of corruption (Barth, J. R., et al; 2004; 2013; Claessens and Klingebiel , 2001; Djankov et al., 2002).

The aforementioned dichotomous view of activity restriction is a cumulative measure of banks' engagement in all insurance, securities, and real estate activities. These three different activities which are treated in several research works as a trinity, create the impression that they are homogeneous in a certain respect. The empirical behavior that may exist between and among the three component variables, however, shall not be overlooked so as to get unbiased estimation and to appreciate the specific weight that each activity may have on the likelihood of banking instability (Blalock H. 1971).

The intuition here is that aggregating activity restrictions in bank regulation may be desirable to service a specific ideological block or theoretical claim, but may not necessarily offer an objective account of each element. By aggregating insurance, securities, and real estate activities we are assuming that they are identical in their manifestations and are making inferences about the nature of the three units based upon the nature of the aggregate measure to which they belong. In addition, the pervasive use of the aggregate measure of the three units in prior research works seem to have an underlying assumption that they have equal impact on banking development, efficiency, and stability.[36] The present paper begs to differ on the use of an aggregate measure of activity

[36] Aggregating regulatory indicators, generally, compromises the precision of empirical analysis. The margin of error created due to aggregation can be larger and at times may even be statistically significant (Kaufman D. Kraay A., & Zoido-Lobaton P., 1999). With this line of thought, one may wonder to what extent the overall policy prescription of easing or tightening activity restrictions truly serves the three components. One may also wonder to what extent the sign and magnitude of statistical significance reported in prior works captures the sign and magnitude of each unit.

restrictions, at least, with respect to analyzing the occurrence of a banking crisis. By reconsidering the aggregate approach, we aim an improved understanding of the specific impact of restricting commercial banks from engaging in securities, insurance, and real estate activities, as stand-alone factors, on the likelihood of a country experiencing a banking crisis.

We use a cross-country data over the period 2007-2011 in our estimation. The banking crisis data is constructed based on the updated database of Laeven and Valencia (2014). Between 2007 and 2011, a group of 25 countries[37] experienced a banking crisis. Admittedly, the analysis of a banking crisis in a given country stretches well beyond activity restrictions. On the choice of explanatory variables, hence, we rely on the underpinning theories specifying determinants of banking crisis as suggested by the literature (Kaminsky and Reinhart, 1999, Demirgüç-Kunt, A., & Detragiache, E. 1998, 2005; Beck T., et al 2006, Barth, J. R., Caprio Jr, G., & Levine, R. 2001, 2004, 2006, 2009, 2013, Laeven, L., & Valencia, F. (2014).

Our cross-country analysis shows that there is a significant association between the aggregate measure of activity restriction and the likelihood of a country experiencing a crisis over the period of 2007 through 2011. Results for the disaggregated estimations, however, reveal that only securities and real estate activities mimic the effects observed in the aggregate measures, while restrictions on insurance activities consistently remain insignificant in the varying estimations.

[37] UK and US in 2007; Austria, Belgium, Denmark, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Latvia, Luxembourg, Mongolia, Netherlands, Portugal, Russia, Slovenia, Spain, Sweden, Switzerland, and Ukraine in 2008, and Nigeria in 2009 (Laeven and Valencia, 2014).

This contradicts the overarching conclusions and policy recommendations made by several prior works based upon the aggregate measure of activity restrictions.

The rest of the paper is structured as follows. Section two reviews the relevant literature and provides a brief theoretical framework. Section three gives empirical specifications and data. It also provides data sources and summary statistics. Section four reports the empirical results and the discussions thereof. The last part forwards concluding remarks.

3.2 Determinants of Banking Crisis

Regulatory restrictions on the type of activities that commercial banks can engage have long been a question of great interest in the study of banking crises. In the 19th century, in countries where a modern banking system was present, the engagement of banks in diverse activities was considered as a "successful economic institution" (Tilly R., 1998). There is no compelling evidence suggesting the same assessment for the first three quarters of the 20th century, perhaps, due to the macroeconomic and political instabilities witnessed in so many jurisdictions.[38]

One of the lessons drawn from the banking crisis occurred in the 1930s was the prevention of commercial banks from taking on too many risks (Grauwe, Paul de., 2014). For example, the commonly referred Glass Steagall Act of 1933 in the US was intended to separate commercial banking from investment banking.

From the 1970s onwards, however, the efficient market paradigm, which appeared to be influential in favor of deregulating the financial markets, is believed to have contributed for the rise of a

[38] Germany had a relatively successful model of universal banking model during the 20th Centurry (Tilly R., 1998 & Benston, G. J., & Harland, J. 1990).

universal banking model again (Grauwe, Paul de., 2014 & Greenspan A., 2007). In Europe, for instance, the 1989 Second Banking Directive embraced the universal banking model by allowing banks to engage in diverse financial activities (Benink H., & Benston G., 2005). Similarly, the "Gramm-Leach Bliley Act" which repealed the "Glass-Steagall Act" in 1999 marked a formal endorsement of the universal banking model in the US.

According to the World Bank (2013) survey, almost all countries have a certain level of regulatory restrictions against the blending of commercial and investment functions. This measure of regulatory restrictions refers to the extent to which banks are prohibited or allowed to engage in securities, insurance, and real estate activities. As an aggregate index, this regulatory variable is constructed by summing up the three unit which uses a measure of 1 to 4: one represents permitted, two means permitted with limitation, three means tight restriction and four means prohibited (WB, 2013 & Barth et al 2013). The aggregate analysis of activity restrictions varies from the low of 3 in Switzerland to the high of 12 in Uganda, Iraq, Nicaragua and Guyana, with the average of around 7.22 of the 139 countries that responded to the World Bank survey.

Nevertheless, the question whether commercial banks should be allowed to engage in diverse "non-traditional" banking activities is still far from being setteled. Theoretical models have made conflicting predictions regarding the implication of activity restriction on the likelihood of a country experiencing a banking crisis.[39] The arguments forwarded in the literature can generally be cascaded under two headings based on their take on the relationship between activity restrictions and banking crisis. We will be discussing the two blocks in brief hereinbelow.

[39] See Barth, Caprio and Levine (2006) for an in-depth literature review on the relationship between activity restrictions and banking crisis.

3.2.1 Activity restriction-favorable outcome

The public interest view of banking regulation holds the idea that restricting banks from engaging in securities, insurance, and real estate activities is desirable in order to promote a stable banking system. According to the proponents of this view, the reasoning for restriction rests on several theoretical and empirical justifications. First, setting a barrier between banking and other commercial activities has the potential to decrease concentration and monopolization in the banking system, which in turn may reduce the creation of big financial institutions considered "too big, complex, and interconnected to fail" (Saunders A. 1994, Barth J. et al 2006, 2013 & Laeven and Levine 2007).

Second, activity restriction may reduce potential conflicts of interest (Corrigan E.G., 1987). There presents overriding concerns regarding conflicts of interest when banks are allowed to engage in diverse commercial activities which include, *inter alias,* (a) the discrimination of competitors of its commercial firm affiliate in the supply of credit; (b) the use of lending power to tie customers of the bank to the products or services rendered by its commercial firm affiliate; (c) the favorable treatment to a failing commercial firm affiliate to preserve goodwill; or (d) the disclosure of confidential information the bank has in its dealing with competitors of its commercial firm affiliate (Saunders A., 1985 & 1994, and John et al, 1994).

Third, it may also prevent riskier activities common in other sectors from infecting that of the conventional banking system (Gambacorta, L., & van Rixtel, A. A. 2013). Put differently, the affiliation of banks with a broader range of activities increases the chance that they may engage in riskier behavior and thereby exert greater costs on the deposit insurance system during times of bank failure (Boyd J. H. et al 1998, Saunders A. 1994). The concerns that allowing banks to engage

in diverse activities might bring negative consequences, as provided hereinabove, begs for a helping hand from the regulator to delimit traditional banking business from securities, insurance and real estate activities so as to promote financial stability (Barth, J. R., et al; 2004; 2006; 2013). Overall, the empirical findings in favor of this view suggest that a higher level of activity restriction leads to a lower probability of banking crisis (Čihák, M., Demirgüç-Kunt, et al, 2012, Caprio G et al 2014 & Kim et al, 2013, Hoque, H et al. 2015), a lower insolvency risk (Agoraki et al, 2009), and a higher profit efficiency (Pasiouras et al, 2009).

3.2.2 Activity restrictions-unfavorable outcome

While the "public interest view" of banking regulation associated activity restrictions with favorable outcomes, a contrasting "private interest view" argues against regulatory restrictions based on efficiency considerations. On a theoretical scale, Saunders (1994) argued that allowing banks to engage in diverse activities can expand the opportunities of economies of scale, and scope. The issue is that to the extent to which economies of scale and scope contribute to cost saving, the engagement of a bank in a range of activity lines adds to efficiency gains. Empirical assessments of the efficiency gains of scale and size in banking, however, are still far from being conclusive (Boot A. 2011).

In addition, regulatory restrictions can limit the advantages of diversification of risk and activities (Eisenbeis and Wall; 1984, Kwan and Laderman; 1999; & Laeven and Levine, 2007). There is a compelling argument in the literature, on the link between diversification and performance of banks (Iskandar-Datta, M., & McLaughin, R., 2007). We analyze the correlation among regulatory restrictions in securities, insurance, and real estate activities and the level of the diversification index across countries. The result shows that restrictions on securities activities have a negative

and significant correlation with the diversification index. As for the correlation of the insurance and real estate activities with the diversification index, the coefficients appeared negative but statistically insignificant.

Another way through which activity restrictions lead to unfavorable outcomes is the impact they may have on the overall development and stability of banks. A higher restriction on banking activities is associated with a higher government regulatory power. Arguments in favor of the "private interest view" suggest that when the power of regulatory authorities grows, the risk of corruption and rent-seeking presents itself which in turn reduces the performance and stability of banks (Barth, J. R., et al; 2004; 2013; Claessens and Klingebiel, 2000; Djankov et al., 2002). In line with this thought, there are a number of empirical works showing a higher level of activity restriction with a lower banking sector efficiency (Barth et al, 2013), a lower cost efficiency (Pasiouras et al, 2009), and a higher risk of corruption (Barth, J. R., et al; 2004 p. 4; 2013; Claessens and Klingebiel , 2000; Djankov et al., 2002).

3.2.3 Hypotheses Development

Despite the conflicting theoretical stands on the desirability of regulatory restrictions on banking activities, there are numerous empirical works which use bank-specific or cross-country data to examine the role of activity restriction and the occurrence of a banking crisis (Cihak M., et al 2013, Barth Caprio and Levine 2001, Caprio Jr. et al, 2014). As shown by Barth Caprio and Levine (2004) and Beck et al (2006), putting regulatory restrictions on bank activities tends to increase the likelihood of a country experiencing a banking crisis. This result, however, has been contested by a number of works showing the negative effect of activity restrictions on the occurrence of a

banking crisis (Laeven, L., & Levine, R. 2009, Eichler, S., & Sobański, K. 2012, Kim et al, 2013, Caprio Jr. et al. 2014, Beck, T. 2014 & Ashraf, B. N. 2017).

Two main reasons can be forwarded for the aforementioned conflicting results. First, Barth Caprio and Levine (2004) and Beck et al (2006) might have the reverse causality problem as suggested by Kim et al (2013). Both works used banking crisis data collected during the 1980s and 1990s, while the activity restriction data was from the 2003 survey.[40] Second, they might also have the effects of omitted variables.[41] Be this as it may, a regulatory restriction of banking activities has appeared consistently as a robust indicator of banking crisis over the years.

Activity restriction as a robust indicator of banking crises in prior works, however, is a cumulative measure of banks engagement in all securities, insurance and real estate activities[42]. As such, the analysis made in those works has an underlying assumption that securities, insurance and real estate activities have equal weight in causing or preventing a banking crisis. This study tests the following hypothesis to examine the effect of restricting each activity on the likelihood of developing banking crisis.

H1: activity restrictions as a cumulative measure of securities, insurance, and real estate activities lead to banking crises.

H2: Restrictions on securities activities contain a banking crisis.

[40] Barth Caprio and Levine (2004) crisis data was from the late 1980s and 1990. Similarly, Beck et al (2006) collected crisis data during 1980 to 1997.

[41] Though Barth Caprio and Levine (2004) tried to address the omitted variable issue by controlling official supervisory practices, capital regulations, moral hazard indexes and other regulatory variables, it didn't assess for concentration which appeared to be key indicator of banking crisis under Beck et al (2006).

[42] An attempt made by Barth et al (2001) to study the effect of each component of activity restrictions on bank development revealed that restricting banks from engaging in securities activities is stronger than other components.

H3: Restrictions on insurance activities contain a banking crisis.

H4: Restrictions on real estate activities contain a banking crisis.

3.3 Data, Methodology and Descriptive Statistics

3.3.1 Data

This paper uses cross-country data to examine the role of activity restriction in a banking crisis. The banking crisis data is constructed based on the updated database of Laeven and Valencia (2014). A dummy variable equal to 1 is used if the country is classified as either borderline crisis or systemic crisis.[43] The banking crisis data is collected over the period 2007 through 2011. In the period under consideration, a group of 25 countries[44] experienced a banking crisis.

Banking regulation data is constructed based on the World Bank (2013) and Barth et al (2013) database on bank regulation and supervision compiled from responses of official supervisory and regulatory authorities in 180 countries.[45] WB (2013) provides the survey questions and details of the data collection process. For the sake of comparisons between the pre and post global financial crisis period, we also make a reference to the 2007 bank regulation and supervision survey.

The overall restriction on banking activities measures the degree to which banks face regulatory restrictions on their activities in 1) securities market, 2) insurance, and 3) real estate. The index

[43] Laeven and Valencia employed two cumulative conditions to define banking crisis in a consistent manner: 1) significant signs of financial distress in the banking system (bank runs, losses and/or bank liquidations); and 2) significant banking policy intervention measures in response to significant losses in the banking system. Interventions are considered significant if at least three out of the following six measures have been used: a) extensive liquidity support; b) bank restructuring gross costs; c) significant bank nationalizations; d) significant guarantees put in place; e) significant asset purchases; and 6) deposit freezes and/or bank holidays. Borderline crises are those that almost met the definition of a systemic crisis.

[44] Refer supra note 2 for the list of countries experiencing systemic and borderline crisis from 2007 to 2011.

[45] The World Bank conducted four surveys on banking regulation and supervision which were released in 1999, 2003, 2007, and 2012.

ranges from 0 to 12, where a higher value indicates more restrictions. Similarly, securities, insurance, and real estate activities separately measure the level of restrictions by using an ordinal value of 1 to 4 where one represents permitted, two means permitted with limitation, three means tight restriction and four means prohibited (WB, 2013 & Barth et al 2013).

The occurrence of a banking crisis in a given country is considered to be the product of different factors. Accordingly, our analysis includes control variables pertaining to differences associated with other regulatory variables, such as governance quality, market structure, economic/financial freedom, and legal traditions. For the governance quality data, this paper relies on data of the World Development Indicator and the World Governance Indicator as compiled by Kaufman Daniel and Aart Kray (2015). Data on the structure of the banking system is taken from the Financial Development Indicators' of the WB. The data on the aggregate measures of economic and financial freedom was collected from the Heritage Foundations. Data on the legal origin of countries was taken from La Porta et al (1999). Data on macroeconomic indicators was collected from the World Development Indicators (WB) and the International Financial Statistics (IMF). Information on the income classification and regional classification of countries is collected from the IMF and WB respectively.

Considering the availability of data, this paper constructs a sample of 139 countries and jurisdictions for which a complete data on the variables of interest is found. The list of these countries and jurisdictions can be found in Annex II. The analysis excludes: (a) countries that did not participate in the WB fourth survey on bank regulation and supervision, (b) countries that did participate in the survey, but where one or more measure of variable of interest is not provided or missing. Nevertheless, due to missing values of one or more control variables, the effective sample

size of the numerous estimations reported in the present paper might be different. On the bright side, the different samples might be important to check sample sensitivity and to make sure that the results do not stem from mixing together heterogeneous groups of countries (Rose, A. K., & Spiegel, M. M., 2011). The data sources of all variables and description of their scale are provided in Annex I.

3.3.2 Methodology

This work employs a *probit* model to analyze the aggregated/disaggregated effect of activity restrictions on the occurrence of a banking crisis. Based on this model, the probability that a banking crisis occurs, is assumed to be a function of a vector of explanatory variables (Demirgüç-Kunt, A., & Detragiache, E., 1998 & 2005; Beck et al., 2006, Kim et al 2013). This work acknowledges that a number of regulatory, institutional or national characteristics determine the likelihood of banking crisis. With the occurrence of a banking crisis used as dependent variable, we estimate the following two models:

$$probit(y_j) = a_0 + \beta ACTREST_j + \delta x_j + \varepsilon_j \quad (1)$$

$$probit(y_j) = a_0 + \beta_1 SECREST_j + \beta_2 INSREST_j + \beta_3 RELESTREST_j + \delta x_j + \varepsilon_j \quad (2)$$

Where the subscript *j* denotes the country, y_j is the occurrence of a banking crisis in country *j*, $ACTREST_j$ is the vector of overall restrictions on banking activities, $SECREST_j$, $INSREST_j$, and $RELESTREST_j$ are vectors of restriction on securities, insurance, and real estate activities respectively. x_j is a vector of regulatory, institutional, structural, macroeconomic and other national characteristics considered to be determinants of a banking crisis as provided in the literature, and ε_j measures the error.

The correlation among the explanatory variables is checked and the result shows no serious issue of multicollinearity. The correlation coefficients of securities, insurance, and real estate activities are below 0.34, which makes it sound to include all of them simultaneously in the model. Some of the country specific controls of governance quality, economic freedom and macroeconomic variables are generally highly correlated but they do not *per se* affect the coefficients of the variables of interest (Wooldridge J., 2013). The different estimates, however, show no difference concerning the value of the variable of interest. In addition to the country and sector specific controls employed, we also checked the endogeneity problem that may emanate from reverse causality or omitted variable problem in the estimation analysis. This will be discussed in section 3.4.3

3.3.3 Descriptives

Barth et al (2013) reported that 80 percent of the countries tightened activity restriction following the 2008 financial crisis by aggregating four non-traditional banking activities: securities, insurance and real estate activities, and the permissibility of banks owning non-financial firms. This assertion, however, doesn't reflect the actual regulatory trend of securities, insurance and real estate activities. In fact, with respect to the three activities we found that 63 percent of the countries that responded to the Bank Regulation and Supervision Survey have eased restrictions in the aftermath of the crisis.[46] (see Table 1 for the disaggregated count).

[46] The following countries ease activity restrictions following the late financial crisis: Angola, Argentina, Australia, Austria, Bahrain, Belarus, Belize, Benin, Bhutan, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Burundi, Chile, China, Colombia, Cook Islands, Costa Rica, Côte d'Ivoire, Cyprus, Dominican Republic, Ecuador, El Salvador, Ethiopia, Fiji, Finland, Gambia, Ghana, Gibraltar, Guatemala, Guernsey, Guinea-Bissau, Honduras, Hungary, Iceland, Indonesia, Ireland, Italy, Jamaica, Jersey, Kenya, Kuwait, Latvia, Lebanon, Lithuania, Macao, China, Malawi, Malaysia, Maldives, Mali, Morocco, Mozambique, Niger, Norway, Pakistan, Panama, Peru, Portugal, Romania, Russia, Senegal, Slovenia, South Africa, Sri Lanka, Suriname, Switzerland, Tajikistan, Tanzania, Thailand, Togo, Trinidad and Tobago, Venezuela, and Virgin Islands, British (WB, 2013).

Table 1: Activity restrictions before and after the late financial crisis

	Activity restriction after the 2007/8 crisis compared with pre crisis period	count of countries/jurisdictions
Real estate activities	Tighter	24
	No change	63
	Ease	34
jointly defined		121
securities activities	Tighter	17
	No change	56
	Ease	42
jointly defined		115
Insurance activities	Tighter	15
	No change	43
	Ease	59
jointly defined		117
Overall restriction	Tighter	20
	No change	21
	Ease	74
jointly defined		115

Since a tighter restriction of banking activities may "sacrifice the profitability and competitiveness of the banking industry", the higher share of easing restriction observed following the crisis could be a way to resurrect banks from the ashes of the crisis (Baradaran, M. 2014). Besides, the "Gramm-Leach Bliley Act" which officially repealed the "Glass-Steagall Act" in 1999 in view of making US banks more competitive with their counterparts in mainland Europe and Japan might have also sent a signal to other countries mimicking the US model that easing restriction is a favorable approach. Last, the easing of restriction could also be associated with the adoption of Basel II in a large number of countries. In this regard, the negative significant association between the Basel II adoption and the activity restriction variable reported by Hui L. et al (2017) lends to the justification that banks were allowed to engage in broader activities to diversify their income.

The easing of regulatory restrictions on banking activities, however, was not the same across the board. A t-test conducted to examine the differences between the pre and post crisis regulatory restrictions on banking activities shows that changes with respect to real estate and insurance activities were significant.

Table 2: T-tests to examine differences between the pre and post crisis regulatory restrictions of banking activities.

Variable	Average index for 2007	Average index for 2011	p-value
securities activities	1.841379	1.80292	0.7374
Real estate activities	3.197368	2.868613	0.0099***
Insurance activities	3.205479	2.528986	0.0000***
overall activity restriction	8.280822	7.223022	0.0000***

Securities, insurance, and real estate activity restrictions take values from 1 to 4 where one represents permitted, two means permitted with limitation, three means tight restriction and four means prohibited. The test is used to examine the equality of means between the 2007 survey and the 2011 survey. significance at *p<0.1, **p<0.05, and ***p<0.01.

As has been pointed out in the previous section, the occurrence of a banking crisis in a given country is a product of different factors, and activity restriction is one among the many. The present paper essentially relies on the prevailing literature specifying the determinants of banking crisis in constructing the explanatory variables included in the regression (Kaminsky and Reinhart, 1999, Demirgüç-Kunt, A., & Detragiache, E. 1998, Beck T., et al 2006, Barth, J. R., Caprio Jr, G., & Levine, R. (2001a), 2004, 2006, 2009, 2013, Laeven, L., & Valencia, F. (2014). Some summary statistics of variables are provided in Table 3.

Table 3: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
CRISIS	139	0.133333	0.340883	0	1
ACTREST	139	7.223022	2.053781	3	12
SECREST	139	1.827338	0.939689	1	4
INSREST	139	2.539568	0.827658	1	4
REALESTREST	141	2.851064	1.075282	1	4
ENTRY	143	7.816184	0.457954	5	8
DIVERSIFICATION	141	1.397163	0.642311	0	2
CAPITALREGU	140	7.332143	1.719138	2	10
PVTMONT	115	7.826087	1.384506	4	11
GOVTOWN	118	15.31059	18.05602	0	73.7
OFFICIALSUP	142	10.73541	2.439395	5	14
CONCENTASSETS	122	71.88992	19.96701	14	100
FUNDINGDEPO	67	44.99224	30.3159	0	100
CONCENTDEPOS	121	71.18397	19.48129	11.6	100
INFLATION	130	7.702231	8.55791	-1.7	71.18
GDPGR	160	3.289747	4.76646	-12.6738	27.46172
BANK_ROA	161	1.52354	2.1352	-9.53	16.71
ECOFREEDOM	156	61.34615	10.06969	28.6	89.3
FINANCFREEDOM	157	51.40127	17.99069	10	90
KKZ_GOVNCE	162	0.000369	0.913349	-1.86713	1.933254
GDPPC	167	2.148912	2.718778	-7.83746	10.80032
POLISTAB	162	-0.02664	0.969745	-1.86612	1.987613
REGQUAL	162	0.034972	0.956841	-2.21237	2.004851

Note: See Annex I for variable description

3.4 Results and Discussions

3.4.1 Main results

We start with the effect that activity restriction as an aggregate measure has on the banking crisis. In the estimations made under Table 4, activity restriction enters all of the regressions with a negative and significant value. We made different estimations for a variety of samples, in view of

Table 4: banking crisis, regulation, structural and macroeconomic variables, and activity restrictions

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
ACTREST	-0.0666***		-0.0972***		-0.0886***		-0.0917***		-0.101***	
	(0.0166)		(0.0198)		(0.0189)		(0.0198)		(0.0257)	
ENTRY			0.0543	0.0690	-0.0170	0.00103	-0.00620	0.0135	0.0173	0.0365
			(0.0751)	(0.0661)	(0.0663)	(0.0656)	(0.0644)	(0.0646)	(0.0565)	(0.0593)
DIVERSIFICATION			0.0243	0.0234	0.00602	0.0239	0.00863	0.0198	-0.00550	-0.00244
			(0.0542)	(0.0575)	(0.0653)	(0.0698)	(0.0693)	(0.0819)	(0.0567)	(0.0602)
CAPITALREGU			-0.00388	-0.00587	-0.0126	-0.0113	-0.0175	-0.0205	-0.00426	-0.00472
			(0.0176)	(0.0177)	(0.0271)	(0.0294)	(0.0276)	(0.0294)	(0.0192)	(0.0208)
PVTMONT			0.0701**	0.0752**	0.0961*	0.111*	0.108*	0.132**	0.0602**	0.0643**
			(0.0300)	(0.0326)	(0.0568)	(0.0606)	(0.0553)	(0.0663)	(0.0285)	(0.0316)
GOVTOWN			-0.0002	-0.0008	0.00019	0.0007	0.0006	0.0014		
			(0.0025)	(0.0030)	(0.0031)	(0.0035)	(0.0035)	(0.0039)		
OFFICIALSUP			0.0107	0.0129	-0.0275	-0.0213	-0.0281	-0.0258	-0.00269	-0.00550
			(0.0175)	(0.0167)	(0.0245)	(0.0232)	(0.0259)	(0.0245)	(0.0239)	(0.0250)
SECREST		-0.156**		-0.207**		-0.165*		-0.214*		-0.167*
		(0.0656)		(0.0821)		(0.0875)		(0.115)		(0.0879)
INSREST		-0.0373		-0.0504		0.0219		-0.0119		-0.0209
		(0.0338)		(0.0451)		(0.0723)		(0.0708)		(0.0604)
REALESTREST		-0.0543**		-0.0932***		-0.124***		-0.112***		-0.109**
		(0.0221)		(0.0320)		(0.0461)		(0.0405)		(0.0432)
CONCENTDEPOS					-0.0007	-0.0012				
					(0.0025)	(0.0024)				
FUNDINGDEPO					0.0049***	0.0053***	0.0053***	0.0062***		
					(0.0016)	(0.0013)	(0.0014)	(0.0013)		
CONCENTASSETS							0.00243	0.00339	-0.0043	-0.0049
							(0.0026)	(0.0032)	(0.0030)	(0.0033)
INFLATION									-0.0194	-0.0203*
									(0.0125)	(0.0120)
GDPGR									-0.0215**	-0.0136
									(0.0099)	(0.0119)
BANK_ROA									-0.0149	-0.0058
									(0.0223)	(0.0232)
Observations	139	139	97	97	58	58	58	58	75	75
Pseudo R square	0.1571	0.1873	0.2470	0.2889	0.3238	0.3700	0.3316	0.3808	0.3577	0.3828

The coefficient estimates are transformed to represent the marginal effects. Robust Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5: banking crisis, activity restrictions, and more national characteristic controls

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SECREST		-0.139**		-0.154**		-0.145**		-0.0942		-0.0764*
		(0.0640)		(0.0725)		(0.0728)		(0.0578)		(0.0432)
INSREST		-0.0500		-0.0334		-0.0461		-0.0518		-0.0705
		(0.0394)		(0.0431)		(0.0422)		(0.0385)		(0.0438)
REALESTREST		-0.0514**		-0.0554**		-0.0493**		-0.0338*		-0.0395*
		(0.0257)		(0.0241)		(0.0232)		(0.0205)		(0.0221)
1.BRITISH	-0.154	-0.122								
	(0.119)	(0.118)								
1.FRENCH	-0.115	-0.0875								
	(0.145)	(0.144)								
1.GERMAN	-0.0160	0.0109								
	(0.145)	(0.170)								
1.SOCIALST	-0.0577	-0.0553								
	(0.121)	(0.122)								
ACTREST	-0.0656***		-0.0667**		-0.0636**		-0.0478***		-0.0536***	
	(0.0168)		(0.0270)		(0.0251)		(0.0183)		(0.0183)	
ECOFREEDOM			0.00381	0.00316						
			(0.00481)	(0.00360)						
FINANCFREEDOM					0.00298	0.00249			-0.00447*	-0.00465
					(0.00318)	(0.00205)			(0.00267)	(0.00295)
KKZ_GOVNCE							0.121***	0.119***		
							(0.0377)	(0.0324)		
INFLATION									0.0136	0.0132
									(0.0138)	(0.0144)
GDPGR									-0.00692	-0.00748
									(0.00626)	(0.00564)
GDPPC									-0.0152	-0.0152
									(0.0195)	(0.0190)
POLISTAB									0.0117	0.0129
									(0.0572)	(0.0563)
REGQUAL									0.205**	0.204**
									(0.0887)	(0.0901)
Observations	131	131	125	125	126	126	126	126	122	122
Pseudo R square	0.2083	0.2257	0.1842	0.2112	0.1936	0.2144	0.3459	0.3556	0.4180	0.4232

The coefficient estimates are transformed to represent the marginal effects. Robust Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

checking the sensitivity of the estimation. Regression (1) and (2) shows the results of the aggregated and disaggregated activity restrictions respectively, without including other explanatory variables. Regression (3) and (4), reports the results when including the main banking regulatory variables. The restriction on banking activities and private monitoring variables, consistently enters the regression with a significant effect on the likelihood of developing a banking crisis. Columns (5) to (10) present the results when including the different regulatory, structural, and macroeconomic control variables. Despite the variation of the effective sample size of the different estimations, results for activity restriction remain the same. Incidentally, it is also worth noting that the proxy for the existence of moral hazard (*FUNDINGDEPO*) enters with a positive and significant value, supporting the prevailing literature on the danger of moral hazard on the occurrence of a banking crisis.

The overall estimation provided under Table 4 supports to the minimum two important views. First, the consistent negative and significant association between activity restrictions and the occurrence of a banking crisis supports the prevailing consideration of activity restriction as a robust indicator in the analysis of a banking crisis. Second, the restriction of banks from engaging in securities, insurance, and real estate activities does not have equal weight in mitigating a banking crisis. In specific terms, the results offer no support to the view that allowing banks to engage in insurance activities induces a banking crisis.

Table 5 illustrates the effects of activity restrictions on a banking crisis, by including governance quality, legal origin, and other national characteristics. The results are consistent with the analysis of Table 1 suggesting that restricting banks from insurance activities plays an insignificant role in mitigating the likelihood of a country experiencing a banking crisis. A higher financial freedom

mitigates the likelihood of crisis at 10 percent significance. Somewhat surprisingly, coefficients of the variable *KKZ_GOVNCE* are positive and significant, suggesting that countries presenting a higher regulatory quality were more likely to go through a banking crisis between 2007 and 2011. This result is consistent with Caprio Jr. et al (2014) and could be justified by the prevalence of the late crisis in high-income countries with a better score of rule of law, regulatory quality, and other governance indicators.

3.4.2 More on Robustness

So far in the analysis, the binary measure of a banking crisis which is prevalent in the literature has been used. Taking the value of one for the occurrence of crisis and zero otherwise could cloud the distinction between systemic and borderline crisis since both scenarios are treated alike. In order to test the sensitivity of our estimation to the varying intensity of a banking crisis, we employed a different ordinal measure of banking crisis which takes the value of two if the country went through a systemic banking crisis, one for borderline crisis and zero otherwise[47] (Laeven and Valenica, 2012).

Table 6 columns 1-4 show the ordered *probit* estimation of a banking crisis for the period 2007-2011. Results for activity restrictions essentially remain unchanged after the introduction of a distinction between a borderline and a systemic banking crisis. The result reinforces the claim expressed in this paper that restricting banks from engaging in securities, insurance, and real estate activities does not have a similar effect in mitigating a banking crisis.

[47] A group of 25 countries experienced banking crisis between 2007 and 2011, of which eight were borderline crisis. See Laeven and Valencia, 2012 for the list of countries and detail parameters to distinguish systemic and borderline banking crisis.

Table 6: ordered probit specifications.

VARIABLES	oprobit	oprobit	oprobit	oprobit	ivprovit	ivprobit
SECREST	-1.834**	-0.930*	-1.297**	-0.996*		
	(0.860)	(0.483)	(0.560)	(0.549)		
INSREST	-0.426	-0.389	-0.211	-0.417		
	(0.342)	(0.350)	(0.512)	(0.516)		
REALESTREST	-0.816***	-0.374*	-0.484*	-0.454*		
	(0.304)	(0.192)	(0.279)	(0.255)		
ACTREST					-0.610***	-0.567***
					(0.0724)	(0.109)
ENTRY	0.397				0.0943	
	(0.551)				(0.123)	
DIVERSIFICATION	-0.0204				-0.175	
	(0.482)				(0.227)	
CAPITALREGU	0.00949				0.0718	
	(0.153)				(0.0617)	
PVTMONT	0.713***				0.214**	
	(0.239)				(0.0915)	
GOVTOWN	-0.0100				0.000517	
	(0.0216)				(0.00538)	
OFFICIALSUP	0.0713				0.0793**	
	(0.129)				(0.0372)	
KKZ_GOVNCE		1.322**				
		(0.549)				
ECOFREEDOM			0.0319			
			(0.0373)			
INFLATION				0.216*		-0.0215
				(0.129)		(0.0528)
GDPGR				-0.0617		-0.0551***
				(0.0649)		(0.0176)
RULELAW				0.368		0.113
				(0.728)		(0.292)
REGQUAL				1.778***		-0.255
				(0.684)		(0.654)
FINANCFREEDOM						-0.00872
						(0.0150)
GDPPC						0.0692
						(0.0658)
Constant cut1	5.334	-1.048	-0.0180	0.271		
	(5.225)	(1.443)	(2.943)	(0.888)		
Constant cut2	6.096	-0.355	0.543	0.976		
	(5.206)	(1.473)	(2.928)	(0.852)		
Observations	97	126	125	125	87	117
Pseudo R2	0.2315	0.2858	0.1686	0.3187		

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

3.4.3 Endogeneity

In addition to the different sample sensitivity estimations, we also checked the endogeneity problem that may emanate from reverse causality or omitted variable problem. Given the sample period taken for analysis, one can make a convincing case that the reverse causality is not a pressing issue in the analysis at hand. Though banking crisis trigger regulatory reforms, by and large, regulations were not imposed in the wake of the crisis. The "Volker rule", which tightens activity restriction in the US, is a good instance in this regard. The rule adopted as part of the "Dodd-Frank Act" in 2010 was expected to be effective by July 21, 2012. However, the full implementation has been extended until July 21, 2017 (FRB; 2016). Similarly, structural banking reforms with respect to activities in Europe came in the forefront after the publication of the Liikanen report in 2012 (Gambacorta, L., & van Rixtel, A. A. 2013). As such, the possibility of reverse causality would not be a pressing issue.

An omitted variable problem could exist, however. In the area of banking regulation and development, the existing literature considers a number of possible instrumental variables for institutional quality, which includes, *inter alia* , legal origin, average latitude, and ethnic fractionalization (Acemoglu et al. 2001, Beck et al, 2006, Barth et al., 2009, Barth et al, 2013b, Houston et al, 2011, & T.Kim et al, 2013). We use the average latitude and ethnic fractionalization as an instrument however the regression did not find their endogeneity. The results of the instrumental variables regression are reported in Table 6 columns 5 and 6.

3.5 Conclusion

Although there is a growing literature on the use of activity restriction as a conventional robust indicator of a banking crisis, little attention is given to the actual impact of its component units-

securities, insurance, and real estate activities. The present paper separately examines the extent to which banks face regulatory restrictions in securities, insurance, and real estate activities so as to have a higher degree of confidence in assessing their effect on the likelihood of developing a banking crisis. Such an approach would be one that corrects (unverified) inferences about the nature of component units based upon the nature of an aggregate measure to which the units belong.

Based on our analysis, activity restriction as an aggregate measure enters all estimations with a negative and significant value, suggesting that a higher restriction might mitigate the likelihood of a country experiencing a banking crisis. This result is not new to the body of cross country research on systemic banking crisis. The disaggregated estimation of activity restriction, however, revealed that only securities and real estate activities appeared to have a similar effect to that of the aggregate measure. The impact of restricting banks from conducting insurance activities appeared to be insignificant in our cross-country analysis. This result brings in perspective the deficiencies of the aggregated regulatory variable of activity restriction in capturing the true nature of the indexed units- securities, insurance, and real estate activities.

Furthermore, the results of this paper give a pause to the numerous research works providing an over generalized policy prescription of tightening or loosening non-traditional banking activities across the board. Perhaps the aggregated measure of activity restriction is suitable for empirical analysis to service the main theories of banking regulation and supervision. But the interpretation of its aggregate measures shall not be taken for granted as it may lead to distorted conclusions. The implications of this approach go beyond understanding the actual impact of securities, insurance, and real estate activities on the likelihood of a country experiencing a banking crisis.

The banking development and efficiency literature which commonly uses the aggregate measure of activity restrictions might have also suffered from biased estimations.

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Annex I: Variable Description

Variables	Description	
CRISIS	Refers to banking crisis between 2007 and 2011. Dummy equal to 1 if the country is classified as either borderline crisis or systemic crisis and 0 otherwise. Based on the classification of Laeven and Valencia (2014); Laeven and Valencia (2012)	*Dependent variable*
ACTREST	Overall activity restriction index that measures the degree to which banks face regulatory restrictions on their activities in 1) securities markets, 2) insurance, and 3) real estate. The index ranges from 0 to 12 (Higher values indicate more restrictive.) The World Bank, 2013, & Barth et al, 2013	*Hypothesis*
SECREST	The extent to which banks may engage in underwriting, brokering and dealing in securities, and all aspects of the mutual fund industry. The World Bank, 2013, & Barth et al, 2013	*Hypothesis*
INSREST	The extent to which banks may engage in insurance underwriting and selling. The World Bank, 2013, & Barth et al, 2013	*Hypothesis*
REALESTREST	The extent to which banks may engage in real estate investment, development, and management. The World Bank, 2013, & Barth et al, 2013	*Hypothesis*
ENTRY	Whether various types of legal submissions are required to obtain a banking license. Composite of eight requirements. The World Bank, 2013, & Barth et al, 2013	*Control*
DIVERSIFICATION	Whether there are explicit, verifiable, quantifiable guidelines for asset diversification and banks are allowed to make loans abroad. (Higher values indicate more diversification.) The World Bank, 2013, & Barth et al, 2013	*Control*
CAPITALREGU	Summary measure of capital stringency: 1) whether the capital requirement reflects certain risk elements and deducts certain market value losses from capital before minimum capital adequacy is determined; and 2) whether certain funds may be used to initially capital a bank and whether they are officially verified. The World Bank, 2013, & Barth et al, 2013	*Control*
PVTMONT	Measures whether there are incentives/ ability for the private monitoring of banks, with higher values indicating more private monitoring. The World Bank, 2013, & Barth et al, 2013	*Control*

GOVTOWN	The extent to which the banking system's assets are government-owned. (government-owned banks defined as banks in which the government owns 50 percent or more of the shares) The World Bank, 2013, & Barth et al, 2013	*Control*
OFFICIALSUP	An index of 10 survey questions to measure whether the (banking) supervisory authorities have the authority to take specific actions to prevent and correct problems. The World Bank, 2013, & Barth et al, 2013	*Control*
CONCENTDEPOS	The degree of concentration of deposits in the five largest commercial banks. The World Bank, 2013, & Barth et al, 2013	*Control*
CONCENTASSETS	The degree of concentration of total assets in the five largest commercial banks. The World Bank, 2013, Barth et al, 2013	*Control*
FUNDINGDEPO	Funding with insured deposits, a proxy measure to which moral hazard exists. (Higher values indicate more moral hazard.) The World Bank, 2013, & Barth et al, 2013	*Control*
LEGALORIGIN	Identifies whether the legal origin of the Company Law or Commercial code of a given country is *ENGLISH* Common Law, *FRENCH* commercial code, *GERMAN* Commercial Code, or *SOCIALIST*/Communist Laws. La Porta et al 1999	*Control*
ECOFREEDOM	Composite of 10 specific institutional factors, some as composites of even further detailed and quantifiable components: business freedom, trade freedom, fiscal freedom, freedom from government, monetary freedom, Investment freedom, Financial freedom, Property rights, Freedom from corruption, and Labor freedom. Averaged over 2007-11 periods. Heritage Foundation	*Control*
FINANCFREEDOM	measures the relative openness of each country's banking and financial system by determining: the extent of government regulation of financial services; the extent of state intervention in banks and other financial services; the difficulty of opening and operating financial services firms (for both domestic and foreign individuals); and government influence on the allocation of credit. The country's financial climate is measured as an overall score between 0 and 100, where 100 represent the maximum degree of financial freedom. Heritage Foundation	*Control*
KKZ_GOVNCE	Composite of six governance indicators (2011 data): voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and corruption. Individual factors are weighted equally to determine overall score of economic freedom.	*Control*

	Higher values correspond to better governance outcomes. World Bank – Governance Indicators (Kaufmann et al 2012) & Teorell, Jan, Marcus Samanni, Sören Holmberg and Bo Rothstein. 2011. The Quality of Government Dataset, version 6Apr11. University of Gothenburg: The Quality of Government Institute, http://qog.pol.gu.se	
INFLATION	Inflation, as measured by the annual growth rate of the GDP implicit deflator shows the rate of price change in the economy as a whole. The GDP implicit deflator is the ratio of GDP in current local currency to GDP in constant local currency. Averaged over 2007-2011 periods. World Bank national accounts data, and OECD National Accounts data files.	*Control*
GDPPC	Annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. Averaged over 2007-2011 periods. World Bank national accounts data, and OECD National Accounts data files.	*Control*
GDPGR	Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. Averaged over 2007-2011 periods. World Bank national accounts data, and OECD National Accounts data files.	*Control*
BANK_ROA	Annual mean of return on assets (net income to total assets). Čihák, M, et al, 2012b.	*Control*

Annex II

Angola
Argentina
Armenia
Australia
Austria
Bahrain
Bangladesh
Belarus
Belgium
Belize
Benin
Bhutan
Bosnia and Herzegovina
Botswana
Brazil
Bulgaria
Burkina Faso
Burundi
Canada
Cayman Islands
Chile
China
Colombia
Cook Islands
Costa Rica
Côte d'Ivoire
Croatia
Cyprus
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Estonia
Ethiopia
Fiji
Finland
France
Gambia
Ghana
Gibraltar
Greece
Guatemala
Guernsey
Guinea-Bissau
Guyana
Honduras
Hong Kong, China
Hungary
Iceland
India
Indonesia
Iraq
Ireland
Isle of Man
Israel
Italy
Jamaica
Jersey
Jordan
Kenya
Korea, Rep.
Kosovo
Kuwait
Latvia
Lebanon
Liechtenstein
Lithuania
Luxembourg
Macao, China
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Mauritius
Mexico
Moldova
Montenegro
Morocco
Mozambique
Myanmar
Namibia
Nepal
Netherlands
New Zealand
Nicaragua
Niger
Nigeria
Norway
Oman
Pakistan
Palestinian Territory
Panama
Paraguay
Peru
Philippines
Poland
Portugal
Puerto Rico
Qatar
Romania

Russia

Samoa (Western)

Senegal

Serbia

Seychelles

Sierra Leone

Singapore

Slovakia

Slovenia

South Africa

Spain

Sri Lanka

Suriname

Swaziland

Switzerland

Syria

Taiwan

Tajikistan

Tanzania

Thailand

Togo

Tonga

Trinidad and Tobago

Tunisia

Turkey

Uganda

Ukraine

United Arab Emirates

United Kingdom

United States

Uruguay

Vanuatu

Venezuela

Virgin Islands, British

Yemen

Zimbabw