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ORIGINAL ARTICLE

The regulators' dilemma and the global banking regulation: the case of the dual financial systems

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Abstract
This paper aims to contribute to the literature debate on the regulators' dilemma affecting international financial regulations focusing on the banking regulation of dual financial systems. In this regard, the paper provides a new taxonomy of Islamic Financial Systems considering the banking regulation as a driver for the classification and a more detailed definition of dual financial systems. The literature review reveals the existence of different financial system structures affected by socio-cultural biases due to different characteristics of various countries and financial systems globally. The risk of regulatory arbitrage or over-regulation phenomena is high, stifling the growth and the level playing field for both some systemically financial systems.

Keywords Banking regulation · Basel framework · Islamic bank · Islamic practices · Governance standards

JEL Classification G01 · G21 · G28 · K22

Introduction

Regulation is necessary, particularly in a sector, like the banking sector, which exposes countries and people to a risk.
Christine Lagarde, International Monetary Fund Chair, 2011

Banks move in a rich and highly controlled environment facing, at the same time, the evolution of the existing framework and ever new changes due to the revolution in the way of banking. Generally, the net benefit of regulation for both micro- and macro-level, direct and indirect, is positive, justifying the existence of regulation itself. According to Kern [48], the public interest theory of regulation suggests that policy and regulatory intervention can be undertaken to face negative externalities arising from market distortion and regulatory arbitrages. On the opposite, Stigler (1971), belonging to the private interest theory, believes "*regulation is designed and operated by industry primarily for its own benefit*". Thus, banking regulation is undoubtedly necessary to ensure the equal level playing field inside and between financial systems, guarantee the banking systems soundness and resilience, and the ordered outgrowth of developing countries and emerging economies [23, 49, 53]. In this regard, more than twenty years have passed since the first wave of global banking regulatory reforms has profoundly changed the regulatory landscape, and a lot has happened. The last global financial crisis revealed the financial system regulatory and supervisory framework's weaknesses worldwide, and the global banking system *un-resilience* [36, 45]. The crisis also highlighted the need to complement micro-prudential banking regulation with a macro-prudential regulation designed to address systemic risks and the imperative to converge towards a global regulatory framework [21]. By the way, there is no doubt that after the financial downturn in 2008, the set of strict rules to comply has improved banks'

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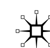


capacity to absorb losses and face liquidity turmoil. Banks are more resilient to unexpected events and potential downturns than in the past.

Undercapitalised and poorly supervised banks led to excessive risk-taking, often using speculative and highly volatile financial products [6, 60, 66]. For a long time, deregulation and liberalisation have contributed to creating a riskier financial system, as proven by empirical evidence [31]. Nevertheless, the banking systems' brittleness must be pursued right in this essence of the primary banking activity, the collection of savings, and credit granting. Hence, the banks are imperfect due to their primary scope of assuming and managing risks. It is necessary to find the right balance between capital requirement and profitability [70, 8, 34, 72]. As international Basel banking standards, the international soft regulation could have a different impact than those expected without preserving banking systems from systemic risk, and the last financial crisis is self-evident. It has raised scepticism about the effectiveness of existing approaches and the relationship between good regulation and bank soundness with no clear evidence that a set of common international standards is universally appropriate. Recent debates on financial regulation theory suggest that policy and regulatory intervention could generate systemic distortions if not properly calibrated (27). Following the level playing field's aim, new macro- and micro-prudential approaches have to consider *socio-cultural* bias and regulatory bias linked to domestic underpinnings, local Governance, financial system or economic conditions. Two issues linked together are quickly detectable. Firstly, Basel members have chiefly developed countries with highly advanced financial systems. It implies that the Basel Committee on Banking Supervision (BCBS) failed to produce effective regulations and supervision since Basel members developed international regulations without consulting developing countries and emerging economies, not members of the Basel Committee [48]. On the other side, international financial soft law, as international Basel standards, affects the domestic regulatory system amending national regulation practice. Countries as “Basel observers” could not fully receive international standards contributing to generating regulatory arbitrage phenomena since financial institutions could be interested in operating in those countries weakly regulated, creating financial instability conditions and sloppy outgrowth.

Therefore, some observations raise considering different financial system ranges influenced by different countries' histories and domestic legal and institutional frameworks. The Islamic Financial System (IFS) is one of them since it refers to financial activities guided by Islamic law fundamentals (*Shariah*) [37]. *Shariah* refers to *“a code of law or divine injunctions that regulate the conduct of human beings in their individual and collective lives”* [9]. Thus, the Islamic finance model is rooted in different principles and characteristics than the conventional one (*socio-cultural* bias). Considering the IFS, some biases and issues arise, nourishing a different perspective of the regulators' dilemma and contributing to the literature debate. Notably, the regulator’s dilemma concerns the conflict between the international banking framework proposed by BCBS (universally adopted) and the domestic banking law in force within different countries, leading to regulatory bias, gaps, or *over-regulation* [7]. Basel banking principles and standards have been thought and built for the “conventional” and “western” financial system implementation and main developed countries [43, 44, 74]. As mentioned before, these standards' impact could be different from those attended due to the different underpinnings of single banking systems as those dominated by ethical and religious constraints. These distortions are amplified in those financial systems characterised by parallel regulation, as the Islamic ones, where the domestic conventional banking law coexists together an Islamic one governing the Islamic banking business, activities, services, and products, already suffering a domestic problem of standardisation. Globally, the regulatory conflict is dominated on the one hand by the need of Islamic banks, ever more globalised, to be compliant with Basel regulation universally accepted but *conventional* designed.

On the other hand, Islamic countries and regulatory authorities push banking systems to comply with the Islamic standardisation process [7]. Thus, the typical *top-down* approach of international soft regulation should increase regulatory bias and gaps and an *over-regulation* risk, increasing the vulnerability and stifling the growth and the level playing field for both some systemically financial systems as the Islamic one but also globally [43]. According to Beck et al. (2003) [15], these observations draw the attention to two theories historically affected by financial development: the endowment theory, which emphasises *the roles of geography and the disease environment in shaping institutional development* and the law and finance theory which is based on country’s legal tradition [7]. Law and finance supporters believe that *historically determined legal tradition differences help explain international differences in financial development.* In this context, the dual financial systems architecture study offers a different perspective representing a deal-breaker for the regulator’s dilemma. Although the literature does not provide a uniform and shared definition of a dual financial system, a first definition refers to those systems where a double regulation is in force, splitting the financial system architecture. However, several studies in the 1980s and 1990s provided different definitions of dual financial systems dealing with monetary and other regulatory policies according to the McKinnon [50] and Shaw model [64], highlighting the importance of an effective financial system to economic development. In particular,

Shanin [62] examined the relationship between monetary policy instruments and the unorganised loan rate since the unorganised loan markets (as a form of informal financial markets) influence monetary policy instruments' functioning above all in many less developed countries. More recently, Nguyen and Canh investigated small businesses' financing decisions distinguishing formal and informal finance. Hence, dual financial systems include formal and informal financial markets, as Kapur [46] defined. Financial dualism involves the coexistence of formal and informal financial systems developed in low-income countries (Sham and Atieno, 2001). In this regard, in the last 25 years, there have been many attempts to include several informal financial markets into the formal financial system. According to the Financial Action Task Force (FATF) recommendation (2017) and Shahin and El-Achkar [63], *"by increasing financial inclusion, a proportionate approach can reduce the scope of transactions conducted through the informal financial system, away from regulatory and supervisory oversight"*, aiming at reducing financial dualism.

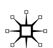
Nowadays, many countries worldwide adopt a different framework to regulate the financial system, considering the financial dualism from the regulatory perspective (as in the USA, where national and state banks are chartered and supervised differently). However, the dual financial system's peculiarity is the unbundling of the whole system and single components. The Islamic Financial System represents a good landscape to study the regulator's dilemma in this background. Referring to the Islamic Financial System, in 2019, the IMF [42] first defined a *dual* system, *where both conventional deposit-takers and Islamic Deposit Takers coexist,* including stand-alone entities, subsidiaries of conventional banks or "Islamic Windows". The last paragraph reveals some bias that may be self-evident above all in those financial systems as the IFS founded on *ethical-religious* underpinnings. Overcoming the regulatory, *socio-cultural*, and country bias, this paper provides a new taxonomy focusing on the dual financial systems from a banking regulatory perspective. Thus, this paper aims to contribute to current literature about the international banking regulation and the regulators' dilemma since the banking systems constitute a column of the global financial system and intermediation. As said before, the IFS is a good proxy since many countries have double banking laws to regulate the Islamic and conventional banking systems. According to Zaher and Hassan [74], which summarises the Organization of Islamic Cooperation (OIC) countries' existing regulation and following the IMF [42] mapping of the IFS architectures, the taxonomy selects a sample of countries considering each banking/financial system's fundamental elements. It starts with the domestic banking law and regulation systematically reviewing and examining them, considering their relationship with the Basel Committee affiliation (applying the Basel Committee's Core Principles) and the financial system architecture too. Thus, considering the regulatory driver, a more accurate financial system taxonomy could help policymakers fathom the effects of international regulation, such as banking soft-regulation. The taxonomy captures endogenous variables affecting the international standards and fuelling the regulators' dilemma. In this way, this paper aims to contribute to reshaping the international regulatory *top-down* approach and debate from a different perspective.

The remainder of this paper is organised as follows. Section 2 presents the literature and regulation background focusing on international regulation principles and Islamic Financial System's main features, and Sect. 3 presents the financial system taxonomy. Section 4 presents the discussion of the taxonomy with some observations. Finally, we highlight and discuss the main findings, implications, and future remarks in the conclusions section.

Literature and regulation background

Principles of international financial regulation

The international financial architecture is founded on a balance between essential elements. In this brittle balance, regulation and prudential supervision of banks and financial intermediaries, in general, play a challenging but significant role [17, 61]. The frequency and severity of the global financial crisis (firstly the most famous 2007–2008 and then the sovereign debt crisis in Europe in 2011) have fuelled calls for a radical change in the whole global banking and financial system. Banking regulation has to prevent a bank's failure to spread to healthy institutions and protect and reassure bank depositors. Therefore, the international regulation and supervision approach followed by the Bank for International Settlement (BIS) and by its committee (BCBS) could be and is today the most promising [13, 59]. The goodwill has conceived these international agencies to develop financial stability, adopting measures to improve the system and financial markets ([30], BCBS—BIS, 1974), promoting cooperation between central banks and other equivalent agencies. Inevitably, new banking regulation affects profitability, especially with more attention to capital requirements [54]. Consequently, it follows that financial regulation has increased significantly, leading the way towards the best stable, efficient, and resilient financial system. However, it is hard to understand if the regulation will ever eliminate the odds of a future crisis. The literature is increasingly focusing on the impact analysis of the new Basel regulatory standards on banking systems, regarding their influence in the risk and regulatory capital management [4, 18, 19, 28, 75]. The biggest challenge for prudential supervision remains to create an ideal financial system. According to Merton



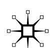
[51], following the *functional perspective* in the financial intermediation analysis, it is crucial to recognise the best institutional structure to perform the related economic functions. The financial functions are more stable than financial institutions, which can change across countries' histories and their legal and law institutional framework.

Nevertheless, the financial institutions' competition (in bank business, for example) could cause a change in the institutional structure, contributing to improving the financial system's efficiency. Finally, Merton believed that the most efficient institutional structure for fulfilling the financial system's functions generally changes over time *differs across the geopolitical subdivision.* Indeed, it is not simple or maybe possible to find the answer since an "*all-season"* efficient system, for all different financial architecture, might not exist.

Into the dual financial system: the islamic financial system

In 2016, the Financial Stability Board classified Islamic Banking as systemically important since it operates in more than 60 countries and 14 jurisdictions, concentrated in the Middle East and South-East Asia. Besides, countries operating in the IFS often match developing countries and emerging market economies [36].[1] The IFS is founded on the profit and loss sharing system linked to real assets or real economic transactions (because of *gharar*) and the prohibition of payment and receipt of *usury* (*ribah*). It is not a *debt-based* system, but it is more *asset-based* [37]. These ethical and religious underpinnings completely affected the institutional and legal architecture of those "Islamic countries" make strongly different Islamic banks' activity, as banks operate compliant with the Shariah law. Thus, banking regulation is also needed in IFS for many reasons, ensuring compliance with Shariah and providing a level playing field in the international markets [38]. Therefore, the Islamic Banking System needs to adopt additional rules compared to conventional banks' use (regulatory bias). However, previous considerations explain that Islamic banks operate in a highly tricky regulated environment spoiled by some biases. They cannot be limited to universally applying international regulatory standards as those issues by the BCBS [20] since they do not consider conventional banks' distinctive characteristics compared to the Islamic. International financial soft law, as BCBS standards, affects the domestic regulatory system influencing local regulation practice. By the way, they are designed by "conventional" policymakers and generally not suitable for some financial systems as the Islamic one, not an *interest-based* system. Moreover, applying international soft regulation to Islamic banks without targeted amendments may not consider the full spectrum of Islamic banking specific risks [43]. Therefore, while the conventional banking (and financial) system is well-regulated in all aspects, the Islamic one is already too young and fragmented [68]. The Islamic Banking and Finance is related to a lack of harmonised rules and regulations and the nonuniformity in those countries offering Islamic banking products and services [36]. It probably represents the major issue. Products fully allowed in one country, such as the repurchase agreements (*Quard Innah*), are fully acceptable in the far East, whereas it is not permissible in other Muslim countries. This lack of standardisation is due to different interpretations of the Shariah, arising from the various keys to understanding the Islamic law from many Muslim scholars [65, 67, 73, 74, 41]. Therefore, the result is that the Islamic Financial System is already exposed to a *"Shariah arbitrage"* phenomenon, additionally to traditional regulatory arbitrage [76]. The lack of standardisation is also why it is not correct to carry out banking performance and stability analysis without considering different countries' regulation landscapes. Legal requirements can influence the banking business structure, profitability, and strength [76]. The first step towards the Islamic banks' legal standardisation and internationalisation began in 2002 when the Islamic Financial Services Board (IFSB—an international organisation grouping several Islamic banks and banking authorities) started with common prudential standards developed for Islamic banks and financial products. They continued in 2015 since they adopted a set of Core Principles for the Regulation and Supervision of Islamic banking complementing the BCBS's existing principles. The IFSB encouraged members to use the principles as a *benchmark to assess their regulatory and supervisory systems' quality and identify future work to achieve a baseline level of sound regulations and Islamic finance practices* [44]. These principles complement those of BCBS, but they consider peculiarities of Islamic banks business model as the treatment of Profit-Sharing Investment Account (PSIA) and Investment Account Holders (IAHs), Shariah governance framework or *Islamic Windows* operation. However, a previous study of the IMF in [43] registered a lack of consistent application of international standards since about 60 countries have modified domestic frameworks to accommodate Islamic banking, but in most of the countries, they are optional. Finally, international soft regulation cannot overlook previous issues, and literature studies focused on comparative analysis could consider the variable "financial system" linked to differences in the regulatory environment. As a matter of fact, previous literature contributions are also traditionally marked by a global

[1] The IFSB defines the Islamic Banking systemically important if it represent 15% or more of total banking system asset.



empirical analysis that considers countries with different historical and geopolitical trim and, above all, different ethical underpinnings [2, 7, 16, 33, 45]. The last literature review on the Islamic Banking industry reveals several contributions to performance analysis between Islamic and conventional banks [37]. Most contributions focus on (i) the last global financial downturn which affected differently Islamic and Conventional banking system [1, 45], Farooq and Zaheer, 2015; [3, 5, 7, 39], (ii) the Dual financial system—as a system where Islamic Finance operates alongside their Conventional counterparts—[2, 16, 33, 45, 55, 57], iii) the impact of Basel III Standards on the banking system without considering the divergence in financial system architecture [4, 18, 19, 28, 35, 29, 40, 75].

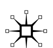
Finally, summarising the theoretical background, some strictly related remarks raised affecting the regulators' dilemma: (i) the need and the value of the international financial regulation, particularly in the banking sector riskier and more strategic, (ii) by scholars, growing attention to the impact of international regulation on banking business, performance and soundness, (iii) a closer emphasis to the Islamic Financial and Banking System, as the most widespread and systemically relevant dual financial system, (iv) the common opinion that international soft regulation, as the Basel standards, failed to produce effective regulations and supervision at global level, until now, (v) the existence of some *biases* and gaps due to the different financial systems characteristics affected by countries history, geopolitical issues and domestic legal and institutional framework. This study aims to contribute to current literature about international banking regulation and the regulators' dilemma in this context. Previous paragraphs provide a prior definition of the dual financial systems referring to systems where a double regulation is in force since current literature has not yet defined it. However, following the IFS' principles, the dual financial system cannot be merely defined as a *binary* concept since different interpretations of ethical and religious underpinnings exist for Islamic law. Starting from the IMF [42] definition of IFS, the taxonomy extends the Islamic Financial System architecture's *binary* concept. Different interpretations may affect domestic financial systems architecture and legal framework with various dual financial system shades because the Islamic law affected cultural, historical and legal country framework. A new financial system taxonomy focusing on dual financial systems and banking regulatory perspective could help policymakers fathom and assess international regulation's effects, as the banking soft-regulation, within different domestic systems. Differences in countries' characteristics generate endogenous variables affecting international soft regulation as the Basel banking standards. In this way, this paper aims to contribute to reshaping the international regulatory *top-down* approach and debate from a different perspective.

Research methodology: how to pass the *dual* financial system definition

This paper provides a new taxonomy of financial systems focusing on the "dual" financial system's different perspectives to contribute to the debate about the regulators' dilemma in those financial systems. The literature review (Sect. 1) examines different definitions of the dual financial system, highlighting the financial dualism existing in low-income countries (formal and informal financial markets) and from the regulatory perspective. Previous paragraphs also drew attention to the need for international banking regulation since banks' leading role in financial systems intermediation contributed to globalisation. This need is even more imperative considering differences in financial dualism, mainly including Islamic and conventional financial and banking systems. According to Karmann [47], banks and banking regulation as part of the legal system are essential determinants of a financial system. The literature review highlights that the IFS and Islamic Banking are dominated by *ethical* and *religious* constraints leading by the Shariah involving country legal and institutional architecture. Moreover, literature contributions identify the dual financial systems following a *binary* approach, defining them as those systems where conventional institutions and Islamic institutions coexist without considering different countries' legal frameworks. As a matter of fact, the IMF [42] mapping the Islamic Financial System structure into two categories:

- The *dual* system is a financial system where a double regulation is in force and the conventional and Islamic institutions coexist. The Islamic institutions, as Islamic Banks, could be represented by *stand-alone entities*, subsidiaries of the conventional, or "Islamic Windows";
- The *full-fledged* Islamic financial system, where the conventional practices are not allowed, and financial business must only comply with the Shariah.

However, it is quite important since the lack of standardisation affects IFS due to different interpretations that Shariah may have influencing socio-cultural issues. Indeed, in *Islamic-based* countries, public and private institutions (including authorities and regulators) internally constitute a *Shariah Supervisory Board,* consisting of a *board of experts* of Shariah and Islamic practices, which can provide an opinion on products services, or businesses [36]. Conversely, other countries that did not find a legal environment on Islamic law leave free interpreting the Shariah without separating the Islamic Banking practices. These countries could not be included in



the *binary* definition of the dual financial system. Thus, it is possible to order different financial system structure shapes, considering different legal frameworks and Shariah interpretation. The taxonomy proposed aims to extend the *binary* definition identifying a more granular level in the dual financial system structure classification. Mainly, the taxonomy uses the domestic banking law as a discriminating driver to classify the financial system, also dwelling on international banking regulation as Basel standards implementation. A clearer picture of the financial system's organisation, as it happens with dual, may help authorities identify the capability and efficiency of adopting international banking standards. In line with the aim stated above, the research methodology identifies countries with conditions for developing dual financial systems, as in the Islamic Financial System. These financial systems and countries typically match with Muslim-majority countries, where there is the possibility of finding a specific domestic Islamic banking law. The research focuses on international financial systems adopting international banking standards and international economic and financial organisations to identify countries adopting Islamic finance and banking practices.

Therefore, referring to the objective, the first step aims to identify those countries in which the banking system is systemically significant globally, checking among those countries members of BCBS, representing the 28 jurisdictions covering 90% of the world's banking assets.[2] The sample also includes Malaysia and the United Arab Emirates (UAE) as observer members of the Basel Committee.[3] Secondly, the sample selection focuses and compare with those countries wherein the IFS presence has spread, by considering those jurisdictions members of the Organization Islamic Cooperation, the Arab League and the IFSB (as the Islamic counterpart of the BCBS), to consider Muslim-majority countries. Thus, the sample cross-checks show that:

- According to the IFSB Report 2020 and the State of the Global Islamic Economic Report 2019/20, some BCBS/IFSB members are included in the top 10 countries by Islamic finance assets and banking (2019): Malaysia, UAE, Saudi Arabia, Indonesia, and Turkey. Singapore is in the top 15. India and Brazil are only observers of the Arab League, but there are no Islamic banks in Brazil. The most important Islamic countries leading Islamic finance, Iran and Sudan, are not BIS and BCBS members and do not apply Basel standards. However, they are included since their leadership role in Islamic banking and finance globally, and Iran is the first in the top 10 rankings of IFSB.
- As one of the most relevant banking systems, the European Union is not a major Islamic international organisation member. However, some European countries are working in "Islamic finance" activities: the first European Islamic bank operates in Germany, and the Federal Financial Supervisory Authority of Germany (*BaFin*) is an associate member of the IFSB; France holds the highest number of Islamic banks in the EU, with eight banks offering Shariah-Compliant products and services. United Kingdom (ex-EU Member—2020) is an associate member of the IFSB and has more Islamic banks and lenders than any other Western country. Finally, Luxembourg and Ireland are leading Islamic fund centres in Europe as advanced financial services countries. Luxembourg central bank is the first European Bank associate member of IFSB.

Thus, the final sample consists of 10 countries representing advanced and developing conventional and/or Islamic banking systems. These countries are summarised in Table 1, considering the Islamic Finance Country Index (IFCI) provided by the Cambridge Institute of Islamic Finance [22]. The IFCI is the oldest index for ranking different countries concerning Islamic banking and finance. The countries selected represent a data sample that includes different taxonomy classes and different grades of Shariah compliance.

Results and discussion

The domestic regulatory frameworks review

This paragraph lies in a regulatory review, examining banking law and fundamentals of the selected countries, focusing on Islamic Banking and practice, to build the taxonomy. Previous paragraphs highlighted the lack of a standard definition of the dual financial system and the opportunity to extend the *binary* definition, like the IMF's. Systematically analysing and examining countries' domestic banking law in the sample, this study identifies five different shapes of the banking system structure ordered according to their "*Shariah-Compliance*", displayed in Fig. 1 and referred below. The taxonomy extends the *IFS structures' binary definition* (detected in classes 3 and 5), filling its granularity gap.

Notably, the first-class (1) identifies as "*Fully Conventional Banking only"* system. This kind of financial system structure provides a specific definition of the banking business, not allowing the Islamic Banking business. It is the

[2] BCBS, RCAP on consistency: jurisdictional assessments, https://www.bis.org/bcbs/implementation/rcap_jurisdictional.htm, (accessed February 2020).

[3] Malaysia and UAE central banks, as banking supervisor authorities, are full members of the BIS but they are outside observers on the BCBS. They implement Basel standards voluntary.

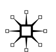
Table 1 Sample composition

Country	Bank Assets (million USD—2019)	Bank Assets %GDP (2019)	Bank Credit to private sector %GDP (2019)	State Bank Ownership (in top 5)	Islamic Banking	IFSB Ranking 2020	IFCI 2019	Global Relevance (IFCI)	Membership in international organisations			
									BCBS	IFSB	OIC	Arab League
India	2.290.000	80%	50%	5	Yes	-	35	-	Full Member	-	-	Observer
Singapore	1.024.000	275%	121%	1	Yes	-	29	-	Full Member	Full Member	-	-
EU	38.208.593	245%	85%	-	Yes	-*	-*	-	Full Member	*	-	-
Turkey	700.000	92%	62%	1	Yes	20	13	Moderate	Full Member	Full Member	Full Member	-
Saudi Arabia	701.635	88%	n.a	2	Yes	3	4	Exceptional	Full Member	Full Member**	Full Member	Full Member
Malaysia	n.a	n.a	121%	2	Yes	6	2	Exceptional	Observer	Full Member	Full Member	-
UAE	832.410	198%	75%	4	Yes	8	7	Exceptional	Observer	Full Member	Full Member	Full Member
Indonesia	627.600	56%	32%	3	Yes	18	1	Highest/ Exceptional	Full Member	Full Member	Full Member	-
Iran	869	n.a	n.a	n.a	Yes	1	3	Exceptional	-	Full Member	Full Member	-
Sudan	n.a	n.a	10%	n.a	Yes	2	5	Exceptional	-	Full Member	Full Member	Full Member

*Only Germany and Luxemburg are Associate Members. Al-Rajhi Bank (Saudi Arabia) is the first world Islamic bank, Dubai Islamic Bank (UAE) the second one, and Maybank (Malaysia) the fourth are state-owned banks. Source: authors' own compilation. Data: Word Bank, Islamic Financial Services Board (IFSB), Islamic Finance Country Index (DDCAP Group)

India case, where recently, the central bank (as the regulator and supervisory authority of the banking system) has decided to not pursue *a proposal for the introduction of interest-free banking in India* after considering *the wider and equal opportunities* available to all citizens to access to banking and financial services. Thus, the Reserve Bank of India does not grant the licence for banking activity if it consists of *interest-free* banking business since it is different from conventional banking activity. However, India's Muslim population is about the world's third-largest estimate in 195 million people in 2020 [71], and on the sidelines of the debate, the Indian central bank has recently started to consider opening "Islamic windows" in conventional banks for a gradual introduction of *interest-free* banking in the country. Nevertheless, the *Fully Conventional Banking only* system is considered a *Shariah non-compliant* system under the regulatory perspective not included in the IMF map of the IFS' structures since it is not possible to carry out Islamic banking. Therefore, we define a class (2) as *"Fully Conventional System Unregulating Islamic Banking"*. Generally, in this financial system architecture, the banking law and regulation do not refer to the Islamic banking business, identifying a neutral position to Islamic practices. However, following the taxonomy regulatory perspective, in this category, it is possible to locate some features discoverable with two examples, identifying different shades:

- *Fine-tuning approach*: Singapore is a *fully* conventional financial system with no specific Islamic finance law. Moreover, the Singaporean government and the Monetary Authority of Singapore (MAS), as central bank and banking authority, have adopted a "*fine-tuning approach"* to accommodate Islamic and conventional banking within a common legal framework. Thus, the aim is to integrate the Islamic Banking system into the current financial system rather than make a separate regulatory framework. The MAS has started this process by issuing in 2009 the *"Guidelines on the Application of Banking Regulations to Islamic Banking"* [52] to facilitate the growth of Islamic Banking. In the end, along with the Conventional banks, Islamic banks can carry out the banking business, observing the same requirements enshrined in the Banking Act and under prudential supervision by the MAS [32].
- *No objection to Islamic banking*: in this subcategory, it is possible to include two examples that could appear completely different, but they are very similar to the law and regulation point of view. Sure, Saudi Arabia is known as one of the most famous Muslim countries globally since it is founded on Islamic law, affecting political, economic, and social lives. Unexpectedly, Saudi Arabia's banking system is regulated by the Banking Control Law act of 1966 [58], without any references to Islamic Bank-



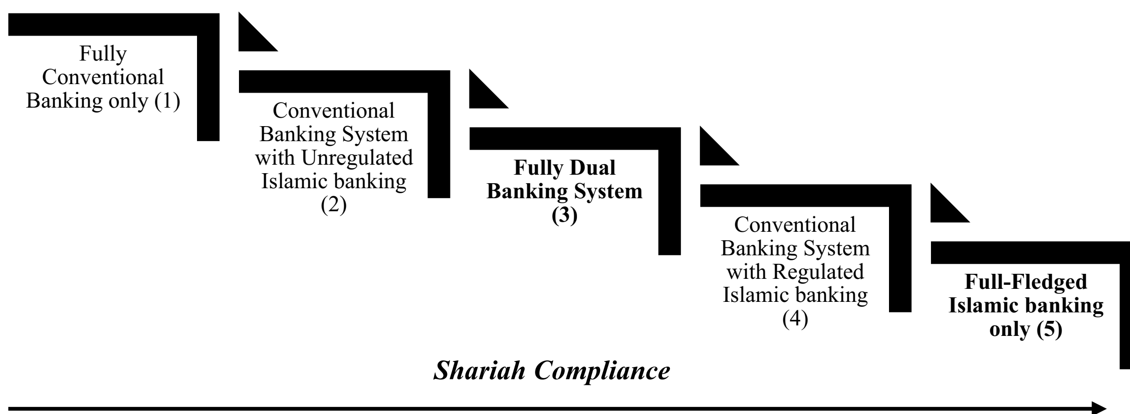


Fig. 1 IFS structures: taxonomy framework. Source: authors own compilation

ing. Saudi Arabia does not explicitly recognise the concept of Islamic banking, but the Islamic Banking business is allowed in all shapes and cannot be assimilated with the conventional. Islamic Banks can carry out the business based on Shariah principles merely following the general banking regulation. Thus, Saudi Arabia's banking law considers Islamic banks as *stand-alone* entities, and Islamic banking cannot be "a part" of the conventional bank. Suddenly, in the same way, we can consider the Islamic Banking business in the European Union. The EU and the European Banking Union law and regulation officially do not prohibit the Islamic Banking business, noting that Islamic banks already exist in some countries like Germany and France. Each country could grant the banking business license considering the domestic banking law in these circumstances. Islamic banks can carry out *interest-free* banking activities in these countries that comply with domestic banking laws.

According to the IMF map of the IFS structure above, the dual financial system definition may not include these conventional financial systems because, in these systems, Islamic banking is allowed but not regulated. Generally, Islamic banking business is conducted under the conventional banking licence in this financial system. This kind of financial system can be defined as Shariah-compliant since it can carry out banking business to comply with Islamic law.

Thus, we identify the class (3) as "*Fully Dual Banking System*". This kind of financial system structure is the only correspondent with the definition of the IMF. The dual financial system cannot merely be defined as a financial system where IFS operates alongside its conventional counterparts. In the *dual* structure, the IFS and the conventional counterpart coexist side-by-side since the national financial authority totally separates the financial system from the law, regulation, banking and financial business, sovereign funding, and monetary market. Accordingly, we identify the Malaysian financial system as the world's only dual financial system (at least in the developing economies). Notably, the *"Central Bank of Malaysia Act 2009"* [12] regulates the central bank, promoting monetary and financial stability. Sub-session 27, Chapter 1, Part VI defines the dual financial system in Malaysia, consisting of the IFS and the conventional. The regulatory framework includes Islamic banks as stand-alone entities or subsidiaries of conventional institutions, with specific regulation and banking licenses in this country. As a matter of fact, in the Central Bank Act, the national authority nominated a Shariah Advisory Council as well as a sub-authority to ascertain Islamic law for Islamic financial business (defined compliant with the Shariah). The central bank splits Islamic Money Market Operations to ensure compliance from the Shariah perspective to ensure enough liquidity for the Islamic interbank market's efficient functioning. The liquidity is managed by the *Commodity Murabahah Programme* (crude palm oil-based) and longer-term liquidity management. Islamic Banking and Takaful are under separate regulations. Afterwards, the *Islamic Financial Services Act 2013* provides for the regulation and supervision of Islamic financial institutions, payment systems, and other entities to promote financial stability and compliance with Shariah. Thus, by reviewing domestic financial regulation and banking law among most developed international banking systems and economies, we find Malaysia financially complies with the dual financial system's IMF definition. It is a unique case where a national authority and government recognise the *financial system's duality*.

Class (4) "*Conventional Banking System Regulating Islamic banking*" is halfway between the previous one and the "*Full-Fledged Islamic Banking only*". Notably, this architecture is different from that *dual* since the financial system is not fully separated into two parallel structures. Once again, the IMF definition of IFS maps the dual financial system as a *binary* concept. However, several financial systems are qualified as conventional ones regulating Islamic

banking with appropriate banking law and licence in different ways, which cannot be assimilated with the *fully dual,* identifying a *hybrid* structure. Countries in the sample, Indonesia, UAE, and Turkey, fit well with this class. In the first case, *Syariah* (Islamic) banking is regulated by the Indonesia Government act of 1998, allowing Commercial and Rural banks to base their activity on conventional and/or *Syariah* principles. In this way, Conventional and Islamic banking have single common regulation, supervised by the Central Bank. Thus, Act n.21 of 2008 [10] enhanced the Islamic Banking regulation, better defining the *Syariah* (Islamic) banking and Business Unit. This act allows to carry out Islamic Banking as a part (business unit) or a branch of the Conventional banking or "*full-fledged*". Shariah principles are verified by the Indonesian Ulama Council, which recommend the banks Shariah Supervisory Boards. Bank of Indonesia also released a codification of Islamic banking products that defined the different contracts well. Thus, Indonesia's framework is a conventional financial system that has regulated Islamic banking and licenses with a specific domestic law but is not comparable with the previously *Fully Dual Banking System*. Islamic banking cannot carry out with *stand-alone* entities or Islamic windows but only in conventional banks' subsidiaries. In UAE, Islamic banks and Investment Companies are regulated by the Federal Law n.6 of 1985 [26]. They shall mean those whose articles and statutory law includes a commitment to abide by the provision of the Shariah. Thus, Islamic banks shall have the right to carry on all or part of banking, commercial, financial and investment services and operations. The higher supervisory function is assigned to the Higher Shariah Authority, which shall be formed by a cabinet decision, incorporating Shariah, legal and banking personnel. This authority, related to the Ministry of Justice and Islamic Affairs, ensures the legitimacy of their transactions according to the provisions of Islamic Shariah law. Thus, UAE is a conventional financial system in which financial regulation has regulated Islamic banking and licenses with a specific domestic law. Finally, in Turkey, *Participation banking* is the name given to banks that carry out *interest-free* banking, such as Islamic banking. Turkey is also a primarily conventional financial system. The banking system of Turkey is mainly regulated by the Banking Law N. 5411/2013 [69], which does not regulate "Islamic" banking. However, they have introduced the concept of *Participation Banking* which operates alongside traditional banking. Participation Banks (as well as participation funds, accounts, and so on) is "an institution operating primarily to collect funds through special current accounts and participation accounts and grant loans according to the Banking Law and the branches in Turkey of such institutions established abroad (window)." Participations Banks are members of the Participation Banks Association of Turkey. Participation banking fundamentals are quite similar to the most common Islamic banking principles and contracts, based on interest-free and profit and loss sharing systems. Turkey's banking framework is quite close to the Indonesian framework since it provides specific regulations for Islamic banks and other Islamic finance institutions. These kinds of financial systems can be defined as Shariah-Compliant too.

The last class (5) identified as "*Fully Islamic Banking only"* is totally *"Shariah-compliant"*. This financial system is covered in the IFS structure definition of the IMF since conventional practices are not allowed, and financial business must only comply with Shariah. The banking business is fully interest-free in this financial system, and the domestic banking law and licenses permit only Islamic banks. Looking at the country in the sample and as confirmed by IFSB, in this category, only two countries can be placed: Iran and Sudan. Indeed, for the first one, IFSB data confirms that Iran is the most extensive Islamic financial and economic system globally. The Islamic banking law of 1983 sets out that Islamic banks can only engage in *interest-free* transactions and regulate the banking system, instruments and supervisory. Similarly, Sudan (the second world's most extensive Islamic financial and economic system) is a fully IBS where the banking business act provides that banking business must not be inconsistent with the Shariah. The Central Bank of Sudan introduced Islamic laws in 1984. Table 2 displays the distribution of countries in the sample according to the proposed taxonomy.

International banking standards adoption

Previously, we highlighted the top-down approach's issue that characterises international soft regulation as banking standards and the regulators' dilemma. Different interpretations of Islamic law, different domestic legal country frameworks, and different *interest-free* banking practices make Islamic banks different from their conventional counterparts, causing a lack in the comparability of different financial systems. In this regard, Basel standards could use some adjustments, like those proposed by the IFSB but not commonly adopted. According to a survey of IMF (2014), different jurisdictions follow two approaches: in the first, Basel standards are directly applicable to all banks, including Islamic banks; in the second, the Basel standards are complemented by IFSB standards. It is a key issue since some countries involved in the IFS are global-significant, like those considered in the taxonomy. Notably, some of them as India, Singapore, and the European Union, integrate the Basel framework into domestic banking regulation and supervisory approach and no distinction is made regarding the framework between conventional and Islamic banks. On the contrary, some countries adopt Basel standards differently:

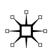


Table 2 Distribution of the sampled countries along with the taxonomy

Country	Financial System structure					
	Fully Conventional Banking only (1)	Conventional Banking System unregulating Islamic banking (2)		Fully Dual Banking System (3)	Conventional Banking System regulating Islamic Banking (4)	Full-Fledged Islamic Banking only (5)
		Fine-Tuning Approach	No objection to Islamic Banking			
India	✗					
Singapore		✗				
EU			✗			
Saudi Arabia			✗			
Malaysia				✗		
Turkey					✗*	
UAE					✗	
Indonesia					✗*	
Iran						✗
Sudan						✗

*Participation Banking is the name given to Islamic banks in Turkey. Syariah banks are Islamic banks in Indonesia

Source: authors own compilation

- Indonesia's financial system does not apply the Basel framework to *Shariah banks* or *rural banks.* The regulatory framework of *Shariah banks* is similar to the Basel framework since the difference of *interest-free* banking and is compliant with the IFSB standards. Therefore, *Shariah* commercial banks can be subsidiaries of conventional commercial banks, and the framework is applicable on a consolidated basis. According to the Basel monitoring report on Regulatory Consistency Assessment Programme (RCAP), rural banks are not connected to the payment and clearing system and operate in a restricted regime. They are classified as no global systemically important (G-SIBs) and no domestic systemically important banks (D-SIBs). *Rural banks* comprise less than 2% of the total banking assets and can take Shariah rural banks' legal form.
- Saudi Arabia has no specific regulation for Islamic banks and regulates these banks in the same way as conventional. According to the RCAP report, this does not currently lead to Basel standards deviation, with no special treatment for Islamic banks, services, and products.
- Turkey declared participation banks (as Shariah-compliant banks) no global systemically important, but seven banks are systemically relevant from a domestic point of view. This kind of bank operates compliant with conventional counterparts' framework but considers the unique features that *interest-free* banking requires. They apply the Basel framework, but they follow the standard of IFSB too.
- Malaysia and UAE are not fully BCBS members and do not apply the Basel framework mandatorily. Nevertheless, Malaysia financial authorities have completed the domestic implementation of the relevant Basel III prudential reforms, and it is considered compliant with Basel III and following [11]. Malaysia's banking system follows a hybrid approach, also implementing IFSB standards for Islamic banks. On the contrary, according to the last UAE Financial Stability Report 2019, Emirates' banking system is almost totally compliant with the Basel framework, but national authorities do not provide official disclosure about IFSB standards application for Islamic banks.
- Finally, Iran and Sudan are not members of the BCBS, but they are observers of the IFSB. There is no extensive official disclosure for these countries, but the Iranian banking system has voluntarily adopted Basel I standards until now, and Sudan Central Bank (the banking authority) has started to work to facilitate the implementation of the international standards [24, 25].

The relationship between IFS architecture and international banking standards

Previously, we provided the regulatory principles useful for new financial system taxonomy, highlighting different countries' legal frameworks adopting Islamic banking practices. Results are summarised in Table 3. Firstly, the taxonomy identifies several differences compared to the IFS structures' IMF [42] map. The *dual* definition of the IFS refers to those countries where a double regulation is in force and the conventional and Islamic institutions coexist, allowing Islamic banks represented by *stand-alone*

Table 3 Financial Systems architecture and international standards relationship

	Islamic Banking domestic law	IMF [42] definition	Taxonomy classes	International standards adoption	
				BCBS	IFSB
India	✗	Fully Conventional	(1)	✓	✗
Singapore	✗	Fully Conventional	(2)	✓	✗
EU	✗	Fully Conventional	(1)	✓	✗
Turkey	✓	Dual	(4)	✓(also for Participation banks)	✓
Saudi Arabia	✗	Fully Conventional	(2)	✓ (no difference for Islamic banks)	✗
Malaysia	✓	Dual	(3)	Discretionary	✓
UAE	✓	Dual	(4)	Discretionary	✗
Indonesia	✓	Dual	(4)	✓ (not for Islamic banks)	✓
Iran	✓	Fully Islamic	(5)	✗	✗
Sudan	✓	Fully Islamic	(5)	✗	✗

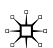
Source: authors' own compilation

entities. The taxonomy highlights the weakness of the *IMF definition's binary approach*, which may not consider the standardisation issue of Islamic banking and finance due to different interpretations of Shariah. The *dual* definition excludes countries where the regulatory framework is *neutral* to Islamic banking practices, like Singapore and the European Union. Unexpectedly, the domestic regulatory review also reports Saudi Arabia's case as an *Islamic-founded* country in the first positions of Islamic banking and finance ranking and hosting Al-Rajhi Bank, the world's largest Islamic bank (S&P [56]. As said before, Saudi Arabia's legal framework does not require specifics for Islamic banking practices, with a single banking legal framework for Islamic and conventional banks. Regarding international banking framework adoption, Saudi Arabia fully applies Basel standards without distinguishing Islamic banking and does not provide national disclosure about IFSB formal adoption. Therefore, going towards those financial system structures "more" Shariah-compliant, the taxonomy categories are closer to the dual financial system's IMF definition. However, the review of the international banking standards records the inverse relationship between the Shariah-compliance of the financial system structure and the adoption of the international banking framework. This is the case of Malaysia, UAE, Indonesia, Iran, and Sudan as Shariah-compliant financial systems, which generally regulate Islamic banking, but they do not apply international Basel standards to the Islamic banks with a *top-down* approach. Turkey is the exception since they regulate participation banks separately but declare they implement Basel and IFSB standards.

Furthermore, several issues arise. Firstly, the lack of standardisation of Islamic finance practices and the differences in Shariah interpretations make it difficult for banks to compare within and between different countries. Many differences generate many endogenous and exogenous variables to be considered in comparative analysis and implications in the level playing field of international Islamic banks that have to comply with different domestic legal requirements impacting the business model. The mismatch between Islamic banking regulations may generate over-regulation phenomena affecting efficiency, profitability, and soundness. Moreover, most issues arise due to the lack of implementation of international banking standards, with implications for the clearness of banking sector disclosure and the banking system stability. Differences in the Shariah interpretations, the lack of standardisation and the uneven application of international standards could generate *regulatory arbitrage*. Islamic and conventional banks carrying out Islamic subsidiaries or Islamic windows could be encouraged to move or increase activities in those countries with fewer regulatory constraints. These phenomena increase the risk of jeopardising the orderly outgrowth of those developing countries adopting Islamic finance practices and the inefficient impact of international banking standards.

Conclusions and further remarks

This paper aims to contribute to the literature debate on the regulators' dilemma affecting international policymakers concerning the conflict between international banking standards (as Basel framework) and the domestic banking



law in force within different countries. Notably, this paper focuses on the dual financial system, as the IFSs, highlighting some biases and issues typical in those countries underpinned by ethical and religious principles. These countries often suffer regulatory biases, socio-cultural biases, over-regulation, and standardisation issues. The literature contributions demonstrate that the need for regulation is fundamental in those sectors characterised by systemic risk, as the banking sector, justifying the massive law-making run after the 2008 financial crisis born from the banking system. The growing banking regulation amplified the regulators' dilemma due to no clear evidence about the suitability of a set of common international standards universally applied with a *top-down* approach. The international Basel standards are thought and built for conventional banking systems without considering the possibility of different structures as those financial systems in which double banking regulation is in force. Thus, dual financial systems are generally analysed and considered following a *binary* approach. The *binary* approach is not always adequate to capture the difference in various financial systems' characteristics, highlighting a gap of the granularity of different shades of the financial system and without considering the impact of the international regulation, as Basel framework.

By reviewing the domestic and international banking regulation of a sample of countries members of the BCBS and globally relevant in the IFS practices, this paper provides a new financial system taxonomy overcoming the dual financial system definition of the IMF [42] and by the banking regulation perspective. The taxonomy highlights the impact of those *socio-cultural* and regulatory biases linked to the Islamic Financial Systems' historical and geopolitical underpinnings and identifies some issues. Firstly, the dual financial system cannot be defined as a *binary* concept since different Shariah interpretations and the lack of standardisation affect Islamic finance. Looking at countries in the sample where the banking system is systemically relevant at the domestic and global level, there are different approaches in Islamic banking regulation with different shades of the *IMF's dual concept* (2019). At the same time, the domestic banking regulation combined with local Governance and political aspects also affected the implementation of international standards. The taxonomy highlights that those countries in which the IFS is developed and Islamic banking is systemically relevant generally does not fully implement the Basel framework (formally). However, the taxonomy also identifies some virtuous countries representing a role model (as Turkey), in which Islamic banking (*participation banking*) is regulated, and the Basel framework is implemented by Islamic banks, which also follow IFSB standards. In this country, the risk of regulatory arbitrage and instability is lower since domestic and international banking regulation ensures the level playing fields to all the actors involved. Once again, it is confirmed how and how much the role of financial regulation is positive and the essential positive role and benefits of financial regulation and benefits.

Furthermore, the taxonomy could help contribute to the literature debate of the regulators' dilemma since it provides a more granular classification of the dual financial systems. The taxonomy does not consider the *binary* concept (Islamic yes/no, regulated yes/no) and considers the different Shariah interpretations based on different countries' religious, historical, political, and legal underpinnings. As a matter of fact, the regulators cannot but consider different domestic banking laws and countries' legal characteristics in the *top-down* approach of international soft-regulation. The risk of regulatory arbitrages grows both within and between different countries since banks could be interested in exploiting the regulation mismatch. However, this phenomenon may undermine international banking standards and create the conditions for the banking system instability. Therefore, in countries with a solid international relationship and globally interconnected banking systems, over-regulation, socio-cultural and regulatory bias may generate regulatory arbitrage phenomena becoming a vehicle in financial distress transmissions.

Finally, researchers and policymakers could consider taxonomy results and discussion and the financial system variable as a new discriminating variable in financial systems and banking systems analysis and regulation. Notably, it is helpful for policymakers to arrange international standards that consider the effect and impact on the domestic country level. On the other hand, the researchers' and practitioners' point of view could be possible analyses and assesses Islamic and conventional banking systems performances and soundness comparing them also considering new financial system variables.

The last decades demonstrated the Islamic Financial Systems and the Islamic model resilience in dealing with conventional-generated financial crisis hit financial markets and banking. However, the opposite is unclear since the effects of the Islamic model breakdown globally are unknown.

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Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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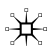

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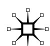

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