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Research article

Development and validation of a performance measurement system based on Islamic principles

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A B S T R A C T

The infamous malfeasance of corporate giants and the collapse of a financial system with global reverberations have further pressured the need for greater ethical discipline and consideration in business and finance. This study explored the motivations within firms as driven by their performance measurement systems (P.M.). Then, the study developed a newly proposed P.M.S. with greater ethical emphasis based on Islamic principles to be a foundation for augmented Sharia-compliant screening criteria for Islamic equities. Discourse analysis of the Islamic religious texts was used, followed by validation through interviews with scholars and practitioners. Results indicate that improving the current Sharia screening criteria is possible by expanding the qualitative and quantitative assessments to include indicators that consider shareholders, the board of directors and top management, business dealings and products, employee relations, community issues and environmental protection. This study has implications for regulators such as Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), Islamic Financial Services Board (IFSB) and Sharia-compliant screening criteria users such as the Dow Jones Islamic Market (DJIM), Financial Times Stock Exchange (FTSE) and Standard and Poor's (S&P) that may consider expanding their current equity screening criteria which mainly depends on the issuer's business activity and narrow quantitative measures. This version: June 28, 2022.

1. Introduction

Repeated scandals and controversies over the last decades have scarred the financial and corporate sectors. The infamous malfeasance of giants Enron, the energy company in 2001 [1] and WorldCom, the telecommunications company in 2002 [2], are illustrations of the magnitude of the problem. In 2007–2008, the world was struck by the most costly disaster of recent human history, the Global Financial Crisis (G.F.C.), which cost over USD$10 trillion in estimated losses [3]. U.S. government-sponsored enterprise giants Fannie Mae and Freddie Mac, investment firms Goldman Sachs and Morgan Stanley, and even credit rating agencies Moody's and Standard & Poor's were all guilty of playing a role towards the G.F.C [4–9]. In response, significant revisions of regulations and legality resulted in the enactment of the Sarbanes-Oxley Act, the Dodd-Frank Act and Basel III to regulate the financial industry [10–12].

The decay of ethics and the magnitude of the financial crisis and earlier scandals have placed enormous pressure on regulatory bodies to revise rules on ethics and corporate governance [13]. The regulatory consequences on the financial sector to the possible level of being 'over-regulated' may impede further growth and innovation [14,15]. Nevertheless, as exhibited, financial institutions and banks continue to break ethical codes despite heavier regulations, which suggests that despite the management of symptoms, the

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source of the problem has not been cured. Numerous approaches have been attempted, primarily focused on revisions of regulations and laws imposed on firms. Despite heavier external pressures from regulatory bodies, companies and banks fail to inculcate an internal motivation to practise business with a healthy code of ethics. Therefore, there is a need to look for new approaches. These post-hoc controls and auditing processes have an external focus.

An internal focus, Motivation and a sense of self-control within a firm or bank to abide by personal and professional ethics will be more effective in avoiding future financial scandals. Results are more effectively achieved if driven by intrinsic as opposed to extrinsic Motivation [16–19]. Over history, big companies have failed due to ethical slips. The survivors evolve by learning from these mistakes and rectifying moral misbehaviour to avoid a similar fate.

Therefore, a potentially more helpful way of approaching this problem is to drive the behaviour of firms internally—an internal focus on change attempts to cause a shift in the behaviour and attitudes of firms. Kaplan and Norton made a pointed remark when they observed that "what you measure is what you get" [20]. Accordingly, the firm's performance measurement system (P.M.S.) can be deliberately designed to reward ethical behaviour, therefore openly encouraging it. The deliberate design of a P.M.S. and the processes affect the behaviour of every player in the organization. With the awareness that information about particular activities and results is being reported back to higher-level management, employees and managers are most likely to be driven to behave differently.

This study used the perspective of religion towards P.M.S. to drive more ethical behaviour internally in a firm. This paper revisited the Sharia-compliant screening methodology within a proposed Islamic P.M.S. (IPMS) context. The existing screening practices introduced around all jurisdictions offering Sharia-compliant securities were formulated to serve investors interested in Sharia-compliant investments. These screening criteria are structured by Sharia principles prohibiting *riba, maysir* and *gharar* [21].

There are around fifteen users of the current screening criteria, including the global leading indexes providers such as Dow Jones Islamic Market (DJIM), Financial Times Stock Exchange (FTSE) and Standard and Poor's (S&P). The implications of the different views of Sharia scholars give different degrees of tolerance in the screening process among different equity index providers. For example, Pok [22] argues that the Sharia-compliant criteria adopted by DJIM, S&P and FTSE are stricter than the one adopted by the Shariah Advisory Council (S.A.C.) of the Security Commission (S.C.) of Malaysia. The investigation [22] finds that from a sample of 477 Malaysia's Sharia-compliant stocks listed by the S.A.C., only 58 (12.16%) sample firms are Sharia-compliant under the DJIM compared to 80 (16.77%) sample firms under S&P and 301 (63.10%) sample firms under the FTSE criteria. Such data indicate that DJIM has the highest benchmarking criteria, whereas S.C. of Malaysia is the most liberal among the four Islamic equity providers.

Fiqh muamalat, which is based on Islamic commercial law, is the reference for the screening methodologies. In its holistic form, *fiqh muamalat* is the code of rules extracted mainly from the primary sources, namely the Quran (the Holy Book in Islam) and *Sunnah* (which is the Prophet Muhammad's (peace be upon him) way of life. However, the Quran and the *Sunnah* serve as reference texts and do not explicitly provide specific guidelines in life for different times, places and contexts. Therefore, the guideline for the quantitative criteria is based on reasoning from the source of Sharia by qualified Sharia scholars or what is defined in Islamic jurisprudence as *ijtihad*, which be seen in establishing the benchmark defined for financial ratios [21]. Therefore, the conceptualization of Islamic equities is that the issuer business is not only engaged in *halal* or lawful practices but also related to a good image in the physical context, such as in quality, safety, environmental friendliness, and process efficiency [21].

Nonetheless, over the last decade, there has been a debate about the adequacy of the current criteria for Sharia-compliant securities. For example, Abdulrahman [23] suggests a model that concentrates on sustainability issues and proposes a model of five indicators of sustainable development, namely: (1) socio-cultural development, (2) economic development, (3) political development, (4) environment protection, and (5) spiritual development. Moreover, Rahman [24] tackles the issue from a different perspective. He argues that applying Islamic rules in business should not mimic conventional business but instead leverage it. Therefore, there is a need for more Muslim scholars to become aware of conventional business practices so that information related to the required category under screening can be recognized by them [24]. This is because the challenging aspect of the stock screening process is identifying the main activity of the issuer. The above study suggests creating a transparent regulatory environment by establishing a globally acceptable, universal Sharia standard for screening. A study by Shofawati [25] perceives the current screening criteria as a limited tool. It argues that the mechanism of stock screening according to the fatwa DSN-MUI, the Kuala Lumpur Stock Exchange (KLSE) Islamic Index and the DJIM index are based on two criteria, namely types of business activity or core activity screening and financial screening, but there is no standard of specification and parameter especially in the financial screening criteria of the indices [25].

According to some of the extant literature, environmental protection as part of sustainability concerns remains a weakness of the current screening criteria. For example, Masih et al. [26] argue that the current Sharia stock screening norms characteristically do not explicitly address environmental protection and conservation elements, as adopted by S.R.I. funds [26]. Thus, in recent times, many stakeholders of Islamic finance have advocated the expansion of Sharia stock screening criteria to incorporate this aspect. Another research study [27] concludes that there are weaknesses in the process of the current criteria, including variation in tolerance limit (for impermissible or *haram* elements), variations in the use of calculation methods (total assets and market capitalization), insufficient income purification mechanism, and confusions about the application of *bay al sarf* and *bay al dayn* regulations [27]. The authors also criticize the current criteria, ignoring certain vital areas, like questionable marketing and sales practices and environmental damages.

Recent studies offer good insights into the screening criteria issue [28–32]. However, the most recent studies still emphasize the weaknesses of the screening criteria. For example, Hashmi et al. executed a focus group discussion (F.D.G.) with ten Islamic finance researchers to advance the discourse of the concept of Sharia investing (S.I.) in which one of the issues investigated was the criteria for constructing Islamic equity indices [33]. Results of the study indicate that Islamic finance researchers and analysts argue that there is a need to revise the criteria for constructing Islamic equity indices. Furthermore, Al Rahahleh & Bhatti [34] examines whether Sharia mutual funds and their conventional peers outperform their benchmark. The results indicate that investors are concerned about the Sharia compliance of their portfolios, given that there is very little difference between Islamic and conventional funds.

Additionally, Hanafi & Hanafi [35] investigate the effect of Sharia status on initial public offering (I.P.O.) under-pricing, long-term performance and the relationship between short-term and long-term I.P.O. performance and attempt to gain an insight into the nature of Sharia I.P.O. under-pricing being a signal or an overreaction. The authors find that Sharia status induces individual investors, leading to more overreaction in the long term. Hambali & Adhariani [36] analyze whether Sharia-compliant companies have better sustainability performance, especially amid the COVID-19 pandemic [36]. The authors find that sustainability performance is pale during COVID-19 for all firms regardless of the Sharia-compliant label.

Our objective in this paper was to develop proper Sharia screening criteria in the financial market, which enables investors to invest in companies that operate permissible business activities in Islam. Our focus on developing the above screening criteria was incorporated within a P.M.S. based on Islamic principles, which drives the stock issuer's performance. In its quantitative and qualitative assessment items, the current criteria are shared by almost fifteen users globally and differ mainly in their thresholds. Since the developed criteria expand the current criteria in terms of scope and items, this study has policy implications and considerations to the screening criteria users of Islamic equities in regional and international equity indices like the DJIM and the FTSE Global Equity Sharia Index Series.

Although having global standardized market indices is interesting, the Sharia advisory board uses only two-tier screening methods to determine company admissibility status: business activity and financial ratio screening [37]. The slight differences emerge from the macro factors and are applied to the benchmark related to capital financing, affecting only the financial ratios. For example, the Sharia screening guidelines used by the S.C. of Malaysia and the Dow Jones are virtually unanimous on business activities deemed non-permissible (*haram*). However, when it comes to the financial ratio screening part, there are some differences. For instance, concerning interest income obtained from conventional banking, S.C. would approve a company as Sharia-compliant if the total interest amount is less than 10%. Similarly, there is a difference in the treatment of accounts receivables whereby the cap varies and reaches 45% for the DJIM Index [37].

While our investigation was done in Malaysia, the source of the P.M.S. framework is *Quran and Sunnah*, a standard source for all screening criteria globally. Only the second stage of our investigation about validation is based on scholarly experts in Malaysia (interviewees). Furthermore, the validation mainly concerns new dimensions of the screening criteria, namely shareholders, board of directors and top management, business dealings and products, employee relations, community issues and environmental protection. These new dimensions are not part of the existing criteria. This is why this study claims "replicability" or consideration of adopting the new screening criteria framework by other equity providers or "users".

The rest of this paper is structured as follows. Section 2 discusses the related literature. Section 3 presents specific details about the methods and validation interviews. Section 4 reports the results, while Section 5 discusses the results. Section 6 concludes this study.

2. Literature review

All firms utilize key performance indicators (KPIs) and measure success or firm achievement. An accurate term for these benchmarks and yardsticks is performance measurement system (P.M.S.). The types of P.M.S that firms use are as varied as the definitions of "performance". Many of these definitions are lengthy and elaborate, but all P.M.Ss serve the primary goal of keeping a pulse on the firm, which will aid decision-making towards achieving the goals of a firm [38]. Based on the firm's goals, top management and decision-makers will deliberate and select the items (i.e. aspects of the firm) they desire to be measured. Hence the design of the P.M.S. is heavily influenced and determined by the firm's objectives.

The measurement system will not specifically identify detailed actions and examine whether the employees have taken these actions. However, employees will identify the goals related to the strategy and the vision. Employees will focus their efforts on achieving the overall vision [20,39,40]. Each measure can only provide a clear performance target or focus attention on the company's critical areas. As Kaplan & Norton [20] argue, managers cannot tell employees exactly how to achieve specific results. The firm's objectives become the basis of a P.M.S., designed to pull people toward the overall goal of being a Sharia-compliant company due to the nature and motivational effects that P.M.S will have, driving the firm towards attaining these objectives. The firm engages in a self-fulfilling cycle with a Pygmalion effect.

The evolution of P.M.S over the decades, as depicted in Fig. 1, has shifted its focus from financial indicators to non-financial and, most recently, indicators with a heavy consideration for the ethical perspective of firms. Traditionally and conventionally, firms only concentrate on profits. Financial performance is a core aspect of a firm's survival, and the sole reason for business is to create earnings. Hence firms used to only concentrate on the bottom line; all efforts, measures and even reward or compensation schemes relating to its shareholders and employees revolved solely around the financial KPIs they achieved. Most economic consumption theories, such as the utility maximization theory, assume that all entities prioritize economic gains based on self-interest. Friedman was adamant and firm in opining that firms have no role to play other than maximizing profits and pleasing shareholders [41].

The shortcomings of financial measures became more pertinent [42], and influential authors vocalized their criticism of P.M.S. used by many firms [43]. Financial measures were short-sighted [44], failed to be good leading indicators of future performance [45] and were revealed to be more susceptible to manipulation than imagined [46]. As firms experienced a change in business challenges and objectives, academic authors and industry practitioners began to adopt non-financial measures as new aspects of P.M.S. Non-financial measures were introduced and most widely adopted by firms in the 1980s–1990s.

In comparison, non-financial measures introduced an external focus of the firm as a complementary aspect to the primary internal focus provided by financial measures. Non-financial measures were good leading indicators, compared to lagging financial ones, making them better predictors of future profits. Most firms maintained that profit was still the overriding goal (both for the short and long term). However, they acknowledged it as inadequate because it fails to indicate how performance can be improved [47] and

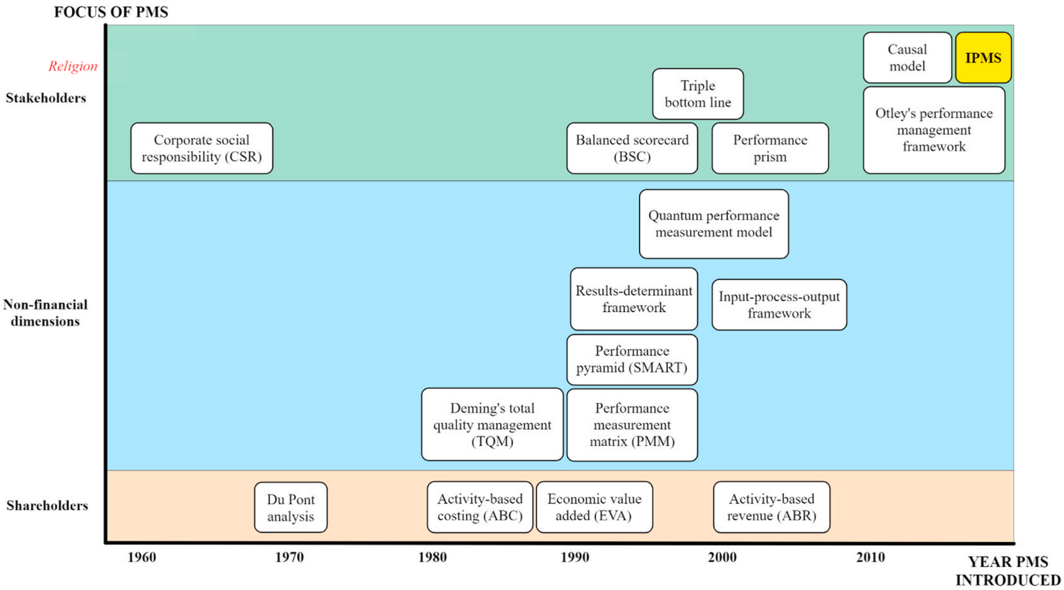

Fig. 1. Evolution of P.M.S. through time[11].

realized that non-financial measures could be good predictors of future earnings. For example, customer ratings [48] and employee satisfaction [49] were significant predictors of firm financial performance due to the leading nature of these performance drivers. New non-financial objectives extended and improved the scope of firms' general management strategy and objectives as they began to include parties' perspectives beyond the firm's direct ones (such as shareholders, employees, and customers). This approach of including the interests of external or indirect parties is spreading over time.

Some firms began to incorporate new non-financial objectives due to the realization that companies must play a role beyond profit-making. Such a move was the second reason for adopting non-financial measures into P.M.S., and it opposed the shareholder approach to social responsibility staunchly supported by Friedman. In the 1980s, there was a growing awareness of environmental issues such as global warming and other socio-economic issues such as income disparity and gender inequality. Some business entities began to engage in philanthropic and charitable efforts, such as the case of The Body Shop, which proposed an alliance with Greenpeace to save whales [50], and American Express, which contributed 1 cent to the restoration of the Statue of Liberty for every time an Amex was swiped [51]. Efforts such as these had an indirect and unaccounted (positive or negative) financial impact on the companies and the public's perception of them, not necessarily helpful in predicting future earnings. However, they complied with the new non-financial philanthropic aims of the firm.

By the 1990s, there was a growing consensus that firms should include the interest of all parties that impact their activities in their strategic planning and P.M.S. Although the word "stakeholder" in its current use appeared in 1963 by the Stanford Research Institute, Weiss [52] illustrates how stakeholder analysis can be complemented with issues of management approaches to examine societal, organizational, and individual dilemmas. The theory highlights the responsibilities of a firm beyond shareholders, managers and employees, known as inside stakeholders [38]. Other familiar stakeholders can be viewed in Fig. 2. The stakeholder theory has become one of the most critical developments in the field of business ethics, which is widely regarded as being a key element in the measurement of Islamic banking performance, making it of extreme relevance in Islam's principles of property rights specifically in terms of its relationship to stakeholder groups and external environment [53].

Stakeholder theory aims to force companies to consider the repercussions of their decisions and actions on parties that may not be directly connected to them. However, these parties form the environment and setting of the firm's existence and impact the firm. Proposers of the stakeholder theory claim that it is only possible to create shareholder value by creating stakeholder value first [54]. It can be argued that this is somewhat contrary to shareholder theory, which focuses on creating value for shareholders [41]. However, both theories still maintain the ultimate goal of maximizing shareholder value. Nevertheless, if adhering to stakeholder theory, outside stakeholders often demand that inside stakeholders' needs be subordinated to the greater good of society, which implies the greater good to outsiders and society at large [38], and attaining goals beyond shareholder maximization. By the 1990s and onwards, most of the P.M.S introduced were more stakeholders-focused, such as the balanced scorecard (B.S.C.) and corporate social responsibility (C.S.R.) ratings.

However, there is still space for evolution in the literature of P.M.S. While stakeholder theory emphasizes the consideration of the interest of parties that impact the firm, the Islamic worldview dictates that all parties, whether of great or small influence, must have their interest cared for. This gives more significant consideration and acknowledgement of less influential stakeholders and has weaker institutional pressure on the firm, such as customers, members of society (especially the weakest and most marginalized groups), the environment, and even employees. Contrary to conventional stakeholder theory, Islamic principles protect the interests of the weakest and least influential stakeholders. Even though they may have minimal impact on the firm, consideration is given because the firm can

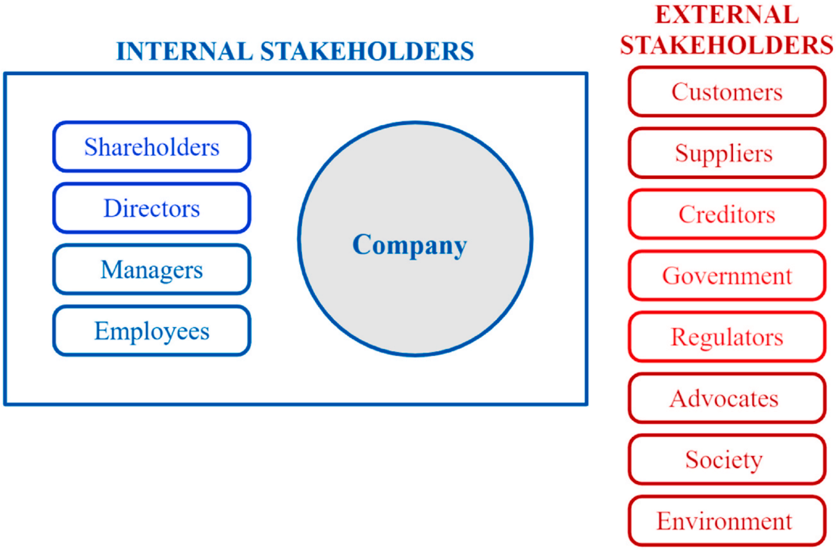

Fig. 2. Stakeholders of a company, consisting of internal and external stakeholders, represent the parties relevant to stakeholder theory[21].

impact them.

Islam is the second largest religion representing around 25% of the world population, and the main religion in 56 countries [55]. What makes Islamic business probably different from its conventional counterparts is Islamic law, or in Arabic translated to Sharia, which divides Islamic law into two major subcategories, namely man-to-God relationship or worship (*ibadah*) and man-to-man transactions (*muamalah*). The latter drives all Islamic banking, finance, and business practices.

Prior literature has explored the application of Islamic principles in the context of sustainability and environmental conservation [56–58]. The extension of this strand of research to a business context is also supported by research studies emphasizing the role of ethics in motivating company behaviour [59,60]. This work was motivated by the fact that a comprehensive Islamic P.M.S. is not fully developed, and most Islamic firms still leverage their conventional counterparts' measures. IPMS has significant policy implications for regulators, businesses and investors interested in including Islamic assets in their portfolios. Islamic business indices in major stock markets like the DJIM, FTSE and other Islamic security markets are based on the current screening criteria that inadequately encompass all the ethical aspects stipulated in Islamic law.

3. Methodology

The approach to developing the IPMS framework served two-fold objectives that required the adoption of discourse analysis using religious texts using the primary sources of Sharia, namely the Holy *Quran* and *Sunnah* to form the framework representing stage 1. Stage 2 is validating the developed framework through semi-structured interviews with scholars, academicians, practitioners, and regulators in the Islamic finance space in Malaysia. The stages and associated methods are detailed in Table 1 below.

Stage 1 (step 1): Development of a P.M.S. based on Islamic principles.

The religious nature of this research required the researchers to study the religious scriptures of Islam to identify essential components within the Holy Book of the *Quran* and *Sunnah* (which is the Prophet Muhammad's (peace be upon him)'s way of life). The narrations of *Sunnah* are known as *hadith*, as they are the scientifically recorded verbatim actions of the Prophet Muhammad (peace be upon him). Execution of this stage of the research required the researchers to conduct an interpretative discourse analysis of religious scripture. The research design to develop the Islamic P.M.S. based on this stage required first the identification of the Islamic principles for business as follows.

3.1. Islamic principles for business

The religion of Islam encompasses every aspect of a Muslim's life and living environment, and the guidelines are based on evidence within the scriptures of the *Quran* and *Sunnah*. Similarly, abundant rulings, values and principles are evidenced and contained in the *Quran* and *Sunnah* in business. In this subsection, we elaborate on the fundamental principles discussed in the religious scriptures of Islam to be applied in a business setting.

[1] *Source: Author, 2020 based on Performance Management Systems literature.*

Table 1
Stages of research methodology.

Item	Stage 1	Stage 2
Objective	Formation of framework	Validation of framework
Technique	Discourse analysis	Semi-structured interviews
Sampling	Religious texts of the Quran and *Sunnah*	Selective sampling

3.1.1. Adherence to prohibitions outlined in Quran and hadith

From the narrations of the Prophet Muhammad's (PBUH) life (*hadith*) and way of life (*Sunnah*) of the Prophet Muhammad (PBUH), Muslims derive a code of behaviour and mannerism for eating, dressing, prayers, interaction within society, marriage, children's upbringing, treatment towards finance and business. The Quran also contains rules and restrictions on how a Muslim must live his/her life, such as prohibiting the consumption of interest (*riba*) (Quran 2:275) and the prohibition of eating swine (Quran 2:173). These Islamic laws are all-encompassing to guide the life of a Muslim people (*ummah*). These prohibitions prioritize the well-being of society at large and must therefore be adhered to by Muslims.

One of the most essential Islamic principles for business is the prohibition of interest (*riba*). Ultimately, scholars have singled out five main reasons for the prohibition of *riba*; *riba* is unfair, corrupts society, implies the improper appropriation of other people's property, has an ultimately negative effect on growth, and it demeans and diminishes human personality [61]. The most prominent and influential reason is that *riba* is deemed unfair and cruel (*zulm*). The injustice may be towards either the borrower or the lender. For example, when a loan is made for a business venture, the borrower must repay interest regardless of the outcome. Therefore, should the venture make a loss, the borrower will have to repay the interest on top of repayment for the principal and the loss of his labour. The borrower's problem will be exacerbated in such ill circumstances and likely result in a default. In the meantime, the lender will still make a profit from the interest paid.

Other prohibitions outlined in Islam are the consumption of swine (Quran 2:173), drinking alcohol (Quran 5:90) and gambling (Quran 2:219). The consumption of alcohol and the practice of gambling are all detrimental to the individual, the family unit, and society at large. Islam has this foresight and therefore prohibits the consumption of alcohol and the activity of gambling because its disadvantages outweigh its benefits (Quran 2:219 and 5:90). In business, these prohibitions must be adhered to and respected.

3.1.2. Social justice

"social justice" implies the same concept of economic justice or just distribution of economic duties and rewards [62]. Unlike legal justice, which is applied on the individual level, social justice relates to issues applied to society as a whole. For example, the entire *surah al-Ma'un* in the *Quran* emphasizes feeding the poor (Quran 107:1–7). This section of the Quran elaborates on actions that characterize those who are unjust or cruel (*zalimun*). The characteristics that should be avoided are ill-treating orphans, stinginess to feed the poorest (Quran 89:18), neglecting daily prayers, and performing a charitable act to make only a good impression to observers while failing little tests such as being kind to one's neighbour, for these acts are deemed hypocritical (Quran 2:11).

Allah has repeatedly emphasized the special status of orphans and the poor. Muslims are obligated to feed the poor and constantly include them in celebrations such as Eid, as well as in the recovery of performing a sin such as *zihar* or killing in the sacred land (Quran 2:184, 2:196, 4:8, 5:89, 5:95, 22:28, 58:4, 69:34, 74:44, 89:18 and 107:3). The Prophet Muhammad (PBUH) himself was an orphan. He understood the importance of supporting other orphans (Hadith Sahih al-Bukhari 6005). There are numerous reminders of protecting the property of orphans and treating them justly, for Allah will severely punish those who mean mischief to orphans (Quran 2:83, 2:177, 2:215, 2:220, 4:2–3, 4:6, 4:8–10, 4:127, 6:152, 8:41, 17:34, 18:82, 59:7, 89:17, 90:15, 93:6, 93:9 and 107:2).

An Islamic economic system protects the weakest members of society. It aims to alleviate poverty as Caliph Umar Al-Khattab did during his reign as Caliph of the Islamic Empire [63]. Poverty is the deprivation of fundamental rights such as the right to live, freedom, education, dignity and ownership of property [62]. Al-Ghazali observed the five objectives of Sharia (*maqasid al-Sharia)* to protect and preserve the fundamental rights of everyone in the society; protection of religion, life, reason, posterity and property [64]. There is no discrimination of race, gender or social class as equality is emphasized, so long as it does not contradict the teachings of Islam [65].

Islam aims at building a society based on religion, morality and social justice, applicable in every age to society's evolution and civilization's progress [62]. Islam heavily emphasizes social justice by protecting the weakest in society and exhorting the richest. Monopoly, exploitation, social injustice, and the hoarding of wealth are prohibited in Islam. Islam only believes in the principle of private ownership and free economic enterprise to a limited extent because it is restricted to not conflict with the benefits of the society as a whole. Social justice in Islam considers all its citizens, Muslims and non-Muslims alike.

As elaborated in the Quran, should a person prefer others over himself even though there was want within him, then the selfless are among those who are successful (Quran 60:8). The Mercy of Allah is better than the wealth which the rich amass (Quran 43:32). Most importantly, the distribution of wealth, poverty and richness are by God's Will, as Allah is the provider of sustenance. He enlarges and restricts sustenance as He pleases (Quran 34:39). All things in the heavens and on Earth are believed to belong to Allah. At the same time, men are only entrusted to walk this Earth temporarily as a test and preparation for Eternal Life (Quran 4:126). The Islamic principle of social justice aims to establish an Islamic economic system that embodies Allah's instruction to treat each other with kindness and enforce justice in society.

[2] *Source: Author, 2020 based on stakeholder theory literature.*

Securing access to economic facilities for non-Muslims in a Muslim country is a fundamental teaching in Islam to eradicate poverty. Islam gives great importance to the dignity of each human being in a Muslim society [66]. Johan et al. studied customer perception among Muslims and non-Muslim customers of Shariah-compliant credit cards (SCCC) in Malaysia. Although Muslims and non-Muslims differ in their view of "religiosity" for holding SCCCs, both categories agree on the subjective norm and their intention to hold SCCCs [67]. The author suggests that although Malaysia has diverse ethnic groups, they firmly intend to hold SCCCs regardless of their faith orientation. It can be concluded that though Malaysia is an example of a multi-racial country with a Muslim majority that adopts a dual financial system, the economic rights, including access to the financial system facilities, can be argued to be non-discriminative regardless of the faith orientations among customers.

3.1.3. Accountability, fulfilment of trust and honesty

One of the most important beliefs in Islam is the belief in the Hereafter. The weighing of one's deeds on the Day of Judgment is based on the concept of accountability, as even a (good or bad) deed, the weight of a mustard seed, will be accounted for (Quran 21:47). Nothing escapes the knowledge of Allah, as He knows all that is revealed and concealed (Quran 28:69). In order to attain success and the promise of heaven in the Hereafter, a person is made accountable for one's actions towards self and others. Companies and large corporations are also held accountable for every action that affects any party within the business environment.

This weight and burden grow significantly for authorities and parties in a position of power, as they must practise a sense of accountability to the people and God. One must discharge his/her trust honestly and faithfully (Quran 23:8). The price of breaking a covenant with Allah is a severe penalty that is only suffered in the Hereafter (Quran 23:8). Trusts may be expressed or implied [68]. An expressed trust in a business transaction is usually signed on a contract; therefore, it is a covenant for both parties to honour the terms agreed upon. In Islam, a spoken word must also be honoured because otherwise, the person is deemed a hypocrite (Hadith Sahih al-Bukhari 34). An implied trust arises out of power, position, or opportunity. For example, an elected ruler is expected to execute the people's trust to rule fairly and care for the welfare of the people. It also applies to a high-ranked executive of a firm or any person who has authority over another. This condition is not restricted to personal commitments and promises but extends to social and religious obligations.

In the case of wealth, one must earn through legitimate means and abandon illegitimate ones. There is no permissibility for deception, cheating and dishonesty in business (Hadith Sahih al-Bukhari 2407, Hadith Muslim 170, Hadith Sahih Muslim 1581 and Hadith Sunan an-Nasa'i 4457). Virtuous and moral conduct such as mercy, leniency and good treatment towards others should be encouraged (Hadith Sahih al-Bukhari 6927, Hadith Sahih Jami' at-Tirmidhi 3541, Hadith Sahih al-Bukhari 303). Islam propagates transparency and honesty in all business dealings, which is in line with enjoining the proper and forbidding the improper, described as the characteristic of the best of people (Quran 3:110). This refers to what is permissible (*halal*) and prohibited (*haram*), as well as what is good and sinful. These two spectrums overlap, as what is halal is beneficial and wholesome, while what is haram is sinful and harmful.

3.1.4. Responsibility towards all other creations

The role and responsibilities of man as vicegerent extends to all living creatures and the environment. Both the *Quran* and *hadith* quote the subjects of nature (Quran 13:3–4, 21:30, 56:68–70), the environment (Hadith Sahih al-Bukhari 2320, Hadith Sahih Muslim 1552), and wastefulness which is frowned upon (Quran 6:141, 14:34). For example, Islamic teachings recognize the importance of water for living creatures, as every animal and man is created from water (Quran 24:45, 25:54). Islam emphasizes the conservation of water, as the wastefulness of water is sinful even if from a running river and for ablution and prayers (*ibadah*) (Hadith Sunan ibn Majah 425).

Preservation and conservation extend to other elements of the environment and nature, such as trees and animals. The Prophet (PBUH) was narrated to have said that anyone who cuts down a tree with no just reason, Allah will send him headlong into Hell (Hadith Sunan Abi Dawud 5239). Such is the severity in Islam for not being a vicegerent who takes heed of his actions. Also, Islam suggests that fauna too may have human-like emotions, as in one narration, the date-palm tree was described to be crying as it was missing the Prophet's (PBUH) *dhikr* (prayers) (Hadith Sahih al-Bukhari 918). Similar to water, trees and plants are mentioned in the Quran numerous times regarding their growth, value and importance (Quran 16:11, 16:68, 17:91). The Prophet (PBUH) narrated that the produce of any plant is considered a charitable gift (Hadith Sahih al-Bukhari 2320). This includes feeding animals with the produce of a tree, as caring for animals is obligated by Islam.

Animals are creations of God that must be respected and protected. The variety of animal species and their different natures is a testament to Allah's Greatness and Perfection as the Maker. For example, the design of the camel that can contain its water for travel across the desert for days on end (Quran 88:17) and the flight of the bird as it is held up amid the sky by Allah (Quran 16:79). Many animals have been honoured upon the naming of a few chapters of the Quran after them, such as the bee (*Surah al-Nahl*), the spider (*Surah al-Ankabut*) and the ant (*Surah al-Naml*).

The severity of being cruel to animals has numerous narrations in the *hadith*. While killing animals is permissible, it is impermissible to kill an animal tied up for use as a target (Hadith Sahih Sunan Ibn Majah 3188) or bludgeon it to death (Hadith Sahih al-Bukhari 5475). Slaughtering must be done in the kindest way towards the animal made permissible to consume, by slaughtering it swiftly with a sharp knife (Quran 5:3). The cruelty towards animals has a severe punishment, as the Prophet (PBUH) was narrated to have said that a woman entered Hellfire because she was cruel to a cat that she tied up, starved and not set free to chase after its natural prey (Hadith Sahih al-Bukhari 3318). At the same time, in another narration, a prostitute was forgiven of her sins because she showed sincere kindness to a dog that nearly died of thirst (Hadith Muslim 2245). Allah repeatedly warns mischief makers and transgressors that they will suffer a fate similar to the ill deeds they inflict upon other living beings (Quran 2:11, 2:27, 5:64, 7:56, 7:74, 30:41).

Table 2
Profile of interviewees.

No	Code Name[4]	Group	Gender	Nationality	Length (hr:min:secs)
1	A1	Advisory/Scholar	M	Malaysian	1:09:22
2	A2	Advisory/Banker	M	Malaysian	0:50:53
3	B1	Banker	M	Non-Malaysian	1:06:07
4	B2	Banker	M	Malaysian	0:39:32
5	B3	Banker/Regulator	M	Non-Malaysian	0:56:23
6	G1	Government-linked	F	Malaysian	0:54:01
7	G2	Government-linked	F	Malaysian	1:17:29
8	R1	Regulator/Scholar	M	Malaysian	0:45:59
9	R2	Regulator/Scholar	M	Malaysian	1:05:22
10	R3	Regulator	M	Malaysian	0:59:00
11	S1	Scholar	F	Malaysian	2:42:30
12	S2	Scholar/Regulator	M	Malaysian	0:46:11
13	S3	Scholar	M	Non-Malaysian	0:36:51
14	S3	Scholar	F	Malaysian	1:12:33
15	S4	Scholar	F	Malaysian	0:36:37

Based on the above study of Islamic philosophy in the *Quran* and *Sunnah*, the key elements that need to be accounted for within an Islamic P.M.S. were identified. This entailed a thematic analysis study of the religious texts in Islam.

Many studies have utilized this methodology to extract the principles and construct a new measurement scale. For example, some studies explored the visions and missions of the company and the objectives set out by the firm in order to construct a suitable KPI system for their employees [69,70]. In this study, a similar approach was applied to extract principles and later translated into a business setting consisting of financial and non-financial measures of performance for a firm.

Stage 1 (step 2): Identifying corresponding components for an IPMS.

In this stage, the leading Islamic principles and values were used to promulgate corresponding components for a P.M.S., a new framework.

These principles and values were matched in a business setting, and measures already utilized in socially responsible investments (S.R.I.) and environmental, social and governance (E.S.G.) models were compared and proposed according to the judged suitability and appropriateness of the indicator (see appendix A). The judgement of the suitability and appropriateness of every indicator is based on the researcher's ability, as similarly practised in prior studies [71,72]. However, the validity testing served as a check for the indicators chosen. In the next step of the research methodology, all these selected indicators were subjected to a validation check and response from an industry or scholarly expert,[3456789].

As this study focused on the application of IPMS on Sharia-compliant firms in Malaysia, the current screening methodology will draw a comparison. This screening methodology by the Securities Commission (S.C.) Malaysia was first introduced in 1995, with one revision made in 2007 and the latest revisions made in 2013 [73]. The screening methodology comprises a quantitative assessment that adopts a two-tier approach (outlining business activity benchmarks and financial ratios benchmarks) and a qualitative assessment mainly moderated by the Sharia Advisory Council of S.C. (see Appendix B).

In addition to comparing the current screening methodology by S.C., the IPMS is compared to a conventional P.M.S. In this case, a comparison of the IPMS to the environmental, social and governance (E.S.G.) framework contained in the MSCI Database [74] as seen in Appendix C. The E.S.G. framework is classified as a variation of the C.S.R. framework, focusing on stakeholders' interests that impact the firm.

Stage 2: The new P.M.S. based on Islamic principles (IPMS) was tested for validity. This validity stage was conducted by conducting semi-structured interviews with experts in the field. Industry experts, academics and religious scholars are interviewed. The sample included members of the Sharia Advisory Council of governing bodies such as the Central Bank of Malaysia (Bank Negara Malaysia) and Securities Commission, as well as experts in the academic field that have authority on religious texts and references. This contributed to the credibility of the P.M.S. and reinforced the validity of the new proposed Islamic P.M.S.

In this study, 15 semi-structured interviews were conducted, consisting of 8 scholars and seven practitioners, all with significant knowledge, expertise, and experience in their respective fields. The sampling of the interviewees was based on a list of industry leaders and academic experts known in the field of Islamic finance and the corporate sector of Malaysia in general. Selective sampling was conducted via email invitations to over 200 potential interviewees, and a subsequent interview session was agreed upon should there be a positive response to the email invite. The anonymous profiles of the 15 interviewees can be viewed in Table 2 and 3.

[3] a scholarly expert is an expert or an academic in Islamic studies.
[4] Code names: Banker (B), Government (G), Scholar (S).
[5] *Source: Author, 2020 based on* literature and the Islamic worldview.
[6] *Source: Author, 2020 based on literature and the Islamic worldview.*
[7] *Source: Author, 2020 based on Islamic principles.*
[8] Appendix A is an author generated bases on (E.S.G.) analyses based on MSCI Database.
[9] Appendix C is author generated comparison between IPMS, current screening methodology by S.C. and E.S.G. framework by MSCI Database.

Table 3
Below shows the proposed P.M.S. based on Islamic principles, with the proposed new dimensions based on the Stage 1 analysis of this study detailed as new items within the framework.

Proposed P.M.S. based on Islamic principles				
		Items	Measures	
			Quantitative	Qualitative
Current screening methodology	**Prohibited involvements**: A company's involvement in prohibited areas, as outlined in Islam, should be measured and penalized.	Interest (*riba*) income, banking, insurance and other instruments Haram items such as liquor, swine flesh, non-halal F&B, gambling and activities of significant *gharar* (e.g., spot trading) Harmful items such as tobacco	Limit involvement in these activities. The percentage of activities composition and income generated from these activities will be used as a 'negative' measure of the company.	
	Monitored financial measures: Islam promotes living free from debt and maintaining reasonable levels of financial liquidity.	Debt	The maximum threshold for the debt-total assets ratio	
		Liquidity	Minimum measure for cash-total assets ratio	
New dimensions for IPMS	**Shareholders**: A company sets deliverable performance targets related to shareholder returns.	Return on investments	Return on assets, return on equity, profit before tax, earnings per share, market share, dividend payouts, and projected pipeline value.	Relationship and engagement with shareholders via meetings, newsletters and other frequent communication.
	Board of directors and top management: The most influential leaders and executives represent high competency, skill level and value-added to the firm. They are also subjected to a greater sense of responsibility and accountability.	Fulfilment of covenants and trusts		Establishment of firm vision, mission and goals that consist of both financial and non-financial aspirations, a feedback system from stakeholders to top management, strategic alignment
		Fair compensation	CEO-to-worker pay ratio, director's compensation-to-worker pay ratio	
		Corporate governance: transparency	A reasonable number of independent boards of directors, internal control procedures and internal auditors.	Separation of C.E.O. and chairman of the board of directors, director with background knowledge in Islamic studies
	Business dealings and products	Fulfilment of covenants and trusts: contracts, transactions and business dealings	Contract breach, overdue debt to suppliers	Transparency of contracts, firm's reputation on honesty and reliability, customers' complaints, feedback and ratings, involvement in court cases
		Beneficial products and services		Engaged in providing products and services that serve the greater good of society at large
		Product quality, safety, and reliability	Product failure and defect rates, a refund for defects	Duty of care to consumers, general safe consumption and usage of the product
		Ethical business practices	Customer complaints on unethical matters, reports on companies by N.G.O.s	Fair pricing, non-exploitation or monopoly/oligopoly, non-deceptive marketing strategies
		R&D and innovation	Investment value (in absolute amount and in proportion to profits) in research or improvement initiatives	Project management efficiency, the effectiveness of technical service and support groups
	Employee relations	Justice for all: Cash profit sharing, employee ownership and involvement	Reasonable wages and staff remuneration or bonuses, overtime allowances	Promotion based on meritocracy
		Work and family benefits		Insurance coverage, paternity/maternity leave, unique employee benefits and aid for the lowest-ranking/paid staff
		Religious obligations		Availability of praying facilities, the flexibility of performing prayers during working hours without compromising the quality of work, decent and modest dress code

(*continued on next page*)

Table 3 (*continued*)

Proposed P.M.S. based on Islamic principles				
		Items	Measures	
			Quantitative	Qualitative
		Personal growth and development		Efforts to inculcate knowledge, develop skills and encourage practice related to Motivation, personal development and capabilities
		Cultural norms	Ratios for ethnicity, gender, age groups	Equality without discrimination towards ethnicity, gender, lineage or age, non-discrimination during employment (i.e. ethnic and religious diversity in the working environment), gender segregation for private spaces, prevention of frivolities where activities are free from non-beneficial elements such as profane music, dancing or discussions on non-beneficial topic
	Community issues	Payment of alms (*zakat*)	Contribution towards the eight* groups legitimate to receive zakat aid	
		Infaq for the weakest members of society	Contribution (in absolute amount and in proportion to profits) to attend to the needs of the hungry, the poor, the orphans and the elderly	
	Environmental protection	Environmental conservation efforts (plants, mother nature and the general environment)	Contribution (in absolute amount and proportion to profits) towards environmental conservation efforts, 'negative' measure for activities causing environmental destruction	Efforts in environmental restoration, responsible consumption
		Animal welfare (animal care, animal husbandry and humane treatment)	Contribution (in absolute amount and proportion to profits) towards preserving animal welfare is a 'negative' measure for activities threatening species survival and ecosystem.	Efforts in wildlife preservation and animal welfare

Each interviewee was sent a copy of the interview questions before the interview to allow him/her to reflect on the questions and potential responses. The interviewee was asked to provide feedback based on his/her expertise, experience, and opinion on the current screening methodology and the newly proposed IPMS. The interviewee was asked about both frameworks' purpose, effectiveness, strengths and weaknesses. Emphasis was made on how aligned with Islamic principles each framework is, the weaknesses of the current screening methodology, and the basis and feasibility of every dimension/item constituting the proposed IPMS.

This is a common approach to validation of a construct, as the interview sessions were semi-structured and gave the interviewer the opportunity and flexibility to question according to the development and response of the interviewee [75]. Every indicator proposed in the IPMS framework was posed as a question to the interviewee. The expert interviewee was allowed to express his or her opinion on the appropriateness and suitability of the item for this research, particularly the screening methodology for Sharia-compliant firms. Validation processes are essential and commonly used in the fields that construct new measurements or scales [76–78].

4. Results

As depicted in Figs. 3 and 4, the Islamic worldview, with its extended utility that covers this life and afterlife, summarises the objective of the Sharia into a framework of protection. The protection framework includes the protection of religion, life, intellect, honour or family and property. Most of the laws of Sharia that cover Islamic business relate to the objective of property protection. In this paper, the methodology is developed through two main adages. Firstly, the Islamic principles were identified through discourse analysis of the Islamic religious texts consisting of the *Quran* and *hadith* and used as a basis for the newly-proposed P.M.S. Secondly, the validation of this Islamic performance measurement system was made through interviews with scholars, industrial practitioners, and corporate leaders of varying industries. Comparisons were drawn between the current screening methodology on Sharia-compliant firms implemented by the Securities Commission Malaysia and the newly-proposed IPMS.

The worldview and perspective of the Islamic religion have distinct features. Through the interpretive discourse analysis of the religious texts, the *Quran* and *hadith*, these principles were identified and transposed for a business environment and firm. Based on the five primary purposes of Islamic law (*maqasid al-Sharia*) or objectives of Sharia, further evidence in the Islamic literature was investigated to design a P.M.S. based on Islamic principles, as depicted in Fig. 5 below.

The second stage of our investigation for this paper was the validation stage. Semi-structured in-depth interviews were conducted to validate the above framework. As discussed in the methodology part, 15 interviews were conducted with equal representation by Islamic scholars, regulators, banks and industry players in Malaysia.

These field experts and practitioners were asked to seek their opinion of the current screening methodology for Sharia-compliant firms (by the Securities Commission Malaysia) and the suitability of the newly-proposed P.M.S. (IPMS) as an improved screening methodology for firms with an Islamic objective.

There was consensus and agreement on the dimensions introduced by the newly-proposed P.M.S. and acknowledgement that the items were all based on Islamic principles. As exhibited below, participants agreed to a need to address Islamic ethics better when measuring the performance of firms.

> "So those are the only two criteria? The old one.. from a financial standing, without the ethics.. they are inadequate because they ignore the Islamic ethics..from what I've heard, [the newly-proposed P.M.S.] seems very comprehensive.. you seemed to have covered all the basis, fantastic. I think they're all very suitable..– S3 (S: Scholar)

> ".. Islamic finance is not just about finance.. we have to go back to the famous five maqasid sharia.. this idea of revising our practice has to be disseminated to the players, the regulators in many countries, we have to really come back to the initial idea." – B1 (B: Banker)

There was evidence of companies gaming the system and suggesting the imperativeness of a more comprehensive P.M.S. that measures Islamic aspects beyond negative measures of prohibited activities and financial measures.

> ".. A case study on how do companies react to this (change in screening methodology). So, they surprisingly, they informed that.. they do a lot of cosmetic changes.. we call it window dressing."– S2 (S: Scholar)

However, the newly-proposed P.M.S. was criticized for being difficult to implement and measure, as it subjects firms to measures of significant subjectivity and is deemed a burdensome task to regulators.

> "Imagine the one.. delisted is.. big company. So, they welcome the improvement, but you know, the consistency.. this is all about cost." – S3 (S: Scholar)

> "Because they tend to avoid subjectivity.. there's no dispute about it, your debt ratio, that's in your financials, the kind of debt that you take, that's also in your notes, all those are clear established facts which doesn't give any room for judgement calls. So that is important to the investor.. who are managing the funds.. they want something straightforward for them to understand and for them to implement." – B2 (B: Banker)

Some participants also questioned investors' sentiments and whether there is a demand for greater transparency and comprehensive measurements of Sharia-compliant firms.

> "..where is the demand? What will be driving the demand.. why would they care on the second bit (qualitative assessment)?. we need to understand the users' motivation bit on the assessment or the people being assessed, why would the people want to be allowed to go through the process.. and who will be using the assessment." – B3 (B: Banker)

The majority of participants, especially the practitioners and regulators, suggested using the newly-proposed P.M.S. as a measure to better tier and grade Sharia-compliant companies without subjecting them to these measures as part of the screening methodology.

> "..so leave the screening as it is, but you might want to create a part 2 to it, which is a more subjective part of the methodology.. it does not really impact your inclusion or exclusion.. how green the companies are in terms of management and so on. That is closer to the concept of what environmentalists are doing; they rate companies in terms of practices and so on. So again, you

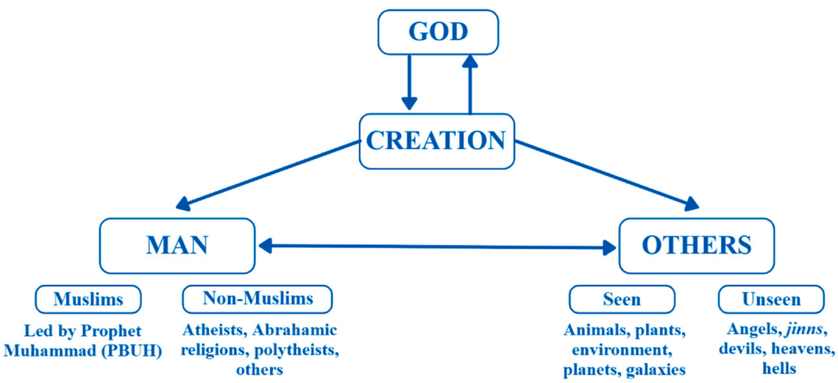

Fig. 3. Islamic worldview and perspective, a brief illustration of the critical components and relationships discussed in Islamic teachings.[5]

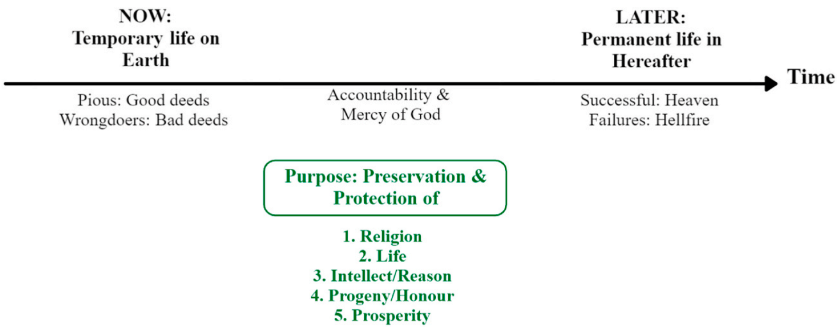

Fig. 4. Islamic principles, a brief illustration of the phases of life and death in Islam, as well as the purpose of Islamic principles propagated in Islamic teachings.[6]

have companies subscribing to values, and how close are these companies' activities in line with those values? So, it is not a mandatory ranking; it's still subjective. " – B2 (B: Banker)

There were further suggestions to improve the newly-proposed P.M.S. by adjusting the financial measures' details and prioritizing some dimensions and items.

"This has an error here because Cash over Total Assets doesn't make sense.. because, actually, you should do it over Liquid Assets or Total Cash.. because no company will have 33% of their assets in cash. It just means that they are sitting on a pile of cash." – B4 (B: Banker)

"..so maybe what you can do is that, I think maybe in terms of components, you have the components, but maybe you would want to classify them based on the priorities, which ones should be prioritized, the primary and the secondary." – S4 (B: Banker)

Based on the interviews conducted, the findings on the screening methodology used by the S.C. for Sharia-compliant firms are grouped into three categories; the strengths of the current screening methodology, the weaknesses, and suggestions made by interviewees to improve the framework. A summary of the findings of the interviews can be viewed below in Table 4.

5. Discussion

There was no significant criticism of the theoretical framework of the newly-proposed P.M.S., as these items were proven to be firmly established normatively in Islamic literature. However, a bias emerged in the interviews because participants contradicted themselves as they argued critically against implementing the newly-proposed P.M.S. This could be attributed to substantial institutional pressures and barriers in implementing the newly-proposed P.M.S., as these individuals who play significant roles in the regulatory and financial industry express hesitance in implementation despite acknowledging the need to improve the screening

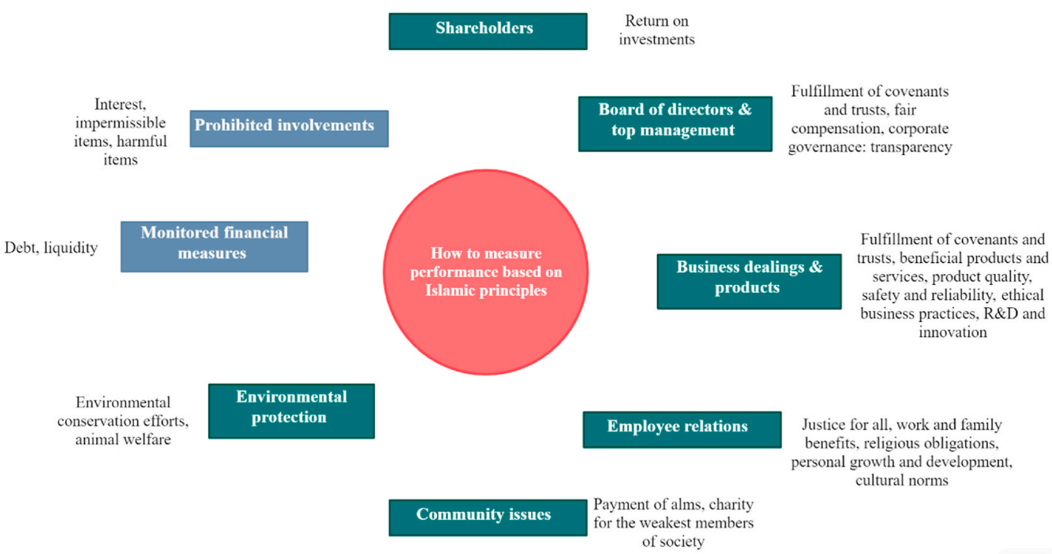

Fig. 5. Islamic P.M.S. based on Islamic principles[7].

Table 4
Summary of interview findings.

	Current screening methodology	Proposed IPMS
Strengths	Adequate progress and stability	Better representation of Islamic principles
Weaknesses	Lack of transparency in qualitative assessment Inadequate representation of Islamic ethics Anecdotes of 'gaming' the system	Difficult to be implemented The unsuitability of particular dimensions and items
Suggestions	Minor adjustments of financial benchmarks	An additional framework to better tier companies Prioritizing dimensions and items Investigation of Investors' Sentiments

methodology. Institutional theory literature discusses pressure to conform to the rules and belief systems prevailing in the environment [79].

Furthermore, we addressed the leading comments of the interviewees and how they will be incorporated into the IPMS framework.

a. **Regulators' support:** Interviewee B1 (B: Banker) page 26 supports the literature that states the weaknesses of the current criteria and its lack of representing *maqasid al-sharia* in the ethical part. This interviewee calls for the dissemination of the IPMS to be backed by regulators in many countries. Islamic Sharia-compliant equities are based on specific criteria initiated by the regulatory body of each Islamic market index or equity provider [80]. Therefore, regulators can initiate their regulations to adopt the framework. Another strong suggestion is for the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Islamic Financial Services Board (IFSB) to adopt and consider this framework as international regulators.
b. **Consistency and cost:** Interviewee S3 (S: Scholar) page 27 argues about cost and consistency, but that can be addressed if regulators introduced the framework for companies who wish to be listed as Sharia-compliant firms.
c. **Additional reporting for new measures.** Interviewee B2 (B: Banker) page 27 suggested leaving the status quo (current screening criteria) as mandatory and instead creating a "Part 2″ that will be subjective and optional to indicate how a company scores within a spectrum of compliance. Although this may serve some purpose, it will not lead to improving the current criteria that are already flawed according to the literature. It will also violate the standardization of the measures and bring inconsistency to the listing requirement.
d. **Demand and Motivation:** Interviewee B3 (B: Banker) Page 27 argues about the demand and the Motivation for the new criteria framework. As mentioned above, the Motivation lies with the regulator's and the provider's listing requirements. Although the reporting party "company" is a stakeholder in this case and may view the new requirement as a regulatory burden, the requirement is dedicated by the equity provider (i.e. KLSE, DJIM)
e. **Measurement:** Interviewee B4 (B: Banker) argues about the high liquidity requirement of 33% (cash/total assets). The current criteria and this framework require cash to be <33% meaning that companies are inefficient and risky if they keep a liquidity ratio over 33% of total asset market value. However, they can have any liquidity less than that. Therefore, this ratio addresses the interviewee's concern.

Overall, the findings of the interviews have generally provided constructive feedback to allow for suitable adjustments to be made to the IPMS framework, such as prioritizing certain dimensions and reconsidering some specific measures (as discussed earlier). These suggestions will refine the IPMS framework before its final application to a quantitative comparative analysis of Malaysian firms.

It can be observed that the interviewees validated the basis of the proposed dimensions and items within the Islamic principles, implying that the IPMS framework is in line with Islamic principles. All the concerns raised were focused on the implementation and specific quantitative/qualitative measures. The interviewees viewed the qualitative measurements of intangible firm characteristics as challenging and sceptical that they could be implemented. They recognized the purpose and need for such a framework but expressed scepticism in its execution beyond an academic exercise.

Concerns regarding the subjectivity and data accessibility of the qualitative measures in the IPMS framework are the main challenges of the next stage of this research topic. However, the resistance expressed by many interviewees to introduce these dimensions within the screening methodology may be influenced by their own bias, as many of them are regulators themselves or are/have been affiliated with an advisory/regulatory role. As observed, the necessity and basis of a more comprehensive framework, such as the IPMS, was agreed upon, but the party or stakeholder responsible for taking the lead in implementing this improvement was debated. A few of the interviewees believed that regulators must take the leading role, while the regulators interviewed believed that change should come from the industry and demand side.

It is also a bias of the interviewees to dismiss investors' demand for a more ethically comprehensive screening methodology, as there is a strong growth of ethical financing and socially responsible investments (S.R.I.). With the U.N.'s initiative launched in 2006, the Principles of Responsible Investment (P.R.I.), and the growing demand for ESG-compliant equities, the global trend for ethical financing will flourish further. Suppose Islamic investment funds, presently a subset of ethical financing, fail to evolve with the demand and growth of this new niche sector. In that case, Islamic investment funds and financing may become redundant and obsolete. Failure to improve the screening methodology shortly may be replaced by other frameworks, such as E.S.G., a currently more comprehensive and widely used framework for screening equities.

Although the validation of this study is done in Malaysia, the model can be holistically applicable to other schools of thought. In Malaysia, according to Mahfouz and Ahmed, the tolerance threshold of debt, liquidity, and non-permissible income ranges are

33.33%–30%, 33%–30% and 5%–25%, respectively [81]. Dow Jones, FTSE, S&P and MSCI Barra and Russell Investment (MSCI) apply a 33% or 33.33% threshold for total debt. The most crucial difference is that Dow Jones uses the denominator of market capitalization, while the Malaysian standards use total assets according to the market value [21]. Regardless of how the Malaysian quantitative measures differ, both are missing out on the ethical and environmental framework introduced in this paper. The source of this study is based on the primary sources of Sharia (Quran and *Sunnah*), which are agreed by consensus to be the source for all schools of thought in the *sunnah* traditions and among major Islamic sects. The difference may come only in *ijtihad* issues related to sub-issues, as these sects' leaders (*imam*) form the secondary source of Islamic law.

This research study acknowledges the caveats and limitations mentioned in this section. The validation process can be further improved. Firstly, although the study validates the IPMS framework with 15 experts from academia and practice, the interviewees are regulators, scholars and practitioners from the banking and finance industry. Practitioners from other industries were not engaged in the study.

Secondly, nearly all the experts interviewed were Malaysians. Garnering more interviewees based in more countries may allow greater contextualization of the Sharia screening process and suggested refinements in the IPMS framework. A broader context will allow a more robust case of comparison with international Sharia screening criteria used by Dow Jones and FTSE.

6. Conclusion

The proposed enhanced performance measurement system and framework is most likely to enact a fairer picture of the expected performance of Sharia-compliant firms, a growing list of firms driven by the rapid growth of Islamic finance worldwide. The development of the proposed instrument may have policy implications for regulatory bodies and criteria users such DJIM, FTSE and S&P to ensure that the ratings and evaluation of Sharia-compliant businesses more fully account for their efforts and contributions. It proposes an internal focus to drive businesses to higher ethical standards, adoptable by all firms. While there are prominent differences with other religions and secular-driven perspectives, many Islamic principles and values translated to the practical business environment considerably overlap with universal ethical principles and moral values. This paper contributes by expanding the theoretical basis of performance measurement and management to consider the role of religion as a new perspective by giving more significant consideration to less influential stakeholders.

Further research should examine the comparisons between the Islamic performance measurement system and prior conventional performance measurement systems, such as corporate social responsibility (C.S.R.) ratings and balanced scorecards (B.S.C.). Further research can be considered by expanding the scope of the validation process. Also, a more improved performance measurement system would consider weightage for items in it.

Author contribution statement

Noor Leena Haniffah: Analyzed and interpreted the data; Wrote the paper.
Mohammed shaiban: Analyzed and interpreted the data; wrote the paper.
Pervaiz K. Ahmed: Conceived and designed the analysis; Contributed analysis tools or data.

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Data availability statement

No data was used for the research described in the article.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendices.

Appendix A: Environmental, social and governance (E.S.G.) analyses based on MSCI Database[8]

Dimensions	Strength	Concern
Community issues	Generous giving Innovating giving Community consultation/engagement Strong aboriginal relationships	Lack of consultation/engagement Breach of covenant Weak aboriginal relations
Diversity in workplace	Strong employment equity program Women on the board of Directors Women in senior management Work/family benefits Minority/women contracting	Lack of employment equity controversies
Employee relations	Positive union relations Exceptional benefits Workforce management policies Cash profit sharing Employee ownership/involvement	Poor union relations Safety problems Workforce reduction Inadequate benefits
Environmental performance	Environmental management strength Exceptional environment planning and impact assessment Environmentally sound resource use Environmental impact reduction Beneficial products and services	Environmental management concern Inadequate environmental planning or impact assessment Unsound resource use Poor compliance record Substantial emissions/discharges The negative impact of operations The negative impact of products
International	Community relations Employee relations Environment Sourcing practice	Poor community relations Poor employee relations Poor environmental management/performance Human rights Burma Sourcing practices
Product and business practices	Beneficial products and services Ethical business practices	Product Safety Pornography Marketing practices Illegal business practices
Other	Limited compensation Confidential proxy voting Ownership in firms having high CSID Ratings	Excessive compensation Dual-class share structure Ownership in other firms

Appendix B: Current screening methodology for Sharia-compliant firms listed on Bursa Malaysia by the Securities Commission Malaysia

Quantitative Assessment	Qualitative Assessment
Tier 1: Business activity benchmarks **A. Limit of 5% involvement in the following activities:** 1. Conventional banking 2. Conventional insurance 3. Interest income from conventional accounts and instruments 4. Gambling 5. Liquor and liquor-related activities 6. Pork and pork-related activities 7. Non-halal food and beverages 8. Tobacco and tobacco-related activities 9. Non-Sharia compliant entertainment 10. Other activities deemed non-compliant according to Sharia **B. Limit of 20% involvement in the following activities** 1. Hotel and resorts operations 2. Share trading 3. Stockbroking business 4. Rental received from non-Sharia-compliant activities 5. Other activities deemed non-compliant according to Sharia **Tier 2: Financial ratio benchmarks** **A. Cash over Total Assets < 33%** Cash will only include cash placed in conventional accounts and instruments (excludes those placed in Islamic accounts/instruments). **B. Debt over Total Assets < 33%** Debt will only include interest-bearing debt, whereas Islamic debt/financing or *sukuk* will be excluded from the calculation.	**(Not disclosed by S.C.)**

Appendix C: Comparison table of the dimensions included in proposed IPMS, current screening methodology by S.C. and E.S.G. framework by MSCI Database[9]

Dimensions	IPMS (Proposed)	Screening methodology (S.C.)	E.S.G. (MSCI Database)
Prohibited involvements	✔	✔	✔
Monitored financial measures	✔	✔	
Shareholders	✔		
Board of directors and top management	✔		✔
Business dealings and products	✔		✔
Employee relations	✔		✔
Community issues	✔		✔
Environmental protection	✔		✔

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