The Integrity of Emerging Financial Markets: Prioritising Factors through Analytical Hierarchy Process

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Abstract: *This study aims to identify and prioritise market integrity factors of emerging markets using the analytical hierarchy process (AHP). The results show that within these domains, enforcement system is the most critical factor to ensure market integrity in emerging markets. Protection of investors is the second most important factor within the domain of regulatory quality. This study contributes to the literature by presenting a model of integrity focused on ethical behaviour, regulatory quality, and enforcement system for emerging Asian markets, given that this region is most susceptible to market fraud due to weak regulatory and enforcement systems.*

Keywords: Market integrity; Financial markets; Analytical hierarchy Process; Regulations; Enforcement system
JEL Classification: G1, G2, G18

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1. Introduction

The global financial crisis of 2008 urged regulators to tighten regulations in security markets, fostering new and diverse regulations with a focus on reducing systematic risk and improving market integrity (Austin, 2015; Siow & Aitken, 2003; Spatt, 2009). The central objective of regulators is to maintain market efficiency and integrity (Austin, 2014; 2015; 2017b; Azzutti et al., 2021; Comerton-Forde & Rydge, 2006; O'Hara, 2001). Market integrity means a market with a low level of crime, as well as fair, sound, effective, and equitable enforcement (Austin, 2017b; Fodor, 2008). Market efficiency, meanwhile, refers to a market where securities prices fully reflect all available information (Fama, 1970; Siow & Aitken, 2003). Market integrity and efficiency ensure that no individual can manipulate prices for their benefit or make abnormal profits, such the when the stock price of NEI Webworld rose by 11,400% in a day in response to false rumours on the United States market in 1999. Efficiency and integrity are often referred to as the twin pillars of a well-functioning financial market (Siow & Aitken, 2003). However, the market is not only a system of exchange or of resource allocation; it also includes a legal, cultural, social, political, and belief system, which in turn influences the functioning of financial markets (Carruthers & Kim, 2011; Y. Liu & Liu, 2024; Preda, 2007), within the domain of protection of investors, the rule of law, and the quality of enforcement systems (Brummer, 2024; Comerton-Forde & Rydge, 2006; Cumming et al., 2018; Cumming & Johan, 2008).

Research in market integrity mainly focuses on market abuses and illegal practices, i.e., market manipulation and insider trading (Aggarwal & Wu, 2003; Aitken et al., 2009; Allen & Gale, 1992; Austin, 2017; Barczentewicz et al., 2023; Bromberg et al., 2017; Huang & Cheng, 2015; Q. Liu, et al., 2021; Shah et al., 2023; Zulkifley et al., 2023). While a number of studies discuss the impact of surveillance efforts and regulations on market integrity (Bhattacharya et al., 2000; Brummer, 2024; Comerton-Forde & Rydge, 2006; Cumming et al., 2018; Cumming et al., 2011; Spatt, 2009), others present a model of market integrity (Austin, 2016b; Fodor, 2008; Spatt, 2009). To date, however, no study has identified the essential factors of market integrity, which is important to the proper functioning of the market. The absence of market integrity deprives it of investment, reduces investor confidence, deteriorates order flow, increases cost of capital, and reduces market efficiency (Macey, 2023; Siow & Aitken, 2003).

In this study, we contribute to the existing literature in two ways. First, the study identifies the essential factors of market integrity in emerging markets, and presents a model of integrity focused on ethical behaviour of market participants, regulatory quality, and enforcement systems. Secondly, the study applies a multi-attribute utility theory, outranking theory, and goal programming, in the form of the analytical hierarchy process (AHP). AHP has been widely applied for preference analysis in multi-attribute problems, and is classified as an optimal framework that takes into account conflictual, multidimensional, incommensurable, and uncertain effects of the decision-making process (Mubarik et al., 2018; Munda, 2000; A. Singh & Prasher, 2019; Varis, 1989). This paper uses AHP to prioritise factors of market integrity based on expert opinion. Three emerging Asian markets, namely Malaysia, Taiwan, and Thailand, are selected as the sample, given that the region is highly susceptible to market fraud due to weak regulatory and enforcement systems (Aggarwal & Wu, 2006; Huang & Cheng, 2015; Khwaja & Mian, 2005; Mei et al., 2004; Shah et al., 2019). Additionally, these three Asian markets are the best mix of developed and underdeveloped markets, with some beating Western markets and others being quite dismal. AHP takes into account expert opinion from the region to identify and prioritise market integrity factors.

2. Literature Review

2.1 Market integrity

In the literature, market integrity is rarely defined, and a precise definition is not available. Bhattacharya et al. (2000) state that "Market integrity refers to disadvantages outsiders face vis-à-vis insiders when trading on the market, and we expect market integrity to change over time." This definition mainly focuses on the absence of an enforcement system related to insider trading. Market integrity can be explained in different ways, such as markets with low crime, market efficiency, effective enforcement, regulations, and trust, but there is no quantitative term to define market integrity yet. Since the global financial crisis that hit many countries, regulators have more rigorously clamped down on capital market fraud as their prime objective. The main focus of these regulations is protecting investors against market and corporate fraud, and to maintain the integrity of the market for fair trading and ethical market practices (Fodor, 2008).

The concept of integrity and efficiency are sometimes confusing and even take to be synonymous. In this case, however, market integrity and efficiency are distinct. Market integrity is not just when securities prices reflect actual value, but also when it provides a fair and equal chance of trading to all market participants, thus reducing information asymmetry. In financial literature, market integrity is linked to efficiency, in that a high integrity market will also be effective. To finance scholars, the influence of the capital asset pricing model (CAPM) and the efficient capital market hypothesis (ECMH) leads to a prediction that prices will reflect the fundamental value of the asset as closely as possible in an informationally efficient market. If prices reflect the fundamental value of the asset, this will result in the most efficient allocation of capital. Market integrity, therefore, means trading practices that may interfere with the ability of prices to reflect the fundamental value of the asset.

Similarly, one of the main issues in financial markets is the protection of market integrity and fairness to maintain market efficiency. Integrity means that markets are unimpaired, uncorrupted, and sound, while fairness means that markets are impartial and fair (Austin, 2017b). The absence of market integrity creates market volatility. Volatility is not always the result of market fundamentals; most of the time, it is due to the deterioration of market integrity that stems from poor market design. Fraudulent activities in the form of insider trading and market manipulation are the primary cause of deterioration. Market integrity ensures that no individual can manipulate prices for their benefit, generate abnormal profit, or the primary goal of securities markets. Although regulators and stock markets have surveillance systems to detect and prevent manipulation, it still occurs because investors now congregate in funds (Aitken et al., 2009). Furthermore, emerging markets have a relatively lower level of market integrity (Wang et al., 2021, 2022), since investors in these markets are involved in noise trading activities, which ultimately reduce market integrity. Therefore, market integrity is a critical issue in emerging markets, and the present study will contribute to the knowledge by filling this gap.

2.2 Factors of market integrity

2.2.1 Ethical behaviour of market participants

Ethical behaviour in financial markets is essential both from a moral and economic standpoint, where economic activities are based on trust among market participants (Astrachan et al., 2020). As such, any breakdown of this trust will adversely affect pricing mechanisms and market efficiency, causing integrity to deteriorate (Mminele, 2014). Ethics is a set of rules that define right and wrong behaviour that helps individuals distinguish between facts and beliefs, decide on the exposure of issues, and ascertain the moral principles used in certain situations (Chong & Anderson, 2008). Ethical values help individuals organise and manage actions taken with due regard to morality and trust in the decision-making process. In the use of ethics, the individual must be aware of the need to act following the morals and beliefs held (Karpoff, 2021). Ethical behaviour is an action that complies with the reasonable substantive standard. Ethical investment is, therefore, the application of ethical and social criteria in the selection and management of an investment portfolio (Cowton, 1994; Hussein & Omran, 2005). Ethics has become a particular concern for investment, particularly capital market investment (Bonnefon et al., 2025; Jamnik, 2011; Parmitasari et al., 2018; Shefrin & Statman, 1993).

Ethical issues in finance are distinct from other areas of business since financial transactions are highly regulated by law rather than by an ethical standard. But the law is an uncertain regulator, and all financial laws are based on presumed ethical standards of fairness, particularly in financial markets (Jamnik, 2011), where heterogeneous investors with asymmetric information trade (Bushee, 2001; Chung et al., 2018). These heterogeneous investors in the form of insiders, individual investors, and institutional investors, are potential manipulators of financial markets and a threat to integrity (Barber & Odean, 2013; Burns & Kedia, 2006; Ghafoor et al., 2018; Peng & Röell, 2013). Therefore, higher ethical standards are required from these market participants (Jamnik, 2011).

2.3   *Regulatory system*

The primary responsibility of security regulators is to preserve market integrity (Uzougbo et al., 2024b) and mitigate market abuses, such as market manipulation, insider trading, and front running. The monitoring process has become more difficult than it was 30 years ago (Austin, 2014). The regulatory system is an essential pillar of financial markets, as they attract investors and market participants for the effective allocation of resources across the economy. Therefore, regulators must ensure trust and confidence to protect investors against market abuses and ensure market integrity (Guiso et al., 2008). An effective regulatory system provides fairness and integrity to the market and its participants (Igbinenikaro & Adewusi, 2024; Uzougbo et al., 2024b), eliminating market abuses. This leads to market efficiency, as they provide more grounds for a fair reflection of security prices in the market (Austin, 2017b). In line with national public interest, a market is fair if it provides transparent and fair pricing, easy and equal access to the market to all participants, and asymmetric information. Therefore, all market participants are treated equally.

Further, as suggested by Shefrin and Statman (1993), securities regulators protect investors from possible flawed decisions. Regulators mainly focus on the protection of investors from investing in securities that may suffer abnormal losses. Therefore, the protection of investors is another regulatory goal along with ensuring integrity and fairness. The objective of the regulatory system is not merely to increase liquidity and reduce transaction costs, which is ultimately referred to as market efficiency. According to the International Organization of Securities Commissions (IOSCO, 2003), Fodor (2008) and Austin (2017b), the objectives of securities regulations are the protection of investors against market abuses; ensuring the efficiency, transparency, and fairness of the market system; reducing systematic risk; and ensuring the effectiveness, efficiency, and fairness of market structures.

Therefore, market fairness is linked to investor protection against illegal market trading, which ensures that market structure is effective and does not favour any participant in trading and information sharing process. Regulation should be designed to detect, discourage, and punish market abuses and unfair trading practices to maintain investor confidence and market integrity. Further, regulations must ensure fair access and facilitation to all market

participants regarding trading and information, and to ensure fair treatment and order flow formation, therefore maintaining good governance and market structure. Existing studies have identified the relationship between market efficiency and financial market regulation and enforcement, concluding that more efficient securities regulations have a positive impact on initial public offerings, market valuation, and market participation (Jackson & Roe, 2009; La Porta et al., 2006; Zeume, 2017), while surveillance efforts improve market integrity (Comerton-Forde & Rydge, 2006).

2.4   Enforcement system

Performance measurement of the enforcement system and regulatory system is challenging from a legal perspective. The same holds for capital market-related laws and regulations. In order to achieve a meaningful measurement of effective enforcement, actions against misconduct must be defined. One school of thought suggests that the list of enforcement actions and settlements are the best and appropriate measure for effective enforcement, while others argue that the role of enforcement authorities in reasonably performing their duties can be used as a proxy of effective enforcement. As such, enforcement is a crucial component of maintaining market integrity and market confidence (Uzougbo et al., 2024a). Effective enforcement of existing laws and regulations creates a dissuasion factor for those who would otherwise intentionally circumvent the rules.

Enforcement against misconduct discourages manipulative activities, insider trading, and illegal practices (Chen et al., 2016; Cumming et al., 2015a; Mehta & Zhao, 2020). Increased expenditure on the enforcement of securities regulations also improves the detection of fraud and facilitates increased trading and participation in the stock market (Cumming et al., 2015a; Cumming & Johan, 2013). In the US, improved regulations have reduced insider trading activities (Seyhun, 1992). The enforcement system exists in the form of private enforcement and public enforcement. Public enforcement benefits small firms, while private enforcement benefits large firms (Cumming et al., 2015a). These enforcement systems have increased market liquidity and reduced market volatility (Cumming et al., 2015b). Furthermore, studies have identified that surveillance efforts to detect illegal market manipulation has significantly contributed to market efficiency and liquidity (Comerton-Forde & Rydge, 2006; Cumming et al., 2011). To ensure

equality among market participants, regulators must ensure transparency regarding pre-trade information and the demand and supply of in-depth information. Figure 1 represents the market integrity model and hierarchy.
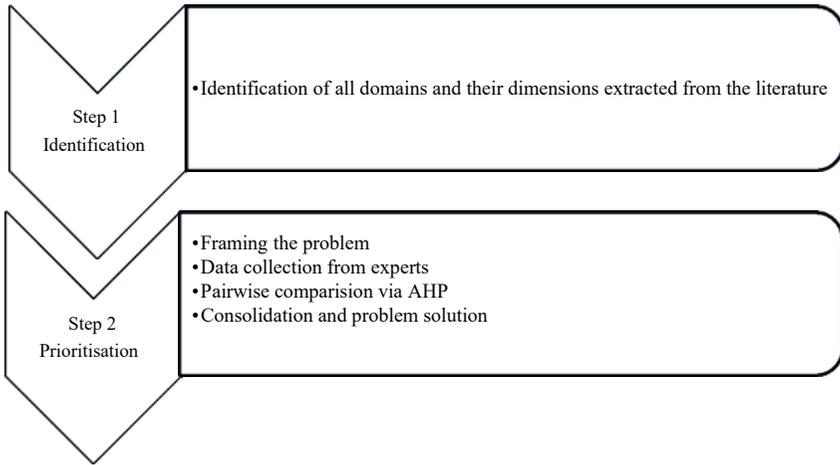
Figure 1: Market integrity hierarchy
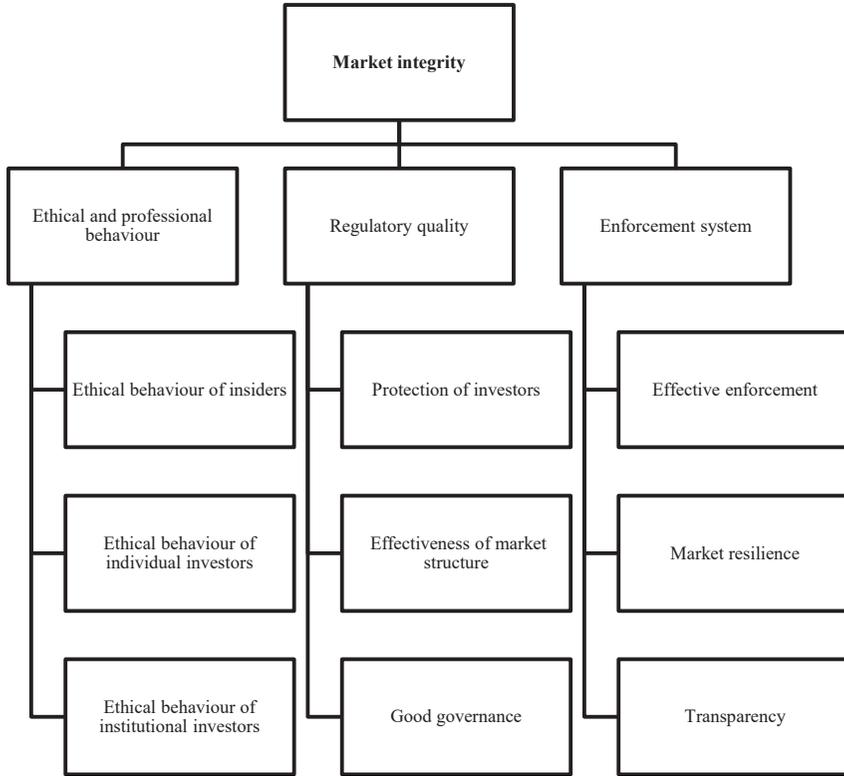
3.   Methodology

3.1   *AHP methodology*

The AHP relies on the theory of measurement through pairwise comparisons, relies on the judgment of experts to derive priority scale. AHP is a prevalent method to manifest human judgments in multiple criteria decision making (Kuo & Chen, 2023). AHP a widely used and well-known decision support tool in the business sector (Govindan et al., 2014; Mubarik et al., 2018; Ponis et al., 2015; A. K. Singh, 2016). The AHP methodology compares

criteria, or alternatives for a criterion, in a natural, pairwise mode (Borade et al., 2013; Tavana et al., 2023). This study is designed to identify and prioritise market integrity factors, therefore, AHP takes into account expert opinion from this region to prioritise market integrity factors. This process is divided into different steps, which are highlighted in Figure 2.

Figure 2: Process of AHP

Step 1
Identification

•Identification of all domains and their dimensions extracted from the literature

Step 2
Prioritisation

•Framing the problem
•Data collection from experts
•Pairwise comparision via AHP
•Consolidation and problem solution

3.2   Identification

From the review of the literature and IOSCO, we extract domains and dimensions of market integrity. We identify three domains and nine dimensions of market integrity. The domains and dimensions are presented in Table 1.

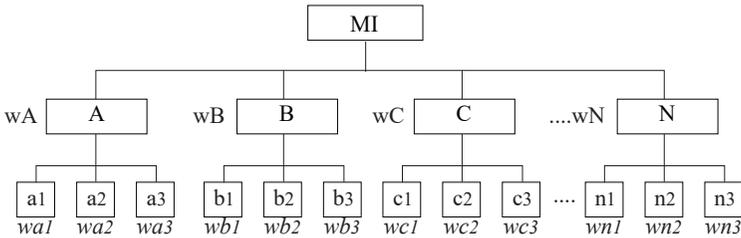**Table 1**: Domains and dimensions of market integrity

Domain	Dimensions
Ethical and professional behaviour	Ethical behaviour of insiders
	Ethical behaviour of individual investors
	Ethical behaviour of institutional investors
Regulatory quality	Protection of investors
	Effectiveness of market structure
	Good governance

Domain	Dimensions
	Effective enforcement
Enforcement system	Market resilience
	Transparency

3.3 Prioritising

The second step involves prioritising domains and dimensions in a pairwise comparison. This step starts with defining the problem and goals of domain and dimensions along with hierarchy. Our primary goal is to identify important factors in improving market integrity. The common hierarchy of AHP is presented in Figure 3.

Figure 3: AHP hierarchy model

where *MI* represents market integrity, *A*, *B*, *C*, and *N* represent the domain of the hierarchy, *a*, *b*, *c*, and *n* represent dimensions, and w represents the local weight of domains and dimensions.

3.4 Data collection from experts

To develop the index, we used expert opinion in the form of questionnaires completed by industry experts and academic researchers to find the most critical factors that reduce market manipulation in these financial markets. The experts were selected using expert sampling, a non-probability technique and a form of purposive sampling, where the researcher relies on his/her expertise to select the sample with pre-defined experience and expertise (Mubarik et al., 2018).

We started with the definition of expert for the purpose of this study. We divided experts into two categories—regulatory experts and academic experts—with 10 years or more of experience. A regulatory expert is any individual working in securities commissions or stock exchanges in either legal, compliance, or enforcement divisions, while an academic expert is any academician with research background in law and finance, financial markets, and regulations. For each market, at least two experts were selected to complete the questionnaire. Table 2 presents the details of the selected experts.

Table 2: Sample experts

Expert classification	Expert group	Experts
Academics	Law and finance	3
	Financial markets	3
	Regulations	4
Regulators	Securities and exchange commissions	6
	Stock exchange	4
Total		20

Note: Securities commissions include Securities Commission Malaysia, Securities and Exchange Commission Thailand, and the Financial Supervisory Commission (FSC) Taiwan

3.5 Pairwise comparison

AHP pairwise comparison was conducted at the domain level and the dimension level. A nine-point scale was used to assign relative weights to a pairwise comparison between domains and dimensions. The scale of measurement as adopted by Saaty (1977) and presented in Table 3.

Table 3: AHP measurement scale

Degree	Definition
1	Both dimensions are equally important
3	Weakly/moderately important
5	Important
7	Very important
9	Extremely important
2, 4, 6, 8	Intermediate values

After the data collection process, data was processed through matrices to find the normalised and unique priority weights for each criterion in the form of pairwise comparison judgment matrices (PCJM) (Govindan et al., 2014; Mubarik et al., 2018). To calculate the weights for various criterions, a pairwise comparison matrix P is created. The matrix P is an $n \times n$ real matrix, where n represents the number of evaluation dimensions taken. Every entry of the matrix P depicts the relative importance of the *wth* criterion when it compares to the *lth* criterion. If $a_{wl} > 1$, then the *wth* criterion is more important than the *lth* criterion, whereas if $a_{wl} < 1$, then the *wth* criterion is less important than the *lth* criterion. Similarly, if $a_{wl} = 1$ then both criteria have equal importance.

The critical concern of the AHP is to obtain consistency in the judgments through consistency ratio. Saaty (1980) suggests that if the consistency ratio is higher than 1 the judgments process must be repeated, as these judgments are neither reliable nor consistent. If the consistency ratio equals 0, the judgments are considered consistent and reliable. The consistency ratio is calculated based on the following steps (Hamner, 2006; Noorul Haq & Kannan, 2006): calculating the eigenvector or relative weights and *λmax* for each matrix of order *n*, and computing the consistency index for each matrix of order *n* by the formula:

$$CI = (\lambda_{max} - n)/(n - 1) \tag{1}$$

$$CR = CI/RI \tag{2}$$

Once the CR is met, we get the normalised priority weights for each PCJM that have been calculated. The normalised weights of each domain and dimension of market integrity are added together for succeeding hieratical levels to attain global composite priority weights of all dimensions (Mubarik et al., 2018).

4.   Results

The results of pairwise comparison judgement matrices and global composite priority weights generated through AHP are presented below.
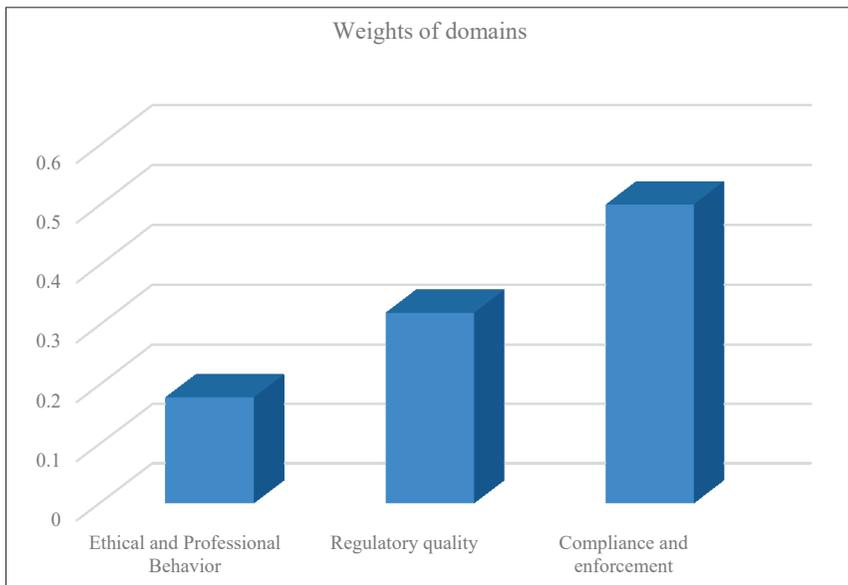
4.1 Domains of market integrity

Table 4 represents PCJM and the priority of domains for market integrity. The domains of market integrity are ethical and professional behaviour, regulatory quality, and enforcement system. PCJM is geometric means of comparison.

Table 4: Domains: Pairwise comparison judgment matrices (PCJM)

	(I)	(II)	(III)	Weights	Ranking
Ethical and professional behaviour (I)	1	0.61	0.33	0.1787	3
Regulatory quality (II)	1.65	1	0.69	0.3201	2
Compliance and enforcement (III)	3.04	1.44	1	0.5012	1
Consistency ratio		0.007			

Figure 4: Weights of domains

The results suggest that within the three domains of market integrity, enforcement system is the most critical domain with a local weight[1] of 0.512. It is important to note that in recent research, enforcement against misconduct is one of the critical variables that mitigate misconduct in

financial markets (Aitken et al., 2015; Cumming et al., 2015a). This finding is also supported by the argument that enforcement against misconduct limits incentives to engage in market misconduct (Chen et al., 2016; Cumming et al., 2015).

The study also supports the argument that emerging markets have weak enforcement systems (Ararat et al., 2021), therefore the importance of enforcement system is critical in preserving market integrity. Similarly, past studies show that expenditure on enforcing securities regulations improves the fraud detection process, increases trading volume, and heightens investor confidence (Cumming et al., 2015a; Cumming & Johan, 2013). Similarly, Seyhun (1992) notes that enforcement activities are effective in reducing insider trading activities in the US.

Another important factor of market integrity is regulatory quality, with a weight of 0.3201 which is ranked second. Regulation is aimed at ensuring fair price formation and investor protection, which in turn promotes market practices that ensure fair treatment of orders and a reliable price formation process. The literature also supports the positive impact of effective securities regulations on initial public offerings, market valuation, and market participation (Jackson & Roe, 2009; La Porta et al., 2006; Zeume, 2017). Shefrin and Statman (1993) also suggest a regulator of securities to protect people from imperfect decisions and unsophisticated/ uninformed investors from investing in securities that may generate losses or suboptimal returns. With reference to emerging markets, our results support the argument that these markets have poor regulatory quality. Thus, strong regulatory quality may help improve market integrity and deficiency. The consistency ratio of this estimation is 0.007. The consistency ratio is less than 0.1, which shows that there is a consensus of judgments by the experts, with no inconsistency observed (Mubarik et al., 2018; Najmi & Makui, 2010).

4.2   Dimensions of market integrity

There are nine dimensions of market integrity within these three domains. Under ethical and professional behaviour, the ethical and professional behaviour of institutional investors is the most critical factor with a weight of 0.629, ranked first on the priority list. Institutional investors require more ethical behaviour due to the fact that they act as monitors and serve on

boards of directors (García-Meca et al., 2017; García-Sánchez et al., 2015). They also hold significant shares, and firms with more institutional investors are more prone to manipulation. The other two factors count the minimum value of 0.233 and 0.138. The consistency ratio of 0.009 shows that expert judgment is consistent.

Table 5: Pairwise comparison judgement matrices (PCJM) of ethical and professional behaviour

	(I)	(II)	(III)	Weights	Ranking
EPB of insiders (I)	1	1.85	0.34	0.233	2
EPB of individual investors (II)	0.54	1	0.24	0.138	3
EPB of institutional investors (III)	2.95	4.15	1	0.629	1
Consistency ratio		0.009			

**Figure 5**: Ethical and professional behaviour
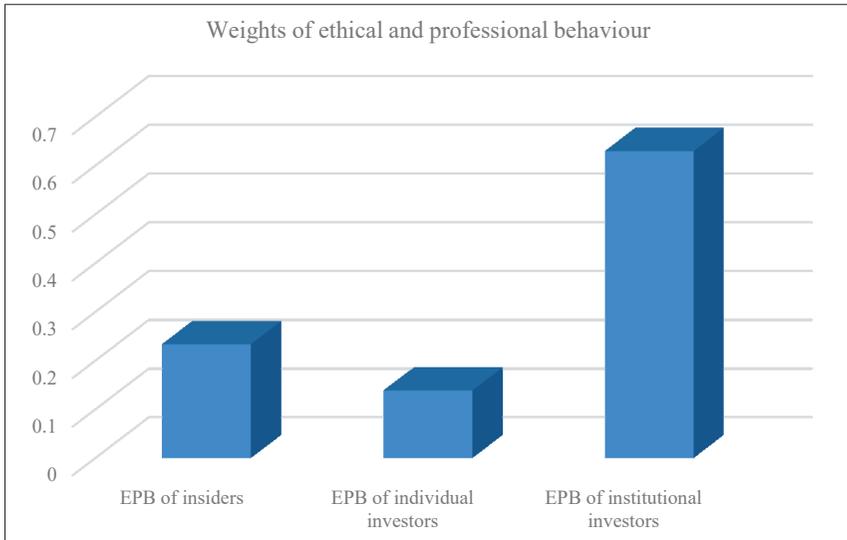
For the domain of regulatory quality, protection of investors is the most critical factor to improve market integrity, with a local weight of 0.425, followed by the effectiveness of market structure at 0.384.

Table 6: Pairwise comparison judgement matrices (PCJM) of regulatory quality

|	(I)	(II)	(III)	Weights	Ranking
Protection of investors (I)	1	2.31	1.07	0.425	1
Good governance (II)	0.43	1	0.51	0.191	3
Effectiveness of market structure (III)	0.93	1.95	1	0.384	2
Consistency ratio		0.001			

Figure 6: Weights of regulatory quality
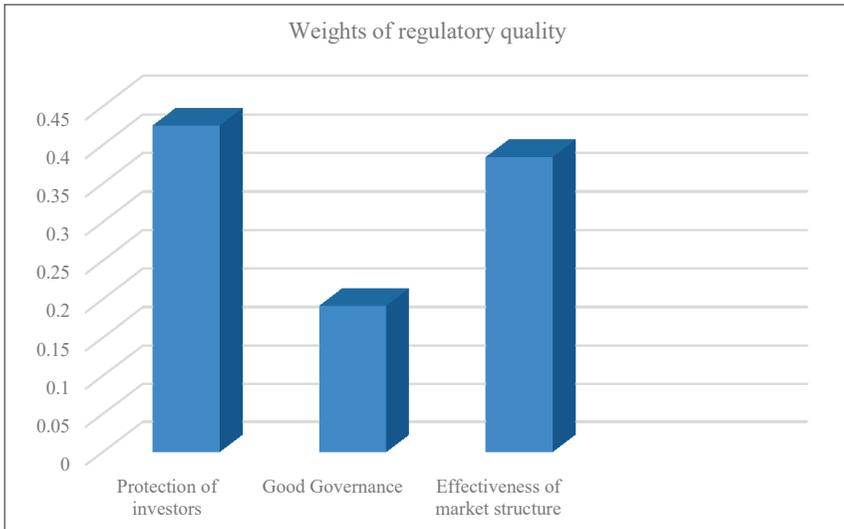
The literature also supports the finding that efficient securities regulations have a positive impact on the initial public offering, market valuation, and market participation (Jackson & Roe, 2009; La Porta et al., 2006; Zeume, 2017). This is also suggested by Shefrin and Statman (1993), as securities regulators protect investors from flawed decisions. Regulators mainly focus on the protection of ingenuous investors from investing in securities that may suffer abnormal losses.

Table 7: Pairwise comparison judgement matrices (PCJM) of enforcement system

	(I)	(II)	(III)	Weights	Ranking
Effective enforcement (I)	1	4.15	2.30	0.60	1
Market resilience (II)	0.24	1	0.64	0.152	3
Transparency (III)	0.43	0.155	1	0.248	2
Consistency ratio		0.003			

Figure 7: Weights of enforcement system
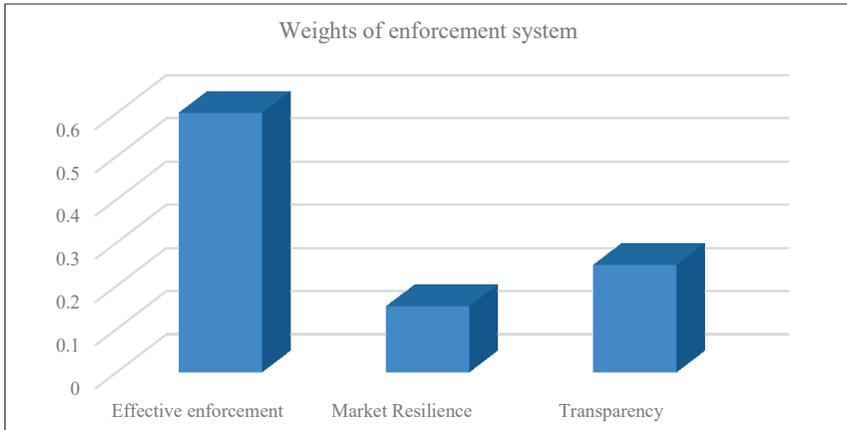
Finally, for the domain of enforcement system, effective enforcement is the most significant factor contributing to 0.60 in market integrity with a consistency ratio of 0.003. We already find in this domain that enforcement and compliance is critical for market integrity, while effective enforcement is also an essential dimension of enforcement and compliance.

4.3   Global composite priority weights

After the calculation of PCJM weights and priority for each domain and dimension, the next step is to find a composite solution for a market integrity model. The local weights of all domains and dimensions are added together concerning succeeding hierarchical level to obtain the global composite priority weight (GCPW). The GCPW can be obtained by multiplying the local weights of dimensions to their corresponding domains, which can be used for evaluation of all factors for decision-making as well as indexing (Govindan et al., 2014; Mubarik et al., 2018; Saaty, 1990). The complete market integrity index is presented in Table 8.

The results of the GCPW show that effective enforcement is one of the most critical factors, with a global weight of 0.3007 in the overall index. Hence, in order to maintain market integrity, regulators must develop and implement an effective enforcement system. This is supported by the argument that if there is effective enforcement in financial markets, the rate of fraud will be lower (Aitken et al., 2018; Cumming et al., 2015a; Cumming et al., 2018; La Porta et al., 2006; Parsons et al., 2018). Effective

enforcement is also an essential tool in reducing insider trading, as highlighted by Seyhun (1992). Similarly, Aggarwal and Wu (2006) note that effective enforcement increases market efficiency, thus promoting market integrity.

Table 8: Global composite priority weight of market integrity

Domain	Relative weight using AHP	Dimension	Relative weight using AHP	Global weights using AHP	Ranking
Ethical and professional behaviour	0.1787	Ethical and professional behaviour of insiders	0.233	0.041637	8
		Ethical and professional behaviour of individual investors	0.138	0.02466	9
		Ethical and professional behaviour of institutional investors	0.629	0.1124	5
Regulatory quality	0.3201	Protection of investors	0.425	0.1360	2
		Good governance	0.191	0.0611	7
		Effectiveness of market structure	0.384	0.1229	4
Enforcement system	0.5012	Effective enforcement	0.60	0.3007	1
		Market resilience	0.152	0.0761	6
		Transparency	0.248	0.1242	3
Total				1	

Table 9: Derivation of market integrity ranking

Market integrity factors	Weights	Ranking
Effective enforcement	0.3007	1
Protection of investors	0.1360	2
Transparency	0.1242	3
Effectiveness of market structure	0.1229	4
Ethical and professional behaviour of institutional investors	0.1124	5
Market resilience	0.0761	6
Good governance	0.0611	7
Ethical and professional behaviour of insiders	0.0416	8
Ethical and professional behaviour of individual investors	0.0246	9
Total	1.00	

Figure 8: Index weights
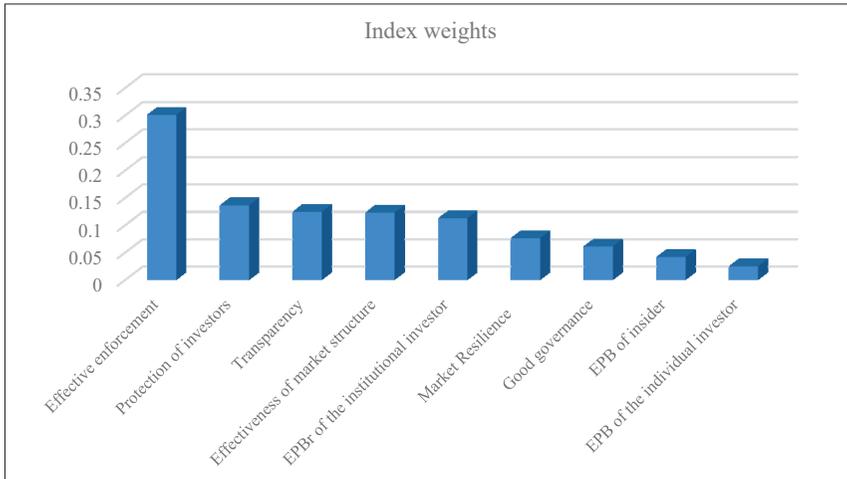
The second important factor is the protection of investors with a global weight of 0.1360, which ranks second in the overall composite index for all nine dimensions. The primary responsibility of the regulator is to protect investors from market miscreants in order to preserve market integrity (Fodor, 2008). Moreover, IOSCO states that the protection of investors is the primary responsibility of regulators and exchanges (Austin, 2016a).

5.   Conclusion

Market integrity is a vital pillar to prevent market abuses, such as market manipulation, which can be achieved through the behaviour of market participants, regulatory systems, and strong enforcement systems. For this purpose, a market integrity index is constructed using AHP based on expert opinion. We identify three domains of market integrity, i.e., ethical and professional behaviour, regulatory quality, and enforcement system.

The results suggest that within these three domains, enforcement system is the most critical. This means that enforcement is critical to mitigate misconduct in financial markets. There are nine dimensions of market integrity within these three domains. For the domain of ethical and professional behaviour, ethical and professional behaviour of institutional investors is the most important factor. For regulatory quality, the protection of investors is the most critical factor to improve the integrity of financial

markets. And for enforcement system, effective enforcement is the most significant factor. We also constructed global weights and a composite index, which show that among all factors of market integrity (both domains and dimensions), effective enforcement is the most critical. This suggests that effective enforcement in financial markets reduces the likelihood of fraud being committed.

The finding of the study has significant implications for regulators and investors. Regulators must prioritise effective enforcement in the design of market integrity policies to reduce the likelihood of fraud. Moreover, the findings suggest that investor protection is also crucial in protecting market integrity. This needs to be taken into account in policymaking and the formulation of market practices rules. The study has several limitations. We found it challenging to find industry experts, therefore limiting our sample. Industry experts are usually those who work in the enforcement and regulatory divisions of security commissions, who are reluctant to give their opinion on these issues. Therefore, we relied mostly on personal contact in these three markets studied and ensured confidentiality. Future studies may be conducted to expand the sample size and to test this market integrity model. This model has been developed by AHP and expert choice system; however, new methodology and empirical studies may be conducted to validate this model.

Endnote

[1] Local weight is derived from PCJM of both domains and dimensions.

Credit Author Statement

Syed Qasim Shah: Conceptualisation, Formulation of idea, Development of methodology, Data collection, Original draft preparation. **Izlin Ismail**: Design of methodology, Conceptualisation, Supervision, Advisory. **M. Asif**: Drafting, Formal analysis of AHP, Editing.

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