

Valuation Newsletter Highlights

- Contributory Assets Charges
- Market Data
- Market Highlights
- Appendix

Contributory Assets Charges

Introduction

Purchase Price Allocation is an acquisition accounting process used to allocate the purchase price to the company’s assets and liabilities acquired in a business combination. This is usually done after the completion of a merger or acquisition. The process entails identifying and valuing the acquired company’s assets and liabilities which could include:

- Intangible assets - Customer relationships, trademarks, brand names, patents, technology, etc.
- Tangible assets - Property, plant and equipment, land, building, inventories, etc.
- Liabilities - Bank loans, lease liabilities, deferred revenue, deferred tax liabilities, etc.

Valuation of intangible assets is challenging as it may involve judgements on assumptions used in the valuation process. One of the common methods to perform the valuation of intangible assets is multi-period excess earnings method (“MEEM”). Under this method, the value of an intangible asset is the present value of the intangible asset’s cash flows after adjusting for the proportion of cash flows that are attributable to other assets (also known as **contributory assets**) necessary for generating those cash flows. Refer to Diagram 1 and Table 1 for a simple example of valuing customer relationships using MEEM.

Diagram 1: Valuation of Customer Relationships using MEEM

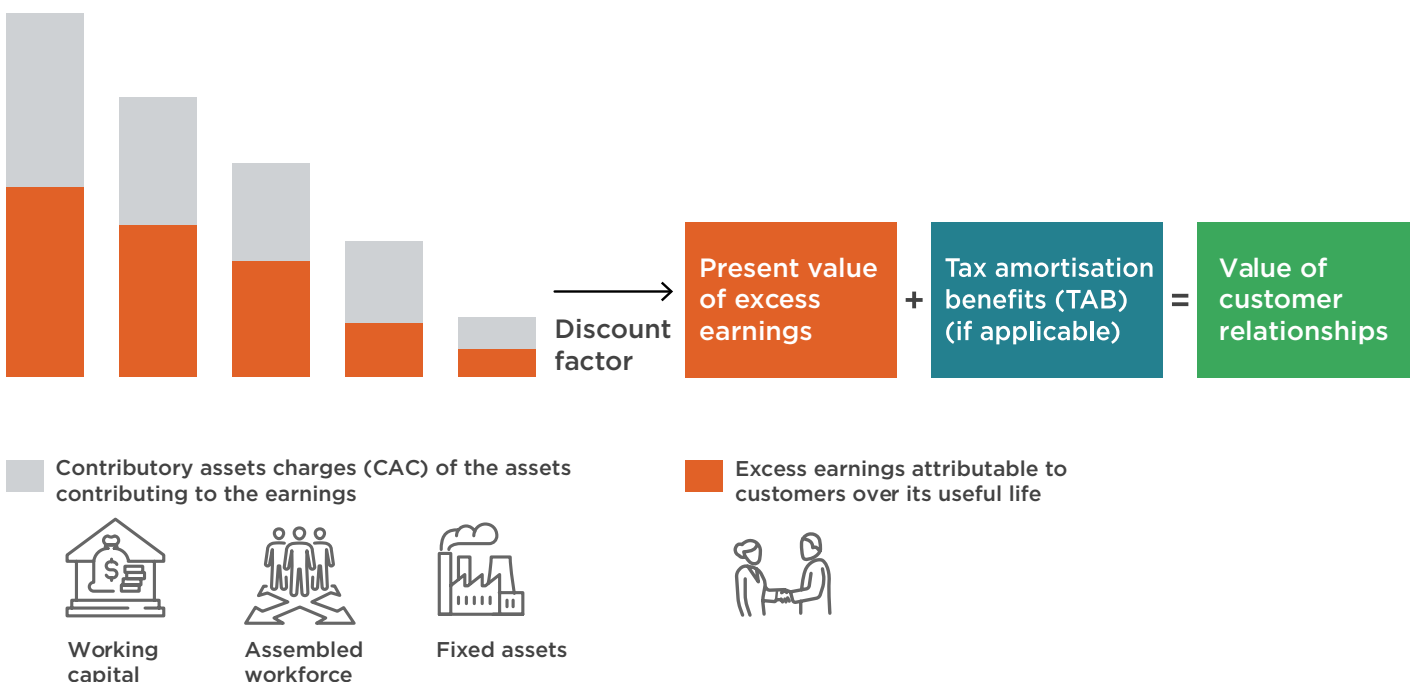


Table 1: MEEM - Valuation of Customer Relationships as at 31 December 2023 (the “Valuation Date”)

SGD'000		FY2024	FY2025	FY2026	FY2027	FY2028
Revenue from regular customers		350,000	385,000	423,500	465,850	489,143
Attrition rate (Note 1)	35.0%	65.0%	42.3%	27.5%	17.9%	11.6%
Adjusted revenue		227,500	162,663	116,304	83,157	56,755
Earnings before interest and tax (“EBIT”)		34,125	25,213	19,772	16,609	14,189
Less: income tax expense	17.0%	(5,801)	(4,286)	(3,361)	(2,824)	(2,412)
EBIT after tax		28,324	20,927	16,410	13,785	11,777
Contributory assets charges (“CAC”) - return on:						
Working capital	0.8%	(1,865)	(1,334)	(954)	(682)	(465)
Assembled workforce	0.3%	(657)	(470)	(336)	(240)	(164)
Fixed assets	0.9%	(2,146)	(1,534)	(1,097)	(784)	(535)
Excess earnings		(4,668)	(3,337)	(2,386)	(1,706)	(1,164)
Discount period		23,656	17,589	14,024	12,079	10,612
Discount factor	12.0%	0.5	1.5	2.5	3.5	4.5
		0.9	0.8	0.8	0.7	0.6
Present value of excess earnings		22,353	14,839	10,564	8,124	6,373
Total present value of excess earnings		62,253				
Tax amortisation benefits (“TAB”)		-				
Subtotal		62,253				
Fair value of customer relationships (rounded)		62,000				

Total may not add due to rounding.

Note 1: The attrition rate is computed based on reducing balance method.

As shown in the above Table 1, the **contributory assets charges (“CAC”)** are estimated based on the percentage of revenue ranging from 0.3% to 0.9%. In this example, the CAC could contribute approximately 10% to 16% of EBIT after tax which are considerably significant. Hence, CAC could be a significant input in the valuation of intangibles assets using MEEM. In this newsletter, we will be discussing about CAC in greater detail.

What are contributory assets?

Contributory assets are assets that are utilised along with the intangible assets to generate potential cashflows as most intangible assets cannot produce independent cashflows without contributory assets. Therefore, for future cash flows to be produced, both contributory assets and intangible assets are jointly used. Some examples of contributory assets are shown in Table 2.

Table 2: Examples of Contributory Assets

Asset category	Examples
Working capital	Cash, trade receivables, inventory, trade payables, etc.
Intangible assets	Assembled workforce, customer relationships, trademarks, tradenames, etc
Fixed assets	Property, plant and equipment, land, building, etc.

What are contributory asset charges (“CAC”)?

The cash outflows given to contributory assets which are better known as contributory asset charges is one of the key assumptions in MEEM, as shown in Table 1.

The two components in CAC are:

- The “**return of**” refers to the amount needed to recoup the initial investment sum or replace the asset.
- The “**return on**” concept is alike to that of the rental payment to the hypothetical owner for using the rented asset.

The “return of” is not applicable for the working capital as the asset will be replenished itself over a period. For most intangible assets such as assembled workforce, the annual costs to replace the asset are included in the forecast expenditures, and this will account for the “return of” the asset. Similarly, the forecast depreciation expenses are considered as a “return of” fixed assets. As the “return of” contributory assets are either replenished themselves or already included in the forecast cash flows in various forms of expenditure, valuers will put more time and effort in the estimation of the “return on” the contributory assets.

How is the “return on” estimated?

The “return on” can be estimated by multiplying the rate of return that reflects relative risks of the subject contributory asset and its fair value/carrying amount annually (either ending or average basis). Examples for some rates of return commonly adopted by valuers are shown in Table 3.

Table 3: Examples for Rates of Return

Contributory assets	Rates of return
Working capital	Short-term borrowing rates and/or cost of equity
Assembled workforce	Weighted average cost of capital (“WACC”)
Fixed assets	Borrowing rate for similar assets and/or cost of equity

The calculated “return on” can be converted into a percentage of revenue to facilitate the application of the “return on” for each subject asset’s cash flows. The estimation of CAC - “return on” can be based on historical data of the subject company. Refer to Tables 4 to 6 for simple examples of calculating “return on” for various contributory assets including working capital, assembled workforce, and fixed assets.

Table 4: Working capital CAC - “Return on” as at the Valuation Date

SGD’000		FY2019	FY2020	FY2021	FY2022	FY2023	Workings
Total revenue		80,000	150,000	200,000	300,000	400,000	[A]
<u>Working capital:</u>							
Trade receivable		35,000	50,000	60,000	85,000	150,000	[B]
Inventory		7,500	10,000	15,000	20,000	25,000	[C]
Trade payable		10,000	20,000	30,000	40,000	45,000	[D]
		32,500	40,000	45,000	65,000	130,000	[E]=[B]+[C]-[D]
Post-tax financing rate (*)	2.8%						
CAC		926	1,139	1,281	1,851	3,702	[F]=[E]*Post-tax financing rate
CAC as % of revenue		1.2%	0.8%	0.6%	0.6%	0.9%	[G]=[F]/[A]
Average CAC as % of revenue:	0.8%						[H]=Average of [G]

Total may not add due to rounding.

(*) Short-term borrowing rate

Table 5: Assembled workforce CAC – “Return on” as at the Valuation Date

Department	Pax	Average salaries /pax (Note 1) SGD'000	Recruitment and training costs/pax (Note 2) SGD'000	Probation and training period (months) (Note 3)	Efficiency level (Note 4)	Cost of assembled workforce (Note 5) SGD'000	Workings
	A	B	C	D	E	$[(B * D * (1 - E)) + C] * A$	
Finance	25	30.0	30.0	6	70%	2,100	[F]
Logistics	15	20.0	20.0	6	70%	840	[G]
Sales	40	55.0	55.0	6	70%	6,160	[H]
Head Office	25	35.0	35.0	6	70%	2,450	[I]
Value of assembled workforce						11,550	[J]
WACC						10.0%	
CAC						1,155	[K]=[J]*WACC
FY2023 revenue						400,000	[L]
CAC as % of revenue						0.3%	[M]=[K]/[L]

Total may not add due to rounding.

Note 1: Estimated monthly salaries (including benefits such as bonus, employer's CPF, commission/overtime etc.) per headcount for each department.

Note 2: Estimated costs to recruit and train one new headcount for each department.

Note 3: Average probation and training period per headcount for each department.

Note 4: Estimated efficiency level that a new headcount of each department will operate at during the probation and training period.

Note 5: Fair value of assembled workforce is estimated by using the replacement cost method.

Table 6: Fixed assets CAC – “Return on” as at the Valuation Date

SGD'000		FY2019	FY2020	FY2021	FY2022	FY2023	Workings
Total revenue		80,000	150,000	200,000	300,000	400,000	[A]
Fixed assets		10,000	20,000	30,000	35,000	40,000	[B]
Post-tax financing rate (*)	7.5%						
CAC		754	1,509	2,263	2,641	3,018	[C]=[B]*Post tax financing rate
CAC as % of revenue		0.9%	1.0%	1.1%	0.9%	0.8%	[D]=[C]/[A]
Average CAC as % of revenue:	0.9%						[E]=Average of [D]

Total may not add due to rounding.

(*) Long-term borrowing rate

Can “return on” and “return of” be estimated together?

For certain contributory assets like fixed assets, some valuers will ignore depreciation as “return of” and estimate both “return of” and “return on” together for fixed assets using “gross lease” method or “level payment” method. The detailed calculation of these methods is not discussed in this newsletter. When adopting one CAC combining “return of” and “return on” for fixed asset, depreciation expenses should be excluded from the forecast cash flows to avoid double counting for “return of”. This means one will need to determine the Earnings Before Interest, Tax, Depreciation and Amortisation (“EBITDA”) before deducting the CAC.

What are the common issues in applying CAC?

General

Is it mandatory that the computation of CAC be based on the fair value of contributory assets?

According to the Appraisal Foundation's "Best Practices for Valuations in Financial Reporting - Contributory Assets", published in May 2010, it is acceptable to use the book value instead of the fair value if the book value aligns with the objective of measuring the fair value for intangible assets. Nevertheless, the utilisation of the book value for contributory assets is only appropriate when the difference between their book and fair values is deemed to be insignificant. In addition, from the perspective of market participants, access to the fair value of the contributing assets is frequently limited, as industry-comparable data is typically only based on book value. Therefore, it is up to the valuer's professional discretion to determine whether to use fair value or book value in the CAC calculation.

Working Capital

What happens if the working capital is negative, and it is a norm in that industry?

In specific industry sectors, negative working capital might boost the entity's value. Thus, it is crucial to take this into account when establishing the optimal level of working capital for calculating CACs. This would create negative CACs which in advertently will lead to boosting the value of the specific intangible asset in question.

Should we incorporate one-time accounting adjustments related to business combinations into the working capital, such as inventory step-ups, for the purposes of calculating CAC?

One-off adjustments should be excluded from the opening balance and ongoing levels of working capital (from the market participants' perspectives) adopted in the CAC computation. If we included one-time business combination accounting adjustments in the working capital, the purpose for the valuation of the subject intangible assets would have been different. In addition, this is not representative of the long-term need for working capital.

Conclusion

Valuing intangible assets is typically complex due to the involvement of judgments regarding assumptions like the contributory asset charges assumption under MEEM. Various issues arise concerning the common methods used and their application in estimating contributory asset charges. Valuers must be mindful of these issues to prevent errors when valuing intangible assets using MEEM.

Land

Should land be adjusted to its fair value in the computation of CAC?

The assumption made is that land does not deteriorate in value over time. The CAC should be based on the fair value of land required to substantiate the earnings related to the subject intangible asset at any point.

Fixed Assets

Should fixed assets balances be normalised for early-stage entities?

The fixed asset levels of an early-stage entity might not accurately represent the fixed asset levels required for mass production in the later stage. Hence, normalisation of the fixed assets is required when calculating the CAC. The normalised level of fixed assets represents the amount that market participants would deem appropriate for facilitating the subject intangible assets in generating earnings. It should be fairly valued and incorporated into the projected financial information.

Should we deduct CAC from EBIT or EBITDA level?

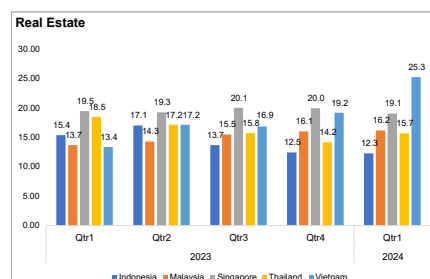
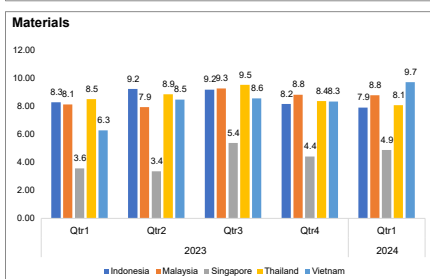
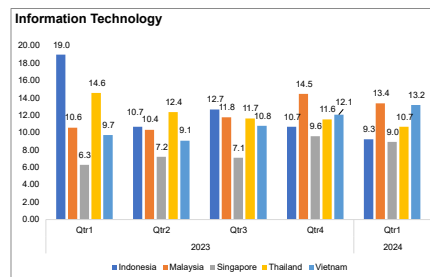
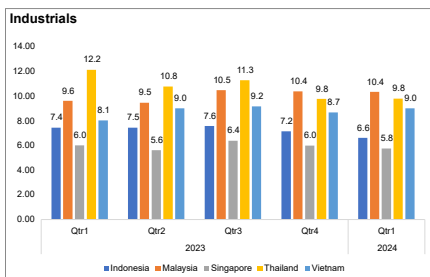
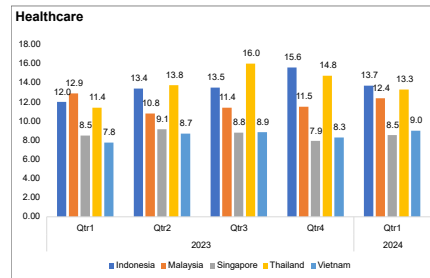
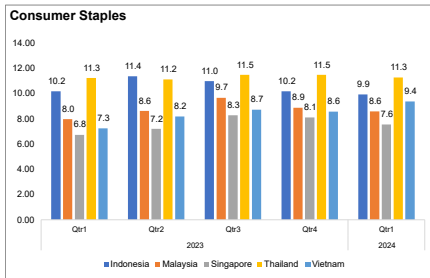
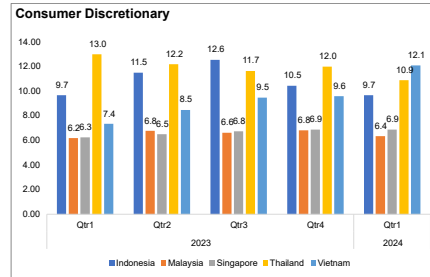
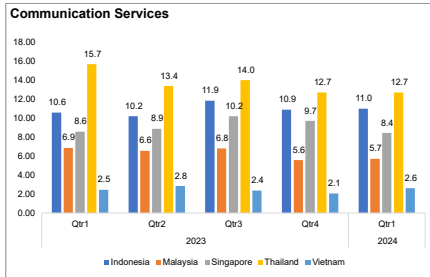
If depreciation is considered as the "return of" the fixed assets, then the CAC should be deducted from the EBIT.

Accordingly, one will need to determine the Earnings Before Interest and Tax ("EBIT") before deducting the CAC.

As highlighted in previous section, if the "return on" and "return of" are calculated together, one must only go down to EBITDA before deducting the CAC. If the CAC was deducted from EBIT instead of EBITDA, the "return of" will be double counted, and this could result in understatement of the fair value of the intangible assets.

Market Data

Median TEV/EBITDA multiples of certain industries in some ASEAN markets



Source: Capital IQ – 23 April 2024

Observations

1. The Real Estate sector has the highest median TEV/EBITDA which could be due to factors such as the tangible value of real estate assets, stable cash flows, potential for long-term growth, limited supply in certain markets, and favorable market conditions.
2. Thailand's consistently high median TEV/EBITDA ratios across multiple sectors imply that companies are being valued at a premium in relation to their earnings. This indicates a willingness among investors to pay a higher price for those investments.
3. Vietnam's significantly low median TEV/EBITDA in the Communication Services compared to other countries suggests a lack of investor confidence.

Market Highlights

- Sustainable funds in South-east Asia attracted more capital in 2023 than in 2022, bucking the global trend of lower inflows. Last year, a net US\$324.7 million flowed into funds that are domiciled in South-east Asia and tagged with a sustainability label. This figure is 11.2 per cent higher than the US\$291.9 million of net inflows recorded for 2022, according to data from Morningstar. The global universe of sustainable funds netted inflows of US\$63 billion last year, a 60.9 per cent decline from US\$161 billion of net inflows in 2022.

(Source: Business Times)
- The Singapore Exchange (SGX), Bursa Malaysia, the Stock Exchange of Thailand (SET) and the Indonesia Stock Exchange (IDX) have formalised the Asean-Interconnected Sustainability Ecosystem (Asean-ISE), said the exchanges in a joint statement on 15 February 2024. They also agreed on a foundational governance structure and operational blueprint for building this ecosystem. Four Asean stock exchanges will be jointly developing an initiative to implement common ESG (environmental, social, and governance) metrics in their respective data infrastructures and advance the region's sustainable development.

(Source: Business Times)
- The Singapore Exchange Regulation (SGX RegCo) was seeking feedback from the market on how to incorporate standards developed by the International Sustainability Standards Board (ISSB), a global accounting standards body, into its reporting rules on climate-related disclosures for listed companies. The regulator is also proposing to make it mandatory for companies to report the primary components of a sustainability report, such as their sustainability reporting framework and targets. Among other things, the regulator is proposing that from FY2025, climate-related disclosures following ISSB standards would include information on a company's value chain, as well as its processes to identify and monitor climate-related risks and opportunities.

(Source: Business Times)
- China has unveiled new ESG disclosure rules for its biggest companies as the world's top polluter seeks to align with European requirements and bring foreign investment back to its struggling economy. More than 400 companies, including those in key stock indexes, will need to publish sustainability reports by 2026, according to draft guidelines released this month by China's three main exchanges. The corporations, which together account for more than half of the bourses' combined market value, have to disclose their ESG governance and strategy, along with metrics including their energy transition plans and impact on the environment and society.

(Source: Business Times)
- On 21 March 2024, the International Valuation Standards Council (IVSC) and the Institute of Valuers and Appraisers, Singapore (IVAS), organised the inaugural webinar of the ValuAsia Connect series, which highlighted the significance of ESG factors in valuation. The event attracted over 400 participants from the Asia-Pacific region, with discussions revolving around the integration of ESG considerations into valuation standards, the incorporation of ESG metrics into models, and the establishment of frameworks for disclosing sustainability-related financial information.

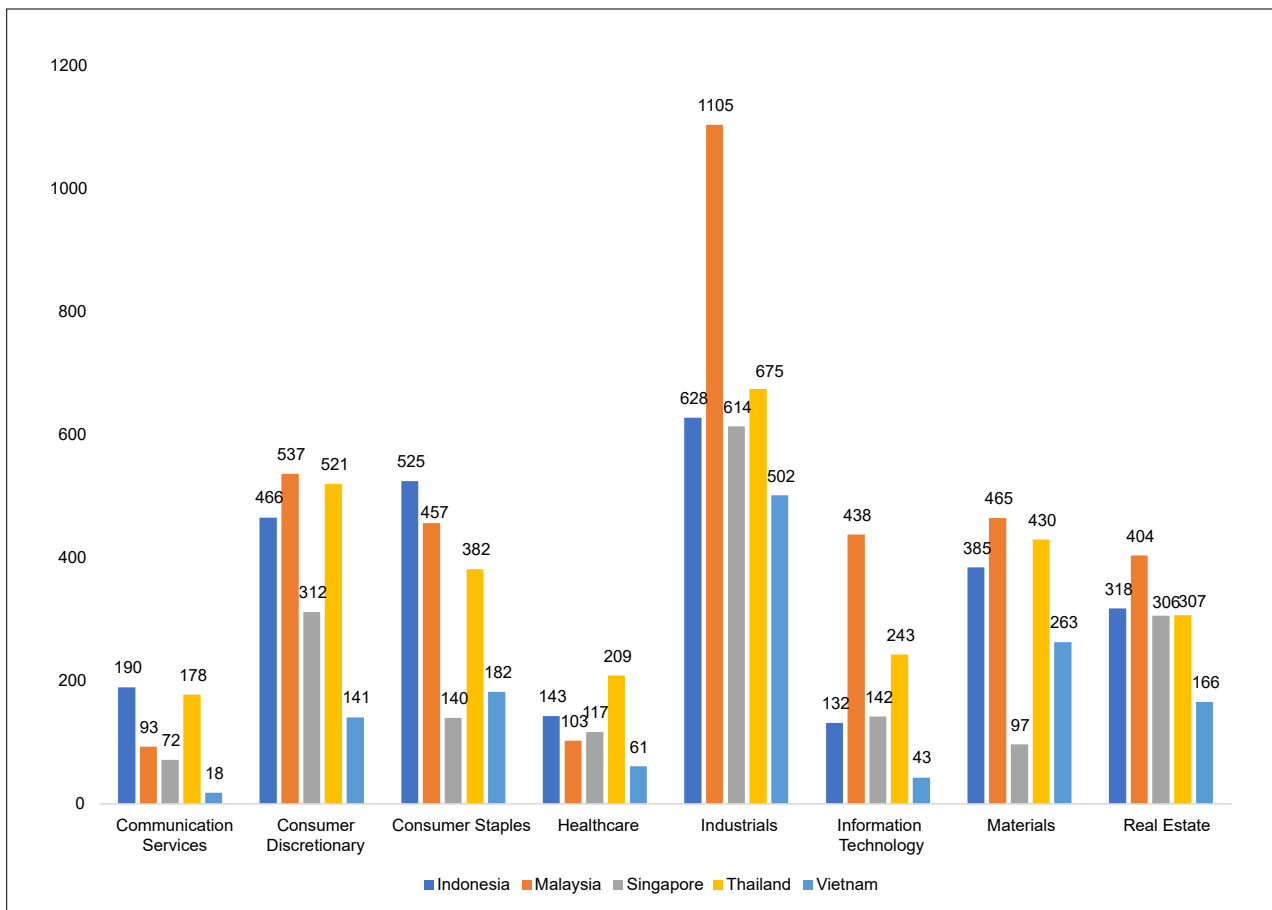
(Source: IVSC)
- The IVSC has issued a survey to examine the development of ESG factors in the valuation process. This survey aims to gather insights into how ESG elements are presently quantified and integrated across different valuation specialties. Open from 28 March to 31 May 2024, the survey aims to collect valuable feedback from valuation professionals, which will inform the IVSC's efforts to improve and enhance ESG-related standards and practices. The findings of the survey will be instrumental in shaping the future of valuation practices to align with global sustainability and governance trends.

(Source: IVSC)

Appendix

Number of data points of certain industries in some ASEAN markets

The volume of data points utilised to develop the market data charts are presented in the charts below:



The companies have been categorised into the various industries based on the following descriptions:

Industry	Description
Communication Services	This industry encompasses companies involved in providing a range of communication and media-related services. It includes telecommunications services, which involve the transmission of voice, data, and video communications. Additionally, the industry includes media services such as advertising, broadcasting (television and radio) and publishing (newspapers, magazines). It also incorporates entertainment services, including movie production and distribution, as well as entertainment equipment required.
Consumer Discretionary	This industry encompasses companies that offer non-essential goods and services, catering to consumers' preferences and desires beyond necessities. This industry includes automobile manufacturers and dealerships, retail businesses selling a variety of consumer products, restaurants providing dining experiences, hotels, resorts, casinos, amusement parks, and companies involved in leisure and entertainment activities. Additionally, consumer durables such as household appliances, furniture, and luxury goods fall within this industry.
Consumer Staples	This industry encompasses companies that produce and sell essential, everyday products for daily living. This includes food, beverages, household products, personal care items, and tobacco. Additionally, the industry consists of distribution and retail sectors such as drug retail, food distributors, food retail, and merchandise retail.
Healthcare	The Healthcare industry includes healthcare equipment and services companies who manufacture and supply medical equipment, devices, and supplies necessary for healthcare facilities. They also offer healthcare services through medical providers, clinics, hospitals, and technology solutions that support efficient healthcare operations. Pharmaceuticals, biotechnology, and life sciences companies are an important component of the industry, encompassing activities related to research, development, and production of pharmaceutical drugs as well as biotechnological advancements and life sciences research.
Industrials	The Industrials industry consists of companies engaged in various manufacturing and industrial operations. This includes sectors such as aerospace, defense, machinery, construction, engineering, transportation, and other industrial-related services. Additionally, the industry includes professional services such as human resources and employment services, research and consulting firms, and companies providing data processing and outsourced services. The Industrials industry plays a crucial role in the economy by manufacturing essential goods, providing services, and offering specialised professional services to support businesses in their operations and decision-making processes.
Information Technology	The Information Technology industry consists of companies that specialise in developing and providing technology products, software, hardware, and IT services. This includes areas such as consulting, infrastructure, semiconductors, internet services, and other technology-related solutions. These companies play a pivotal role in advancing digital innovations, providing technological solutions, and supporting businesses and individuals in their IT needs.
Materials	The Materials industry consists of companies involved in the extraction, processing, and manufacturing of raw materials. This includes sectors such as metals, chemicals, construction materials, paper, packaging, and forestry products. These companies play a vital role in providing the essential materials needed for various industries, including manufacturing, construction, packaging, and other sectors that rely on raw materials for their operations.
Real Estate	The Real Estate industry comprises companies involved in the development, acquisition, management, and ownership of real estate properties. This includes residential, commercial, and industrial properties. Real Estate Investment Trusts (REITs) are also included in this industry, as they invest in and manage income-generating properties. The industry plays a significant role in providing housing, commercial spaces, and infrastructure for various purposes, contributing to economic growth and development.

THANK YOU

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