ESG Funds Performance in ASEAN: Impact Delivered and Future Growth Prospects

NUS National University of Singapore | NUS BUSINESS SCHOOL

CGS International

Scope of Project – Focus Region: ASEAN

ASEAN MAP — Myanmar, Thailand, Laos, Cambodia, Vietnam, Malaysia, Singapore, Indonesia, Brunei, Philippines

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Project Investigation Subjects:

- **Subject 1**: ESG funds' performance in ASEAN countries, holding similarity against peers and correlation between ESG rating agencies.
- **Subject 2**: Sector analysis - potential investment opportunities & ESG funds sector allocation.
- **Subject 3**: ASEAN ESG fund portfolio construction strategy analysis, including ESG funds' stock selection and stock weightage allocation.

ESG Funds Performance in ASEAN Countries

1. Low ESG Fund Representation and Ambiguous Classification
- We adopt Bloomberg's classification of ESG funds, and it classifies a fund as an ESG fund as long as the fund itself states that it is an ESG fund.
- However, only 33 out of 1312 active ASEAN funds are identified as ESG, accounting for less than 3% of the total. This reflects limited ESG adoption in the ASEAN's fund market.

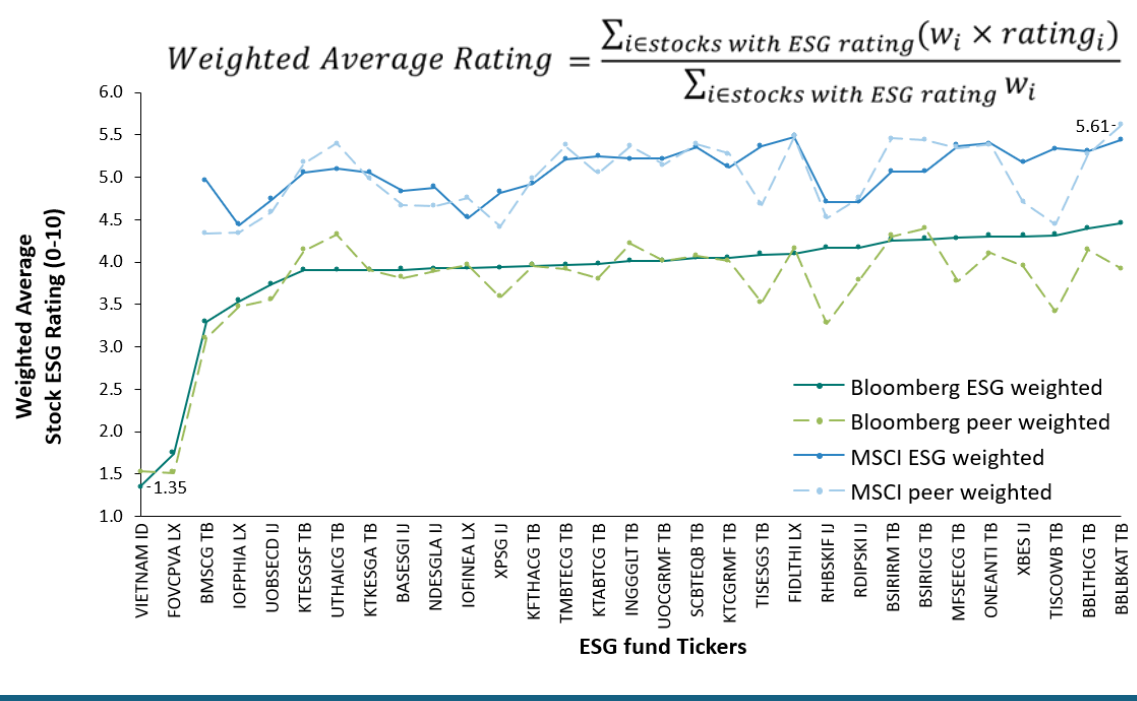**2. Great Distinction between ASEAN ESG and Non-ESG Fund Portfolios**
- By calculating overlap rate, we see that ESG funds seem to hold different stocks comparing with Non-ESG funds

$$\% \, Overlap = \sum_{i \in Common \, Holdings} \min(w_i^{ESG}, w_i^{Peer})$$

ESG Fund Ticker	%overlap		
BASESGI U	46.66	MFSEECG TB	8.94
BBLBKAT TB	34.00	NDESGLA U	43.86
BBLTHCG TB	24.92	ONEANTI TB	45.93
BMSCG TB	25.03	RDIPSKI U	45.18
BSRICG TB	39.11	RHBSKIF U	10.11
BSRIRM TB	36.44	SCBTEGW TB	39.84
FIDLTHI LX	50.98	TISCOWB TB	3.02
FOVCPIVA LX	38.79	TISESGS TB	21.02
INGGGLT TB	45.62	TMBTECG TB	47.25
IOFINEA LX	62.90	UOBPUIN U (all bonds)	
IOFPHIA LX	34.92	UOBSECO U	45.28
KFTHACG TB	13.55	UOCGRMF TB	42.61
KTABTCG TB	33.73	UTHAIAO TB	27.45
KTCGRMF TB	29.51	VIETNAM ID	44.51
KTESGSF TB	20.55	XBES U	33.56
KTKESGA TB	10.01	XPSG U	30.05

3. ESG funds do not outperform the non-ESG funds in ESG ratings
- Weighted average ratings are calculated based on MSCI and Bloomberg stock-level ESG rating.
- Although ESG funds and non-ESG peers invest in different stocks, they ultimately achieve similar ESG performance.

$$Weighted \, Average \, Rating = \frac{\sum_{i \in stocks \, with \, ESG \, rating}(w_i \times rating_i)}{\sum_{i \in stocks \, with \, ESG \, rating} w_i}$$

Weighted Average Stock ESG Rating (0-10) by ESG fund Tickers — Bloomberg ESG weighted, Bloomberg peer weighted, MSCI ESG weighted, MSCI peer weighted

4. Low Alignment between 2 ESG Rating Providers

Correlation	Bloomberg Fund rating	MSCI Stock Weighted
MSCI Fund rating	0.026	0.768
Bloomberg Stock Weighted	0.942	0.546

- From the correlation matrix, we can see that the two ESG rating systems (MSCI & Bloomberg) are largely unaligned at the fund level.
  → lack of standardization across ESG rating providers

5. Funds with ESG rating do not always outperform those without
- ESG rating providers does not cover all ASEAN funds.
- Overall, funds with MSCI ESG ratings slightly outperformed those without.
- Different ASEAN countries exhibit mixed results.

	No. of Funds with ESG Rating 2022	2024	No. of Funds without ESG Rating 2022	2024	1Y Average Return of Funds with ESG Rating	1Y Average Return of Funds without ESG Rating	3Y Average Return of Funds with ESG Rating	3Y Average Return of Funds without ESG Rating
Thailand	303	274	254	283	7.16	9.36	-1.16	-0.91
Vietnam	0	1	82	81	N.A.	-2.37	-16.00	-9.05
Indonesia	15	14	368	369	-3.63	-6.81	-0.79	-4.87
Malaysia	37	48	164	153	9.36	7.75	0.08	1.77
Philippines	6	6	19	19	2.43	4.76	-4.00	-0.27
Singapore	35	38	29	26	20.97	19.87	5.52	4.58
Overall	**396**	**381**	**916**	**931**	**9.78**	**4.56**	**0.15**	**-2.60**

ESG fund underperform / ESG fund outperform

6. High fund rating does not lead to high return
- Correlation between MSCI fund rating and return is calculated.
- Only Singapore exhibits strong and positive correlations between ratings and returns
- the relationship between ESG ratings and fund performance is context-dependent.

	1Y Return & ESG Rating Correlation	3Y Return & ESG Rating correlation
Thailand	-0.48	-0.58
Vietnam	N.A.	N.A.
Indonesia	-0.66	-0.33
Malaysia	0.04	-0.04
Philippines	-0.19	-0.54
Singapore	0.84	0.81
Overall	**-0.01**	**-0.08**

Correlation>0

Sector Analysis – Potential Investment Opportunities

1. Methodology: Market-Cap Weighted ESG Rating

Formula

Weighted ESG Rating for Sector X

$$= \frac{\sum_{i \in sector \, X} MarketCap_i \times ESGRating_i}{\sum_{i \in sector \, X} MarketCap_i}$$

Where:
- i is each individual stock in sector X
- Market Cap$_i$ is the market capitalization of stock i
- ESG Rating$_i$ is the ESG rating of stock i (from 0 to 10 scale)
- Sector X is the industry defined by MSCI classification

Example

	Market Capitalization (Million USD)	MSCI ESG Rating (0-10)	MSCI Sector
Stock A	50	4.0	Energy
Stock B	100	5.0	Energy
Stock C	20	3.0	Energy

Total Rating of the Energy Sector

$$= \frac{50 \times 4.0 + 100 \times 5.0 + 20 \times 3.0}{50 + 100 + 20} = \frac{760}{170} \approx 4.47$$

2. Aggregating 62 MSCI Industries into 11 Sectors

GICS® — 11 Sectors, 25 industry groups, 74 Industries

62 sectors from the MSCI ASEAN database are reclassified into 11 sectors due to fragmentation and incompleteness of data.

3. Graph Plotting & Identification Rationale

A 2-year window is adopted with monthly rating from Jan 2023 to Dec 2024 for plot graphs to capture the most up-to-date

Malaysia, Singapore, Thailand
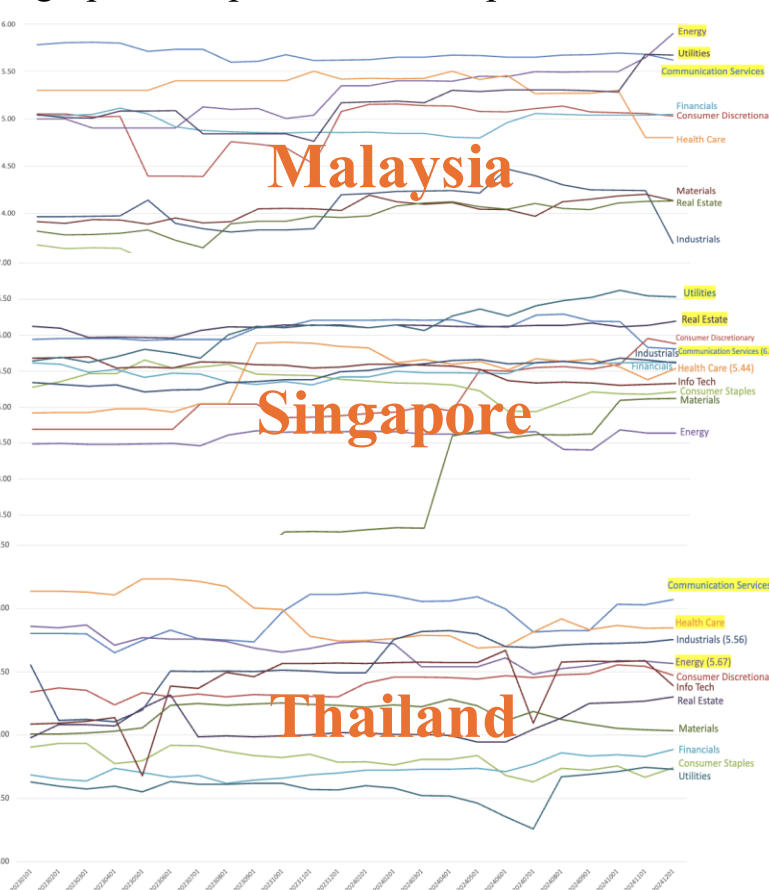
Sectors that are consistently good and with high momentum are identified in Malaysia, Singapore, Thailand, Indonesia and the Philippines where data is available.

4. Outcome & Summary

ESG Ranking	Malaysia	Singapore	Indonesia	Thailand	Philippines
1	Communication Services	Utilities	Communication Services	Communication Services	Communication Services
2	Energy	Real Estate	Energy	Health Care	Utilities
3	Health Care	Communication Services	Utilities	Energy	Real Estate

Top Sectors: Communication Services appears 5 times, followed by Energy and Utilities of 3 times each in the top 15 sectors. Carbon intensive sectors like Utilities and Energy are investigated for the driving pillar behind the ESG ratings.

Countrys & Sectors	Environmental	Social
Malaysia (Energy)	5.93 to 6.79	6.09 to 6.64
Singapore (Utilities)	5.61 to 5.60	4.75 to 6.17
Indonesia (Energy)	5.60 to 6.93	7.10 to 7.73
Thailand (Energy)	5.59 to 5.83	7.95 to 7.45
Philippines (Utilities)	6.52 to 8.01	6.56 to 4.11

ESG Ranking	Malaysia	Singapore	Indonesia	Thailand	Philippines
1	Materials	Materials	Real Estate	Real Estate	Consumer Discretionary
2	Utilities	Health Care	Materials	Information Technology	Industrials
3	Industrials	Industrials	Financials	Industrials	Financials

Country	Outperformed	Underperformed	Total
Indonesia	6	2	8
Thailand	13	7	20
Philippines	0	1	1

High Potential Sectors: Industrials dominates by 4 times, followed by Materials of 3 times.

5. Top Sectors held By ESG Funds vs. Non-ESG Peers

ESG Fund > Non-ESG Peers
ESG Fund < Non-ESG Peers

Country	ESG Funds	Percentage Held By ESG funds in top 3 sectors	Percentage Held by Non-ESG Peers in top 3 sectors
Indonesia	XPSG U	15.18	8.83
	XBES U	16.84	12.54
	UOBSECO U	10.96	11.63
	RHBSKIF U	15.65	9.45
	RDIPSKI U	15.62	10.82
	NDESGLA U	10.45	6.15
	IOFPHIA LX	8.5	14.62
	BASESGI U	19.53	16.53
Thailand	UTHAICG TB	11.56	9.66
	UOCGRMF TB	18.98	14.49
	TMBTECG TB	18.64	16.46
	TISESGS TB	12.44	6.36
	TISCOWB TB	0	5.52
	SCBTEGB TB	18.78	7.35
	ONEANTI TB	11.54	18.48
	KTKESGA TB	6.28	10.00
	MFSEECG TB	22.47	4.61
	KTESGSF TB	6.28	7.96
	KTCGRMF TB	11.26	14.49
	KTABTCG TB	21.25	14.10
	KFTHACG TB	9.63	29.45
	INGGGLT TB	19.23	14.99
	FIDLTHI LX	21.15	23.86
	BSRIRM TB	24.22	21.54
	BSRICG TB	24.18	24.16
	BMSCG TB	16.1	3.89
Philippines	BBLTHCG TB	19.01	18.49
	BBLBKAT TB	16.99	23.35
	IOFPHIA LX	26.29	27.29

Conclusion: ESG funds tend to hold more top ESG performing sectors than their peers.

ESG Fund Portfolio Strategy

1. Main Discussion : How ESG funds' strategy respond to stock level ESG ratings and changes of stock level ESG rating

Funds' Strategy →
- Whether to hold a stock
- How to assign the holding weight to a stock
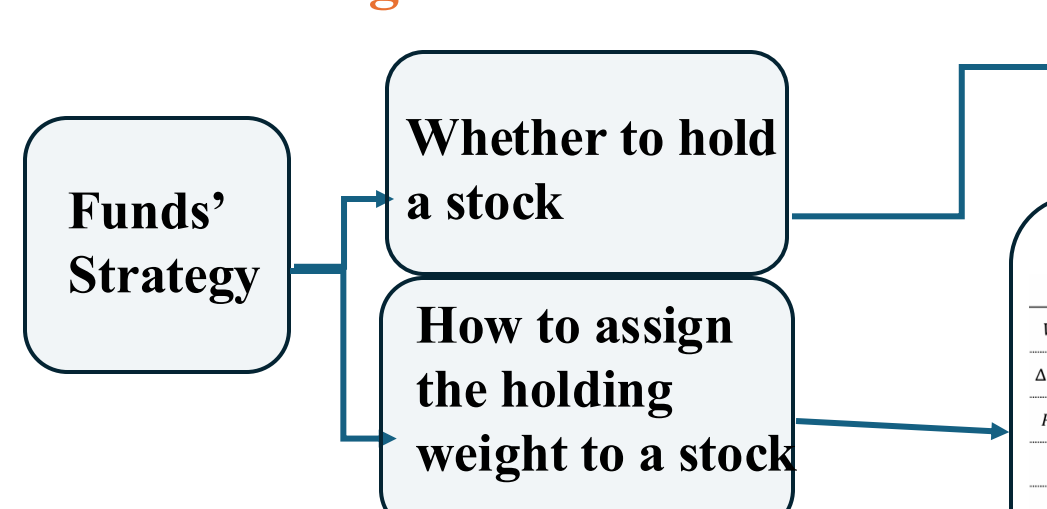
Methodology: Our team split the strategy of a fund into 2 separate decisions.

- The first decision is for funds to decide which are the funds they are going to put in their portfolio
- The second decision is after funds have decided their holding stocks, funds need will do weight allocation to each of the holding stock (weight allocation decision).
- Our team constructed 2 regression models to analyze these 2 decisions respectively.

2. Regression models

$$Hold = f(\beta_0 + \beta_1 \, {}^*Rating_{t-2} + \beta_2 \, {}^*\Delta Rating_{t-1} + \varepsilon)$$

Symbol	Description
Hold	Binary variable. A stock is held by ESG fund or not at time t
Rating	The ESG rating at t-2 for this particular stock (Lagged Rating)
ΔRating	The rating change of this particular stock from t-2 to t-1

$$Weight_{i,t} = \beta_0 + \beta_1 \, {}^*Rating_{t-2} + \beta_2 \, {}^*\Delta Rating_{t-1} + \beta_3 \, {}^*ESGFund_i \, {}^*Rating_{t-2} + \beta_4 \, {}^*ESGFund_i \, {}^*\Delta Rating_{t-1} + \varepsilon$$

Symbol	Description
$Weight_{i,t}$	Portfolio weight of company i in fund j at time t
$\Delta Rating_{t-1}$	Change in ESG rating of company i from t-2 to t-1; i.e., ESG improvement
$Rating_{t-2}$	The absolute ESG rating of company i at time t-2; i.e., ESG rating level
α_j	Fund-specific intercept term
$\varepsilon_{i,j,t}$	Residual term capturing unobserved influences
$ESGFund_i$	A binary variable, 1 is for ESG fund and 0 is for non-ESG fund

Model Setting and Assumptions:
- The input variables are past data points as we assume that a fund's current holding reflects previous year information.
- The first regression runs for all the holding stocks of ASEAN ESG funds and their peers.
- The variable ESGFund in the second regression model is used to test whether ESG funds have a different behavior compared to non-ESG funds in weight allocation once they have decided their holding stocks

3. Statistical results

	Slope Coefficient
Rating$_{t-2}$	0.279***
ΔRating$_{t-1}$	0.379*

	Slope Coefficient
Rating$_{t-2}$	0.506***
ΔRating$_{t-1}$	0.575*
ESGFund*Rating$_{t-2}$	0.064
ESGFund*ΔRating$_{t-1}$	-0.176

4. Summary of Regression Results
- In the first model, variable Rating$_{t-2}$ and ΔRating$_{t-1}$ are both significant, indicating that ESG funds do consider ESG snapshot rating and changes in stock rating when screening their holding stocks
- In the second model, also **Rating$_{t-2}$** and **ΔRating$_{t-1}$** are significant, indicating that ESG funds and non-ESG funds both consider the snapshot stock level rating and changes of ratings in weight allocation

4. Summary of Regression Results (Cont.)
- The third and fourth variable in regression model 2 are insignificant, therefore, we do not observe ESG funds behave differently compared to non-ESG funds in stock weight allocation
- However, as the third variable is marginally significant, there still could be possible that ESG funds might put more emphasis on the level ratings

5. Summary of Analysis
- Stock level ESG ratings and changes of stock level ESG ratings are both critical indicators for ESG funds to decide whether to hold a stock. ESG funds will be more likely to hold a stock if this stock has high ESG rating and positive improvement in ESG rating.
- Funds allocate more weights to stocks with higher ESG ratings and stocks with recent positive change. *(high + positive Δ → more weight)*
- ESG funds and non-ESG funds do not behave differently in allocating the weight of stocks once they hold the stocks.