



## Asset allocation and strategic role of danantara Indonesia sovereign wealth fund

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### Abstract

**Purpose** — This study analyzes the determinants of sovereign wealth fund performance and evaluates the strategic positioning of Danantara Indonesia as a digital-oriented sovereign wealth fund within the ASEAN context, addressing the limited integration of asset allocation, digital transformation, and economic diplomacy in existing literature.

**Method** — This study employs a mixed-method approach using secondary data from five global sovereign wealth funds over the 2020–2024 period. Quantitative analysis includes descriptive statistics, correlation analysis, and principal component analysis, while qualitative insights are derived from SWOT analysis to assess the strategic position of Danantara Indonesia.

**Findings** — The results show that asset under management and equity allocation are the primary drivers of sovereign wealth fund performance, while real estate and renewable energy investments contribute less to short-term returns. Principal component analysis identifies two key dimensions, namely growth–equity and return performance factors. Comparative analysis reveals substantial differences in governance and transparency, with Norway’s GPF serving as a global benchmark. Danantara exhibits strong potential as a digital-oriented fund but faces constraints related to governance readiness and lack of historical performance.

**Implications** — The findings suggest that Danantara should prioritize strong governance, balanced asset allocation, and strategic investment in digital infrastructure and green energy to enhance long-term performance and strengthen its role in ASEAN economic diplomacy.

**Originality** — This study contributes by integrating quantitative portfolio analysis with strategic evaluation to develop a digital–green investment framework for sovereign wealth funds in emerging economies, offering new insights into the role of digital transformation in sovereign investment strategies.

**Keywords:** Sovereign Wealth Funds; Principal Component Analysis; ASEAN; Danantara; Economic Diplomacy

**JEL Classification:** G11; G15; G18; O16; F21

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## Introduction

Amid global financial uncertainty, sovereign wealth funds (SWFs) play a critical role in macroeconomic stabilization and long-term investment (OECD, 2023; IMF 2010).

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There has been considerable research on large and established SWFs, such as Norway's GPF, Singapore's GIC and the Abu Dhabi investing Authority (ADIA), but the literature is still focused mainly on developed economies and traditional investing practices (Error! Reference source not found.; Error! Reference source not found.). Research on SWFs in emerging economies, particularly those using digital and green investing strategies, is still relatively restricted. In contrast to in-depth analyses of large sovereign wealth funds such as Norway's GPF, Singapore's GIC, and the UAE's ADIA (Error! Reference source not found.; Error! Reference source not found.).

The establishment of Daya Anagata Nusantara (Danantara Indonesia), the inaugural digital-oriented sovereign wealth fund in ASEAN, presents a distinctive opportunity to analyze how asset allocation, governance, and strategic positioning can facilitate economic diplomacy and regional integration, emphasizing the development of a framework for digital and green investment strategies in emerging economies. In contrast, limited attention has been given to SWFs in emerging economies that are simultaneously navigating digital transformation and green investment transitions, particularly within the ASEAN region (Error! Reference source not found.; Error! Reference source not found.). Current research mostly focuses on traditional performance variables, including assets under management (AUM) and equity allocation, which are acknowledged as fundamental factors influencing long-term returns. (Error! Reference source not found.; Error! Reference source not found.).

Recent literature stresses the relevance of diversification of renewable energy and infrastructure for improving portfolio resilience (Error! Reference source not found.; Error! Reference source not found.; Error! Reference source not found.). However, these studies primarily disregard the strategic importance of digital transformation such as artificial intelligence, big data, and cross-border financial systems in influencing SWF competitiveness and investment diplomacy (Error! Reference source not found.; Error! Reference source not found.). This gap is particularly relevant in the case of Indonesia, where the development of Daya Anagata Nusantara (Danantara Indonesia) is a new model of a digital-oriented sovereign wealth fund in ASEAN. Unlike typical SWFs, Danantara is positioned not only as an investment vehicle, but also as a strategic tool to boost digital infrastructure, green energy development, and regional economic integration (Error! Reference source not found.; Error! Reference source not found.). However, there is a lack of empirical and strategic analysis that synthesizes portfolio performance and digital transformation in the context of growing ASEAN countries despite its strategic importance.

Therefore, this study addresses three main research questions. First, it uncovers the key asset allocation determinants which influence the success of worldwide sovereign wealth funds and evaluates their applicability to Danantara Indonesia. Secondly, it discusses the benefits and challenges that digital transformation, such as artificial intelligence, big data and cross-border payment systems, brings to a digital-oriented SWF. Third, it investigates strategic insights from global SWFs on balancing digital infrastructure, green energy investment, and governance procedures to reinforce Danantara's role in ASEAN economic diplomacy.

This study fills this gap by combining quantitative analysis of SWF portfolio data (using descriptive statistics, correlation, and Principal Component Analysis (PCA)) with qualitative benchmarking through SWOT analysis of chosen worldwide

SWFs to produce strategic insights for Danantara Indonesia. The contribution of this study lies in integrating empirical portfolio analysis with strategic insights from global SWFs to develop a digital and green investment framework tailored to Indonesia.

This study offers a more integrated perspective by linking financial performance with digital transformation, particularly in the context of emerging ASEAN economies. The findings are expected to contribute to the academic literature on SWFs while providing practical policy insights for positioning Danantara as a strategic instrument of Indonesia's economic diplomacy.

## Methodology

This research utilizes a mixed-methods approach, integrating quantitative and qualitative analyses to assess the performance and strategic positioning of sovereign wealth funds (SWFs). The quantitative part is about the examination of portfolio performance. The qualitative part gives strategic insights based on benchmarking. The data used in this study are secondary data obtained from the annual reports of selected global SWFs, including Norway's Government Pension Fund Global (GPF), Abu Dhabi Investment Authority (ADIA), Singapore's GIC, China Investment Corporation (CIC), and Malaysia's Khazanah Nasional. The observation period lasts five years, from 2020 to 2024, resulting in a balanced dataset.

The variables analyzed include assets under management (AUM), return on investment (ROI), equity allocation, and investment diversification indicators such as fixed income, real estate, and renewable energy. Equity allocation represents potential returns and risk exposure, while Assets Under Management (AUM) functions as an indicator of fund size. Diversification into renewable energy and infrastructure is seen as a hallmark of long-term resilience and a sustainable investment approach for maximizing risk-return trade-offs in portfolio management ([Error! Reference source not found.](#); [Error! Reference source not found.](#)).

Quantitative analysis is performed by employing descriptive statistics to summarize the data's characteristics, correlation analysis to investigate the relationships between variables, and principal component analysis (PCA) to identify the primary factors that influence SWF performance. PCA is employed to reduce data dimensionality and extract the most significant components that explain variance across SWFs. ([Error! Reference source not found.](#)).

In addition to the quantitative results, this study adopts a qualitative approach by applying SWOT analysis to evaluate the strengths, weaknesses, opportunities, and dangers of chosen SWFs. The SWOT framework is established based on benchmarking against global SWFs and is used to examine the strategic posture of Danantara Indonesia as a digital-oriented SWF. This approach allows us to merge scientific findings and strategic policy insights.

The variables in Table 1 are chosen to represent the primary determinants of the performance and portfolio structure of sovereign wealth funds (SWFs). Assets under management (AUM) is used as a proxy for fund size, while return on investment (ROI) reflects overall portfolio performance. Asset allocation variables—including equity, fixed income, real estate, and renewable energy—represent diversification strategies and risk-return characteristics, which are central to modern portfolio theory ([Error! Reference source not found.](#); [Error! Reference source not found.](#)). In addition, benchmark return is included to assess relative performance against

market standards. These variables provide the basis for subsequent quantitative analysis using correlation and principal component analysis (PCA).

**Table 1.** Variables and Measurement

Variable	Proxy / Indicator	Measurement	Description	Source
Asset Under Management (AUM)	Fund Size	USD (Billion)	Total assets managed by SWFs, used as a proxy for fund size.	SWFs Annual Reports (2020–2024)
Return on Investment (ROI)	Return Performance	Percentage (%)	Measures the profitability of investment portfolios.	SWFs Annual Reports (2020–2024)
Equity Allocation	Equity Share	Percentage (%) of total portfolio	Represents exposure to high-risk, high-return assets.	SWFs Annual Reports (2020–2024)
Fixed Income Allocation	Bond Allocation	Percentage (%) of total portfolio	Indicates conservative investment strategy and stability.	SWFs Annual Reports (2020–2024)
Real Estate Allocation	Property Investment	Percentage (%) of total portfolio	Reflects diversification into tangible assets.	SWFs Annual Reports (2020–2024)
Renewable Energy Investment	Green Investment	Percentage (%) of total portfolio	Proxy for sustainable and long-term investment strategy.	SWFs Annual Reports (2020–2024)
Benchmark Return	Benchmark Performance	Percentage (%)	Measures performance relative to market benchmarks	SWFs Annual Reports (2020–2024)

Source: Author's elaboration based on SWFs annual reports (2020–2024).

The variables in Table 1 are chosen to represent the primary determinants of the performance and portfolio structure of sovereign wealth funds (SWFs). Asset under management (AUM) are used as a proxy for fund size, while return on investment (ROI) reflects overall portfolio performance. Asset allocation variables including equity, fixed income, real estate, and renewable energy represent diversification strategies and risk-return characteristics, which are central to modern portfolio theory ([Error! Reference source not found.](#); [Error! Reference source not found.](#)). In addition, benchmark return is included to assess relative performance against market standards. These variables provide the basis for subsequent quantitative analysis using correlation and principal component analysis (PCA).

The conceptual framework illustrates the relationship between asset allocation factors and the performance of sovereign wealth funds (SWFs). Key variables, including asset under management (AUM), equity allocation, fixed income, real estate, renewable energy, and benchmark return, are considered as key determinants of SWF performance. These variables influence return outcomes, which are subsequently analyzed using principal component analysis (PCA) to identify the main drivers of performance and underlying data structure ([Error! Reference source not found.](#)).

The strategic insights generated by the PCA are subsequently analyzed through SWOT analysis to evaluate the strengths, weaknesses, opportunities, and threats. This integrated approach allows the study to establish a connection between empirical findings and strategic evaluation, thereby delivering policy and strategic implications for Danantara Indonesia as a digital-oriented sovereign wealth fund in

the ASEAN context. This study examines three principal analytical dimensions drawn from both quantitative and qualitative methodologies. First, it examines the relationship between assets under management (AUM) and asset allocation patterns, particularly in relation to real estate and renewable energy investments.

Previous research indicates that, although these asset classes contribute to diversification, their influence on short-term returns in large-scale portfolios may be relatively limited ([Error! Reference source not found.](#); [Error! Reference source not found.](#)).

**Figure 1.** Conceptual Framework of the Study



Source: Author's elaboration

Second, the investigation examines the significance of asset allocation structure, particularly equity dominance, as a critical factor in the long-term performance of SWFs. This aligns with Modern Portfolio Theory, which emphasises the importance of equities as a primary source of long-term returns ([Error! Reference source not found.](#)). This is further substantiated by the PCA results, which identify equity and AUM as significant contributors to variance in SWF performance ([Error! Reference source not found.](#)).

Third, the study explores the strategic orientation of Danantara Indonesia in the context of digital infrastructure and ASEAN economic integration. While this position offers opportunities for investment diplomacy, challenges remain in governance and the lack of historical performance, as highlighted in previous studies ([Error! Reference source not found.](#); [Error! Reference source not found.](#); [Error! Reference source not found.](#)).

## Results and Discussion

The results indicate substantial heterogeneity in sovereign wealth fund (SWF) size, with assets under management (AUM) ranging from USD 44 billion to USD 1.5 trillion. This wide dispersion reflects differences in investment capacity and strategic flexibility across funds, which may influence their ability to diversify portfolios and absorb market volatility.

Such variation is consistent with prior studies suggesting that institutional differences in market conditions, investment mandates, and governance structures contribute to heterogeneous portfolio outcomes ([Error! Reference source not found.](#)).

**Tabel 2.** Descriptive Statistics of Sovereign Wealth Funds (SWFs), 2020–2024

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Market Value (USD)	25	1456000000000	44000000000	1500000000000	808480000000.00	513942937818.328
Annual Return (%)	23	30.200	-14.100	16.100	7.162	5.636
Benchmark Return (%)	8	30.200	-13.900	16.300	8.665	9.519
Return vs Benchmark (%)	8	30.630	-9.730	20.900	1.515	9.265
Equities (%)	25	35.800	37.000	72.800	54.632	14.394
Fixed Income (%)	25	17.000	15.000	32.000	25.464	5.832
Real Estate (%)	25	20.200	1.800	22.000	10.700	8.531
Renewable Energy (%)	20	7.500	.000	7.500	3.245	3.300
Valid N (listwise)	7	-	-	-	-	-

Source: Author's calculation based on GPFG Annual Reports ([Error! Reference source not found.](#); [Error! Reference source not found.](#), ADIA Annual Review (2020; 2025), GIC [Error! Reference source not found.](#), [Error! Reference source not found.](#), [Error! Reference source not found.](#), [Error! Reference source not found.](#), and [Error! Reference source not found.](#)).

The average annual return is 7.16%, with a range from -14.10% to 16.10%, indicating considerable performance variability across SWFs. The standard deviation of 5.64% further highlights this dispersion, suggesting that higher-return portfolios are typically associated with greater volatility. This finding is consistent with asset pricing theory, which posits a positive relationship between risk and return ([Error! Reference source not found.](#)).

Benchmark returns range from -13.90% to 16.30%, with a mean of 8.67% and a relatively high standard deviation of 9.52%, indicating significant fluctuations in market performance. The comparison between portfolio returns and benchmark returns shows an average excess return of 1.52%, suggesting modest outperformance. However, the high variability (standard deviation of 9.27%) implies inconsistent performance relative to market benchmarks. This supports [Error! Reference source not found.](#), who emphasizes the importance of benchmarking in evaluating the effectiveness of active portfolio management.

Overall, these descriptive findings indicate that SWFs exhibit heterogeneous portfolio structures, with a strong emphasis on equity allocations and relatively limited exposure to renewable energy. This pattern suggests a trade-off between short-term return optimization and long-term sustainability objectives, which

becomes a critical consideration in the context of emerging digital and green investment strategies.

The correlation statistics presented in Table 3 reveal distinct patterns in the asset allocation behavior of sovereign wealth funds (SWFs). The results reveal that the portfolio structure across asset classes is mostly driven by the level of asset under management (AUM). Specifically, AUM is statistically significantly positively related to equity allocation ( $r = 0.692$ ,  $p < 0.01$ ), where larger SWFs allocate a higher percentage of their portfolios to equities.

On the other hand, AUM is highly negatively correlated with real estate ( $r = -0.901$ ,  $p < 0.01$ ) and renewable energy ( $r = -0.657$ ,  $p < 0.01$ ) showing that bigger funds would favour more liquid and return-seeking assets over alternative and long-term investments. These results are in line with strategic trade-offs in asset allocation decisions and can be explained by well-known financial and investing theories.

**Tabel 3.** Correlation between Market Value and Key Investment Variables in Sovereign Wealth Funds

Variable	r	p	Interpretation
Annual Return	0.228	0.295	Weak positive correlation, not significant. Market Value does not significantly affect Annual Return.
Benchmark Return	0.778*	0.023	Moderate positive correlation & significant. As Market Value increases, Benchmark Return increases.
Return vs Benchmark	-0.567	0.143	Moderate negative correlation, not significant.
Equities (%)	0.692**	0.000	Strong positive correlation & highly significant. Larger Market Value → higher allocation in equities.
Fixed Income (%)	-0.262	0.206	Weak negative correlation, not significant.
Real Estate (%)	-0.901**	0.000	Very strong negative correlation & significant. Larger Market Value → lower allocation in Real Estate.
Renewable Energy (%)	-0.657**	0.002	Strong negative correlation & significant. Larger Market Value → lower allocation in Renewable Energy.

Source: Author's calculation based on GPF Annual Reports (**Error! Reference source not found.**, **Error! Reference source not found.**, ADIA Annual Review (2020; 2025), GIC **Error! Reference source not found.**), **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.**.

The equity allocation was between 37.00% and 72.80%, with a mean of 54.63%. This shows that equities were the most important asset class. This is in line with Modern Portfolio Theory (MPT), which **Error! Reference source not found.** said is true. MPT says that stocks usually give better long-term returns than other asset classes because they have a higher risk-return profile. The fact that SWFs rely heavily on stocks shows that they care more about growth and capital appreciation than about market fluctuations. This allocation shows that they have a long-term investment horizon and can handle short-term changes.

Fixed Income (%) The average fixed income allocation was 25.46%, with a range of 15.00% to 32.00%. The low standard deviation (5.83%) suggests that this allocation is stable, which is what it has always been: a lower-risk anchor in diversified portfolios (**Error! Reference source not found.**). Fixed income gives SWFs liquidity and helps reduce the volatility that comes with owning stocks. This makes it a good choice during times when stock markets are down.

The average percentage of real estate allocations was 10.70%, with a range of 1.80% to 22.00%. Real estate investments aren't as well-known as stocks, but they can help you diversify your portfolio and protect you from inflation **Error! Reference source not found.**) For SWFs, investing in real estate assets is often a good way to diversify their portfolios around the world.

Their main concentration is on properties in established markets that consistently generate income. This distribution highlights the significance of physical assets in establishing stability and resilience. The average allocation for renewable energy was very low, between 0.00% and 7.50%, with a mean of 3.25%.

Even though it is a small percentage, this shows that more and more people around the world are investing in sustainable and ESG-friendly ways. **Error! Reference source not found.** say that institutional investors are starting to see climate change and sustainability as important financial threats and opportunities. For SWFs, the early stage of investing in renewable energy is both a difficulty and an opportunity. The sector is still modest in portfolios, but it is projected to increase as funds respond to international climate pledges and sustainability benchmarks.

Overall, SWF asset allocation patterns demonstrate a mix between growth-oriented strategies (equities) and stabilizing instruments (fixed income and real estate), with renewable energy steadily becoming more prevalent in response to global ESG trends. Equities remain the primary driver of performance, as per the conclusions of this study, but diversification into fixed income and real estate provides resilience. The relatively low renewable energy allocation alludes to an emerging but strategically vital area for future expansion, particularly for funds like Danantara Indonesia, which seek to establish themselves as ASEAN leaders in digital and green investment.

**Table 4.** PCA Results Identifying Growth–Equity and Return–Performance Factors in SWFs

Variable	Communality (Extraction)	Component 1 (Growth & Equity Factor)	Component 2 (Return Performance Factor)
Market Value (USD)	0.953	0.970	-0.107
Annual Return (%)	0.898	0.579	0.750
Benchmark Return (%)	0.976	0.959	-0.237
Return vs Benchmark Equities (%)	0.962	-0.844	0.500
Fixed Income (%)	0.993	0.996	0.037
Renewable Energy (%)	0.875	-0.455	-0.817
Real Estate (%)	0.991	-0.996	0.010
	0.993	-0.993	0.081

Source: Author's calculation based on GPF Annual Reports (**Error! Reference source not found.**, **Error! Reference source not found.**, ADIA Annual Review (2020; 2025), GIC **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**, and **Error! Reference source not found.**

Principal Component Analysis (PCA) was employed to identify the key factors influencing sovereign wealth fund (SWF) performance, as presented in Table 4. The extracted components account for a significant portion of the dataset's total variance, as evidenced by the communality values, which range from 0.875 to 0.993

(**Error! Reference source not found.**). Two principal components were identified, which collectively accounted for 95.52% of the total variance. The dimensional structure of the data is successfully captured by these components, as Component 1 explains 76.07% of the variance and Component 2 contributes an additional 19.45%.

The clustering patterns across variables are evident in the component matrix. Equities (0.996), Market Value (0.970), and Benchmark Return (0.959) exhibit strong positive loadings in Component 1 (Growth and Equity Factor), while Real Estate (-0.993) and Renewable Energy (-0.996) exhibit strong negative loadings. This suggests that larger SWFs with a higher equity exposure tend to exhibit stronger growth performance, whereas a higher allocation to alternative assets is associated with lower short-term return contributions.

These results are in accordance with portfolio theory, which underscores the importance of equities as the primary generators of long-term returns (**Error! Reference source not found.**). In contrast, alternative assets are more effective in promoting diversification and resilience (**Error! Reference source not found.; Error! Reference source not found.**). Component 2 (Return Performance Factor) is predominantly influenced by Annual Return (0.750) and Return versus Benchmark (0.500), alongside a negative contribution from Fixed Income (-0.817). This component illustrates short-term performance dynamics, emphasising the trade-off between return volatility and the stabilising function of fixed income instruments (**Error! Reference source not found.**). These findings suggest that the performance of SWFs is inherently influenced by a trade-off between diversification-oriented assets (real estate and renewable energy) and growth-oriented assets (equities and AUM).

This discovery underscores a fundamental strategic tension between the pursuit of long-term sustainability objectives and the optimisation of financial returns. The findings in the Indonesian context suggest that Danantara Indonesia should strike a balance between growth-driven initiatives and diversification into sustainable assets. Equity-led growth will remain a key driver of returns, but a slow infusion of renewables and real assets is needed to maintain long-term portfolio resilience and to keep pace with the broader ESG movement globally. This study offers empirical evidence that digital-oriented SWFs, such as Danantara Indonesia, must strategically reconcile growth-oriented investment approaches with emerging sustainable investment priorities, particularly in the context of the changing economic landscape of ASEAN.

The empirical results of both the descriptive analysis and principal component analysis (PCA) reveal that asset allocation, especially equity exposure and asset under management (AUM), is the main factor in predicting the performance of sovereign wealth funds (SWFs). However, the experience from global SWF practices indicates that the long-term performance is not just the result of the deployment of funds but also the result of the choice of strategic sectors matched to structural economic transformation. This view is in line with Modern Portfolio Theory which emphasises diversification to improve risk-return trade-offs (**Error! Reference source not found.**), and the Resource-Based View which stresses the strategic placement of assets to gain long-term competitive advantage. Global SWFs demonstrate distinct strategic orientations that go beyond traditional portfolio allocation.

Norway's Government Pension Fund Global (GPF) integrates renewable energy investments with strong ESG governance, reflecting a commitment to

sustainability and transparency (Error! Reference source not found.). Abu Dhabi Investment Authority (ADIA) focuses on frontier technologies, such as health-tech and green hydrogen, to support economic diversification (Error! Reference source not found.). Singapore’s GIC emphasizes investments in digital infrastructure, including data centers and fintech, reinforcing its role as a regional financial and technological hub (Error! Reference source not found. Error! Reference source not found.).

Similarly, China Investment Corporation (CIC) prioritizes digital infrastructure and energy storage to support green industrialization, while Malaysia’s Khazanah aligns its investments with national development priorities in healthcare and sustainable energy (Error! Reference source not found.; Error! Reference source not found.). These patterns indicate that successful SWFs combine financial performance strategies with sectoral specialization aligned to national economic objectives. In the case of Indonesia, these insights suggest enormous prospects for Danantara Indonesia to engage in local strategic industries.

Major national initiatives such as the Cirata Floating Solar Power Plant, geothermal energy development and the electric vehicle battery supply chain, are solid platforms for the spread of green investment. At the same time, the development of Ibu Kota Nusantara (IKN) as a smart city creates substantial opportunities for digital infrastructure investment. Supported by national digitalization initiatives such as QRIS Cross-Border, OSS, SPBE, and Cortax, Danantara is uniquely positioned to differentiate itself as a digital-oriented sovereign wealth fund in ASEAN. Overall, the integration of global best practices with domestic strategic priorities suggests that Danantara’s long-term success will depend on its ability to balance financial performance with strategic sector allocation in digital infrastructure and green energy. This alignment provides a foundation for subsequent SWOT analysis and the formulation of policy-oriented investment strategies.

**Table 5.** SWOT Analysis: Comparative Insights for Danantara as a Digital Sovereign Wealth Fund

Strengths	Weaknesses	Opportunities	Threats
Focus on digital infrastructure & logistics	No historical return data	ASEAN digital economic transformation	Global volatility (e.g., GPFG returns -14% → +16%).
Early momentum → modern governance design	Dependence on domestic & foreign digital investment (FDI/PMDN).	ESG trends & green investment	Competition with established SWFs (GPFG, ADIA, GIC, and CIC).
Government support & ASEAN diplomacy	Human resources & governance untested	Strategic partnerships with global SWFs	Governance & political risks
Flexible initial allocation, not tied to oil/legacy reserves	Narrow asset allocation (focused on digital & logistics).	Potential to achieve high transparency ranking	Asset allocation trade-offs (equities vs renewable).

Source: Author’s elaboration based on GPFG Annual Reports (Error! Reference source not found., Error! Reference source not found., ADIA Annual Review (2020; 2025), GIC Error! Reference source not found.), Error! Reference source not found., Error! Reference source not found., Error! Reference source not found., and Error! Reference source not found..

The SWOT results align with the empirical findings, notably the predominance of equity allocation and assets under management as principal performance determinants identified in the descriptive statistics and principal component analysis. The constrained investment in renewable energy evident in the dataset is mirrored in the opportunity dimension, signifying considerable possibility for future portfolio growth. Moreover, cross-country analysis shows the structural difference of asset allocation techniques and governance procedures among SWFs. Despite its volatile returns (-14.1% in 2022 to +16.1% in 2023) despite return volatility (-14.1% in 2022 to +16.1% in 2023).

In contrast, ADIA maintains relatively stable long-term returns through diversified global portfolios, while GIC and CIC emphasize regional expansion and sectoral diversification. These variations position Danantara Indonesia uniquely as a digital-oriented SWF within ASEAN. When nations are compared, clear differences in asset allocation trends and transparency levels are revealed. Norway's GPFG shows the highest transparency with comprehensive annual data publication and strong ESG integration.

Despite fluctuations in returns (-14.1% in 2022 to +16.1% in 2023) (**Error! Reference source not found.; Error! Reference source not found.**). ADIA (UAE), although more closed, maintains a long-term average return of around 6-7% with global portfolio diversification (equities 32-42%, fixed income 10-20%, alternatives 15-25%) (**Error! Reference source not found.; Error! Reference source not found.**). While the GIC and CIC of China are actively diversifying their holdings in different regions, the Khazanah of Malaysia is devoted to the management of national assets in the service of economic and social development (**Error! Reference source not found.**). These differences in characteristics place Danantara Indonesia in a unique position as the first digital-oriented sovereign wealth fund in ASEAN.

From a SWOT point of view, there are a number of strengths that Danantara can leverage. Its focus on national digital infrastructure and logistics provides significant differentiation from other SWFs. In addition, government support and opportunities for integration with ASEAN diplomacy open up opportunities for accelerating digital platform-based FDI (**Error! Reference source not found.**). However, historical limitations (no annual return track record, limited empirical data) are fundamental weaknesses, especially when compared to GPFG or GIC, which have more than 40 years of data (**Error! Reference source not found.; Error! Reference source not found.**).

The digital economic transformation in the ASEAN region, green investment trends, and the possibility of forming strategic partnerships with existing SWFs are all examples of emerging opportunities. Some examples include GPFG in renewable energy projects, ADIA in health-tech, and GIC in Southeast Asian infrastructure. However, threats such as global volatility, competition with large SWFs, and governance-political risks must still be anticipated (**Error! Reference source not found.**).

**Table 6.** Strategic Responses for Danantara Indonesia Based on SWOT Matrix

Strategic	Description	Source
SO (Strength-Opportunity)	Leverage its position as an ASEAN digital hub with government support to attract FDI in the digital and green energy sectors. Encourage regional collaboration (QRIS	<b>Error! Reference source not found.; Error! Reference source</b>

	Cross-Border, OSS, SPBE) to accelerate the integration of digital and green energy investments.	<b>not found.; Error! Reference source not found.</b>
ST (Strength-Threat)	Use GPFPG-style transparent governance to address global volatility risks and enhance credibility. Leverage digital differentiation to reduce dependence on traditional sectors that are prone to market volatility.	<b>Error! Reference source not found.; Error! Reference source not found.</b>
WO (Weakness-Opportunity)	Compensate for limited track record with strategic partnerships with global SWFs (e.g., GIC, Mubadala, GPFPG) in green energy and digital infrastructure projects. Build a joint investment pipeline to quickly establish reputation.	<b>Error! Reference source not found.; Error! Reference source not found.; Error! Reference source not found.</b>
WT (Weakness-Threat)	Minimize governance weaknesses and data limitations by establishing a digital-based transparency and annual reporting system (Cortax, Satu Data Indonesia). This also reduces political risk and enhances competitiveness against large sovereign wealth funds.	<b>Error! Reference source not found.; Error! Reference source not found.; Error! Reference source not found.</b>

Source: Author's compilation based on Bank Indonesia (2024), Bappenas (2024), ASEAN Secretariat (2024), NBIM (2024), OECD (2023), GIC (2023), Mubadala (2024), and Global SWF (2024).

Overall, empirical results and SWOT analysis indicate that Danantara Indonesia needs to design a more balanced asset allocation between digital infrastructure, green investment, and global financial instruments, while building GPFPG-style transparent governance.

This will strengthen Danantara's appeal as an instrument of economic diplomacy and a benchmark model for digital economy-based SWFs in the ASEAN region (**Error! Reference source not found.; Error! Reference source not found.**). From the SWOT analysis above, a set of strategic responses can be derived to align Danantara's strengths and opportunities while mitigating weaknesses and threats. Table 6 presents the SO, ST, WO, and WT strategies. With this framework, Danantara's strategy is not only normative, but also has an empirical basis from the SWOT results. The integration of national digitalization such as QRIS Cross-Border, Cortax, and OSS as well as green energy through strategic projects such as the Cirata Floating Solar Power Plant and EV battery hub, strengthens Danantara's competitiveness, while also making it a new benchmark in ASEAN for digital-based sovereign wealth funds and green infrastructure (**Error! Reference source not found.; Error! Reference source not found.; Error! Reference source not found.**).

Moreover, collaborating with international sovereign wealth funds is crucial for augmenting Danantara's legitimacy. For example, one may draw insights from Norway's GPFPG on the implementation of transparent ESG-oriented governance (**Error! Reference source not found.**); explore partnerships with Mubadala (UAE) to promote advanced technologies such as AI, semiconductors, and hydrogen (**Error! Reference source not found.**) adopt Singapore's GIC framework for investments in data centers, fintech, and smart cities relevant to the IKN (**Error! Reference source not found.; Error! Reference source not found.**) and foster green industrialization through collaboration with China's CIC in digital infrastructure and energy storage (**Error! Reference source not found.**), as well as with Malaysia's Khazanah on socio-economic investments in health and green energy sectors (**Error! Reference source not found.**).

By assimilating these global standards inside Indonesia's local framework, Danantara can elevate its position as the inaugural digital SWF in ASEAN, simultaneously serving as an instrument for regional economic diplomacy ([Error! Reference source not found.](#); [Error! Reference source not found.](#)). Danantara's strategy as Indonesia's first digital sovereign wealth fund (SWF) should be structured by integrating short-, medium-, and long-term priorities, while strengthening its differentiation from other global SWFs. The immediate need is to build governance and institutional legitimacy. This entails implementing transparency and reporting criteria akin to those of prominent sovereign wealth funds, such as the Government Pension Fund Global. Robust governance systems are crucial for bolstering investor confidence and mitigating institutional risk, especially considering Danantara's weak previous performance ([Error! Reference source not found.](#)).

In the medium term, Danantara should capitalise on Indonesia's comparative advantages in digitalisation and energy to enhance its investment portfolio. National digital initiatives namely QRIS Cross-Border, OSS, SPBE, and Cortax foster an ecosystem conducive to enhancing investment efficiency, transparency, and regulatory certainty ([Error! Reference source not found.](#); [Error! Reference source not found.](#)). Simultaneously, global sovereign wealth funds like GIC and Mubadala Investment Company illustrate that strategic investments in digital infrastructure, artificial intelligence, and data ecosystems may bolster long-term competitiveness.

Therefore, Danantara should prioritize digital infrastructure, smart logistics, and data-driven financial systems while gradually increasing exposure to sustainable investments. In the long term, Danantara needs to position itself as a strategic instrument of economic transformation and regional integration. This requires building a balanced portfolio that integrates growth-oriented assets with sustainable sectors such as renewable energy and infrastructure.

Lessons from China Investment Corporation indicate the importance of aligning investment strategies with national development objectives, particularly in digital industrialization and energy transition. By combining digital infrastructure, green investment, and strategic partnerships, Danantara can establish itself as a differentiated digital-oriented SWF in ASEAN. According to insights from global sovereign wealth funds ([Error! Reference source not found.](#); [Error! Reference source not found.](#)), investments in the digital and energy sectors are now essential strategies for improving portfolio resilience and enabling long-term economic development.

**Tabel 7.** Benchmarking Digital and Energy-Infrastructure Strategies of Global SWFs and Implications for Danantara

SWF	Focus on Digital Investment & Infrastructure/Energy	Key Strategies	Implications for Danantara
GIC (Singapura)	AI, data centers, fintech, green infrastructure.	Digital diversification & sustainability, strategic partnerships with global tech companies.	Emulate public-private partnerships to strengthen the attractiveness of digital & infrastructure investment in ASEAN
Mubadala (UAE)	AI, semiconductors, cloud computing, renewable energy.	Investment in frontier tech & energy infrastructure, global	Develop AI hubs & attract FDI to the technology and renewable energy sectors

Norway GPF	Renewable energy (wind, solar), transport infrastructure.	collaboration (Microsoft, Abu Dhabi AI Hub). ESG integration as a global standard.	Integrate green portfolios & transparent infrastructure for global credibility
CIC (China)	Digital infrastructure, green industrialization.	Digital infrastructure & energy transition to support national industrialization.	Combining national digitalization and green industrialization as a model for sustainable development
Danantara Indonesia	Digital infrastructure, ASEAN integration, energy assets.	No track record yet, but has national digitalization capital (QRIS, OSS, SPBE, Cortax) & green industrial park base.	Becoming the first digital + green energy SWF in ASEAN, differentiated by its combination of digital + green infrastructure

Source: Adapted from **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**, **Error! Reference source not found.**

Digital infrastructure, artificial intelligence, and renewable energy can be collectively used to boost competitiveness and promote structural diversity, as evidenced by funds like GIC and Mubadala (**Error! Reference source not found.**; **Error! Reference source not found.**). Meanwhile, GPF emphasizes ESG integration and transparency, and CIC's digital infrastructure aligned with the country's industrialisation ambitions (**Error! Reference source not found.**; **Error! Reference source not found.**).

For Danantara Indonesia, these trends indicate that competitive advantage is not just based on asset allocation, but also on strategic sector positioning according to national priorities. Danantara has the opportunity to harness existing digital projects (QRIS, OSS, SPBE, Cortax) and great potential in renewable energy with a hybrid approach of digital infrastructure, green energy, and global investment techniques (**Error! Reference source not found.**; **Error! Reference source not found.**). Danantara should focus on creating a diversified and flexible portfolio in the long run in support of its function as a weapon of economic diplomacy.

This includes increasing governance standards, scaling up into frontier technologies and building a scalable pipeline of green investments. Danantara has the potential to be a benchmark digital-green sovereign wealth fund in ASEAN by bridging global best practices with the domestic economic transformation (**Error! Reference source not found.**; **Error! Reference source not found.**).

## Conclusion

This analysis illustrates that the efficacy of sovereign wealth funds (SWFs) is predominantly influenced by fund size (AUM) and equity allocation, whereas investments in real estate and renewable energy exert minimal or detrimental impacts on short-term performance. These results show that diversification into different asset classes requires careful balance, but they also support the claim of Modern Portfolio Theory (**Error! Reference source not found.**) that equity is the most important factor in long-term development.

The comparative analysis highlights the absence of a singular model for success in sovereign wealth fund management. Although GPF Norway exemplifies transparency and ESG integration, ADIA UAE illustrates that diversification with minimal disclosure can nevertheless yield long-term returns. Likewise, GIC

Singapore, CIC China, and Khazanah Malaysia modify their plans in accordance with national interests, encompassing digital infrastructure and industrial strategy. This underscores that SWFs are not solely financial instruments but also tools of economic diplomacy and strategic statecraft.

The establishment of Danantara as the inaugural digital-oriented sovereign wealth fund in ASEAN offers Indonesia both opportunities and challenges. Indonesia experiences advantages from robust national digitalization initiatives, including QRIS Cross-Border, OSS, SPBE, and Cortax, alongside active green energy projects such as floating solar, geothermal, hydropower, and electric vehicle batteries. This establishes a distinctive basis for Danantara to distinguish itself via a digital-green portfolio. On the other hand, the absence of historical performance data, untested governance, and reliance on domestic-foreign investment flows present vulnerabilities that need to be addressed.

Strategically, Danantara's institutional development should proceed through a carefully sequenced approach that prioritises credibility as a foundational prerequisite, followed by the mobilisation of strategic investment, and ultimately long-term portfolio transformation. In its initial phase, enhancing credibility necessitates the prompt implementation of transparent reporting standards and governance frameworks comparable to those adopted by leading sovereign wealth funds, particularly the Government Pension Fund Global. This effort must be firmly anchored in explicit governance regulations aligned with [OECD \(2023\)](#) and the principles advanced by the International Forum of Sovereign Wealth Funds.

Central to this framework is the imposition of stringent limitations on political interference in investment decision-making, the establishment of autonomous and professionally driven investment committees, and the introduction of comprehensive regulations governing related-party transactions to effectively mitigate conflicts of interest. Building upon this institutional credibility, Danantara can then advance its medium-term strategy by leveraging Indonesia's rapidly expanding digital and energy infrastructure to attract foreign direct investment (FDI) and position itself as a key digital hub within the ASEAN region.

However, this ambition requires a disciplined investment approval system grounded in risk-return analysis, fiduciary responsibility, and alignment with national priorities. Such an approach reflects international best practices in sovereign asset management, ensuring that developmental objectives are pursued without undermining financial discipline or governance standards ([OECD, 2023](#)). Over the longer term, Danantara's strategic evolution will depend on its ability to diversify into high-growth, future-oriented sectors, including artificial intelligence, big data, smart mobility, and the hydrogen economy.

This transition should draw upon the experiences and investment philosophies of globally established funds such as GIC, Mubadala Investment Company, and China Investment Corporation, which have demonstrated the importance of long-term capital deployment, institutional expertise, and adaptive investment strategies. Crucially, this diversification agenda must be reinforced by governance mechanisms that ensure accountability, rigorous performance benchmarking, and long-term sustainability, in alignment with global sovereign wealth fund governance standards ([Global SWF, 2024](#)).

Through this integrated and phased approach, Danantara can position itself not only as a national investment vehicle but also as a credible and competitive sovereign asset manager within the global financial landscape. This research is

restricted by its reliance on publicly accessible secondary data. The analysis of funds such as Abu Dhabi Investment Authority and GIC, which provide limited disclosure, restricts a comprehensive assessment of portfolio composition and risk dynamics. Additionally, the performance of Danantara cannot be empirically evaluated due to the absence of a historical return series, as it is a recently established fund.

Future research should employ panel data econometrics across a broader sample of SWFs to examine the causal relationship between asset allocation and fund performance. Additionally, further studies on the impact of digitalization and ESG integration on long-term returns would provide valuable insights. A deeper exploration of Danantara's institutional role within ASEAN economic diplomacy frameworks is also recommended.

To conclude, the results demonstrate that Danantara has the potential to be a leading sovereign wealth fund in ASEAN by leveraging digital infrastructure, spurring green investment, and ensuring transparent governance. Its long term success however will depend on its ability to improve institutional governance, limit political meddling and adopt globally acknowledged investment and risk management standards.

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**Appendix 1.** Comparative Characteristics of Sovereign Wealth Funds (GPFG, ADIA, GIC, CIC, Khazanah, and Danantara Indonesia)

	Indonesia – Danantara	Norway – GPFG	UAE – Abu Dhabi Investment Authority (ADIA)	Singapore – GIC Private Limited	China Investment Corporation (CIC)	Malaysia – Khazanah Nasional Berhad
Aspects	Indonesia (Daya Danantara)	Norway (Government Pension Fund Global)	UAE (Abu Dhabi Investment Authority)	Singapore – GIC Private Limited	China Investment Corporation (CIC)	Malaysia – Khazanah Nasional Berhad
Year established	2025	1990	1976	1981	2007	1993
Main Purpose & Functions	Sovereign wealth fund	Sovereign wealth fund	Sovereign wealth fund	State wealth fund and	Sovereign wealth fund for	Sovereign wealth fund for
Strategic Objectives	Accelerating infrastructure, logistics, digital and FDI attraction through economic diplomacy	Achieving stable long-term growth and maintaining the value of national wealth	Diversify state reserves & strengthen global position	Foreign exchange reserves & long-term growth	Foreign exchange reserves, diversification, economic stability and investment	Generating sustainable and long-term investment and management of state assets
Connection to Economic Diplomacy	Focus on ASEAN and strategic partners through digital platform-based investment promotion	Global reputation instruments, namely the world's largest stock investors (±1.5% of global market cap), international ESG promoters	Become an instrument of UAE economic soft power worldwide	Foreign investment for economic diplomacy	Foreign investment for economic diplomacy and global stability	Becoming an instrument of economic diplomacy through strategic investment and asset management
Investment Instruments / Services	National logistics integration, trade big data, AI tracking, payment gateway	Global stocks (70%), bonds (27%), real estate and renewable energy (3%)	Equities, bonds, alternatives (PE, hedge funds, RE, infra)	Equities, real estate, PE, bonds	Stocks, bonds, real estate, private equity, hedge funds, infrastructure	Stocks, bonds, real estate, private equity, infrastructure
Key Performance Indicators Strategic	Number of integrated partners, trading volume via the platform, value of incoming FDI	Asset value under management, annual return, transparency rating, contribution to ESG	Investment returns, value of assets under management, number of strategic projects	20-year real return ±3.8%, AUM, foreign exchange contribution	Annual returns, AUM, foreign exchange contributions, ESG sustainability	Managed asset value, long-term management, social and economic performance
Asset Scale / Project Value	Initial stage — estimation of initial investment by the government and partners	± USD 6,62 Trillion (2020-2024)	± USD 4.28 Trillion (2020-2024)	± USD 2,42 Trillion (2020-2024)	± USD 1,2 Trillion (2020-2024)	± USD 45 Billion (2020-2024)

Transparency & Governance	-	GPF is recognized as the most transparent fund in the world (ranked 1st in the Global Pension Transparency Benchmark 2024) and winner of the ICGN Global Stewardship Disclosure Award	Long-term average return (20 years: 6-7%), AUM, global projects	Summary report (only composition & long-term return)	Recognized as one of the sovereign wealth funds with good governance, focusing on ESG and high transparency	High transparency in governance with a focus on sustainability and accountability
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Aspects	Indonesia – Danantara Indonesia (Daya Anagata Nusantara Investment Management Agency)	Norway – GPF (Government Pension Fund Global)	UAE – Abu Dhabi Investment Authority (ADIA)	Singapore – GIC Private Limited	China Investment Corporation (CIC)	Malaysia – Khazanah Nasional Berhad
Year established	2025	1990	1976	1981	2007	1993
Projects/ Partnerships	<ol style="list-style-type: none"> <li>National Digital Infrastructure Development.</li> <li>Development of E-commerce Hubs and E-fulfillment Centers.</li> <li>Investment Promotion and Economic Diplomacy.</li> <li>National Energy.</li> </ol>	<ol style="list-style-type: none"> <li>Investment in 1,891 MW of renewable energy capacity (solar, onshore &amp; offshore wind) in Portugal, Spain, and the UK).</li> <li>Joint ventures for green energy.</li> <li>International partnerships in Asia (discussions on corporate governance in Japan, Korea, Singapore, and Indonesia – palm oil sustainability).</li> </ol>	USD 200 million investment in Meril Life Sciences (India, MedTech).	<ol style="list-style-type: none"> <li>Long-term investments in the US, Europe, Asia.</li> <li>Investments in transportation infrastructure and technology in Africa and Southeast Asia.</li> </ol>	<ol style="list-style-type: none"> <li>Long-term investments in the US, Europe, Asia.</li> <li>Investments in transportation and technology infrastructure and energy in Africa and Southeast Asia.</li> </ol>	<ol style="list-style-type: none"> <li>Management of the technology and renewable energy sectors.</li> <li>Investments in the health and education sectors.</li> <li>Partnerships in innovation and infrastructure.</li> </ol>
Relevance to Danantara	Learning base for national digital governance	Global governance, transparency, and ESG integration benchmark	Benchmark for global diversification & soft power diplomacy	Asset diversification benchmark & foreign exchange resilience	Benchmark for global investment diversification and transparent governance with a focus on sustainability	Benchmark governance and transparency in long-term and socio-economic investment management