



# Asian Insights SparX

## Johor-Singapore SEZ

Refer to important disclosures at the end of this report

DBS Group Research . Equity

29 Nov 2024

### JS-SEZ: What awaits?

- ASEAN's first cross-border SEZ could reshape the investment landscape in Singapore and Malaysia, with RTS set to commence by end-2026
- 11<sup>th</sup> Malaysia-Singapore Leaders Retreat in Dec 2024 a catalyst; Watch for (i) focus industries, (ii) tax incentives, and (iii) geographical coverage
- Near-term beneficiaries - Renewables and Energy ([SCI](#), [Seatrium](#)), Data Centers ([MINT](#)), Logistics ([MLT](#), [CLAR](#)) and Technology ([Venture](#), [GVT](#))
- Some risks in Retail ([FCT](#)) and Healthcare ([Raffles Medical](#)), but fears appear overblown

**All eyes on 11<sup>th</sup> Malaysia-Singapore Leaders Retreat in Dec 2024.** Following the signing of the memorandum of understanding ("MoU") on the Johor-Singapore Special Economic Zone (JS-SEZ) in Jan 2024, we have observed positive milestones e.g., infrastructure progress, bilateral discussions. The 11<sup>th</sup> Malaysia-Singapore Leaders Retreat in Dec 24 is a major catalyst to watch. Despite delays, we remain optimistic on the SEZ as both governments have shown political will to implement it, aiming to strengthen business ties and economic connectivity for mutual benefit.

**What are we anticipating?** We take a more conservative view than the market, expecting a phased JS-SEZ development. We await clarity on (i) focus industries, (ii) tax incentives and (iii) geographical coverage of SEZ.

**Position into beneficiaries, monitor riskier names.** We believe near-term beneficiaries include Renewables/Energy ([SCI](#), [Seatrium](#)), Data Centers ([MINT](#)), Logistics ([MLT](#), [CLAR](#)) and Technology sectors ([Venture](#), [GVT](#)). Watch for risks on Healthcare ([Raffles Med](#)) and Retail REITs ([FCT](#)) on potential retail leakage with the upcoming RTS, although market fears may be overblown. Refer to page 3 for summary of picks.

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### STOCKS

	12-mth					
	Price SGD	Mkt Cap USDm	Target Price SGD	Performance (%)		Rating
				3 mth	12 mth	
<a href="#">Sembcorp Industries</a>	5.17	6,838	7.35	10.0	0.6	BUY
<a href="#">Seatrium Limited</a>	1.93	4,882	3.00	31.3	(11.5)	BUY
<a href="#">Mapletree Logistics Trust</a>	1.28	4,729	1.75	(6.7)	(21.3)	BUY
<a href="#">Mapletree Industrial Trust</a>	2.33	4,858	2.75	(4.2)	0.0	BUY
<a href="#">Capitaland Ascendas REIT</a>	2.64	8,620	3.25	(9.1)	(7.5)	BUY
<a href="#">Venture Corporation</a>	12.99	12.85	2,760	15.10	(8.7)	1.2
<a href="#">Grand Venture</a>	0.56	141	0.70	1.8	11.0	BUY
<a href="#">Raffles Medical</a>	0.86	1,187	0.97	(4.4)	(19.3)	HOLD
<a href="#">Frasers Centrepoint Trust</a>	2.14	2,888	2.75	(10.1)	(3.2)	BUY

Source: DBS, Bloomberg  
Closing price as of 28 Nov 2024

The DBS Asian Insights SparX report is a deep dive look into thematic angles impacting the longer term investment thesis for a sector, country or the region. We view this as an ongoing conversation rather than a one off treatise on the topic, and invite feedback from our readers, and in particular welcome follow on questions worthy of closer examination.

## Table of Contents

Investment Summary	3
Beneficiaries vs Losers	3
Overview of JS-SEZ	4
Our view on JS-SEZ	6
Implication on Sectors	8
Aviation	8
Consumer	9
Healthcare	10
Logistics	11
Property (Data Centres)	12
Utilities & Renewables	13
Property (Retail REITs)	14
Property (Residential)	15
Refinery & Petrochemical	16
TMT	17

*Note: Prices used as of 28 Nov2024*

## Investment Summary: Beneficiaries vs Losers

Not déjà vu; JS-SEZ is rooted in bilateral cooperation, unlike Iskandar. We believe both governments have demonstrated political will to implement JS-SEZ, evident from efforts such as signing a MoU, making progress on the 7 key initiatives, and holding discussions leading up to the official Retreat meeting.

Spotlight on renewables, data centers, logistics and technology as near-term beneficiaries. We evaluated 10 sectors (see the next section) and the implications of the JS-SEZ on those sectors, and came up with our top picks for each sector (Table 1, navigate to linked pages for each sector). We believe renewables, DCs, logistics and technology sectors are near-term beneficiaries, with other sectors as medium to longer-term beneficiaries.

**Table 1: Summary of sector impact and top picks**

Theme/Sector (page)	Impact	Stock Recommendations
<b>High-Tech Future</b>		
<b>Technology</b> (page 17)	Tech companies in Singapore could set up or expand their lower cost manufacturing bases in Johor, largely the lower margin backend and downstream processes. Long term structural improvements in cost efficiency expected, potentially allowing for margin expansion.	<b>(+) Venture</b> (BUY; SGD 15.10); <b>Grand Venture Technology</b> (BUY; SGD 0.70)
<b>Data Centers (DC)</b> (page 12)	DC operators and landlords will likely look to expand their presence in JB to complement their existing operations in Singapore, with availability of land and power load as major drivers. Further, Malaysia has rich renewable energy resources, a major draw for operators looking to expand their network while minimising their carbon footprint.	<b>(+) Mapletree Industrial Trust</b> (BUY; SGD2.75)
<b>Net Zero Transition</b>		
<b>Renewables</b> (page 13)	We have a positive outlook on Malaysia's renewable market, backed by DC demand tailwinds and firm project IRRs. We anticipate the upcoming Retreat meeting is set to take place in Dec 2024 to highlight renewable energy sector as an initial focus area.	<b>(+) Sembcorp Industries</b> (BUY; TP SGD7.35)
<b>Refinery &amp; Petrochemical</b> (page 16)	The joint development in Pengerang could have a win-win outcome, attracting FDIs by MNCs to expand capacity across the straits of Jurong Island while allowing Singapore to tap into the abundance of land there for renewable, development of carbon capture solutions as well as other clean energy value chains such as hydrogen.	<b>(+) Seatrium</b> (BUY; TP SGD3); <b>Sembcorp Industries</b> (BUY; TP SGD7.35)
<b>Supply Chain Shifts</b>		
<b>Logistics</b> (page 11)	Increased cross-border movement of goods will lead to growth of the logistics sector. Businesses in the shipping, freight forwarding, and warehousing sectors are poised to benefit from this, as well as growth of the third-party logistics sector.	<b>(+) Mapletree Logistics Trust</b> (BUY; SGD1.75); <b>Capitaland Ascendas REIT</b> (BUY; SGD3.25)
<b>Aircraft Maintenance, repair &amp; overhaul (MRO)</b> (page 8)	While Senai has limited potential as an MRO hub due to logistical challenges, lack of skilled labour and support network, it holds potential for aerospace manufacturing. Its proximity to Singapore's aviation ecosystem, availability of industrial space and lower labour costs make it a potential base for tier 2-3 aerospace suppliers.	<b>(+) ST Engineering</b> (BUY; SGD5.40)
<b>Consumer Spending</b>		
<b>Property (Residential)</b> (page 15)	Development of JS-SEZ has sparked some optimism around properties in JB, a positive for Malaysian developers. However, new rules for Malaysia's residency visa scheme may lead to headwinds on foreign property demand. Rejuvenation of Singapore's Northern region remains intact. We have a positive view on Singapore developers that are able to acquire opportunistic sites at attractive prices.	<b>(+) City Developments</b> (BUY; SGD10.50); <b>Frasers Property</b> (BUY; SGD1.14)
<b>Property (Retail)</b> (page 14)	With the SG-JB RTS, we estimate an additional c.3-4% of leakage in Singapore retail sales to JB, which is generally lower than feared by the markets. The sell-off in Frasers Centrepoint Trust (FCT), which has northern SG retail exposure, ahead of RTS opening likely sentiment-driven instead of operations-driven.	<b>(Neutral) Frasers Centrepoint Trust</b> (BUY; SGD2.75)
<b>Healthcare</b> (page 10)	Johor could emerge as the go-to destination to save on medical costs. We opine that there will be some leakage but no mass exodus of patients to Johor due to factors such as insurance coverage, familiarity, and urgency of medical treatment. JS-SEZ will likely be neutral for IHH with leakage offset by Johor facilities while slightly negative for Raffles Medical due to the lack of operations in Malaysia. We see no impact on Parkway Life REIT.	<b>(Neutral) IHH Healthcare</b> (BUY MYR 7.60) <b>(-) Raffles Medical</b> (HOLD; SGD0.97)

Note: IRR = internal rate of returns; FDI = Foreign direct investments; Source: DBS

### Overview of JS-SEZ

**Objective.** The JS-SEZ aims to (i) bolster the overall business ecosystems for Malaysia and Singapore, (ii) facilitate the movement of people, and (iii) leverage on the economic benefits of both countries. Both governments have outlined 7 initiatives in their MoU, as summarised in Table 1. As communicated by DPM and Minister of Trade and Industry, Mr. Gan Kim Yong, “The objective of the JS-SEZ is to build on the complementary strengths of Singapore and Johor to better compete for global investments together. Companies can tap on Singapore’s offerings as a business and financial hub, and benefit from Johor’s abundant supply of land and workforce as well as Malaysia’s market”. Complementary strengths between Singapore and Johor are summarised in Figure 1 on the next page.

**Latest updates, watch for Dec 2024 Retreat meeting.** To date, two of the seven key initiatives under the JS-SEZ proposal have made notable progress since the signing of MoU in Jan 2024 (Table 1). Officials from both countries had met in Johor in Aug 2024 to advance discussions on JS-SEZ, with the next major milestone being the highly anticipated 11th Singapore-Malaysia Leaders’ Retreat (“Retreat”) (Figure 2). The Retreat was initially set to happen in Sept 2024, but has been delayed to Dec 2024, according to a joint statement by Malaysia Economy Minister Rafizi Ramli and Singapore Minister for National Development Desmond Lee. It has been reported that are some outstanding issues regarding the contribution of both countries to a facilitation fund for companies looking to expand operations in Johor and on skilled workforce provisions, had contributed to the delay. In the longer term, the major catalyst to watch would be the JB-Singapore Rapid Transit System (RTS) Link, slated to open at end-2026.

**JS-SEZ comes with its own set of challenges.** According to key findings from Singapore Business Federation (SBF)’s survey with >160 Singaporean businesses, 90% find Johor an attractive place, with 50% already having operations there. For those considering to enter/expand in Johor, key challenges include (i) manpower crunch (e.g., employment pass issues, insufficient skilled labour), and (ii) cross-border trade issues (e.g., import/export tax issues due to unclear rules and tax classifications, cargo clearance issues). Among the solutions proposed by the SBF survey, businesses have highlighted the need for improved connectivity and greater investment facilitation (e.g., a one-stop shop in Malaysia to address issues).

Figure 3 on the next page summarises major considerations for Singaporean businesses looking to shift/expand into Johor.

**Table 1: Key initiatives and status**

Initiative	Status
Facilitating Malaysia-Singapore <b>renewable energy cooperation</b> in JS-SEZ	Pending
Adoption / implementation of a <b>passport-free QR code clearance system</b> on both sides, to facilitate expeditious clearance of people at land checkpoints	Good progress
Curating <b>training and work-based learning</b> initiatives to <b>address talent and skills gaps</b> for relevant industries in JS-SEZ	Pending
Co-organising an <b>investors forum</b> to gather feedback from Singapore and Malaysia businesses on JS-SEZ	Pending
Developing <b>joint promotion events</b> between Johor and Singapore to promote trade and investment in JS-SEZ	Pending
<b>One-stop business/investment service centre in Johor</b> to facilitate the application processes for various approvals and licenses necessary for Singapore businesses to set-up in Johor	Good progress
<b>Adoption of digitised processes for cargo clearance at land checkpoints</b>	Pending

Note: Status is based on June 2024 announcements. Source: MTI Singapore, DBS

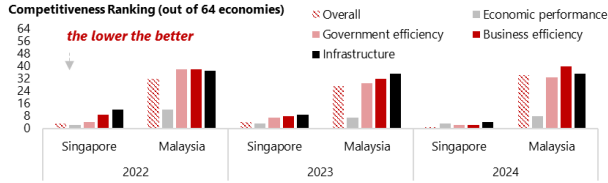
**Figure 2: Timeline and major milestones**



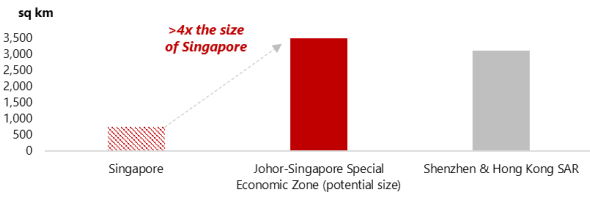
Source: MTI Singapore, Business Times, DBS

**Figure 1: Complementary strengths in JS-SEZ**

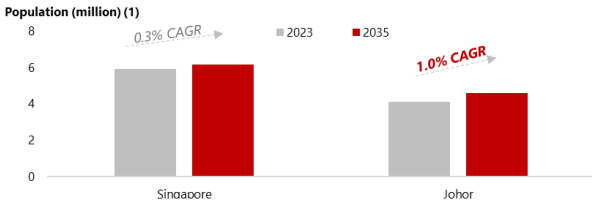
**Johor can leverage on Singapore's capabilities as a financial centre & business hub**



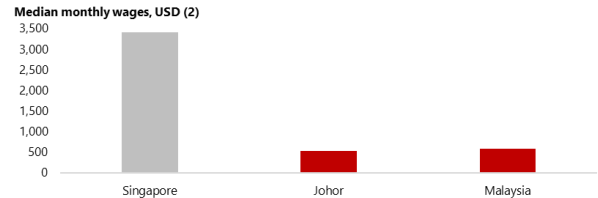
**While Singapore can tap onto Johor's bigger land area...**



**... Johor's growing workforce...**



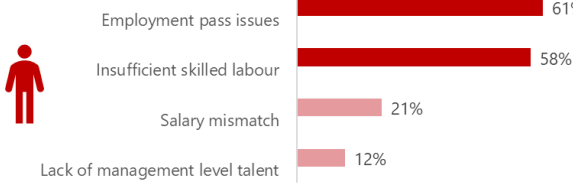
**... at significantly lower median monthly wages compared to Singapore**



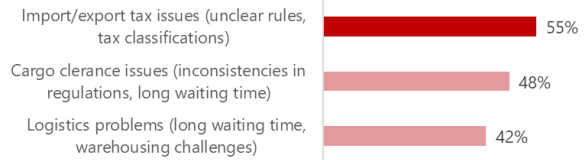
Note: (1) 2035F population forecast for Singapore and Malaysia is estimated by the United Nations and Department of Statistics Malaysia, respectively. (2) Wages is as of June 2023. Singapore's wage estimate excludes employer CPF provided to full-time employed residents. Malaysia's and Johor's estimate is based on the formal sector. Source: CEIC, MoM, DOSM, IMD World Competitiveness Ranking, Singstat, Hong Kong government, CNA, DBS

**Figure 3: Key considerations for Singaporean businesses looking to shift/expand into Johor**

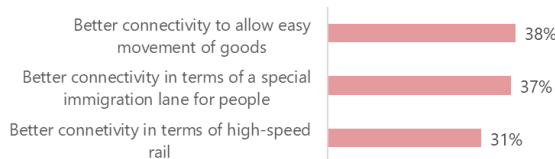
**Manpower crunch is a key challenge faced by Singaporean businesses operating in Johor...**



**... as well as cross-border trade issues**



**Improved connectivity is key to move goods and people efficiently**



**Potential solutions to improve investment facilitation**



Note: Survey of over 160 Singaporean businesses conducted from March to June 2024. Source: Singapore Business Federation (SBF)

**Our view on JS-SEZ**

**Dud or an opportunity?** Both countries are reportedly working towards a full-fledged agreement to be implemented next year, with some skeptics questioning if the said target is achievable, noting that the date of the Retreat was pushed back from Sept to Dec 2024. Furthermore, past experiences with Malaysia’s Iskandar project (Figure 4) have also contributed to skepticism towards the JS-SEZ.

**Not déjà vu; JS-SEZ is rooted in bilateral cooperation, unlike Iskandar.** In our view, both governments have demonstrated political will to implement JS-SEZ, evident from efforts such as signing a MoU, progressing on the 7 key initiatives, and holding discussions leading up to the official Retreat meeting in Dec 2024. Bilateral cooperation is key to driving success of the JS-SEZ in our view, unlike the Iskandar Malaysia project, which experienced slow progress as it was mainly driven by the Malaysian government with limited involvement from Singapore. Furthermore, we have also seen positive progress on key infrastructure projects e.g., Johor-Singapore RTS Link, with the Malaysian government stating progress stands at 65% currently, and on track for completion by end 2026, setting a one-stop business center in Johor, and more, which helps to drive optimism in the fruition of the JS-SEZ. We highlight key differences between Iskandar project and JS-SEZ in Table 2.

**Figure 4: Iskandar project**



*Description: Iskandar, which was conceptualised as an economic growth corridor in 2006, is located in southern Johor. It includes Johor’s heavy industrial zone Pasir Gudang, its capital city Johor Bahru, Iskandar Puteri, Kulai, Sedenak and part of Pontian town. Progress for the Iskandar Malaysia project was halted. Source: Iskandar Regional Development Authority, Straits Times, DBS*

**Table 2: Iskandar Malaysia vs JS-SEZ Project**

	Iskandar Malaysia	Johor Singapore – SEZ (JS-SEZ)
<b>Government involvement</b>	Driven mainly by Malaysia with limited involvement from Singapore	Active involvement by both governments
<b>Infrastructure</b>	Slow progress on infrastructure upgrades, and many plans did not proceed	Several infrastructure upgrades have been completed and are progressing well
<b>Connectivity</b>	Singapore-Kuala Lumpur High Speed Rail and Rapid Transit System (RTS) with Johor were put on hold	RTS progressing well and slated to complete in 2026. Plans for passport-free QR code clearance system on both sides
<b>Economic conditions</b>	Stalled by the onset of the COVID-19 pandemic	Businesses wanting to expand out of Singapore due to land/power constraints. Johor is becoming a viable destination with infrastructure upgrades and govt support.
<b>Ease of set-up</b>	-	One-stop business centre in Johor to facilitate processes
<b>Ease of trading</b>	-	Digitalised process for cargo clearance at land checkpoints

*Source: Iskandar Regional Development Authority, Straits Times, DBS*

**We adopt a more conservative stance than the market; JS-SEZ to be developed in phases given ongoing complexity.**

Although we anticipate JS-SEZ to be a more successful project relative to its Iskandar counterpart, we are of the view that the JS-SEZ will likely be developed in phases considering complexity of negotiations, as discussed below.

**Key issues to iron out and what can we anticipate from the upcoming Retreat in Dec 2024.**

We anticipate three key issues to be ironed out from the Retreat meeting with more clarity on (i) sub-industries of focus, (ii) tax incentives, and (iii) geographical coverage of JS-SEZ.

Firstly, we note that the 7 key initiatives outlined by the MoU are rather broad and general, and we anticipate the Retreat meeting to provide more clarity on the sub-industries of focus. As an example, Initiatives #3-5 (work training for relevant industries, investor forum, joint promotion events) are rather broad at the moment, and we anticipate both governments to identify the 'relevant industries. In our view, technology, data center and renewable sectors are likely to be the key focus areas given the common goals to accelerate growth in these new economies. Logistics is also well positioned as a near-term beneficiary. In the medium to longer term, we anticipate other sectors to follow suit and rolled out in phases, such as food manufacturing, retail, residential properties, healthcare, aerospace and refinery/petchem.

Secondly, we anticipate more clarity around fiscal and non-fiscal incentives in JS-SEZ. Fiscal incentives include tax breaks and exemptions, investments grants and subsidies, low interest loans and financing etc. Additionally, current processes for permit/regulatory approvals in Johor is rather lengthy at c.1.5 years, which is a roadblock for businesses looking to shift/expand into Johor. We expect more clarity around accelerated processes for permit approvals such as altering land zoning, changing from agricultural to commercial use, and construction approvals. On a positive note, the newly established one-stop shop in Johor aimed at facilitating the application

processes for Singapore businesses (one of the key initiatives under the MoU) is a solution to some of the said concerns.

Most importantly, we should obtain more clarity on the exact coverage/size for the JS-SEZ, was not formally firmed out in the Jan 2024 MoU. According to the 2025 Economic Outlook report released by Malaysia's Ministry of Finance on 18 Oct 2024, the JS-SEZ is set to cover a land mass of 3,505 sqkm (18% of Johor, which is almost 5x the size of SG and 2x Shenzhen SEZ), comprising an area governed by six local authorities (Figure 5). The geographical coverage of the JS-SEZ will be key in determining the impact on Singapore's industries. For instance, MPP's Pengerang Integrated Petroleum Complex (PIPC), which is Malaysia's largest refining and petrochemical complex, has been identified as a potential regional oil and gas hub, which could result in some concerns on Singapore's competitiveness as a regional oil and gas hub. We await Singapore's confirmation on Malaysia's proposed JS-SEZ coverage at the 11th Retreat.

**Figure 5: Proposed area for JS-SEZ**



Source: Ministry of Economy Malaysia, Ministry of Finance, The Edge Malaysia

## Implication on Sectors

### Aviation

Johor faces significant limitations as a potential regional MRO hub. The lack of connectivity and low air traffic at Senai Airport poses logistical challenges for airlines, primarily because of additional costs and operational disruptions associated with diverting aircraft to Senai for maintenance. Low traffic limits frequency and potential for connecting flights, making it less attractive for airlines requiring efficient turnaround times. This is a critical factor for airlines, which generally prefer maintenance, repair and operations (MRO) hubs at busier airports to minimise transit costs and keep schedules on track. While there is potential for MRO operators to establish heavy-check hangars in Senai to capitalise on cost savings, the area will need a more robust support network—including engineering workshops and more parts suppliers—to become fully viable.

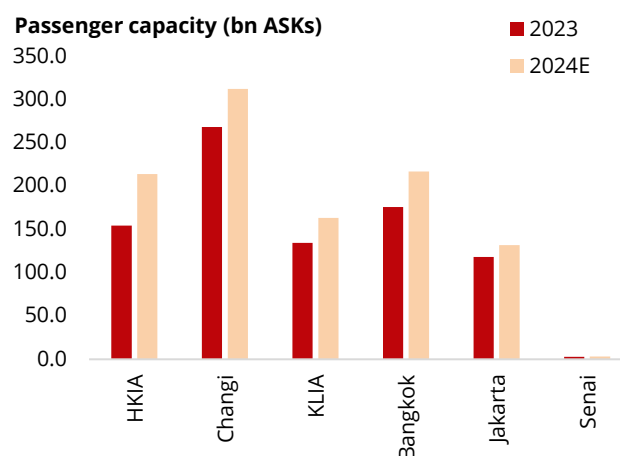
Johor’s proximity to Singapore presents a significant hurdle, as MRO operators in Johor would likely face intense competition for skilled labour. MRO operations are highly labour intensive, requiring a large, skilled workforce to perform inspections, repairs, and overhauls. With a considerable wage disparity favouring Singapore, talent is more inclined to seek employment here, especially in Singapore’s well-established MRO industry, which offers competitive pay and better career advancement prospects.

While Asia Digital Engineering, AirAsia’s MRO arm, opened the first commercial hangar in Senai in 2023, the primary objective is to service AirAsia’s fleet, and there has been limited success in winning third-party business. **SIA Engineering Company (SIE SP) [HOLD, SGD2.50]** chose to establish new airframe hangars in Subang, rather than in Senai, despite Johor’s proximity to Singapore. Subang offers a more favourable environment due to its established aviation ecosystem, higher air traffic, and better connectivity. This strategic choice underscores Senai’s limitations, as even major MRO providers see more operational viability and potential in alternative locations within Malaysia.

### Aerospace manufacturing holds more potential.

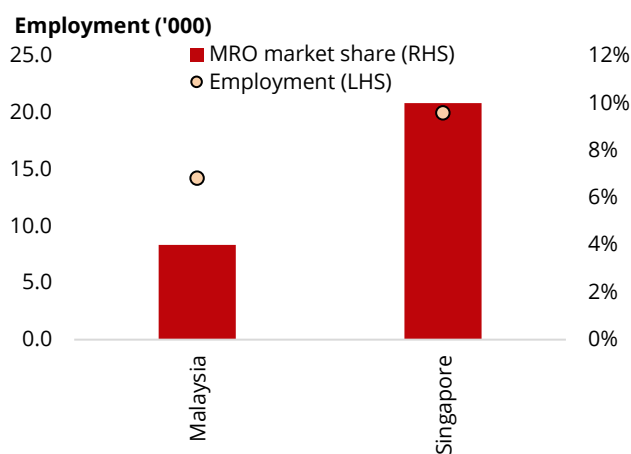
Manufacturing processes allow for a degree of automation, reducing dependency on high-cost skilled labour. Additionally, with the right incentives and infrastructure, Johor could attract tier 2 and tier 3 aerospace suppliers, who may find it beneficial to operate near established hubs in Singapore, positioning it as a manufacturing base rather than an MRO hub.

**Figure 6: Comparison of passenger capacity of Senai airport vs key airport hubs in Asia**



Source: CAPA, DBS

**Figure 7: Comparison of MRO employment and market share between Malaysia and Singapore**



Source: Singapore Economic Development Board, Ministry of Investment, Trade and Industry, DBS

**Our recommendations.** We do not foresee any meaningful impact on MRO operators at this juncture. SIAEC currently has no ambitions to enter the OEM segment. **ST Engineering (STE SP) [BUY, SGD5.40]** could potentially establish parts & components manufacturing facilities in the area to enhance its portfolio of products and expand its presence in the OEM space, though it is too early to tell.



**Consumer**

**Johor is well-positioned for large scale and economical food and beverage manufacturing.** With lower labour and rental costs, Johor is well-positioned as a more economical and large-scale production facility for food and beverages. Its proximity to Singapore also brings added benefits of ease of implementing innovation and technology developed in Singapore, an established R&D hub.

**Establishing manufacturing capabilities in Johor with R&D capabilities in Singapore tried and tested by a prominent local company.** An example would be Ofi, a subsidiary of Olam Group. Ofi has an existing dairy facility, Outspan Malaysia in Johor, and recently invested to double production capacity in 2023. Ofi opened a new Customer Solutions Centre in 2022, located at one of the key innovation hubs in Singapore (One North). It is equipped with pilot facilities to test the potential of large-scale manufacturing of new concepts.

Johor-Singapore SEZ may provide an additional incentive to maintain Singapore's tax structure. While Johor as a lower

cost manufacturing base has always existed, we believe companies like Heineken and Coca-Cola has continued to maintain manufacturing presence in Singapore due to the favourable tax structure in Singapore. With the SEZ, assuming that companies continue to enjoy Singapore's tax structure, we believe they could be more incentivised to shift production to Johor to reap cost savings.

**New investments from Chinese dairy players seeking growth outside China's challenging domestic market.** With Ofi leading the way with a manufacturing hub in Johor and R&D hub in Singapore (Figure 8), we believe Chinese dairy players may be keen to follow in Ofi's footsteps to expand their business in the fast-growing Southeast Asia region. Apart from innovation, being based in Singapore has the added benefit of including the credible Singapore branding for their products, which improves marketability of premium products like infant formula.

**Our recommendations.** We do not see any direct impact onto our coverage names currently.

**Figure 8: Existing food production facilities in Singapore are located close to JB checkpoints, which could facilitate easier re-location to JB**



Source: Companies, DBS

## Healthcare

Johor may emerge as the go-to destination for medical savings. Healthcare companies in Johor could be primary beneficiaries from the JS-SEZ due to its proximity to Singapore, stemming from more convenient travel as a result of passport free QR clearance in addition to improved accessibility from the upcoming RTS (expected by end-2026). Driving the rise in demand would be significant savings ranging from 30-80%, depending on the type of medical service (Table 4).

Leakage in healthcare services could differ depending on cost savings, urgency of medical treatment, and revenue per case. Within primary healthcare, we take the view that leakage in treatment of basic illnesses like the common cold would be minimal given the low revenue per case and reduced inclination to seek healthcare overseas when feeling unwell for modest savings. In contrast, routine health screenings and dental services, which can cost hundreds of dollars, may lead more patients to seek care in Johor. The same could be true for sub-categories of secondary to quaternary care such as diagnostic services, specialist consultations, or even surgeries, albeit constrained by certain factors such as medical emergencies, the availability of advanced treatment options, and portability of Medisave or private healthcare insurance. Figure 9 summarises the top treatments sought by healthcare travelers entering Malaysia.

No rush to Johor as coverage and comfort keep Singaporeans at home. Nonetheless, we are not anticipating a mass exodus of patients from Singapore to Johor due to the JS-SEZ for the following reasons. More than 70% of Singapore residents are covered by an integrated shield plan, thus out-of-pocket expenses through co-payments can be as low as 5%. This provides less incentive for insured patients to seek treatment overseas. Additionally, factors such as comfort and familiarity may discourage patients from receiving treatment abroad, especially for more serious ailments that require longer lengths of stay.

**Table 4: Johor could be the go-to destination for medical savings**

	Malaysia	Singapore	Savings (%)
MRI	USD 270-310	>USD 920	-70%
Heart bypass	USD 12000-13000	USD 17000-18000	-30%
Knee replacement	USD 7000-8000	USD 15500-16500	-50%
Angioplasty	USD 7500-8000	USD 13000-13500	-40%
Basic health screening	USD 70-230	USD 90-360	-30%
Scaling and Polishing	USD 25-50	USD 50-150	-60%
Nursing homes (basic)	USD 350-600	USD 1700-3200	-80%

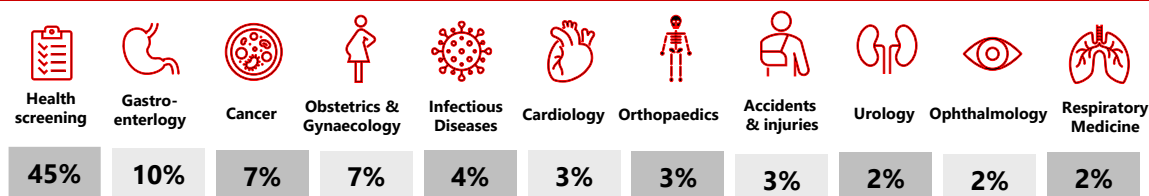
Source: Alvarez & Marsal, SingSaver, Companies, DBS estimates

**Our recommendations.** We believe JS-SEZ is neutral for IHH while slightly negative for Raffles Medical.

We opine that the net impact of the JS-SEZ on **IHH Healthcare (IHH SP) [BUY, SGD2.18]** would be neutral given that potential patient leakage in Singapore could be offset by higher patient volumes at its Johor facilities such as Gleneagles Hospital Medini Johor. Further distinctions in impact are expected among different brands. Brands like Mount Elizabeth and Gleneagles, which target the high-income domestic market, are likely to be more resilient due to the lower price sensitivity of their clientele. In contrast, brands with broader mass market appeal, such as Parkway, may be more vulnerable to patient outflows to Johor. We see no impact on **Parkway Life REIT (PREIT SP) [BUY, SGD4.80]**.

For **Raffles Medical (RFMD SP) [HOLD, SGD0.97]**, the lack of operations in Malaysia could subject the company to risks from patient diversion to Johor, although we believe any negative impact will not be substantial.

**Figure 9: Health screening is top service sought by healthcare travelers entering Malaysia**



Source: Malaysia Healthcare Travel Council, DBS

## Logistics

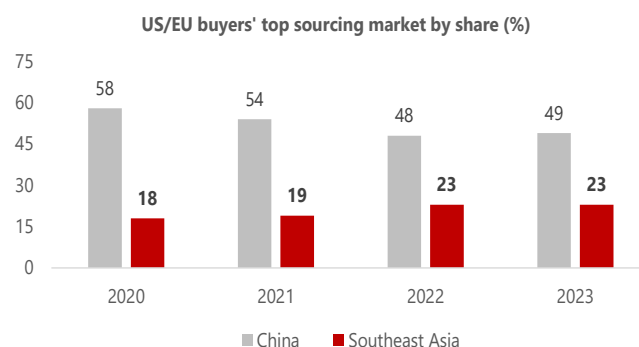
**Logistics to benefit from “twin engines” model.** The JB-SG SEZ is set to create a “twin engine” model, where different components of production and supply chain management are strategically split between JB and SG. This model will drive higher demand for cross-border movement of goods and services, especially for companies with operations on both sides of the Causeway. For instance, in manufacturing, key functions like R&D, sales, and precision manufacturing might be housed in SG, while packaging, assembly, and testing are conducted in JB. This arrangement will increase the flow of goods between the two regions and prompt the need for warehousing of products and components in both markets, along with regular transfers between SG and JB.

**“China +1” strategy will drive more investments into the region.** With the China +1 strategy in focus, more companies are expected to shift parts of their supply chains from China to Southeast Asia, as evidenced by the increasing Southeast Asia market share among top sourcing markets for US/EU buyers (Figure 10). Singapore, as the region's leading shipping port and aviation hub, is likely to remain the central distribution hub, while labour-intensive processes may increasingly be based in Malaysia, where labour costs are up to 70% lower (Figure 11), and warehousing is also more affordable. Given current geopolitical tensions, this SEZ offers an ideal opportunity for MNCs—particularly those from the U.S. and Europe—to relocate or establish operations in Singapore.

### Success of logistics sector hinges on several factors.

The rising need for cross-border movement of goods between JB and Singapore will likely boost growth in logistics, particularly in shipping, warehousing, and freight forwarding. However, the industry's expansion will depend on key regulatory processes, such as streamlining cargo clearance and potential tax incentives.

**Figure 10: Southeast Asia gaining market share among businesses from the US and Europe**



Source: QIMA, DBS

**Figure 11: Labour cost in Malaysia is up to 70% lower than in Singapore**



Source: Indeed, DBS

**Our recommendations.** As businesses set up operations and supply chains across both sides of the border, we should see an increase in cross-border movement of goods. Warehouse property landlords such as **Mapletree Logistics Trust (MLT SP)** (BUY; SGD1.75) and **Capitaland Ascendas REIT (CLAR SP)** (BUY; SGD3.25), and other logistics and supply chain management firms stand to benefit as the SEZ initiative gains traction.

### Property (Data Centres)

**Malaysia to emerge as a major DC market in APAC.** According to Cushman & Wakefield, Malaysia currently has 349MW in operational data centre (DC) capacity and 3.1GW in total DC capacity (including capacity under construction/or planned) (Table 5), positioning Malaysia as a major DC market in APAC. Going forward, Tenaga Nasional Berhad (TNB), a major power producer in Malaysia, estimates that Malaysia's data center capacity could reach >5,000MW by 2035, with to-date applications exceeding 11,000MW (almost 40% of Peninsular Malaysia's existing installed power generation capacity of c.30GW).

**Table 5: Largest APAC DC markets, including operational, under construction and planned capacity, ranked**

Rank	Geography	Capacity (MW)
1	China (mainland)	6,515
2	India	4,336
3	Japan	4,059
4	Australia	3,278
5	<b>Malaysia</b>	<b>3,108</b>
6	South Korea	1,727
7	Singapore	1,334
8	Hong Kong, China	1,127
9	Indonesia	1,046
10	Thailand	467

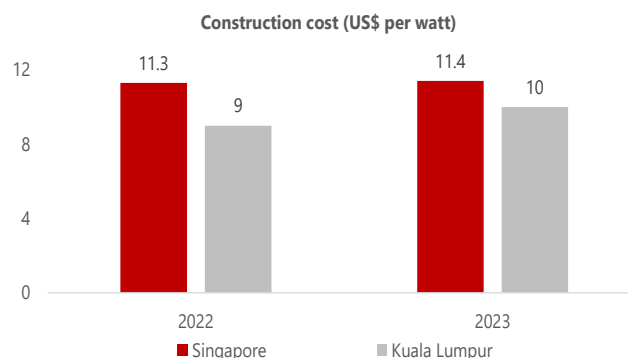
Source: Cushman & Wakefield (Sept 2024), DBS

**Construction and operating costs in Malaysia are significantly lower.** Malaysia's DC market is expanding rapidly, driven by competitive construction and operational costs, and access to renewable energy. Johor stands to benefit from spillover demand as Singapore faces limitations on available land and power load for new DCs. Proximity to Singapore also allows Johor-based data centers to leveraging interconnectivity through Singapore's subsea cables. Notably, construction costs in Malaysia are up to 16% lower than in Singapore (Figure 12), while electricity costs are about 2.5 times higher in Singapore (Figure 13), making Malaysia a cost-effective alternative for data center operations.

**Major players have already started investing in DCs in JB, with more to come in the near-term.** Major tech companies and DC operators, including Nvidia, Equinix, GDS, and AirTrunk, have already established operations in JB, with others like Microsoft have signaled plans to follow soon. As demand for DC capacity grows, particularly driven by AI advancements, JB is poised to see further investments from operators like **ST Telemedia** (portfolio company of Temasek) and **Singtel (ST SP)**

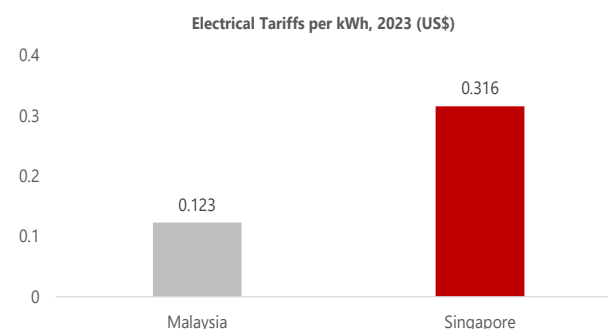
**[BUY, SGD3.82]**, who are well-positioned to capitalise on this expanding market to complement their existing networks in Singapore.

**Figure 12: Construction costs are up to 16% lower in Malaysia**



Source: Turner & Townsend, DBS

**Figure 13: Electrical tariffs in Singapore are 2.5 times higher**



Source: Global Petrol Prices, DBS

**Our recommendations.** Given the lack of power supply in Singapore and limited approvals handed out for new developments, we have seen significant investments into Johor taking shape. We expect this trend to continue especially as Johor provides ample land, renewable energy, and proximity to Singapore's subsea cable interconnectivity. Leading developers and operators of data centers in Singapore will look to expand their presence in Johor if they have not already done so. Beneficiaries include data center developers/operators/landlords such as **Mapletree Industrial Trust (MINT SP) (BUY; SGD2.75)**.

SEZ

**Utilities & Renewables**

**Malaysia's robust electricity demand growth, supported by data center tailwinds.** According to the Economic Research Institute for ASEAN and East Asia, electricity generation is expected to grow at average annual rate of 2.7% between 2019 to 2050F, above the recent 5-year CAGR of 1.7% (Figure 14). We see electricity demand from DCs, economic development, urbanisation and more as tailwinds.

**By 2035F, we forecast power capacity to grow by 6% CAGR, 3x historical growth rates, to meet DC demand.** According to Malaysia Energy Information Hub, Peninsular Malaysia's existing installed power generation capacity stands at c.30GW, which had expanded by +2.0% CAGR over the past decade. Based on our estimates, to power an additional c.4.6GW DC capacity (assuming TNB's 2035F DC capacity forecast of 5GW, up from current operational DC capacity of 349MW), 27GW of additional solar capacity is needed assuming a plant load factor (PLF) of 17%. This solar capacity addition on top of Peninsular Malaysia's current installed power capacity of 30GW translates into a robust power CAGR of up to +5.6% (Table 6), almost 3x the historical growth rate.

**Firm renewable returns in Malaysia.** Data centers are increasingly committed to reducing their carbon footprint, which has driven their transition towards clean energy sources. Malaysia is an attractive hub for DCs given its immense renewable energy capacity potential (Figure 15), while offering conducive project returns for power producers. We estimate solar projects in Malaysia to generate firm double-digit internal rate of returns (IRRs), above global/ASEAN averages of 6-10%.

**JS-SEZ might open another cost-efficient avenue for renewable expansion and imports.** Under the signed JS-SEZ MoU in Jan 2024, "facilitating Malaysia-Singapore renewable energy cooperation in JS-SEZ" was highlighted as one of the seven key initiatives. To date, we have seen promising progress around Malaysia-Singapore renewable energy cooperation, with an opportunity for Malaysia to export renewable energy to Singapore, in line with Singapore's national goal of generating 30% of its energy mix from imported electricity by 2035.

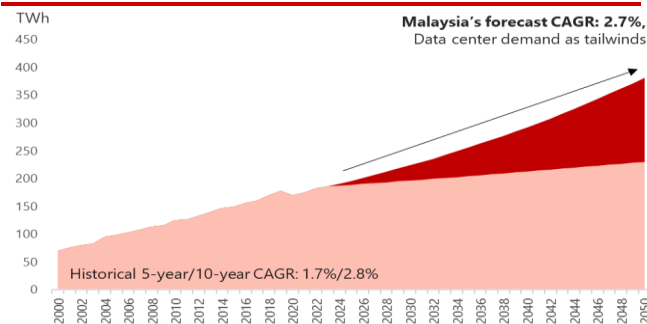
**Our recommendations.** We advocate investors to position in renewable energy developers such as **Sembcorp Industries (SCI SP) [BUY, TP7.35]**. We expect the upcoming Retreat meeting in Dec 2024 to highlight renewable energy as an initial sector of focus, with such companies well positioned to tap onto JS-SEZ renewable energy requirements. We see potential for solar project development in Malaysia/JS-SEZ, which boasts of conducive project IRRs based on our estimates.

**Table 6: Forecasted power capacity CAGR sensitivity analysis: PLF versus 2035F DC capacity**

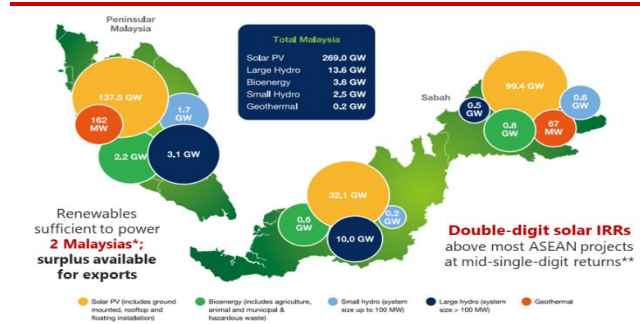
2035F DC capacity (MW)	CAGR	Plant load factors (PLF)					
		15%	16%	17%	18%	19%	20%
4,500	5.7%	5.4%	5.2%	4.9%	4.7%	4.5%	
4,750	5.9%	5.6%	5.4%	5.2%	4.9%	4.8%	
5,000	6.2%	5.9%	<b>5.6%</b>	5.4%	5.2%	5.0%	
5,250	6.4%	6.1%	5.8%	5.6%	5.4%	5.2%	
5,500	6.6%	6.3%	6.1%	5.8%	5.6%	5.4%	

Note: Average PLF of solar projects is 17%, according to BloombergNEF. Source: BloombergNEF, DBS estimates

**Figure 14: Malaysia electricity demand outlook**



**Figure 15: Malaysia's renewable energy potential**



Note: (1) Peninsular Malaysia accounts for 75% of Malaysia's electricity demand. (2) \*Potential electricity generation (TWh) is based on DBS estimates by referencing Malaysia's renewable energy capacity potential (GW) and average plant load factors (%) obtained from BloombergNEF. (3) \*\*Project internal rate of returns (IRRs) are based on DBS estimates.

Source: Economic Research Institute for ASEAN and East Asia, Malaysia Renewable Energy Roadmap, Seda Malaysia, DBS

**Property (Retail REITs)**

RTS can facilitate another c.14.6m shopper trips per year. Johor Bahru is a popular shopping destination as Singaporeans cross the border to tap on currency differentials to shop for cheaper goods and services. Common household items can be sourced in JB at discounts of c.30% - 50% to Singapore prices. Singaporeans and returning Malaysians currently make up c.40% of revenues in JB.

While not a new phenomenon, we view the upcoming RTS as another enabler of connectivity through seamless train connectivity that can reduce travel time to JB to as short as 15 mins. RTS operators are expecting to ferry another 40k travellers per day or an additional 14.6m trips per year. This compares to just 6.9m excursionist trips taken by Singaporeans back in 2019.

**Additional retail leakage to JB estimated at 3% with the RTS.** Singaporeans on average spent SGD141 per day on shopping in Malaysia before the pandemic. With per basket spend as a proxy, we estimate that the RTS will boost retail spending by an additional c.SGD1.8bn in JB, equivalent to an additional c.3% retail leakage from Singapore to JB per year (Figure 16). The impact of JB retail leakage will be buffered by healthy retail sales within Singapore, which has stayed at c.10% of pre-pandemic levels on a trailing-12m basis, riding on strong real-wage growth amongst lower to middle income households and inflation.

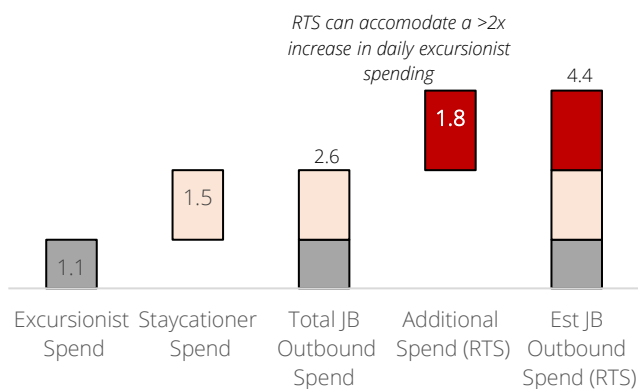
**Northern malls, and services and F&B tenants to watch for risks.** We are watchful on impact in two areas, trade category and proximity. Northern malls may face higher risk of retail leakage to JB but can leverage on stronger weekday traffic from increased JB-SG trips due to the RTS. We note that **FCT's (FCT SP) [BUY, SGD2.75]** Causeway Point Mall is the closest to the upcoming RTS and forms c.20% of FCT's retail portfolio AUM. The mall is currently operating at c.99% occupancy and high single-digit rental reversions, but tenant sales could be impacted as the RTS completes.

**Services and F&B tenants to face heightened risks of sales leakage in our view.** We foresee services and F&B, which have the largest 'pricing arbitrage' against local Singapore prices, to see higher competition from across the border. Across the S-REITs, F&B operators have c.33% exposure within malls, while services make up a smaller footprint of c.5-6%.

**Our recommendation.** We advocate investors to buy **Frasers Centrepoint Trust (FCT SP) [BUY; SGD2.75]** on weakness. FCT's share price will likely face some sentiment-driven pressure ahead of the RTS opening in 2026 or early-27. We see any sell-off as an opportunity to re-enter the stock, as we do not expect material downside to occupancy and reversions for FCT's northern malls. However, structurally lower tenant sales within Northern malls could change our view given lower desirability to lease in the North, which we believe is unlikely given the ability to ride on stronger traffic to the Woodlands precinct which can support sales.

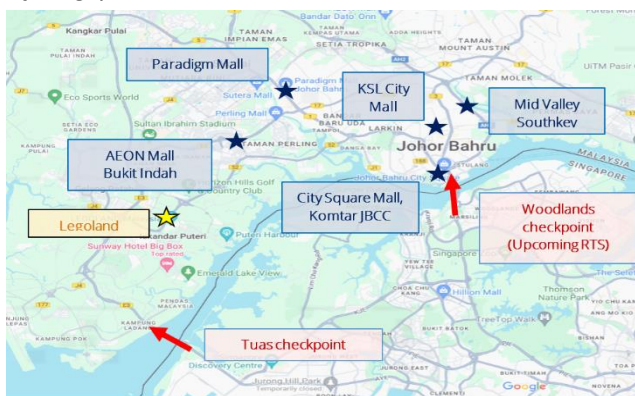
**Figure 16: Potential retail spend leakage from SG to JB (SGDbn)**

Expect c. SGD1.8bn additional retail spend leaked from SG to JB or c. 3-4% of current retail sales value



Source: Malaysia Tourism Board, DBS

Popular shopping and tourist destinations in JB frequented by Singaporeans



Source: Google maps, DBS

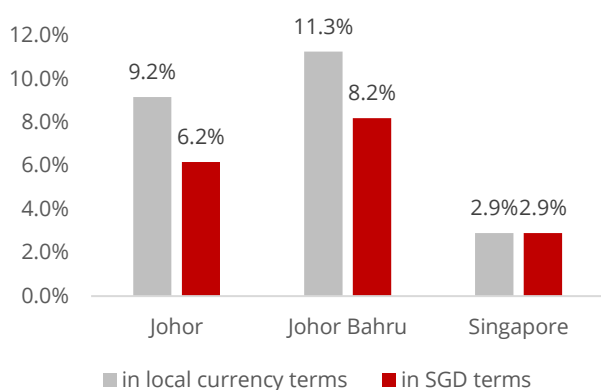
## Property (Residential)

Properties in Johor Bahru have seen more robust price appreciation (in local currency terms) compared to Singapore in the last decade. From 2010 to 2023, Johor Bahru's Property Price Index (PPI) has experienced a compound annual growth rate (CAGR) of 11.3%, while Singapore's PPI has grown at 2.9% (Figure 17). The rise in Malaysia's property prices can be attributed to economic expansion, demographic shifts, and consumer price inflation while the increase in Singapore's property prices has been more gradual due to government cooling measures in place to maintain stability.

**Development of JS-SEZ has sparked some optimism around properties in Johor Bahru.** Driven by the city's growing economic potential and enhanced infrastructure, as well as strengthened collaboration with Singapore, Johor Bahru's residential sector could see a boost, reducing the overhang of significant unsold units. This is positive for Malaysian developers like **Sunway Group (UNRATED)** and **S P Setia (UNRATED)**, with existing/upcoming developments and/or are looking to master-plan new developments in Johor Bahru.

**Johor Bahru's property price appreciation significantly lower in SGD terms, factoring in FX fluctuations.** While property prices in Johor Bahru have shown significant growth in local currency, the depreciation of the Malaysian Ringgit against the Singapore Dollar has dampened the rate of return for Singaporean investors, highlighting the risk of currency fluctuations. As the MYRSGD exchange rate had declined by c.30% over 2010 to 2023, the increase in Johor's PPI in SGD terms was reduced to a CAGR of 8.2% from 11.3% after adjusting for FX (Figure 17).

**Figure 17: PPI CAGR (2010 – 2023)**



Source: Malaysia's National Property Information Centre, URA, DBS

However, new rules for Malaysia's residency visa scheme may lead to a dip in foreign demand for properties in Malaysia. Malaysia My Second Home (MM2H) programme is a residency scheme that allows foreigners to live in the country on a long-term visa. The revamped rules implemented in June 2024 are likely to prompt some considerations for non-Malaysians, in our view. Among the revised requirements for foreigners over 50 years old in the Special Zone category, there are some positives, such as the reduced fixed deposit requirement of USD 32,000. However, key drawbacks include a minimum property purchase price of MYR 1 million, the stipulation that purchases must be made only from developers, a requirement to hold the property for at least 10 years, and a 10% real property gains tax on sale profits. With more stringent requirements, it could discourage foreigners from settling in Malaysia, especially Singaporeans who were considering retirement there to benefit from a more value-for-money lifestyle and lower cost of living.

**Rejuvenation of Singapore's Northern region remains intact.** Woodlands continues to be attractive to Singaporeans even without taking into account the enhanced connectivity between Singapore and Johor Bahru with the RTS, given contrasting underlying fundamentals of both housing markets. Recent new launch Norwood Grand in Woodlands was not only the top-performing project of 2024 with 84% of units sold at launch in October, but had also set a new benchmark price for the area at SGD2,067psf. As such, we anticipate upcoming land banking opportunities in the Northern region to see robust interest from developers, including two sites available for tender – Woodlands Avenue 2 (White site for mixed-use development) and Woodlands Drive 17 (Executive Condominium under Reserve List) – as well as future residential land plots earmarked near the RTS.

**Our recommendations.** We are positive on Singapore developers that could potentially landbank residential sites in the Northern region of Singapore as part of their strategy to develop more suburban owner-occupation projects, including **City Developments (CIT SP) [BUY; TP SGD10.50]** and **Frasers Property (FPL SP) [BUY; TP SGD1.14]**.

## Refinery & Petrochemical

During Malaysia Budget 2025 held on 18 Oct 2024, Ministry of Finance highlighted the inclusion of Pengerang as part of the proposed JS-SEZ; Pengerang had little success in attracting FDIs in the past. Spanning over 80 sqkm (over 2.5x of Jurong Island), Pengerang Integrated Petroleum Complex (PIPC) was launched in 2012 with the ambition to become the regional oil storage and trading hub via a 25-year development plan in four phases. Though, the progress has fallen behind expectations with little success of attracting foreign investment besides Saudi Aramco.








**Jurong Island in need of decarbonisation solutions.** On the other hand, Singapore has successfully maintained its regional oil hub status, thanks to its distinctive competitive edge – mature legal and financial systems, political stability, and low risks of oil pilferage, Nevertheless, it is not without challenges. Shell mulled an exit for its refinery and petrochemical assets in Singapore, after having called off its

sustainable aviation fuel and base oil plant projects here. To meet net zero goals, decarbonisation solutions such as Carbon Capture, Utilisation and Storage (CCUS) and renewable need to be developed, which the latter is constraint by land scarcity in Singapore.

**Complement rather than compete.** A joint development in Pengerang might be the answer. A large part of Pengerang is undeveloped land, and the vast land could serve as a hinterland for the expansion of oil and gas companies from Singapore and potential revival of renewable solar energy farm projects, increasing collaboration between Malaysia and Singapore and attracting FDI from MNCs.

**Our recommendation.** We believe JS-SEZ can bring about benefits to oil & gas, and clean energy value chain players, including **Seatrium (STM SP) [BUY, TP SGD3.00]** for ship repair and CCUS and **Sembcorp Industries (SCI SP) [BUY, TP SGD7.35]** for renewable energy capacity.

**Table 7: Overview on Singapore vs Johor refinery/petchem**

	Singapore/Jurong Island	Johor's Pengerang Integrated Petroleum Complex (PIPC)
<b>Description</b>	<ul style="list-style-type: none"> <li>• Focused on refining, olefins production and chemicals manufacturing</li> <li>• Ranked #9 largest exporter of chemicals in the world</li> <li>• Top #10 exports of refined oil products in Asia</li> </ul>	<ul style="list-style-type: none"> <li>• Focused on oil refinery, naphtha cracker, petrochemical, liquid storage, deepwater terminal and specialty chemical</li> <li>• 25-year development plan (2013-2037) in four phases</li> <li>• Current focus areas: downstream e.g., plastics and synthetic fibres</li> </ul>
<b>Refinery capacity</b>	~1,120,000 boe/d	300,000 boe/d (30% of planned capacity at 1,000,000 boe/d)
<b>Petrochemical capacity</b>	5.7 million tonnes per annum	3.6 million tonnes per annum (31% of planned capacity at 11.3)
<b>Considerations</b>	<p>(+) Access to talent</p> <p>(+) Established infrastructure: logistics, regional connectivity, comprehensive free trade agreements (FTA)</p> <p>(-) Insufficient land size which limits expansion, currently at near max capacity</p>	<p>(+) Land size</p> <p>(+) Ongoing development in phases</p> <p>(-) Risks of oil pilferage</p>
<b>Major companies</b>	 Chandra Asri  ExxonMobil  PetroChina  Chevron	 PETRONAS  أرامكو السعودية  Saudi Aramco

Note: (1) Singapore's refinery capacity (boe/d) includes Shell/Chandra Asri Pulau Bukom plant (current 237,000 boe/d, peak 500,000 boe/d), ExxonMobil (592,000) and Singapore Refinery Co (JV between SPC/Petrochina and Chevron) (500,000), (2) Singapore's petchem capacity (million tonnes per year) includes Shell/Chandra Asri (1.0), ExxonMobil (1.9), PCS (1.8) and INEOS Phenol (1.0).

Source: Companies, EDB Singapore, The Malaysian Reserve, Malaysian Investment Development Authority, DBS



**TMT**

**Johor set to be a low-cost manufacturing base for technology companies.** Given that manufacturing wages in Malaysia are more than 5x lower compared to Singapore, we are of the view that Singapore companies could potentially shift lower value-added manufacturing to Johor, providing opportunities for margin expansion.

**Front end processes likely to stay in Singapore; lower margin backend and downstream processes could shift to Johor.** In our view, Singapore should continue to retain a stronger fab or integrated device manufacturer (IDM) presence as chip fabrication requires a stable electricity supply, significant amounts of water, and highly skilled labour. The availability of skilled labor in Singapore, supported by competitive wages, also enhances its status as an R&D hub. On the other hand, we believe Malaysia/Johor could be a hotspot for backend and downstream processes. Johor is the 3<sup>rd</sup> largest electronics manufacturing state in Malaysia (Figure 18). Johor's electronics industry primarily focuses on components and electronic manufacturing services, unlike other parts of Malaysia such as Kedah which covers a broader part of the value chain, including semiconductor fabrication.

From a capabilities standpoint, we believe it is unlikely that front end processes will move to Johor as infrastructure and ecosystems are relatively underdeveloped compared to Singapore. Consequently, we believe more labor-intensive and lower-margin manufacturing processes could shift to Johor, further solidifying Johor's position as a hub for EMS (electronics manufacturing services) and ATP (assembly, test, packaging). Key competitive advantages between Singapore versus Malaysia are summarised in Figure 19.

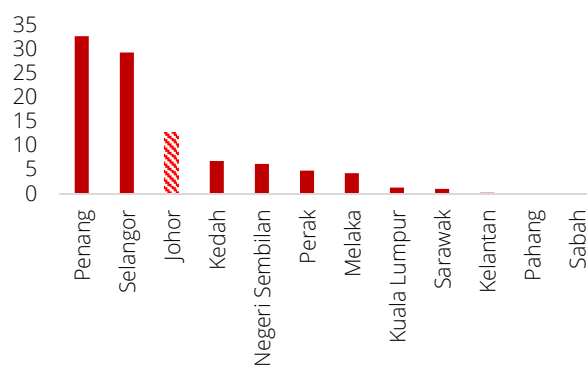
**The JB-SEZ complements the China+1 trade diversification, potentially boosting business for Singapore tech companies (S-Tech).** Both Singapore and Malaysia have emerged as favourable locations for trade diversification out of China for its developed technology ecosystem, supportive government policies, and a fairly skilled workforce vis-à-vis other countries in Asia. We believe that the JB-SEZ is an additional plus point that could attract companies implementing a China+1 strategy as it presents the best of both worlds – tapping on Singapore's advanced manufacturing capabilities while allowing for the option to leverage lower cost manufacturing in Johor. Thereafter, we believe that companies who have expanded to the Sing-Malaya region are likely to establish or

reconfigure regional supply chains, potentially bringing S-Tech companies on board as new suppliers. Firms like Venture, Frencken, and GVT have already benefitted from China+1, and we expect these tailwinds to continue given geopolitical tensions and the growing need for resilient supply chains.

**Our recommendation.** We see potential for cost improvements for S-Tech should JS-SEZ materialise. Singapore technology companies who expand or set up new manufacturing facilities in Johor could see reduced staffing costs, translating to margin expansion. Within our S-Tech coverage, **Aztech (AZTECH SP) [FV, TP SGD 0.63]** and **Frencken (FRKN SP) [BUY, SGD 1.47]** are potential candidates for expanding their facilities in Johor in the near term, as we anticipate a need for additional capacity soon. Looking further ahead, **Venture (VMS SP) [BUY, TP SGD 15.10]**, with 10 out of its 13 manufacturing sites in Malaysia located in Johor, could expand its manufacturing footprints on the back of the gradual recovery in demand of its various technology domains. **Grand Venture (GVTL SP) [BUY, TP SGD 0.70]** could also take advantage of the JB-SEZ to enhance its manufacturing capacity.

Among these names, our top picks are **Venture** and **Grand Venture Technology**.

**Figure 18: Electronics manufacturing states in Malaysia (as % E&E share)**



Note: 2020-23 average;  
Sources: DOSM, DBS

**Figure 19: Lower labour costs a key draw of MY while SG boasts of a developed ecosystem with stronger fab presence**

	Malaysia	Singapore
<b>Electronics industry significance</b>	c.50% of foreign approved investment from electrical and electronic products between 2019-2023. +490% pre-trade war (2014-2018) vs the last five years	c.54% of manufacturing investment commitments are from electronics between 2019-2023. 173% pre-trade war vs past five years
<b>Ecosystem and infrastructure</b>	Developed ecosystem, ATP focused	Developed ecosystem, stronger fab and R&D presence
<b>Government support</b>	USD5.3bn in fiscal support to achieve target USD107bn investment in the semiconductor industry	Cost of facility ownership reduced by 25-30%, earmarked SGD25bn for R&D until 2025
<b>Taxes</b>	Corporate tax 24%. Tax incentives e.g pioneer status	Corporate tax 17%. Tax incentives e.g investment allowances
<b>Labour</b>	Shortage of skilled labour. Manufacturing wages at c. SGD1.0k/month	Skilled labour available. Higher labour costs with manufacturing wages at c.SGD5.7k/month

Sources: CEIC, various government and news sources

**Figure 20: Johor is focused on ATP/EMS vs Penang's broader coverage of the electronics value chain**

	Existing companies in Johor	Existing companies in Penang
IC/Package/Test design		Intel, Bavsand, UST Global, Microsemi, PhisonTech, IDT, <b>Oppstar, Infinecs, Experior</b>
Semiconductor backend	ST Micro, Micron	Osram, Intel, TF-AMD, IDT, Avago, ASE, Fairchild, Renesas, Analog, <b>Inari, Globetronics</b>
Components/Module /System/Device/EMS	Flextronics, Celestica, WD Media, Seagate, Foxconn, IPEX Global Manufacturing, <b>Venture, GVT, Frencken, VS Industry, SKP, SMT</b>	Venture, Plexus, Knowles, WD Media, Flextronic, Jabil, Samina, Amphenol, Smart Modular, Benchmark, Sandisk, <b>GVT, UMS, Venture, Frencken, Nationgate</b>
Product & Equipment	Panasonic	Keysight, NI Malaysia, HP, Agilent LDA, Bosch, <b>AEM, Clarion, Aemulus</b>

■ Malaysia companies    
 ■ Singapore companies    
 ■ Foreign companies

Note: List is non-exhaustive

Sources: Malaysia Investment Development Authority, DBS.

DBS Group Research recommendations are based on an Absolute Total Return\* Rating system, defined as follows:

**STRONG BUY** (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame)

**BUY** (>15% total return over the next 12 months for small caps, >10% for large caps)

**HOLD** (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps)

**FULLY VALUED** (negative total return, i.e., > -10% over the next 12 months)

**SELL** (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame)

\*Share price appreciation + dividends

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