

Bangkok Expressway & Metro (BEM TB)

Leveraged to rapidly growing urban road and rail networks

Earnings upside from new toll and MRT concessions

We initiate coverage of Bangkok road and rail operator BEM with a BUY rating and a target price of THB9.25 derived from a sum-of-the-parts (SOTP) valuation. We expect BEM's FY24E earnings to be supported by a 15% rise in MRT ridership, 5% recovery in expressway traffic and high operating leverage. This should propel FY24 earnings to a record THB4.0b (+14% YoY). Progress on the MRT Orange Line, further extension of its tollway concession and the Purple Line are potential near-term catalysts that could add THB2.2/sh (24%) to our fair value. While valuation looks expensive at 32x PE, we think this is justified by core profit growth of 10% CAGR in FY23-26E and ROE at 10% vs. regional averages of 7% and 8%, respectively. Key downside risks include a sudden rise in interest expense from new projects or slower-than-expected expressway traffic recovery. BEM also might need to raise its debt covenant from 2.5x to 3.5x. However, we expect debt to peak in FY30E when Govt. start to pay project subsidy.

Upside potential in MRT lines, concession extension

We expect BEM to sign construction and concession contracts for the MRT Orange Line by 4Q24. This offers THB1.2/sh upside potential. We also expect a 15-year extension to its expressway toll concession (contract ends Oct 2035) in return for constructing a double-deck expressway to resolve traffic congestion. This would add THB0.7/sh. MRT Purple Line (South) is also within BEM's grasp with THB0.3/sh potential upside as it already runs the northern section of the line. We estimate positive NPV of THB36b from these projects on FY25-30E capex of THB160b.

Expanding long-term margin on fare hikes

Given most of its operating costs are fixed, BEM benefits from operating leverage to higher expressway and MRT traffic volumes. Based on contracted adjustments of toll rates and MRT fares (using core Bangkok CPI), we expect EBIT margin to jump from 37% in FY24 to 50% within FY31, among the highest margins for Thailand's infrastructure plays.

Valuations at premium to peers, but room for growth

BEM is trading at 32x forward PE, or -0.75 S.D. to its long-term average, but is expensive vs 20x for regional mass transit operators. Bangkok's mass transit network expansion is in its infancy with more potential long-term growth than developed countries like Japan and Hong Kong. We believe BEM should stay at a premium for its superior earnings growth (FY23-26E) at 10% (vs. regional average 7%) and ROE at 10% vs. regional average of 8% with potential upside.

FYE Dec (THB m)	FY22A	FY23A	FY24E	FY25E	FY26E
Revenue	14,029	16,374	17,815	18,955	19,961
EBITDA	6,582	8,544	9,468	10,367	11,162
Core net profit	2,436	3,479	3,966	4,348	4,653
Core EPS (THB)	0.16	0.23	0.26	0.28	0.30
Core EPS growth (%)	141.2	42.8	14.0	9.6	7.0
Net DPS (THB)	0.12	0.14	0.16	0.14	0.12
Core P/E (x)	61.5	34.9	31.8	29.0	27.1
P/BV (x)	4.0	3.2	3.2	3.0	2.9
Net dividend yield (%)	1.2	1.8	1.9	1.7	1.5
ROAE (%)	6.5	9.3	10.3	10.7	10.9
ROAA (%)	2.1	3.1	3.5	3.5	3.1
EV/EBITDA (x)	33.2	22.1	20.0	20.4	21.5
Net gearing (%) (incl perps)	183.6	177.4	160.2	205.7	258.6
Consensus net profit	-	-	3,903	4,261	4,489
MIBG vs. Consensus (%)	-	-	1.6	2.0	3.7

Boonyakorn Amornsank
boonyakorn.amornsank@maybank.com
(66) 2658 5000 ext 1394

BUY

Share Price THB 8.25
12m Price Target THB 9.25 (+14%)

Company Description

Operates expressway and metro rail lines in Bangkok, and participates in commercial property developments.

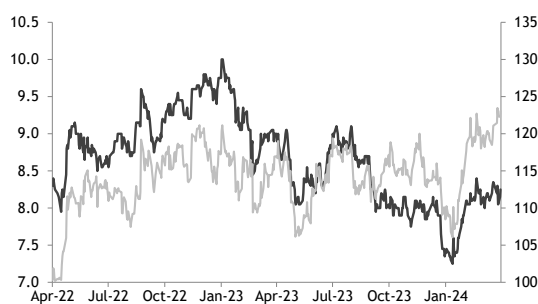
Statistics

52w high/low (THB)	9.10/7.25
3m avg turnover (USDm)	8.6
Free float (%)	51.1
Issued shares (m)	15,285
Market capitalisation	THB126.1B USD3.4B

Major shareholders:

CH. KARNCHANG PCL	34.4%
MASS RAPID TRANSIT AUTHORITY OF THAILAND	8.2%
Thai NVDR Company Limited	6.9%

Price Performance



	-1M	-3M	-12M
Absolute (%)	2	12	(8)
Relative to index (%)	4	12	5

Source: FactSet

Terms defined

FES First Stage Expressway System
SES Second Stage Expressway System
EXAT : Expressway Authority of Thailand
NECL: Northern Bangkok Expressway, a subsidiary of BEM
MRTA : Mass Rapid Transit Authority of Thailand
MRT: Metropolitan Rapid Transit

Other stock(s) mentioned

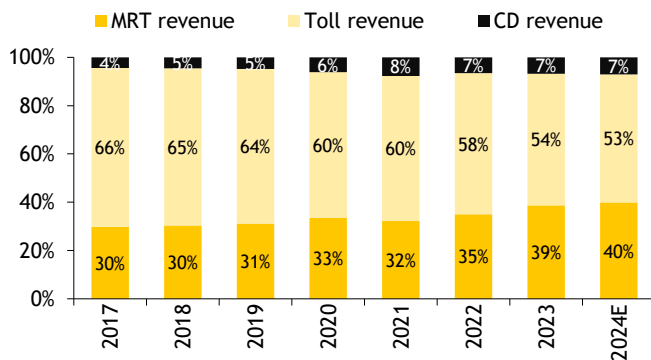
CH. Karnchang - (CK TB, CP THB21.70, BUY, TP THB25.0,)
TTW (TTW TB, CP THB8.90, BUY, TP THB10.0)
CK Power (CKP TB, CP THB4.02, BUY, TP THB4.50)
BTS Group Holdings (BTS TB, CP THB6.20, not rated)
Airports of Thailand (AOT TB, CP THB65.00, BUY THB77.0)

ESG@MAYBANK IBG
Tear Sheet Insert

Value Proposition

- BEM is striving to become the leading, fully-integrated transportation service provider in Thailand and ASEAN.
- BEM operates expressways (55% of revenue) and rail services (39% of revenue) in Bangkok under concession agreements and generates revenues from related commercial investments. It also invests in utility companies to generate solid dividend income.
- It aims to lift ridership by connecting with future Bangkok mass rapid transit projects. Fares are adjusted every 2 years to reflect Bangkok’s non-food CPI inflation.
- BEM has the right to extend its expressway concession for up to 20 years, starting from the latest concession extension in 2020. Extensions come with appropriate returns on investment to increase efficiency.

BEM’s revenue breakdown

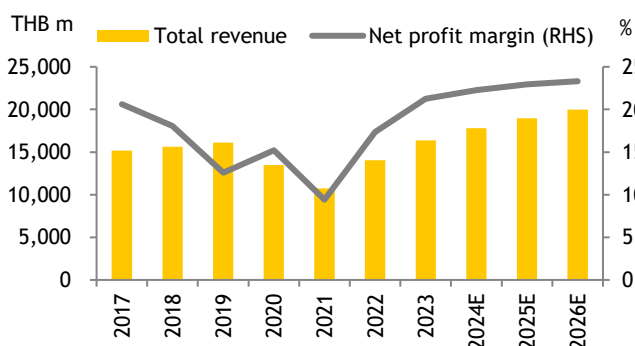


Source: Company

Financial Metrics

- The company aims to secure long-term stable cash flow from expressway operations with improving margins. We expect strong growth in MRT operations from its operating Circle Line and network expansion.
- BEM’s core profit rises to new record high in FY23 at THB3.5b (+43% YoY) as MRT daily average ridership hit a fresh peak at 390k. Tollway traffic remained below the FY19 level, but still showed strong recovery.
- Interest-bearing-debt to equity ratio (IBD/E) was at 1.8x in FY23 (vs. 1.9x in FY22) still below its debt covenant at 2.5x, leaving room to raise funds for upcoming projects.

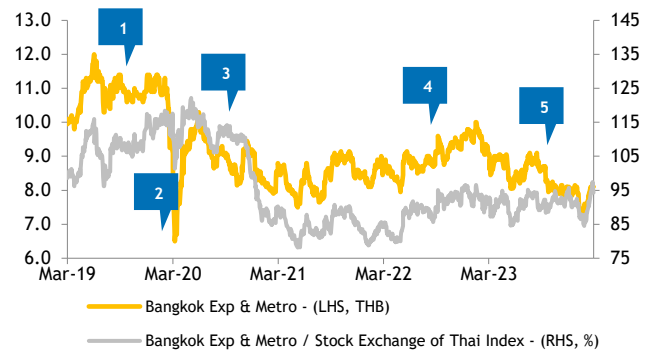
BEM’s revenue and net profit margin



Source: Company

Price Drivers

Historical share price trend



Source: Company, MST

1. Opening of 11 stations on MRT Blue Line (Hua Lamphong - Lak Song) pushes daily ridership to new record in Nov’19.
2. Covid-19 outbreak leads to city lockdown. MRT and expressway usage plunges.
3. Strong recovery in expressway and MRT traffic after lockdown despite international border closure.
4. Solid earnings recovery and progress in bringing MRT Orange Line to Cabinet for approval by the former government.
5. Overhang concern from legal disputes between MRTA and BTS subsidiary BTSC, led to delay in MRT Orange line contract signing (BEM won final bid in Sept’22).

Swing Factors

Upside

- Higher-than-expected MRT ridership on more outer Bangkok connections and tourist arrivals.
- Contract signing of MRT Orange line and double deck expressway could add significant upside to our target.
- Better-than-expected cost management and lower utility costs may further enhance margins.

Downside

- Lower-than-expected pace of expressway traffic recovery due to work-from-home policy implemented by private sector.
- Higher-than-expected interest expense that could stymie future investments.
- Construction delays that could lead to postponement of first day operation of projects on hand.



boonyakorn.amornsank@maybank.com

Risk Rating & Score¹	30.4 (High risk)
Score Momentum²	+3.2
Last Updated	15 Feb 2024
Controversy Score³ (Updated: 8 Mar 2024)	No Evidence of Controversies

Business Model & Industry Issues

- Committed to being a leading, fully-integrated transportation service provider, BEM operates expressway and metro system services, and participates in commercial developments. Its corporate governance and corporate social responsibility commitments include alleviating traffic jams and providing rapid and safe expressway services for the populace.
- The company and one of its subsidiaries; Northern Bangkok Expressway Company Limited (“NECL”), have been granted concessions for construction and operation of a total of four expressways, namely, the Si Rat Expressway (Sectors A, B, and C), the Si Rat Expressway (Sector D), the Si Rat – Outer Ring Road Expressway, and the Udon Rattaya Expressway.
- It has also been offered concession agreements with the Mass Rapid Transit Authority of Thailand (MRTA) to provide services for 2 mass rapid transit systems, the MRT Blue Line and MRT Purple Line Bang Yai – Bang Sue section.

Material E issues

- BEM conducted a random survey on noise levels around expressway boundaries and toll collection booths. The results indicated that noise levels in most of the areas meet regulatory standards. For areas below the standard, the BEM carries out an audit and assessment to find appropriate improvements.
- BEM pays attention to the potential environmental impact of its MRT services on the environment, quality of life, and lives of people and nearby communities, by strictly monitoring, preventing and mitigating environmental impacts of its operations, in accordance with the Environmental Impact Mitigation Measures and Monitoring Program-EMP, during the implementation of MRT projects in service.

Material S issues

- BEM requires all levels of employees to comply with the law and human rights principles without discrimination of any kind based on race, sex, language, religion, politics, national or social origin, birth or other status.
- BEM designs its operating procedures on the basis of independent checks and balances and adopts the SAP system to inspect every step of the operating procedures, including prevention of any potential unusual practices in the procedures. The SAP system comprises sourcing and procurement, maintenance, inventory, accounting and finance modules, all of which are integrated into one system, to inspect every step of the operating procedures and cross-platform processing, including financial data tracking, which helps prevent corruption.
- BEM allows and encourages staff to attend training courses or further study in order to enhance their skills, knowledge, and expertise, as well as fostering positive attitudes toward them. Such training emphasises development of skills, knowledge, and competency of staff, whether it be functional skills, core skills or leadership skills.

Key G metrics and issues

- BEM realises the importance of good corporate governance as well as encouraging employees to be morale and ethical. It has set up a committee on ethics to set out principles and goals for its business operations and as a guideline for the performance of directors, executives and employees. Directors, executives and employees will participate in annual performance assessments to measure their compliance with its ethics and standards every year.
- BEM manages risk from interest rate fluctuations by utilising floating and fixed interest rate loans and plans to issue debt instruments or debentures as dictated by economic conditions and its view on future interest rates. It bases its policies on the Sustainable Development Goals (SDGs) set by the United Nations General Assembly.
- There are 6 independent directors out of 17 directors on the board of directors, five of whom are female.
- EY is BEM’s auditor and it paid THB4.3m to EY for audit fees in 2022.
- In 2022, the 5-member executive management team were paid THB103m.
- The company has a clear policy to fight corruption within the firm and outside and it provides online anti-corruption training to staff. In its orientation programme, all new employees also have to learn about anti-corruption.
- The company has a dividend policy of paying not less than 40% of net profit.

¹**Risk Rating & Score** - derived by Sustainalytics and assesses the company’s exposure to unmanaged ESG risks. Scores range between 0 - 50 in order of increasing severity with low/high scores & ratings representing negligible/significant risk to the company’s enterprise value, respectively, from ESG-driven financial impacts. ²**Score Momentum** - indicates changes to the company’s score since the last update - a **negative** integer indicates a company’s improving risk score; a **positive** integer indicates a deterioration. ³**Controversy Score** - reported periodically by Sustainalytics in the event of material ESG-related incident(s), with the impact severity scores of these events ranging from Category 0-5 (0 - no reports; 1 - negligible risks; ...; 5 - poses serious risks & indicative of potential structural deficiencies at the company).

Quantitative Parameters (Score: 64)						
	Particulars	Unit	2020	2021	2022	BTS (FY23)
E	Scope 1 GHG emissions	m tCO2e	n/a	n/a	n/a	5,681
	Scope 2 GHG emissions	m tCO2e	n/a	n/a	n/a	71,876
	Total	m tCO2e	87,352	116,341	114,196	77,557
	Scope 3 GHG emissions	m tCO2e	n/a	n/a	n/a	75,692
	Total	m tCO2e	87,352	116,341	114,196	153,249
	Scope 1 & 2 emissions intensity	tCO2e/Passenger	0.0012	0.0021	0.0010	0.0005
	Energy consumption intensity (MRT)	MWh/Passenger	0.002	0.004	0.002	0.001
Water consumption intensity (MRT)	M3/M passenger	n/a	0.0003	0.0001	0.0012	
S	Station Quality Index (environment, passenger, equipment)	Index	0.90	0.89	0.93	n/a
	Train Service Punctuality (2 min)	%	98.91%	99.64%	98.98%	99.92%
	Train Service Availability (BL)	%	99.46%	99.88%	99.47%	n/a
	No. of accidents from the BEM's operations (Expressway)	time	0	0	0	n/a
G	Board salary as % of reported net profit	%	2.19%	6.14%	4.23%	4.04%
	Independent directors on the Board	%	33%	38%	35%	55%
	Female directors on the Board	%	27%	25%	35%	9%

Qualitative Parameters (Score: 33)	
a) Is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?	<i>Yes. BEM's Sustainability strategy is developed by its Corporate Sustainability department led by the Head of Risk Management and Sustainability and sponsored by the Group CEO and C-Suit Officers. The CEO will report to the Risk and Corporate Governance Committee.</i>
b) Is the senior management salary linked to fulfilling ESG targets?	<i>No</i>
c) Does the company follow the task force of Climate Related Disclosures (TCFD) framework for ESG reporting?	<i>No</i>
e) Does the company have a mechanism to capture Scope 3 emissions - which parameters are captured?	<i>No</i>
f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?	<i>The lighting service control in the ground metro stations of the MRT Blue Line reduced its electricity use by 25,800 units/month, or reduced greenhouse gas emissions by 15.45 tons of carbon dioxide equivalent/month. The wastewater treatment control in the MRT Blue Line stations reduced electricity use by 13,800 units/month, or reduced greenhouse gas emissions by 8.26 tons of carbon dioxide equivalent/month.</i>
g) Does carbon offset form part of the net zero/carbon neutrality target of the company?	<i>BEM has outlined its strategy to achieve carbon neutrality by 2050</i>

Target (Score: 100)		
Particulars	Target	Achieved
Greenhouse gas emissions to achieve carbon neutrality by 2050	2050	n/a
Reduced Energy Use Scope 2 on expressway system in 2022 (base year 2014 and 2017)	-32%	-32%
Train Service Availability (BL)	99.2%	99.47%
Rescue Operations Arrival on expressway(12 min)	95%	98.5%
Easy Pass Lane Service Availability	99.9%	99.98%
Percentage of passengers 'overall satisfaction	>95	99.9
Passenger Safety : Number of serious injuries per 1,000,000 passengers	-32%	0
The volume of tap water use reduced by ≥ 5% as compared to that of 2021.	-5%	-6%
Impact		
NA		
Overall Score: 65		
As per our ESG matrix, Bangkok Expressway and Metro (BEM TB) has an overall score of 65.		

ESG score	Weights	Scores	Final Score
Quantitative	50%	64	32
Qualitative	25%	33	8
Target	25%	100	25
Total			65

As per our ESG assessment, BEM has an established framework, internal policies, and tangible mid/long-term targets but needs to make headway in improving its qualitative and quantitative "E" metrics, especially in terms of measuring Scope 3 GHG emissions. BEM's overall ESG score is 65, which makes its ESG rating above average in our view (average ESG rating = 50) refer to Appendix I for our ESG Assessment Scoring).

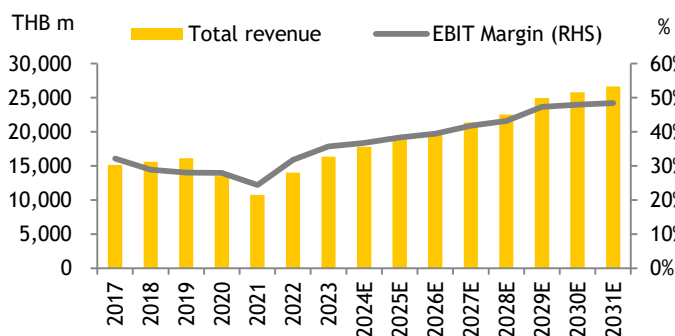
1. Solid fundamentals at discounted valuation

1.1 Infrastructure play with promising long-term growth

BEM operates in four key areas. First, BEM’s expressway operations in the Greater Bangkok metropolitan cover a total distance of 87.2 km, the largest private operator in Thailand in terms of distance. Second, Metropolitan Rail Transit (MRT) operates over 71 km of railways with 54 stations, making it the second-largest private operator in the nation. Third, commercial development utilising advertising media and retail space in MRT stations under its 99.7%-owned subsidiary Bangkok Metro Network, or BMN. Lastly, BEM receives dividend income from investments in utility businesses, including its 18.5% stake in TTW and 16.8% stake in CK Power.

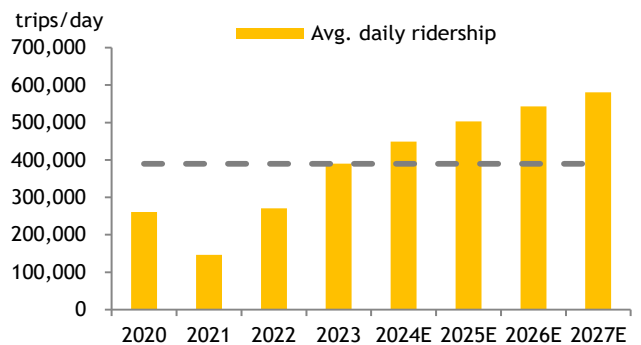
We forecast BEM’s net profit to grow 14% YoY to a record high at THB4.0b in FY24E and another 10% to THB4.3b in FY25E. This should be supported by a continued increase in MRT ridership helped by returning foreign tourists (around 15% of total ridership) and recovery in toll traffic to near pre-Covid levels. Given a high portion of fixed costs, BEM will also benefit from operating leverage on increasing traffic volumes. Without any heavy capex needed for existing operations and pending hikes in toll rates and MRT fares, we expect EBIT margin to jump to 50% by FY31 from 37% in FY24. This would be the second-highest margin among SET-listed infrastructure plays.

Fig 1: Expect margin to expand on high operating leverage



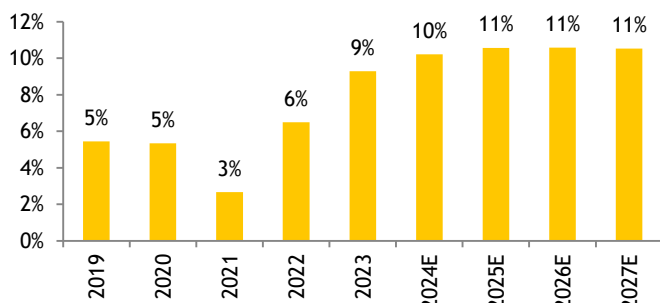
Source: Company, MST

Fig 2: Expect MRT ridership to surpass EBIT-breakeven level



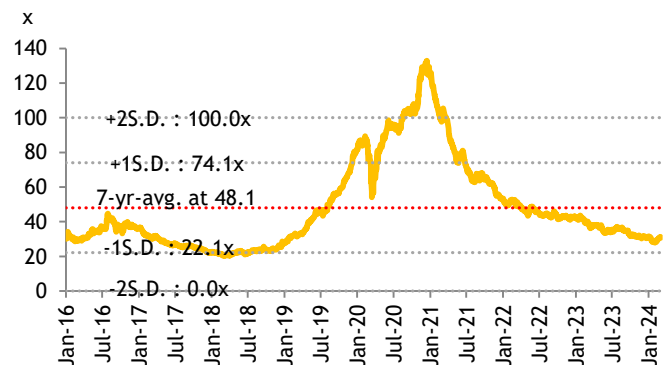
Source: Company, MST

Fig 3: ROE on track for record high



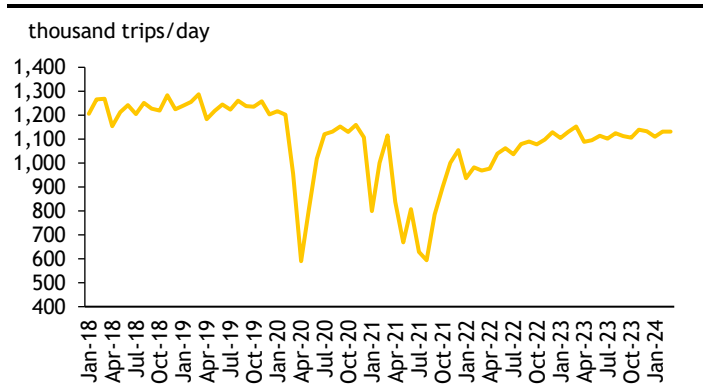
Source: Company, MST

Fig 4: Discounted valuation at close to -1 S.D. of PE



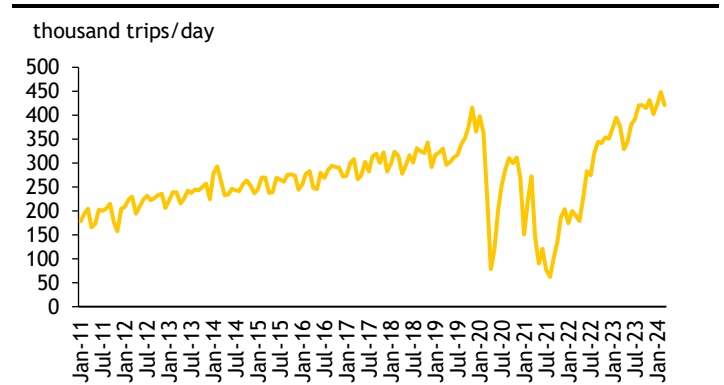
Source: Company, MST

Fig 5: Daily average traffic on BEM’s expressways



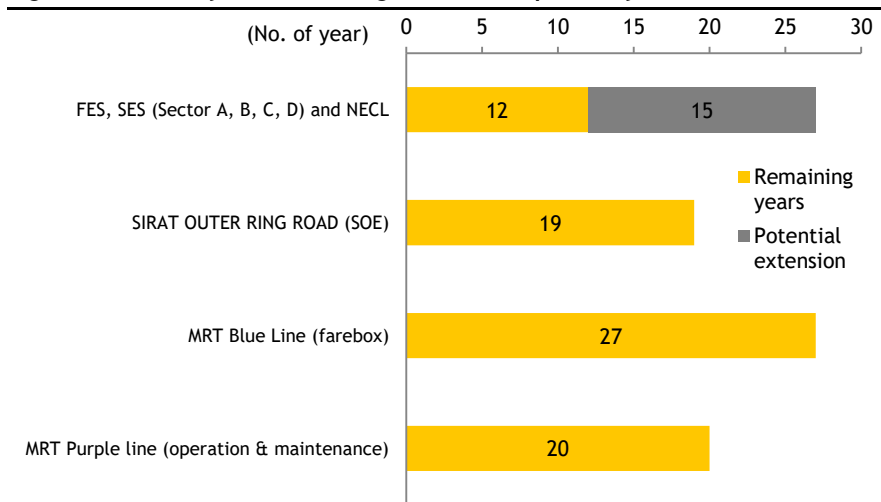
Source: Company, MST

Fig 6: Daily average ridership on MRT Blue Line



Source: Company, MST

Fig 7: Concession years remaining for BEM’s expressways and MRT lines



Source: Company, MST (Starting from 1st Jan FY24)

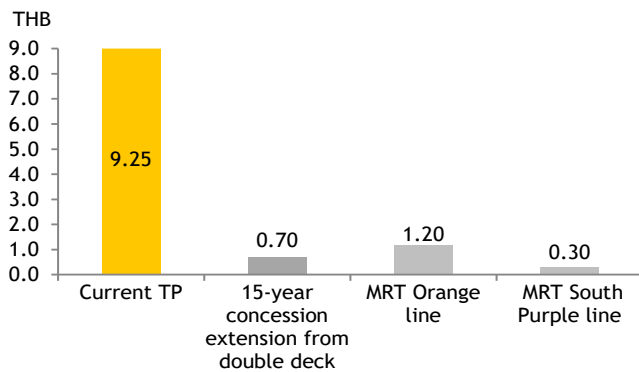
1.2 Upside potential from tollway extension and new MRT Orange Line

We see potential upside to our forecasts from tollway concession extension and the new MRT Orange Line. Due to heavy congestion during rush hours on expressways operated by BEM, double-deck expressways are being introduced to alleviate traffic jams. The Expressway Authority of Thailand (EXAT) will submit its proposal to Cabinet for a 17km road project, costing about THB34b. EXAT will assign BEM’s parent company CH Karnchang to undertake the construction while BEM will bear the cost in return for concession extension of its existing expressways. We expect EXAT to extend BEM’s concession for another 15 years (current concession ends in 2035), which we estimate could add THB0.7/sh upside to our TP.

Another major project which could offer upside potential in the near-term is the MRT Orange Line. BEM’s management expects to sign contracts for a 30-year concession for operation of the Orange Line MRT within 4Q24. This is the third-largest mass transit line in Bangkok in terms of expected daily ridership at 300k in FY31. We expect the legal disputes regarding the bidding to be resolved after two years of overhang since BEM won the final bid in Sept’22. We expect value uplift of THB1.2/sh from this project. We project around 10-12% EBITDA uplift from this project after three years of full operation from FY31.

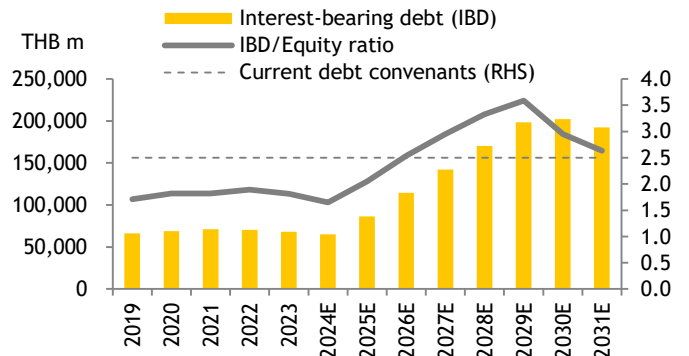
Orange Line and the Double Deck will require roughly THB160b capex over the next five years (FY25-30E). We expect BEM to finance the projects with debt at 75% of total project value while the government will subsidize the cost for MRT Orange Line civil works worth THB91.5b, which will be paid by ten instalments per year. The first instalment will kick off within the third year of full-operation of the Eastern section (Expect COD in FY28). We expect heavy capex allocation will not hurt the company’s ability to pay a dividend (40% pay-out ratio according to BEM’s policy). However, we estimate, BEM’s IBD/equity ratio is likely to breach its debt covenant at 2.5x if BEM maintains a dividend pay-out ratio at 40%. We estimate NPV for these two projects at THB29b derived from 15-year additional toll concession, future fare and commercial revenue with more upsides from traffic feeding into BEM’s existing network. The company could run the MRT Orange Line’s operation at the highest return compared with other mass transit operators as it currently owns the depot that can be connected to its existing circle line.

Fig 8: Upside to TP from 3 infrastructure projects on hand



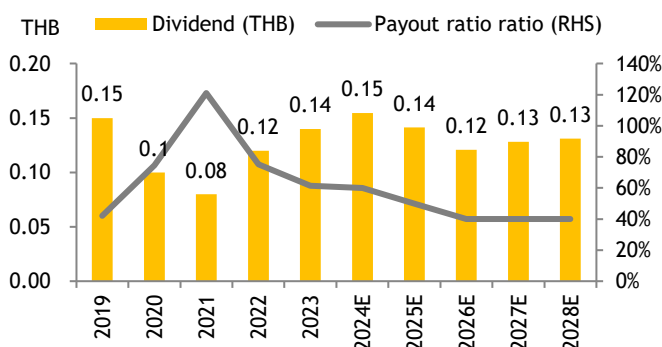
Source: Company, MST

Fig 9: Heavy capex is needed to fund future projects



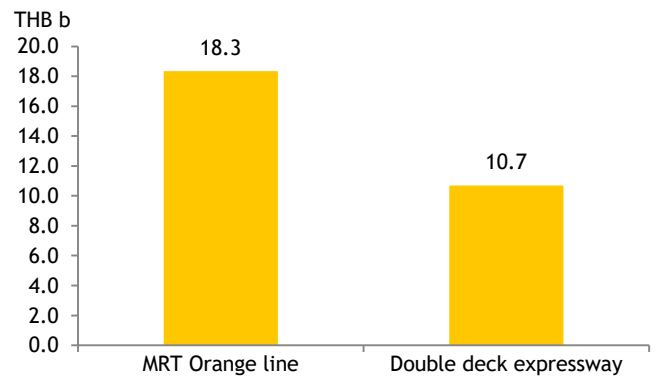
Source: Company, MST

Fig 10: Dividend payment and dividend pay-out ratio



Source: Company, MST

Fig 11: Net present value of two key infrastructure projects



Source: Company, MST

2. Corporate information

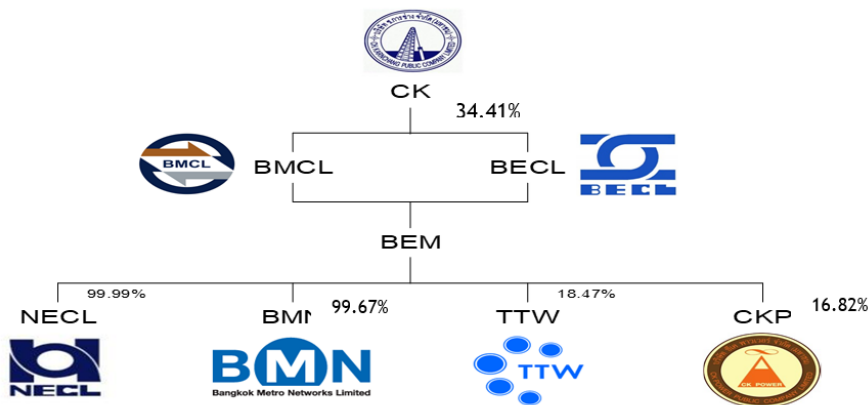
2.1 Shared objectives are paramount for CK Group

BEM was formed in early 2015 from the merger of CK’s former associate company ‘Bangkok Expressway PCL’ and Bangkok Metro PCL. The consolidation was designed to strengthen the financial position and growth prospects of the combined group, given that the MRT operations are still in a growth phase while the expressway business provides a steady flow of cash. Following the merger, the company’s cost of debt fell to 3% from 7% with a much lower D/E ratio.

2.2 Not just about rail and toll businesses

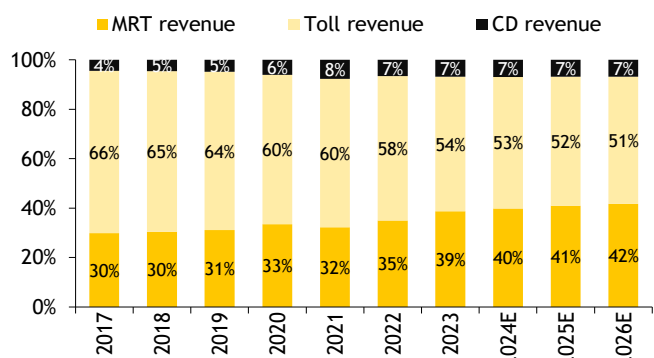
BEM also holds stakes in several commercial developments and basic utility companies. First, BMN Ltd operates a commercial development (CD) business on MRT trains and inside stations. Second, TTW PCL is in the tap water business in the Bangkok metropolitan area. Third, CK Power PCL invested in three types of power projects including hydroelectric, cogeneration and solar. BMN contributed 7% of group revenue in 2023 while the other two delivered dividend income of THB558m pa in total. These three entities stand to benefit from long-term growth factors. First, increasing leasable area and advertising capacity along the MRT network expansion. Second, TTW’s recent concession extension with Provincial Waterworks Authority (PWA) to supply tap water to Pathum Thani province, which kept total capacity at 1.1m cu.m/day. Lastly, CKP has started work on its second mega hydro-power plant in Laos called ‘Luang Prabang Power’ with a production capacity of 1,460 MW (CKP and CK hold a 50% and 25% stake respectively). The project is expected to start generation in 2030 while adding 730 MW of capacity on top of CKP’s current production at 1.0 equity GW.

Fig 12: BEM group structure



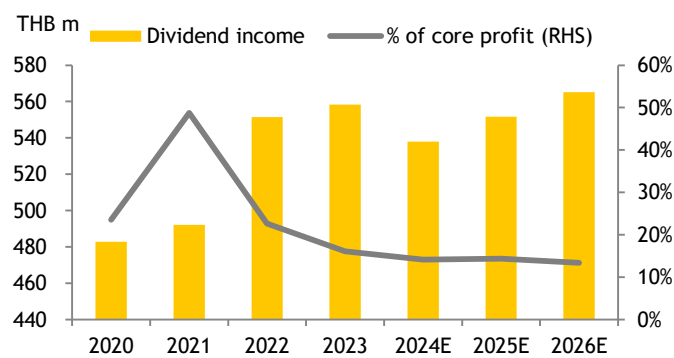
Source: Company, MST

Fig 13: Revenue breakdown by business unit



Source: Company, MST

Fig 14: Dividend income and % of BEM's core profit



Source: Company, MST

2.3 Well-diversified sources of revenue

BEM provides expressway services covering the Greater Bangkok metropolitan area, including the Chalmern Mahanakorn, the Si Rat-Outer Ring Road and Udon Rattthaya expressways. These routes generated 54% of total core revenue in FY23.

Rail business accounts for 39% of total revenue. This segment refers to transportation services provided by subway trains. Currently, the BEM operates two routes comprising the MRT Blue Line and the Purple Line with the latter operated under a gross cost agreement whereby operations and maintenance are overseen by BEM in return for fixed payments.

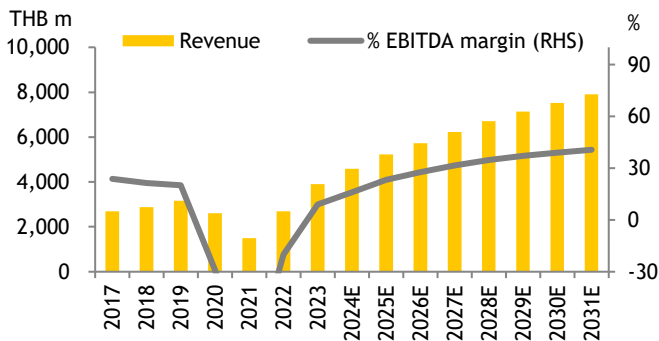
BEM and its subsidiary (BMN) allow private entities to lease space for commercial purposes including advertising, telecommunications and retail activities. Commercial development (CD) contributed 7% of BEM's revenue in FY23.

3. Investment focus

3.1 Circle Line MRT still has room for future growth

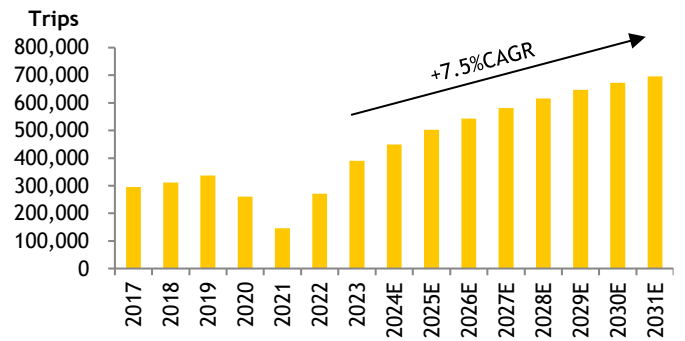
We expect BEM’s daily ridership on the MRT Blue Line to hit a record high at 450k trips (+15% YoY) in FY24 and 500k trips in FY25. This is supported by the mega trends of commuting via public transport, increasing network connectivity as other mass transit lines feed in additional traffic, urbanization and tourism growth in the historical city centre, surrounded by national heritage sites. Our long-term ridership projection at 3.9% ridership CAGR until the end of the contract term in FY50 is still less than the 7.5% CAGR during the decade prior to the Covid-19 outbreak. We expect the increase in cash flow from this project to support financing for investments such as the Orange Line and other mass transit lines in Bangkok’s mass transit masterplan.

Fig 15: MRT Blue Line revenue and EBITDA margin



Source: Company, MST

Fig 16: Average daily ridership on MRT Blue Line



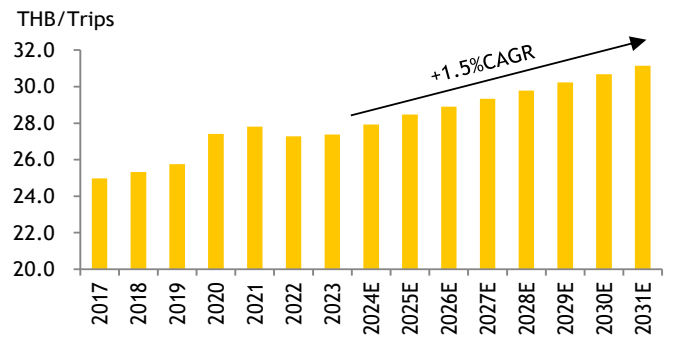
Source: Company, MST

Fig 17: MRT Blue Line operational performance

	Blue line		Purple line
	Initial BL (COD 3 Jul 2004)	Extension BL (COD 30 Mar 2020)	COD 6 Aug 2016
Distance (km)	48		23
Stations	22 Underground 16 Elevated		16 Elevated Stations
Concession Period	PPP net cost 30 years (2020-2050)		PPP gross cost 30 years (2013-2043)

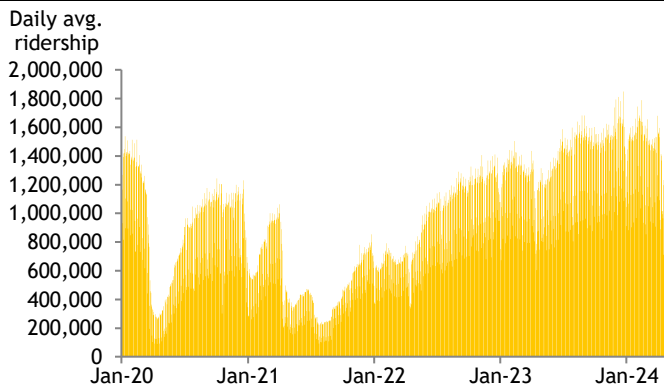
Source: Company, MST

Fig 18: Average fare charged for commuters on MRT Blue line



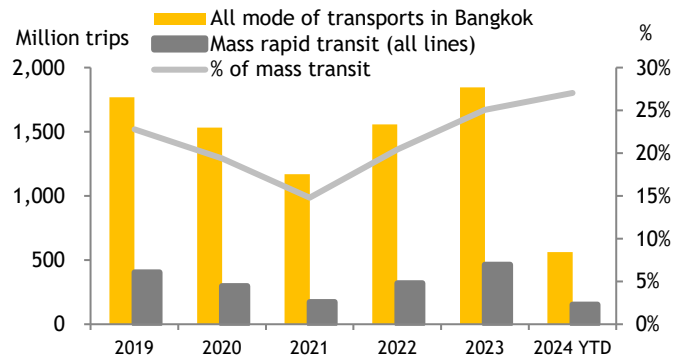
Source: Company, MST

Fig 19: Daily average ridership (All mass transit lines in Bangkok)



Source: MOT, MST

Fig 20: Ridership for mass transit lines are growing in Bangkok



Source: MOT, MST

3.2 Potential upside from MRT Orange Line

We expect to see clarification on the MRT Orange Line project with a strong possibility that BEM will run this project under a PPP net cost contract. Under this scheme, the operator receives ridership income and commercial development inside the stations and trains during the concession period. There are two key advantages that should allow BEM to run the project with superior margins in the long-term. First, the Orange Line will cut through the Blue Line at a perpendicular angle right beside the central depot at BEM's Thailand Cultural Centre Station. Secondly, BEM could run the system more efficiently and at a lower operating cost as its core expertise is in underground rail with 20 years' experience.

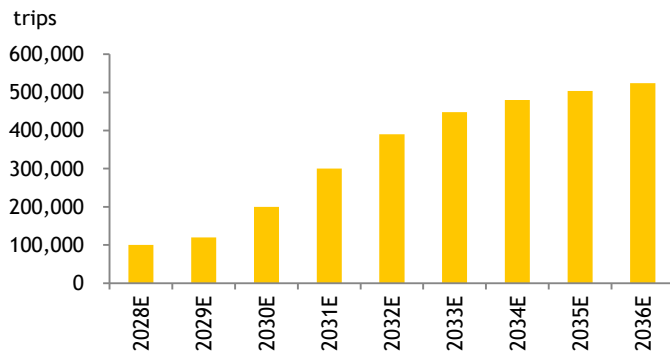
We estimate THB0.7/sh upside to our TP for the Orange Line under the following assumptions. First, ridership reaches 100k trips in the first two years of the EAST Line operation (FY28), increasing to 200k trips after connecting with the WEST Line in FY30. Second, ridership growth reaches 5.5% CAGR over the life of the contract. Third, commercial revenue will reach 15-20% of passenger revenue. Lastly, project cost for E&M and civil works will reach Bt128bn with a D/E ratio of 75:25. This would make the Orange Line the most expensive metro rail train project in Thai history. Management expects the Orange Line to feed in an additional 60k daily ridership to BEM's Circle Line, which is about three times the traffic feeding in from the MRT Yellow line today (Yellow Line started in July'23).

BEM won the official bidding for the project in Sept'22, but the contract has not been signed due to legal disputes involving the project's bidding process and bidder selection by MRTA committees. There were three key lawsuits filed to MRTA committees by BTSC, the subsidiary of BTS Group, the largest mass transit operator in Thailand and the losing bidder. Courts agreed to dismiss two lawsuits regarding the MRT's cancellation of the first round of bidding and adjustment of Terms of reference (TOR) after bidders submitted the bids. The last lawsuit involves the new criteria for second round bidders where BTSC alleges that the criteria may intentionally exclude BTSC from the contest due to its lack of an experienced partner in underground rail construction.

According to a local newspaper *Thansettakij*, the Ministry of Transport is signalling proposed MRT Orange Line project to the Cabinet in Apr'24. This implies a possible end to all lawsuits after three years of project delay. We expect to see positive progress within early 2Q24 after Cabinet approved on 8 Feb-24 the start of land expropriation for the WEST extension (Thailand Cultural Centre - Bang Khun Non) before construction kicks off.

If the construction contract is signed in 4Q24, construction of the WEST extension will start by end of year and we expect it to be completed by April'30. For the EAST side where civil works are 100% completed, it should be ready for operation by Oct'27, a two-year delay from the original plan.

Fig 21: Expected average daily ridership on MRT Orange line



Source: Company, MST

Fig 22: Sensitivity to ridership growth after ramp-up period

Ridership CAGR (%)	Upside to TP (THB)	% change
2.0%	0.9	-20%
2.2%	1.0	-14%
2.4%	1.0	-10%
2.6%	1.1	-5%
2.7%	1.2	0%
2.8%	1.2	4%
3.0%	1.3	10%
3.2%	1.3	15%
3.4%	1.4	21%

Source: Company, MST

Fig 23: Summary of MRT projects on hand

	Orange Line		Purple Line	
	WEST : Bang Khun Non - Thailand Cultural Centre	EAST : Thailand Cultural Centre - Min Buri	NORTH : Bang Yai - Tao Poon	SOUTH : Tao Poon - Rat Burana
Distance (km)	13.4	22.5	23.0	23.6
Station	11 Underground Stations	10 Underground and 7 elevated	16 Elevated Stations	10 underground and 7 elevated
Concession	PPP net cost		PPP gross cost	
Expected Timeline	East 2027	West 2030	In operation	2027

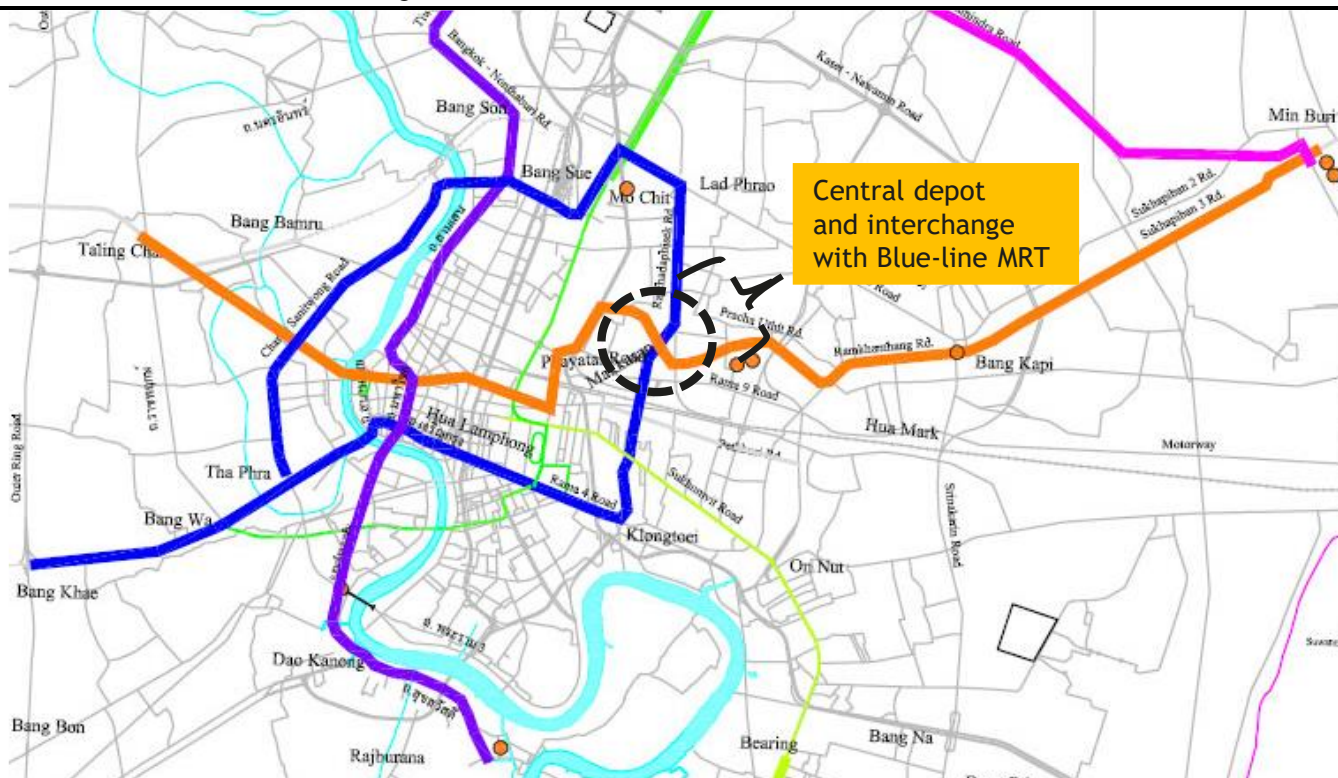
Source: Company, MST

Fig 24: Summary of legal cases regarding MRT Orange line bidding

	Filing Date	Accuser	Defendant	Status	Date
1st bidding					
Change in TOR	Sep-20	BTSC	MRTA	Dismissed by Supreme Admin. Court	Aug-21
Bidding cancellation	Feb-21	BTSC	Selection Committees	Dismissed by Central Criminal Court	Sep-22
MRTA scrapped the tender	Feb-21	BTSC	MRTA	Dismissed by Supreme Admin. Court	Mar-23
2nd bidding					
Bidding collusion	Jul-22	BTSC	MRTA	Dismissed by Central Admin. Court	Jul-23
Suspected irregularities during bidding	Nov-22	Moving Forward Party	MRTA, MOT	Cases not accepted by Central Admin. Court	

Source: Company, MST

Fig 25: Mass transit rail network in Bangkok



Source: Company, MST

Furthermore, we expect the South Purple Line (Tao Pun - Rat Burana) will likely be awarded to BEM as well given the company currently operates the Northern part under a fixed-fee scheme (operation and maintenance). As of Mar'24, the construction progress for 23.6km metro rail was at 30% while MRTA expects the commercial run within FY27. We estimate a value uplift of THB0.3 per BEM share when the O&M contract for the Southern part kicks in.

3.3 BEM a key part of future mass transit network expansion

In July'23, the Department of Rail Transport unveiled an ambitious new master plan, known as the Second Mass Rapid Transit Master Plan in Bangkok Metropolitan Region (M-MAP 2). It aims to enhance the rail transit system in Bangkok and its metropolitan area, which comprises 33 new routes to cater to growing demand from commuters in the expanding city. We are currently half way through the 553km Bangkok masterplan. Under the original M-MAP, we have seen the construction and operation of 242km of mass transit railways, with another 105km currently under construction.

We expect BEM to benefit from additional traffic from outer Bangkok which would feed into its Circle Line. Another objective for M-MAP 2 is to establish a modern and efficient public transport system that will lessen the reliance on private vehicles, thereby alleviating traffic congestion, and reducing greenhouse gases. BEM may find a way to reach carbon neutrality by adding more mass transit lines into its portfolio in order to offset the future impact of carbon emissions from its expressway business. Revenue from carbon credit trading could represent future upside in the long-term.

Fig 26: Mass Rapid Transit Master Plan in Bangkok Metropolitan Region

การพัฒนาโครงข่ายรถไฟฟ้า ตามแผน M-MAP 2



Source: The Department of Rail Transport

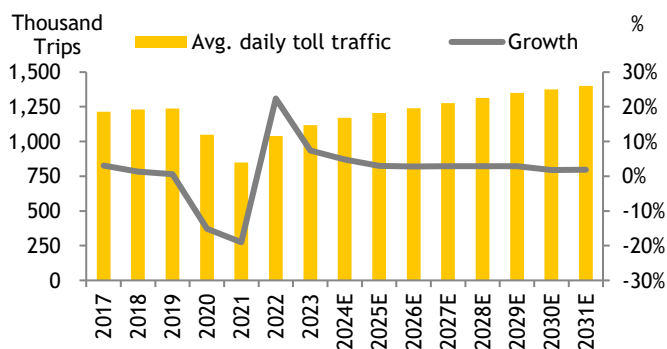
3.4 Steady cash flow from tollway businesses

The company’s expressway business covers the majority of central Bangkok where heavy traffic jams persist. We expect average daily tollway traffic to continue to recover gradually to 1.17m trips (+5% YoY) in FY24. However, the continued impact of the work-from-home policy makes it challenging for traffic to return to the pre-Covid level of 1.24m trips/day by FY25. A higher-than-expected number of foreign tourist arrivals offers the only potential upside to recovery of expressway traffic.

For long-term earnings growth, we see potential upside from concession extension of another 15-20 years offered by EXAT in return for the Double-Deck investment. In 2020, EXAT offered BEM an extended concession for collecting tollway fares on the Second Stage Expressway (sectors A,B,C,D) and NECL to Oct 2035 (the previous concession for Sectors A, B, and C was due to expire in Feb’20) in exchange for BEM withdrawing a THB58b lawsuit against the authority. Factoring in the concession extension, we value the expressway business at THB5.20/sh. We assume traffic to post a 3% CAGR

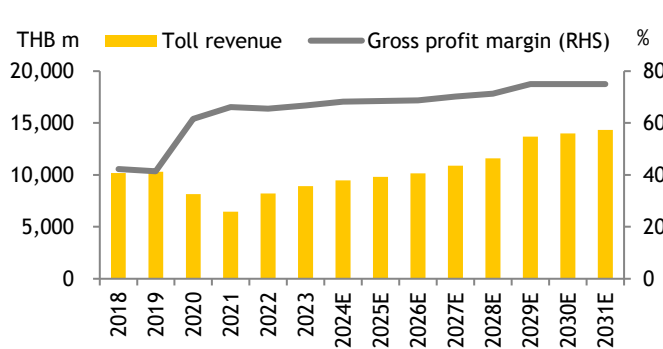
in the next five years (FY24 to FY29), up from 2023's base of 1.12m trips/day, mainly driven by Si Rat - Outer Ring Road Expressway (SOE), which started to feed traffic from the west side of Bangkok after beginning commercial operations in late 2016. However, we do not expect tollway traffic to deliver growth in the long term, given that there will be several new MRT lines starting up in the metropolitan area in coming years amid an official campaign to encourage commuters to replace private vehicles with mass transit options.

Fig 27: Daily average traffic on BEM's expressway



Source: Company, MST

Fig 28: Expressway revenue and GPM performance



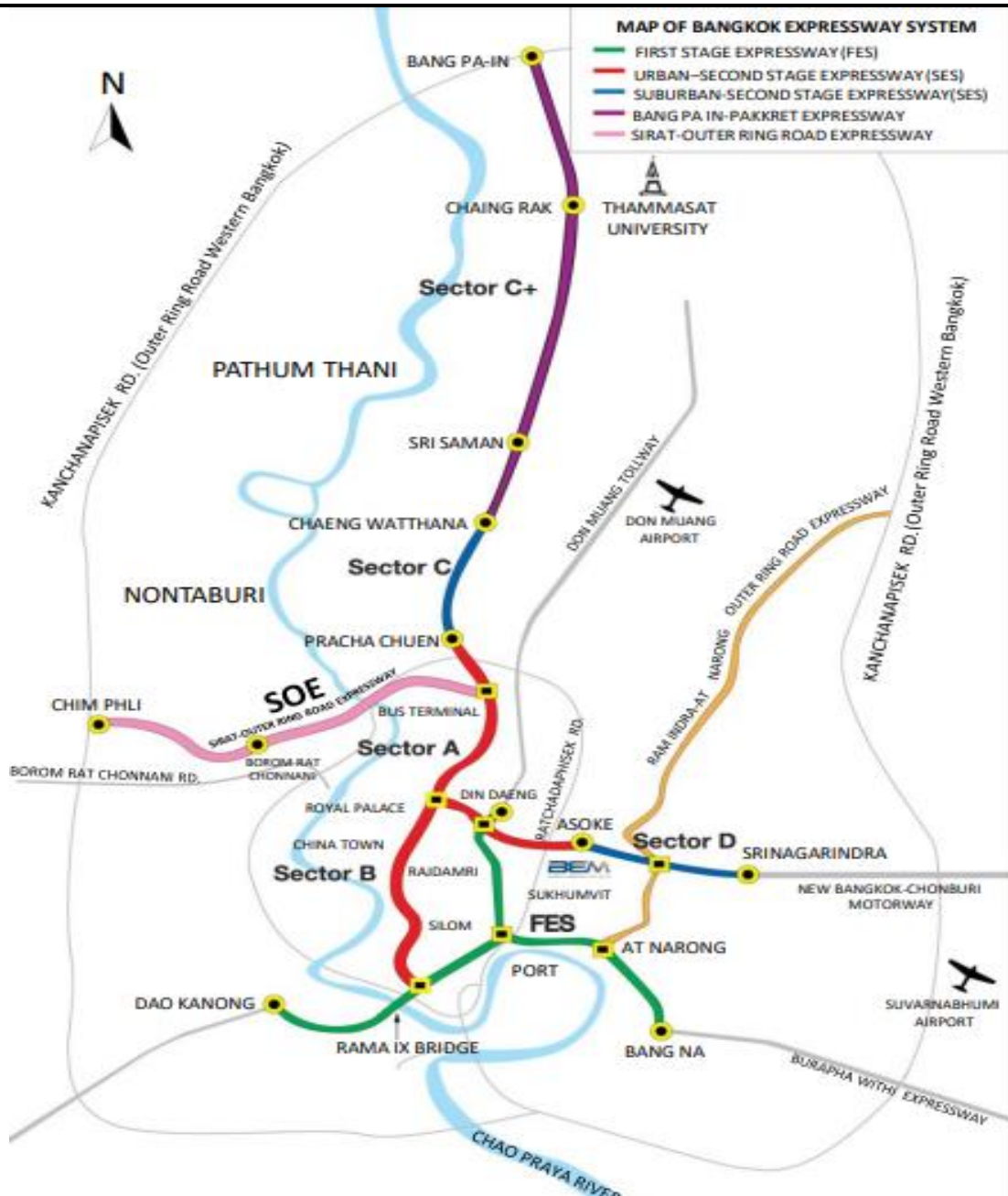
Source: Company, MST

Fig 29: Summary of expressway operations in Bangkok

	Distance	Operator
First Stage Expressway System (FES)	27.1	EXAT
Second Stage Expressway System (SES)	38.5	BEM
Udon Rattaya Expressway (C+) (Bang Pa In - Pak Kret)	32.0	NECL
Don Muang Tollway	28.0	DMT
Ramindra - At Narong and Ramindra - Outer Ring Road Expressway	32.9	EXAT
Bang Pli - Suksawad Expressway	37.8	EXAT
Bang Na - Chonburi Expressway	55.0	EXAT
Si Rat - Outer Ring Road Expressway (SOE)	16.7	BEM
Total	268	

Source: Company, MST

Fig 30: Map of Bangkok Expressway system



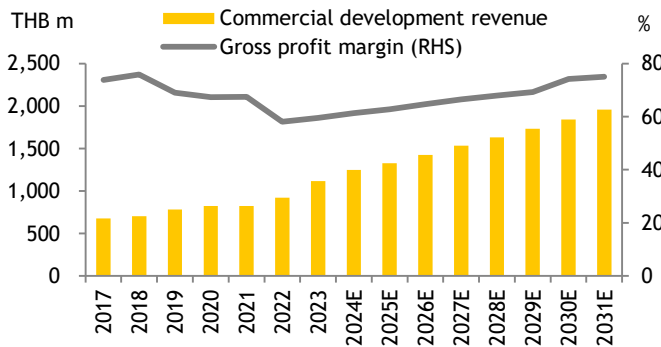
Source: BEM

3.5 Plenty of opportunities for CD business

High-margin commercial development (CD) business could become the key revenue driver as Bangkok Metro Network (BMN) can open up more retail and advertising spaces following an increase in MRT ridership. We forecast revenue from the commercial development business to continue to increase at 7% CAGR in FY24-29, supported by 25% commercial space expansion to 30,000 m3 and 30% growth in number of train carriages to above 200 units. This expansion will allow BEM to expand its outdoor media capacity and convince big-name retailers to open up stores in its stations.

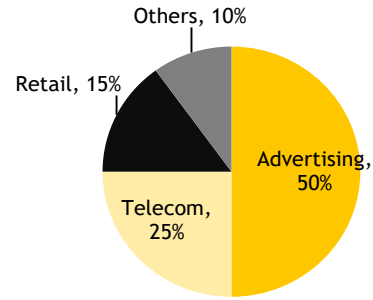
In addition, we expect revenue from this segment to double if BEM can obtain the concession to operate the Orange Line. We currently value BEM's 89% stake in BMN at THB2.0 per share as its growth outlook remains solid from BEM's metro network expansion plan while better-than-expected ridership in the long-term would imply upside potential to our valuation.

Fig 31: CD business performance



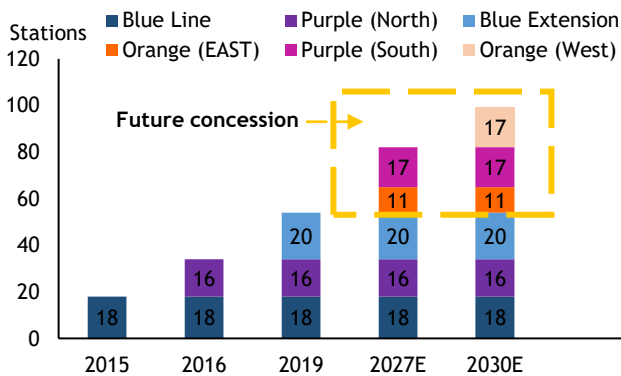
Source: Company, MST

Fig 32: CD business revenue breakdown in FY23



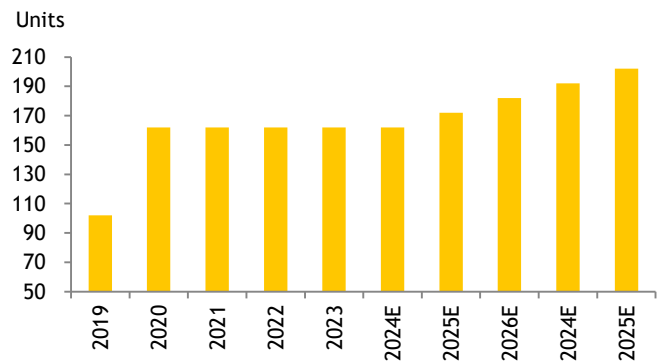
Source: Company, MST

Fig 33: Number of MRT stations under BEM's management



Source: Company, MST

Fig 34: Number of train carriages under BEM



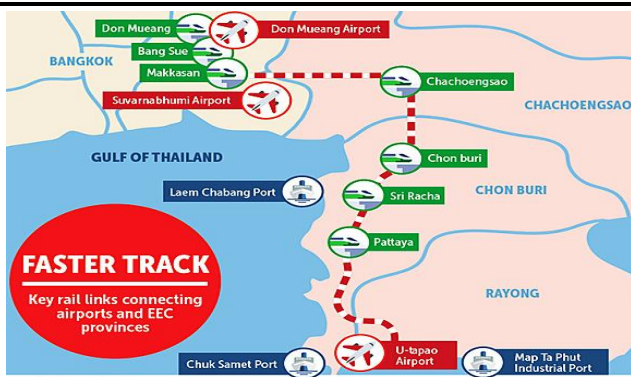
Source: Company, MST

3.6 Potential upside from EEC projects

BEM has a 10% stake in the Asia Era One rail consortium led by Charoen Pokphand Group. The consortium party was granted a concession in Oct'19 to operate a high-speed rail route from Bangkok to the Eastern Economic Corridor (EEC), which is Thailand's hub for export-oriented industries. The project conditions were agreed according to a PPP net cost formula whereby the concessionaire's sources of income will come from passenger fares and commercial development at the train depots. BEM expects to take part in mechanical and electrical engineering (E&M) works. However, there is no specified amount of capex to be allocated while we leave it as potential upside awaiting further project details to be announced in 2024.

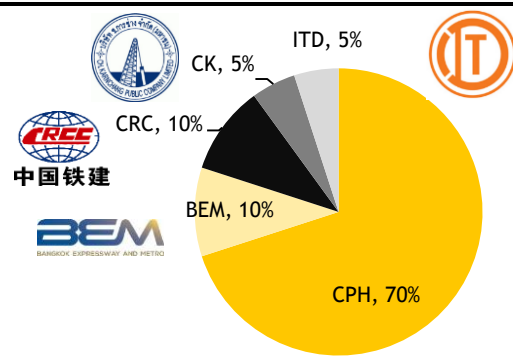
Currently, it is still awaiting an amendment of contract, which will take into account changes in economic conditions caused by the pandemic. According to the State Railway of Thailand (SRT), the revised contract should be signed by May'24 after submission to Cabinet for approval. Construction should kick off in late 2024 and be completed by 2029, a two year delay from the initial expected operating date in 2027.

Fig 35: Roadmap for 3 airport high-speed rail links



Source: Bangkok Posts, Eastern Economic Corridor

Fig 36: Asia Era One rail consortium shareholding structure



Source: Eastern Economic Corridor, MST (CPH: Charoen Pokphand Holdings, CRC: China Railway Construction Corp., ITD: Italian Thai Development PCL)

4. Financial analysis

4.1 Earnings remain on uptrend

We expect BEM to post 1Q24 core profit at THB918m (+23% YoY +7% QoQ) YoY gain supported by revenue that hit a 17-quarter high at THB4.3b (+5%YoY +3%QoQ), driven by continued growth in MRT ridership and a mild recovery in expressway traffic. Gross profit margin is expected to hit a record high at 46.8% in 1Q24 due to the benefit of operating leverage whereby the majority of BEM’s operating costs are fixed.

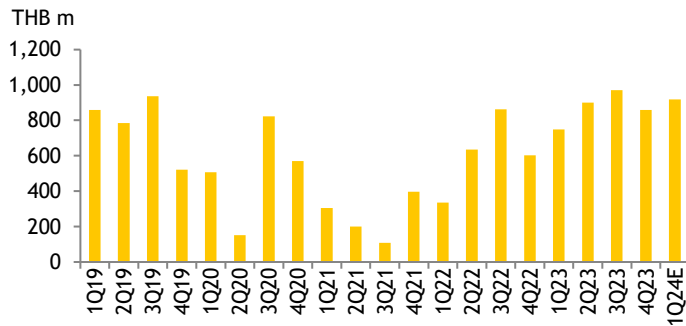
We expect 2Q24 earnings to grow both YoY and QoQ thanks to seasonal dividend from TTW and CKP and a strong inflow of foreign tourists, which should drive MRT ridership to a record high level.

Fig 37: Income Statement

Yr-end Dec (THBm)	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	1Q24E	%QoQ	%YoY
Total revenue	3,094	3,261	3,739	3,935	4,099	3,908	4,182	4,186	4,305	3%	5%
Cost of goods sold	(1,905)	(2,051)	(2,094)	(2,396)	(2,339)	(2,333)	(2,391)	(2,248)	(2,290)	2%	-2%
Gross profit	1,189	1,210	1,644	1,539	1,760	1,574	1,791	1,938	2,015	4%	14%
SG&A	(264)	(304)	(278)	(313)	(301)	(322)	(297)	(321)	(331)	3%	10%
Operating profit	925	906	1,366	1,226	1,459	1,253	1,495	1,616	1,683	4%	15%
EBITDA	1,316	1,664	2,063	1,741	1,988	2,108	2,274	2,183	2,258	3%	14%
Other income	65	383	266	58	50	390	266	58	60	4%	19%
EBIT	989	1,289	1,632	1,284	1,509	1,643	1,760	1,674	1,743	4%	16%
Interest expense	(570)	(583)	(604)	(604)	(572)	(601)	(602)	(596)	(595)	0%	4%
EBT	419	706	1,028	680	937	1,043	1,158	1,079	1,148	6%	23%
Income tax	(83)	(72)	(165)	(77)	(187)	(142)	(188)	(220)	(230)	5%	23%
Equity income	0	0	0	0	0	0	0	0	0	nm	nm
Minority interests	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	0%	114%
Core profit	336	634	863	603	749	901	970	859	918	7%	23%
Extra items	0	0	0	0	0	0	0	0	0	nm	nm
Net income	336	634	863	603	749	901	970	859	918	7%	23%
EPS (THB)	0.02	0.04	0.06	0.04	0.05	0.06	0.06	0.06	0.06	7%	23%
Ratio analysis											
Gross margin (%)	38.4	37.1	44.0	39.1	42.9	40.3	42.8	46.3	46.8		
SGA/Total revenue (%)	8.5	9.3	7.4	8.0	7.4	8.2	7.1	7.7	7.7		
Operating profit margin (%)	29.9	27.8	36.5	31.2	35.6	32.1	35.7	38.6	39.1		
Net profit margin (%)	10.9	19.4	23.1	15.3	18.3	23.1	23.2	20.5	21.3		

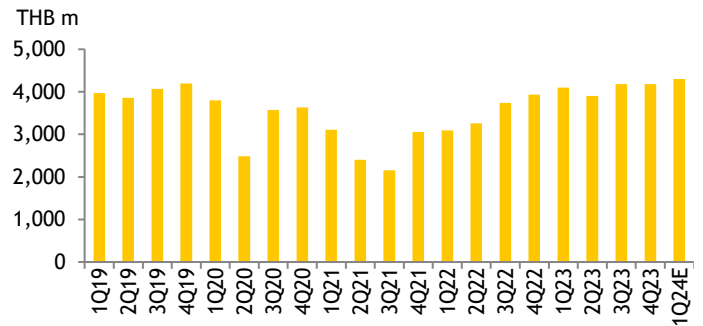
Source: Company, MST

Fig 38: BEM's quarterly core profit



Source: Company, MST

Fig 39: BEM's quarterly revenue



Source: Company, MST

4.2 Continued solid earnings growth in FY24-26E

We forecast BEM's net profit to register a 10% CAGR in FY23-26E, supported by revenue CAGR of 7% during the same period. Revenue growth will be mainly driven by continued growth in MRT ridership at 12% CAGR following an increase in rail network connectivity and more foreign tourist arrivals. We expect expressway business to remain in the post Covid recovery mode with our assumption of 4% CAGR in traffic numbers over the same period.

We project gross profit margin to climb to a record high at 44.4% in FY24E and 45.7% in FY25E thanks to the benefits of high operating leverage as traffic volume continues to increase.

Fig 40: Revenue and profitability

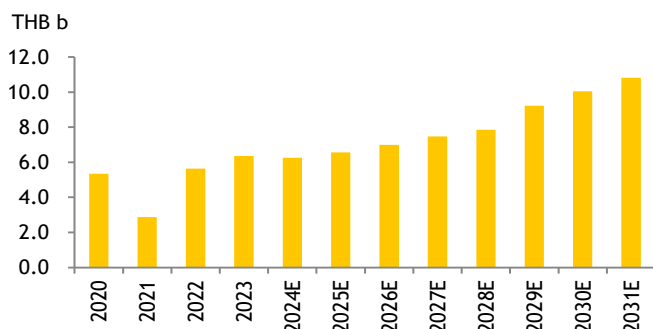
	FY22A	FY23A	FY24E	FY25E	FY26E
Revenue (THB m)					
Rail business revenue	4,917	6,339	7,099	7,813	8,394
Toll business revenue	8,202	8,928	9,468	9,816	10,141
Commercial Development	921	1,117	1,248	1,326	1,426
Total revenue	14,039	16,384	17,815	18,955	19,961
Growth (%)					
Rail business revenue	42	29	12	10	7
Toll business revenue	27	9	6	4	3
Commercial Development	12	21	12	6	8
Total revenue growth	31	17	9	6	5
Dividend income (THB m)	552	558	538	552	565
Interest income (THB m)	187	179	190	190	190
Profitability					
Gross profit	5,582	7,064	7,909	8,670	9,342
Gross profit margin (%)	39.8	43.1	44.4	45.7	46.8
SG&A expenses	1,160	1,241	1,369	1,412	1,452
SG&A to sales ratio (%)	8.3	7.6	7.7	7.5	7.3
EBITDA	5,842	7,808	8,135	8,982	9,721
EBITDA margin (%)	41.6	47.7	45.7	47.4	48.7
Net Profit	2,436	3,479	3,966	4,348	4,653
Net profit margin (%)	17.4	21.2	22.3	22.9	23.3
Key Assumptions					
Rail business					
Daily avg. ridership (trips)	270,566	390,260	448,799	502,655	542,867
Growth (%)	84.5	44.2	15	12	8
Expressway business					
Daily avg. traffic (trips)	1,039,966	1,116,964	1,171,168	1,206,230	1,240,399
Growth (%)	0	7.4	4.9	3	2.8

Source: Company, MST

4.3 Strong cash flow from operation, but debt is still needed to fund future projects

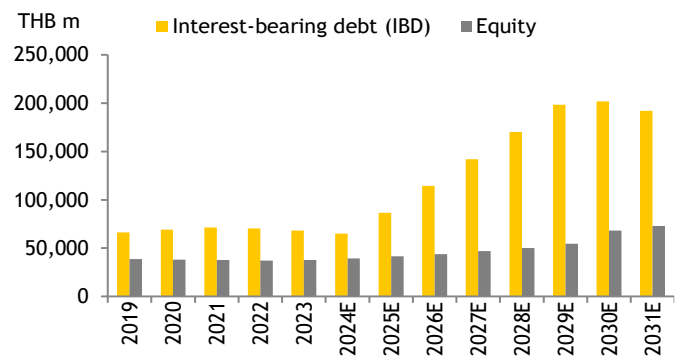
We expect BEM’s cash flow from operations to post a 6% CAGR in FY24-28E before a big jump in FY29E pending toll fare hikes for FES, SES (Sector A, B, C) and, NECL of THB10, or 20% in late FY28. However, cash flow from operations alone may not be sufficient to fund the MRT Orange Line and Double Deck investment. Therefore, debt financing may be required. However, we expect the debt burden to rise along with an increase in the IBD/E ratio before tapering off in FY30 when we expect cash subsidy from MRTA worth THB9.15b pa (10 instalments) to be paid in order to help service loans for the MRT Orange Line project. The long-term rise in interest expenses (FY25-30E) should be covered by upward adjustments in MRT and toll fares, growth in ridership, and benefits from operating leverage.

Fig 41: BEM’s cash flow from operations



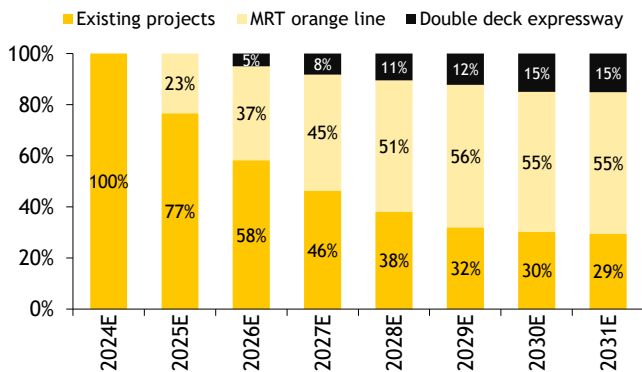
Source: Company, MST

Fig 42: BEM’s interest-bearing-debt and equity



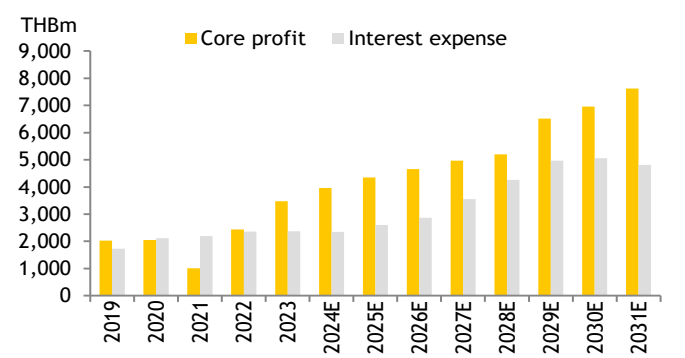
Source: Company, MST

Fig 43: Interest-bearing debt breakdown by projects



Source: Company, MST

Fig 44: BEM’s core profit and interest expense



Source: Company, MST

5. Valuation

5.1 Valuation at discount to historical trading range

We value BEM using a sum-of-the-parts (SOTP) methodology and derive a target price of THB9.25. Our TP implies 36x PE in FY24E, which is close to -0.75 S.D. compared with its seven-year average. The stock is trading at 32x PE -0.75 S.D., but more expensive relative to mass transit operators in the region at 20x. Bangkok is still in the early stages of mass transit network expansion where potential long-term growth is still much larger than in developed countries such as Japan and Hong Kong. Due to solid core profit growth for BEM at 10% CAGR in FY23-26E with long-term upside from projects on hand and its premium ROE relative to regional peers at 10% (vs. average of regional peers at 8%), BEM deserves to trade above the regional average, in our view.

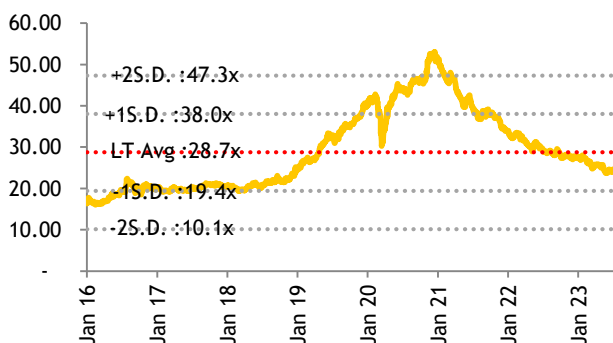
In addition, the company announced a 450m share buyback on 28 Feb'24, equivalent to 2.94% of total paid-up capital under its THB4.0b budget. As of 11 Apr'24, BEM had repurchased 100.7m shares, or almost one quarter of the buyback target. We expect the buyback to be a buffer for the share price until 4 Sep'24, the last day designated for repurchases. This is particularly so if the market price falls below THB8.05/share, the lowest price the company has bought back shares to date.

Fig 45: SOTP Valuation summary

	Value (THB m)	THB/share	Valuation methodology
Expressway business			
FES, Sector A,B,C	31,944	2.1	DCF WACC 6.3% TG 0%
Sector D	11441.2	0.7	DCF WACC 6.3% TG 0%
SOE	24,569	1.6	DCF WACC 3.6% TG 0%
NECL	12,029	0.8	DCF WACC 3.6% TG 0%
Total	79,984	5.2	
Mass transit business			
Blue line MRT	78,958	5.2	DCF WACC 3.0% TG 0%
Purple line MRT (O&M)	4,226	0.3	DCF WACC 6.3% TG 0%
Commercial Development	30,695	2	DCF WACC 3.0% TG 0%
Total	113,879	7.5	
Associates			
CKP PCL (16.8% stake)	4,923	0.3	Holding discount 20%
TTW PCL (18.5% stake)	5,896	0.4	Holding discount 20%
(Less) Interest bearing debt	-65,057	-4.3	
(Add) Cash and equivalent	1,799	0.1	
(Less) Minorities	-2	0	
BEM target price	141,421	9.25	

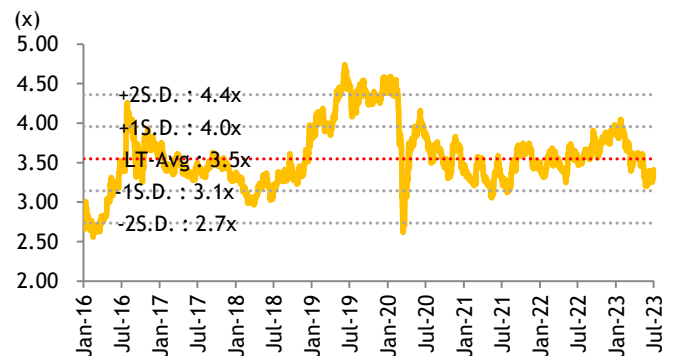
Source: Company, MST

Fig 46: 7-year average EV/EBITDA



Source: Company, MST

Fig 47: 7-year average P/BV



Source: Company, MST

Fig 48: Peer comparison

Ticker	Name	Rating	Price (LC)	Target price (LC)	Market Cap (USDm)	P/E (x)		P/BV (x)		ROE (%)		Yield (%)		EV/EBITDA (x)		EPS Growth (%)		3-year CAGR (FY23-26E) Core EPS CAGR (%)
						FY24E	FY25E	FY24E	FY25E	FY24E	FY25E	FY24E	FY25E	FY24E	FY25E	FY24E	FY25E	
Asia																		
BEM TB	Bangkok Expr	BUY	8.25	9.3	3,402	31.8	29.0	3.2	3.0	10.0	10.5	1.9	1.7	20.0	20.4	14.0	9.6	10.2
BTS TB	BTS GROUP H	NR	5.9	7.2	2,154	189.1	74.7	1.4	1.4	0.3	1.7	2.6	2.6	42.2	42.7	(77.0)	153.1	1.7
66 HK	MTR CORP	NR	23.5	29.6	18,971	10.3	8.7	0.8	0.8	8.7	9.1	5.5	5.6	8.6	7.6	83.8	19.0	21.8
9007 JP	ODAKYU ELEC	NR	1,747.0	2,000.0	4,312	9.0	16.1	1.5	1.4	17.8	8.8	1.2	1.4	12.6	11.8	80.2	(44.3)	(3.8)
9009 JP	KEISEI ELECTI	NR	5,876.0	5,887.5	6,605	11.0	20.0	2.1	1.9	21.7	10.1	0.6	0.6	23.5	20.9	233.2	(45.1)	26.6
9042 JP	HANKYU HANS	NR	4,093.0	4,800.0	6,917	15.4	15.0	1.1	1.0	7.1	6.9	1.3	1.4	13.0	12.7	39.9	2.6	16.1
Asia 's avg					42,360	33.3	20.4	1.2	1.2	8.2	5.9	1.6	1.7	15.0	14.5	62.3	15.8	7.3

Source: Company, MST

6. Risks

6.1 Concession termination

The company's core revenue comes from expressways operated under an extension of a 15-year concession that is due to end in Oct 2035. Political uncertainty and changes in public administration from responsible political parties may result in changes in relevant policies, and new laws might affect the concession periods. Changes in the concession agreement period would directly affect the company's performance and earnings. However, the company has established a joint operating system with government agencies both at the administrative and operational levels by sharing sufficient information to ensure good mutual understanding.

6.2 Interest rate fluctuations

In order to build roads and subway trains, BEM needs to borrow funds to cover construction costs. The company has interest-bearing liabilities to lenders with a large proportion of long-term loans. Thus, interest expense is considered a significant part of expenditure. A rise in interest rates may thus affect its earnings. However, the company issued debentures at a fixed interest rate, and arranged a loan structure to ensure an appropriate mix of loans at fixed interest rates and floating interest rates, and to minimize the risk from interest rate fluctuations. We have constructed a sensitivity analysis of changes in effective interest rates from our base at 2.5% in FY26E, which is the first year that BEM needs to allocate capex for the MRT Orange Line and Double Deck Expressway together. Every 25bps increase in effective interest rates reduces our earnings forecasts by 5% in FY26E.

Fig 49: Sensitivity of profit to changes in effective interest rates (excluding interest rates for lease liabilities) from our base case assumption at 2.5%

Cost of debt %	Interest expense	Net Profit 26E	% change
2.00	(2,291)	5,111	10%
2.25	(2,577)	4,882	5%
2.50	(2,863)	4,653	0%
2.75	(3,149)	4,424	-5%
3.00	(3,435)	4,196	-10%
3.25	(3,721)	3,967	-15%
3.50	(4,007)	3,738	-20%

Source: Company, MST

FYE 31 Dec	FY22A	FY23A	FY24E	FY25E	FY26E
Key Metrics					
P/E (reported) (x)	55.6	38.0	31.8	29.0	27.1
Core P/E (x)	61.5	34.9	31.8	29.0	27.1
P/BV (x)	4.0	3.2	3.2	3.0	2.9
P/NTA (x)	4.0	3.2	3.2	3.0	2.9
Net dividend yield (%)	1.2	1.8	1.9	1.7	1.5
FCF yield (%)	1.5	2.1	3.4	nm	nm
EV/EBITDA (x)	33.2	22.1	20.0	20.4	21.5
EV/EBIT (x)	43.6	28.6	25.9	26.3	27.6
INCOME STATEMENT (THB m)					
Revenue	14,029.4	16,374.4	17,815.0	18,954.9	19,960.9
EBITDA	6,582.2	8,544.3	9,467.7	10,367.0	11,162.3
Depreciation	(144.6)	(138.7)	(117.0)	(124.4)	(135.9)
Amortisation	(1,430.3)	(1,819.0)	(2,047.8)	(2,208.3)	(2,346.1)
EBIT	5,007.4	6,586.6	7,302.9	8,034.3	8,680.2
Net interest income / (exp)	(2,173.5)	(2,371.0)	(2,345.2)	(2,599.2)	(2,863.2)
Associates & JV	0.0	0.0	0.0	0.0	0.0
Exceptionals	0.0	0.0	0.0	0.0	0.0
Other pretax income	0.0	0.0	0.0	0.0	0.0
Pretax profit	2,833.9	4,215.6	4,957.7	5,435.1	5,817.0
Income tax	(397.7)	(736.9)	(991.5)	(1,087.0)	(1,163.4)
Minorities	(0.1)	(0.1)	(0.4)	(0.4)	(0.5)
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	2,436.2	3,478.7	3,965.7	4,347.7	4,653.2
Core net profit	2,436.2	3,478.7	3,965.7	4,347.7	4,653.2
BALANCE SHEET (THB m)					
Cash & Short Term Investments	2,017.8	1,495.3	1,799.1	1,251.0	743.6
Accounts receivable	648.0	897.0	862.9	919.0	966.5
Inventory	0.0	0.0	0.0	0.0	0.0
Reinsurance assets	0.0	0.0	0.0	0.0	0.0
Property, Plant & Equip (net)	337.9	326.7	304.1	25,853.6	58,394.5
Intangible assets	0.0	0.0	0.0	0.0	0.0
Investment in Associates & JVs	0.0	0.0	0.0	0.0	0.0
Other assets	111,124.4	109,777.0	108,454.7	106,970.1	105,346.9
Total assets	114,128.2	112,495.9	111,420.8	134,993.7	165,451.5
ST interest bearing debt	9,673.2	13,245.8	3,752.9	1,613.0	1,849.1
Accounts payable	1,762.8	1,614.9	1,894.7	1,972.4	2,036.6
Insurance contract liabilities	0.0	0.0	0.0	0.0	0.0
LT interest bearing debt	60,768.1	55,057.3	61,304.4	84,910.6	112,530.7
Other liabilities	4,660.0	4,914.0	4,978.0	5,038.0	5,096.0
Total Liabilities	76,864.6	74,831.6	71,929.7	93,534.0	121,512.0
Shareholders Equity	37,261.9	37,662.6	39,489.0	41,457.2	43,936.6
Minority Interest	1.6	1.7	2.1	2.5	3.0
Total shareholder equity	37,263.6	37,664.3	39,491.1	41,459.8	43,939.5
Total liabilities and equity	114,128.2	112,495.9	111,420.8	134,993.7	165,451.5
CASH FLOW (THB m)					
Pretax profit	2,833.9	4,215.6	4,957.7	5,435.1	5,817.0
Depreciation & amortisation	1,574.9	1,957.7	2,164.8	2,332.7	2,482.0
Adj net interest (income)/exp	(2,173.5)	(2,371.0)	(2,345.2)	(2,599.2)	(2,863.2)
Change in working capital	80.6	(366.3)	313.8	21.7	16.7
Cash taxes paid	(397.7)	(736.9)	(991.5)	(1,087.0)	(1,163.4)
Other operating cash flow	0.0	0.0	0.0	0.0	0.0
Cash flow from operations	2,246.2	2,582.5	4,337.7	4,177.7	4,327.8
Capex	(26.7)	(55.1)	(50.0)	(25,625.6)	(32,625.6)
Free cash flow	2,219.5	2,527.4	4,287.7	(21,447.9)	(28,297.8)
Dividends paid	(1,222.8)	(1,834.2)	(2,139.4)	(2,379.4)	(2,173.8)
Equity raised / (purchased)	0.0	0.0	0.0	0.0	0.0
Change in Debt	(1,044.2)	(2,173.2)	(3,245.8)	21,466.3	27,856.2
Other invest/financing cash flow	708.8	957.4	1,401.3	1,812.9	2,108.1
Effect of exch rate changes	0.0	0.0	0.0	0.0	0.0
Net cash flow	661.3	(522.6)	303.9	(548.1)	(507.4)

FYE 31 Dec	FY22A	FY23A	FY24E	FY25E	FY26E
Key Ratios					
Growth ratios (%)					
Revenue growth	30.8	16.7	8.8	6.4	5.3
EBITDA growth	56.4	29.8	10.8	9.5	7.7
EBIT growth	61.3	31.5	10.9	10.0	8.0
Pretax growth	147.5	48.8	17.6	9.6	7.0
Reported net profit growth	141.2	42.8	14.0	9.6	7.0
Core net profit growth	141.2	42.8	14.0	9.6	7.0
Profitability ratios (%)					
EBITDA margin	46.9	52.2	53.1	54.7	55.9
EBIT margin	35.7	40.2	41.0	42.4	43.5
Pretax profit margin	20.2	25.7	27.8	28.7	29.1
Payout ratio	75.3	61.5	60.0	50.0	40.0
DuPont analysis					
Net profit margin (%)	17.4	21.2	22.3	22.9	23.3
Revenue/Assets (x)	0.1	0.1	0.2	0.1	0.1
Assets/Equity (x)	3.1	3.0	2.8	3.3	3.8
ROAE (%)	6.5	9.3	10.3	10.7	10.9
ROAA (%)	2.1	3.1	3.5	3.5	3.1
Liquidity & Efficiency					
Cash conversion cycle	nm	nm	nm	nm	nm
Days receivable outstanding	14.4	17.0	17.8	16.9	17.0
Days inventory outstanding	nm	nm	nm	nm	nm
Days payables outstanding	69.4	65.3	63.8	67.7	68.0
Dividend cover (x)	1.3	1.6	1.7	2.0	2.5
Current ratio (x)	0.5	0.3	0.9	1.2	1.0
Leverage & Expense Analysis					
Asset/Liability (x)	1.5	1.5	1.5	1.4	1.4
Net gearing (%) (incl perps)	183.6	177.4	160.2	205.7	258.6
Net gearing (%) (excl. perps)	183.6	177.4	160.2	205.7	258.6
Net interest cover (x)	2.3	2.8	3.1	3.1	3.0
Debt/EBITDA (x)	10.7	8.0	6.9	8.3	10.2
Capex/revenue (%)	0.2	0.3	0.3	135.2	163.4
Net debt/ (net cash)	68,423.6	66,807.9	63,258.2	85,272.6	113,636.2

Source: Company; Maybank IBG Research

Research Offices

ECONOMICS

Suhaimi ILIAS
Chief Economist
Malaysia | Philippines | Global
(603) 2297 8682
suhaimi_ilias@maybank-ib.com

CHUA Hak Bin
Regional Thematic Macroeconomist
(65) 6231 5830
chuahb@maybank.com

Dr Zamros DZULKAFLI
Malaysia | Philippines
(603) 2082 6818
zamros.d@maybank-ib.com

Erica TAY
China | Thailand
(65) 6231 5844
erica.tay@maybank.com

Brian LEE Shun Rong
Indonesia | Singapore | Vietnam
(65) 6231 5846
brian.lee1@maybank.com

Fatin Nabila MOHD ZAINI
(603) 2297 8685
fatinnabila.mohdzaini@maybank-ib.com

Luong Thu Huong
(65) 6231 8467
hana.thuhuong@maybank.com

LEE Jia Yu
(65) 6231 5843
jiayu.lee@maybank.com

FX

Saktiandi SUPAAT
Head of FX Research
(65) 6230 1379
saktiandi@maybank.com

Fiona LIM
(65) 6320 1374
fionalim@maybank.com

Alan LAU, CFA
(65) 6320 1378
alanlau@maybank.com

Shaun LIM
(65) 6320 1371
shaunlim@maybank.com

STRATEGY

Anand PATHMAKANTHAN
ASEAN
(603) 2297 8783
anand.pathmakanthan@maybank-ib.com

FIXED INCOME

Winson PHOON, FCA
Head of Fixed Income
(65) 6340 1079
winsonphoon@maybank.com

SE THO Mun Yi, CFA
(603) 2074 7606
munyi.st@maybank-ib.com

PORTFOLIO STRATEGY

ONG Seng Yeow
(65) 6231 5839
ong sengyeow@maybank.com

MIBG SUSTAINABILITY RESEARCH

Jigar SHAH
Head of Sustainability Research
(91) 22 4223 2632
jigars@maybank.com

Neerav DALAL
(91) 22 4223 2606
neerav@maybank.com

REGIONAL EQUITIES

Anand PATHMAKANTHAN
Head of Regional Equity Research
(603) 2297 8783
anand.pathmakanthan@maybank-ib.com

WONG Chew Hann, CA
Head of ASEAN Equity Research
(603) 2297 8686
wchewh@maybank-ib.com

MALAYSIA

WONG Chew Hann, CA Head of Research
(603) 2297 8686
wchewh@maybank-ib.com
• Equity Strategy
• Non-Bank Financials (stock exchange)
• Construction & Infrastructure

Anand PATHMAKANTHAN
(603) 2297 8783
anand.pathmakanthan@maybank-ib.com
• Equity Strategy

Desmond CH'NG, BFP, FCA
(603) 2297 8680
desmond.chng@maybank-ib.com
• Banking & Finance

ONG Chee Ting, CA
(603) 2297 8678
ct.ong@maybank-ib.com
• Plantations - Regional

YIN Shao Yang, CPA
(603) 2297 8916
samuel.y@maybank-ib.com
• Gaming - Regional
• Media • Aviation • Non-Bank Financials

TAN Chi Wei, CFA
(603) 2297 8690
chiwei.t@maybank-ib.com
• Power • Telcos

WONG Wei Sum, CFA
(603) 2297 8679
weisum@maybank-ib.com
• Property • Glove

Jade TAM
(603) 2297 8687
jade.tam@maybank-ib.com
• Consumer Staples & Discretionary

Nur Farah SYIFAA
(603) 2297 8675
nurfarahsyifaa.mohamadfuad@maybank-ib.com
• Renewable Energy • REITs

LOH Yan Jin
(603) 2297 8687
lohyanjin.loh@maybank-ib.com
• Ports • Automotive • Technology (EMS)

Jeremie YAP
(603) 2297 8688
jeremie.yap@maybank-ib.com
• Oil & Gas • Petrochemicals

Arvind JAYARATNAM
(603) 2297 8692
arvind.jayaratnam@maybank.com
• Technology (Semicon & Software)

TEE Sze Chiah Head of Retail Research
(603) 2082 6858
szechiah.t@maybank-ib.com
• Retail Research

Nik Ihsan RAJA ABDULLAH, MSTA, CFTe
(603) 2297 8694
nikmohdihsan.ra@maybank-ib.com
• Chartist

Amirah AZMI
(603) 2082 8769
amirah.azmi@maybank-ib.com
• Retail Research

SINGAPORE

Thilan WICKRAMASINGHE Head of Research
(65) 6231 5840
thilanw@maybank.com
• Banking & Finance - Regional
• Consumer

Eric ONG
(65) 6231 5849
ericong@maybank.com
• Healthcare • Transport • SMIDs

LI Jialin
(65) 6231 5845
jialin.li@maybank.com
• REITs

Jarick SEET
(65) 6231 5848
jarick.seet@maybank.com
• Technology

Krishna GUHA
(65) 6231 5842
krishna.guha@maybank.com
• REITs • Industrials

Hussaini SAIFEE
(65) 6231 5837
hussaini.saifee@maybank.com
• Telcos

PHILIPPINES

Daphne SZE
(63) 2 5322 5008
daphne.sze@maybank.com
• Consumer

Raffy MENDOZA
(63) 2 5322 5010
joseraphael.mendoza@maybank.com
• Property • REITs • Gaming

THAILAND

Chak REUNGSINPINYA Head of Research
(66) 2658 5000 ext 1399
chak.reungsinpinya@maybank.com
• Strategy • Energy

Jesada TECHAHUSDIN, CFA
(66) 2658 5000 ext 1395
jesada.t@maybank.com
• Banking & Finance

Wasu MATTANAPOTCHANART
(66) 2658 5000 ext 1392
wasu.m@maybank.com
• Telcos • Technology • REITs • Property
• Consumer Discretionary

Surachai PRAMUALCHAROENKIT
(66) 2658 5000 ext 1470
surachai.p@maybank.com
• Auto • Conmat • Contractor • Steel

Suttatip PEERASUB
(66) 2658 5000 ext 1430
suttatip.p@maybank.com
• Food & Beverage • Commerce

Natchaphon RODJANAROWAN
(66) 2658 5000 ext 1393
natchaphon.rodjanarowan@maybank.com
• Utilities

Boonyakorn AMORNANSANK
(66) 2658 5000 ext 1394
boonyakorn.amornsank@maybank.com
• Services

INDONESIA

Jeffrosenberg CHENLIM Head of Research
(62) 21 8066 8680
jeffrosenberg.lim@maybank.com
• Strategy • Banking & Finance • Property

Willy GOUTAMA
(62) 21 8066 8500
willy.goutama@maybank.com
• Consumer

Etta Rusdiana PUTRA
(62) 21 8066 8683
etta.putra@maybank.com
• Telcos • Internet • Construction

William Jefferson W
(62) 21 8066 8563
william.jefferson@maybank.com
• Property • Materials

Paulina MARGARETA
(62) 21 8066 8690
paulina.tjoa@maybank.com
• Autos

Adi WICAKSONO
(62) 21 8066 8686
adi.wicaksono@maybank.com
• Plantations

Satriawan HARYONO, CEWA, CTA
(62) 21 8066 8682
satriawan@maybank.com
• Chartist

VIETNAM

Quan Trong Thanh Head of Research
(84 28) 44 555 888 ext 8184
thanh.quan@maybank.com
• Strategy • Banks

Hoang Huy, CFA
(84 28) 44 555 888 ext 8181
hoanghuy@maybank.com
• Strategy • Technology

Le Nguyen Nhat Chuyen
(84 28) 44 555 888 ext 8082
chuyen.le@maybank.com
• Oil & Gas • Logistics

Nguyen Thi Sony Tra Mi
(84 28) 44 555 888 ext 8084
trami.nguyen@maybank.com
• Consumer Discretionary

Tran Thi Thanh Nhan
(84 28) 44 555 888 ext 8088
nhan.tran@maybank.com
• Consumer Staples

Nguyen Le Tuan Loi
(84 28) 44 555 888 ext 8182
loi.nguyen@maybank.com
• Property

Nguyen Thanh Hai
(84 28) 44 555 888 ext 8081
thanhhai.nguyen@maybank.com
• Industrials

Nguyen Thanh Lam
(84 28) 44 555 888 ext 8086
thanhlam.nguyen@maybank.com
• Retail Research

APPENDIX I: TERMS FOR PROVISION OF REPORT, DISCLAIMERS AND DISCLOSURES

DISCLAIMERS

This research report is prepared for general circulation and for information purposes only and under no circumstances should it be considered or intended as an offer to sell or a solicitation of an offer to buy the securities referred to herein. Investors should note that values of such securities, if any, may fluctuate and that each security's price or value may rise or fall. Opinions or recommendations contained herein are in form of technical ratings and fundamental ratings. Technical ratings may differ from fundamental ratings as technical valuations apply different methodologies and are purely based on price and volume-related information extracted from the relevant jurisdiction's stock exchange in the equity analysis. Accordingly, investors' returns may be less than the original sum invested. Past performance is not necessarily a guide to future performance. This report is not intended to provide personal investment advice and does not take into account the specific investment objectives, the financial situation and the particular needs of persons who may receive or read this report. Investors should therefore seek financial, legal and other advice regarding the appropriateness of investing in any securities or the investment strategies discussed or recommended in this report.

The information contained herein has been obtained from sources believed to be reliable but such sources have not been independently verified by Maybank Investment Bank Berhad, its subsidiary and affiliates (collectively, "Maybank IBG") and consequently no representation is made as to the accuracy or completeness of this report by Maybank IBG and it should not be relied upon as such. Accordingly, Maybank IBG and its officers, directors, associates, connected parties and/or employees (collectively, "Representatives") shall not be liable for any direct, indirect or consequential losses or damages that may arise from the use or reliance of this report. Any information, opinions or recommendations contained herein are subject to change at any time, without prior notice.

This report may contain forward looking statements which are often but not always identified by the use of words such as "anticipate", "believe", "estimate", "intend", "plan", "expect", "forecast", "predict" and "project" and statements that an event or result "may", "will", "can", "should", "could" or "might" occur or be achieved and other similar expressions. Such forward looking statements are based on assumptions made and information currently available to us and are subject to certain risks and uncertainties that could cause the actual results to differ materially from those expressed in any forward looking statements. Readers are cautioned not to place undue relevance on these forward-looking statements. Maybank IBG expressly disclaims any obligation to update or revise any such forward looking statements to reflect new information, events or circumstances after the date of this publication or to reflect the occurrence of unanticipated events.

Maybank IBG and its officers, directors and employees, including persons involved in the preparation or issuance of this report, may, to the extent permitted by law, from time to time participate or invest in financing transactions with the issuer(s) of the securities mentioned in this report, perform services for or solicit business from such issuers, and/or have a position or holding, or other material interest, or effect transactions, in such securities or options thereon, or other investments related thereto. In addition, it may make markets in the securities mentioned in the material presented in this report. One or more directors, officers and/or employees of Maybank IBG may be a director of the issuers of the securities mentioned in this report to the extent permitted by law.

This report is prepared for the use of Maybank IBG's clients and may not be reproduced, altered in any way, transmitted to, copied or distributed to any other party in whole or in part in any form or manner without the prior express written consent of Maybank IBG and Maybank IBG and its Representatives accepts no liability whatsoever for the actions of third parties in this respect.

This report is not directed to or intended for distribution to or use by any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation. This report is for distribution only under such circumstances as may be permitted by applicable law. The securities described herein may not be eligible for sale in all jurisdictions or to certain categories of investors. Without prejudice to the foregoing, the reader is to note that additional disclaimers, warnings or qualifications may apply based on geographical location of the person or entity receiving this report.

Malaysia

Opinions or recommendations contained herein are in the form of technical ratings and fundamental ratings. Technical ratings may differ from fundamental ratings as technical valuations apply different methodologies and are purely based on price and volume-related information extracted from Bursa Malaysia Securities Berhad in the equity analysis.

Singapore

This report has been produced as of the date hereof and the information herein may be subject to change. Maybank Research Pte. Ltd. ("MRPL") in Singapore has no obligation to update such information for any recipient. For distribution in Singapore, recipients of this report are to contact MRPL in Singapore in respect of any matters arising from, or in connection with, this report. If the recipient of this report is not an accredited investor, expert investor or institutional investor (as defined under Section 4A of the Singapore Securities and Futures Act), MRPL shall be legally liable for the contents of this report, with such liability being limited to the extent (if any) as permitted by law.

Thailand

Except as specifically permitted, no part of this presentation may be reproduced or distributed in any manner without the prior written permission of Maybank Securities (Thailand) Public Company Limited. Maybank Securities (Thailand) Public Company Limited ("MST") accepts no liability whatsoever for the actions of third parties in this respect.

Due to different characteristics, objectives and strategies of institutional and retail investors, the research products of MST Institutional and Retail Research departments may differ in either recommendation or target price, or both. MST reserves the rights to disseminate MST Retail Research reports to institutional investors who have requested to receive it. If you are an authorised recipient, you hereby tacitly acknowledge that the research reports from MST Retail Research are first produced in Thai and there is a time lag in the release of the translated English version.

The disclosure of the survey result of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information. The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey may be changed after that date. MST does not confirm nor certify the accuracy of such survey result.

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, MST does not confirm, verify, or certify the accuracy and completeness of the assessment result.

US

This third-party research report is distributed in the United States ("US") to Major US Institutional Investors (as defined in Rule 15a-6 under the Securities Exchange Act of 1934, as amended) only by Wedbush Securities Inc. ("Wedbush"), a broker-dealer registered in the US (registered under Section 15 of the Securities Exchange Act of 1934, as amended). All responsibility for the distribution of this report by Wedbush in the US shall be borne by Wedbush. This report is not directed at you if Wedbush is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that Wedbush is permitted to provide research material concerning investments to you under relevant legislation and regulations. All U.S. persons receiving and/or accessing this report and wishing to effect transactions in any security mentioned within must do so with: Wedbush Securities Inc. 1000 Wilshire Blvd, Los Angeles, California 90017, +1 (646) 604-4232 and not with the issuer of this report.

UK

This document is being distributed by Maybank Securities (London) Ltd (“MSUK”) which is authorized and regulated, by the Financial Conduct Authority and is for Informational Purposes only. This document is not intended for distribution to anyone defined as a Retail Client under the Financial Services and Markets Act 2000 within the UK. Any inclusion of a third party link is for the recipients convenience only, and that the firm does not take any responsibility for its comments or accuracy, and that access to such links is at the individuals own risk. Nothing in this report should be considered as constituting legal, accounting or tax advice, and that for accurate guidance recipients should consult with their own independent tax advisers.

DISCLOSURES

Legal Entities Disclosures

Malaysia: This report is issued and distributed in Malaysia by Maybank Investment Bank Berhad (15938- H) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets and Services License issued by the Securities Commission in Malaysia. **Singapore:** This report is distributed in Singapore by MRPL (Co. Reg No 198700034E) which is regulated by the Monetary Authority of Singapore. **Indonesia:** PT Maybank Sekuritas Indonesia (“PTMSI”) (Reg. No. KEP-251/PM/1992) is a member of the Indonesia Stock Exchange and is regulated by the Financial Services Authority (Indonesia). **Thailand:** MST (Reg. No.0107545000314) is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission. **Philippines:** Maybank Securities Inc (Reg. No.01-2004-00019) is a member of the Philippines Stock Exchange and is regulated by the Securities and Exchange Commission. **Vietnam:** Maybank Securities Limited (License Number: 117/GP-UBCK) is licensed under the State Securities Commission of Vietnam. **Hong Kong:** MIB Securities (Hong Kong) Limited (Central Entity No AAD284) is regulated by the Securities and Futures Commission. **India:** MIB Securities India Private Limited (“MIBSI”) is a participant of the National Stock Exchange of India Limited and the Bombay Stock Exchange and is regulated by Securities and Exchange Board of India (“SEBI”) (Reg. No. INZ000010538). MIBSI is also registered with SEBI as Category 1 Merchant Banker (Reg. No. INM 000011708) and as Research Analyst (Reg No: INH000000057). **UK:** Maybank Securities (London) Ltd (Reg No 2377538) is authorized and regulated by the Financial Conduct Authority.

Disclosure of Interest

Malaysia: Maybank IBG and its Representatives may from time to time have positions or be materially interested in the securities referred to herein and may further act as market maker or may have assumed an underwriting commitment or deal with such securities and may also perform or seek to perform investment banking services, advisory and other services for or relating to those companies.

Singapore: As of 24 April 2024, Maybank Research Pte. Ltd. and the covering analyst do not have any interest in any companies recommended in this research report.

Thailand: MST may have a business relationship with or may possibly be an issuer of derivative warrants on the securities /companies mentioned in the research report. Therefore, Investors should exercise their own judgment before making any investment decisions. MST, its associates, directors, connected parties and/or employees may from time to time have interests and/or underwriting commitments in the securities mentioned in this report.

Hong Kong: As of 24 April 2024, MIB Securities (Hong Kong) Limited and the authoring analyst do not have any interest in any companies recommended in this research report.

India: As of 24 April 2024, and at the end of the month immediately preceding the date of publication of the research report, MIBSI, authoring analyst or their associate / relative does not hold any financial interest or any actual or beneficial ownership in any shares or having any conflict of interest in the subject companies except as otherwise disclosed in the research report. In the past twelve months MIBSI and authoring analyst or their associate did not receive any compensation or other benefits from the subject companies or third party in connection with the research report on any account what so ever except as otherwise disclosed in the research report.

Maybank IBG may have, within the last three years, served as manager or co-manager of a public offering of securities for, or currently may make a primary market in issues of, any or all of the entities mentioned in this report or may be providing, or have provided within the previous 12 months, significant advice or investment services in relation to the investment concerned or a related investment and may receive compensation for the services provided from the companies covered in this report.

OTHERS

Analyst Certification of Independence

The views expressed in this research report accurately reflect the analyst’s personal views about any and all of the subject securities or issuers; and no part of the research analyst’s compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in the report.

Reminder

Structured securities are complex instruments, typically involve a high degree of risk and are intended for sale only to sophisticated investors who are capable of understanding and assuming the risks involved. The market value of any structured security may be affected by changes in economic, financial and political factors (including, but not limited to, spot and forward interest and exchange rates), time to maturity, market conditions and volatility and the credit quality of any issuer or reference issuer. Any investor interested in purchasing a structured product should conduct its own analysis of the product and consult with its own professional advisers as to the risks involved in making such a purchase.

No part of this material may be copied, photocopied or duplicated in any form by any means or redistributed without the prior consent of Maybank IBG.

Definition of Ratings

Maybank IBG Research uses the following rating system

BUY	Return is expected to be above 10% in the next 12 months (including dividends)
HOLD	Return is expected to be between 0% to 10% in the next 12 months (including dividends)
SELL	Return is expected to be below 0% in the next 12 months (including dividends)

Applicability of Ratings

The respective analyst maintains a coverage universe of stocks, the list of which may be adjusted according to needs. Investment ratings are only applicable to the stocks which form part of the coverage universe. Reports on companies which are not part of the coverage do not carry investment ratings as we do not actively follow developments in these companies.

 **Malaysia**

Maybank Investment Bank Berhad
(A Participating Organisation of
Bursa Malaysia Securities Berhad)
33rd Floor, Menara Maybank,
100 Jalan Tun Perak,
50050 Kuala Lumpur
Tel: (603) 2059 1888;
Fax: (603) 2078 4194

Stockbroking Business:
Level 8, Tower C, Dataran Maybank,
No.1, Jalan Maarof
59000 Kuala Lumpur
Tel: (603) 2297 8888
Fax: (603) 2282 5136

 **Singapore**

Maybank Securities Pte Ltd
Maybank Research Pte Ltd
50 North Canal Road
Singapore 059304

Tel: (65) 6336 9090

 **Indonesia**

PT Maybank Sekuritas Indonesia
Sentral Senayan III, 22nd Floor
Jl. Asia Afrika No. 8
Gelora Bung Karno, Senayan
Jakarta 10270, Indonesia

Tel: (62) 21 2557 1188
Fax: (62) 21 2557 1189

 **Thailand**

Maybank Securities (Thailand) PCL
999/9 The Offices at Central World,
20th - 21st Floor,
Rama 1 Road Pathumwan,
Bangkok 10330, Thailand

Tel: (66) 2 658 6817 (sales)
Tel: (66) 2 658 6801 (research)

 **London**

Maybank Securities (London) Ltd
PNB House
77 Queen Victoria Street
London EC4V 4AY, UK

Tel: (44) 20 7332 0221
Fax: (44) 20 7332 0302

 **India**

MIB Securities India Pte Ltd
1101, 11th floor, A Wing, Kanakia
Wall Street, Chakala, Andheri -
Kurla Road, Andheri East,
Mumbai City - 400 093, India

Tel: (91) 22 6623 2600
Fax: (91) 22 6623 2604

 **Vietnam**

Maybank Securities Limited
Floor 10, Pearl 5 Tower,
5 Le Quy Don Street,
Vo Thi Sau Ward, District 3
Ho Chi Minh City, Vietnam

Tel : (84) 28 44 555 888
Fax : (84) 28 38 271 030

 **Hong Kong**

MIB Securities (Hong Kong)
Limited
28/F, Lee Garden Three,
1 Sunning Road, Causeway Bay,
Hong Kong

Tel: (852) 2268 0800
Fax: (852) 2877 0104

 **Philippines**

Maybank Securities Inc
17/F, Tower One & Exchange
Plaza
Ayala Triangle, Ayala Avenue
Makati City, Philippines 1200

Tel: (63) 2 8849 8888
Fax: (63) 2 8848 5738

 **Sales Trading**
Indonesia

Helen Widjaja
helen.widjaja@maybank.com
(62) 21 2557 1188

Philippines

Keith Roy
keith_roy@maybank.com
Tel: (63) 2 848-5288

London

Greg Smith
gsmith@maybank.com
Tel: (44) 207-332-0221

India

Sanjay Makhija
sanjaymakhija@maybank.com
Tel: (91)-22-6623-2629

www.maybank.com/investment-banking
www.maybank-keresearch.com