

BUY (Unchanged)

Company Update

TP: Bt 10.00 (Unchanged)

Upside : 14.3%

13 SEPTEMBER 2021

Bangkok Exp. & Metro (BEM TB)

A reopening play

BEM is a reopening play with strong earnings growth of 277% y-y in 2022F and 47% y-y in 2023F driven by traffic volume and a ridership recovery after the easing of Bangkok lockdown, operating leverage benefits, and higher dividend income from associates. BEM is also a potential winner of the West Orange Line project. Reaffirm BUY.



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Reaffirming BUY

BEM has been a victim of the COVID-19 crisis and we expect it to post its worst-ever earnings of Bt588m this year. However, we maintain our BUY call with a DCF-derived SOTP-based 12-month TP (2022F base year) of Bt10/share as, **first**, we believe the shares have priced in the bad news, down 23% from early last year. **Second**, we expect a traffic volume and ridership recovery after the easing of Bangkok's lockdown this month to drive earnings growth of 277% y-y in 2022F and 47% y-y in 2023F. **Lastly**, with a strong earnings recovery outlook, its valuation at PE of 60x in 2022F before falling to 41x in 2023F vs. its 46x pre-COVID average in 2015-19 is still undemanding in our view.

Low break-even level

Some 60% of BEM's revenue comes from its highly profitable expressway business and 30% from the still loss-making mass-transit business. Despite traffic volume plunging to 0.6m cars/day in August (vs. 0.8m in 8M21 and 1.2m in pre-COVID 2019) and ridership to 0.06m trips/day (vs. 0.14m in 8M21 and 0.34m in 2019), BEM still reported a profit of Bt506m in 1H21. This was due to its low break-even traffic volume of 0.5m cars/day while its break-even for ridership is at 0.32m trips/day. However, after Bangkok lockdown easing early this month, management has seen its traffic volume recover to 0.8m cars and ridership to 0.1m trips. We estimate its traffic volume to increase to 88% of the 2019 pre-COVID level in 2022F and 100% in 2023F and ridership to 67% in 2022F and 83% in 2023F.

Associates' businesses look solid

We also expect BEM's dividend income to increase to Bt466m-621m in 2021-23F driven by **1**) its 18%-owned TTW (TTW TB, Bt11.7, BUY), a cash-cow tap-water producer, for which we forecast earnings growth of 2% a year on average in 2021-23F, and **2**) its 18%-owned CK Power (CKP TB, Bt5.35, BUY), a power plant operator, for which our analyst, Nuttapop Prasitsuksant, projects earnings growth of 419% y-y this year and 8% y-y in 2022F. With its core business earnings turnaround, we estimate BEM's earnings growth at 277% y-y in 2022F and 47% y-y in 2023F.

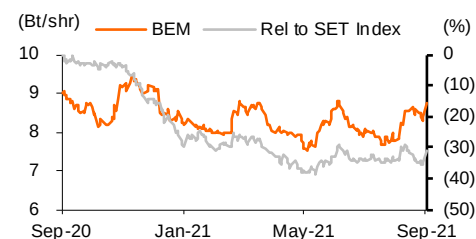
Potential upside

The bid for the West Orange Line project (Bt123bn) looks set to be delayed to 2022. However, we still see BEM as a potential winner given its experience (BEM is the only subway operator in Thailand), cost advantages (the line will be connected to BEM's Blue Line, allowing some cost savings), and construction capability (BEM's parent firm is Ch. Karnchang Pcl (CK TB, Bt19.6, BUY)). If we assume a 10% IRR for the project, we roughly estimate an additional value of Bt1/share on top of our TP.

COMPANY VALUATION

Y/E Dec (Bt m)	2020A	2021F	2022F	2023F
Sales	13,489	10,772	13,529	15,467
Net profit	2,051	588	2,216	3,266
Norm profit	2,048	588	2,216	3,266
Consensus NP	—	1,221	3,306	4,371
Diff frm cons (%)	—	(51.8)	(33.0)	(25.3)
Prev. Norm profit	—	588	2,215	3,266
Chg frm prev (%)	—	0.0	0.0	0.0
Norm EPS (Bt)	0.1	0.0	0.1	0.2
Norm EPS grw (%)	(29.9)	(71.3)	276.7	47.4
Norm PE (x)	65.3	227.4	60.4	40.9
EV/EBITDA (x)	36.0	54.1	33.7	26.9
P/BV (x)	3.5	3.5	3.4	3.2
Div yield (%)	1.1	0.1	0.4	0.6
ROE (%)	5.3	1.6	5.7	8.0
Net D/E (%)	175.9	174.5	154.7	132.5

PRICE PERFORMANCE



COMPANY INFORMATION

Price as of 13-Sep-21 (Bt)	8.75
Market Cap (US\$ m)	4,064.8
Listed Shares (m shares)	15,285.0
Free Float (%)	54.0
Avg Daily Turnover (US\$ m)	12.0
12M Price H/L (Bt)	9.45/7.50
Sector	Transportation
Major Shareholder	CK Pcl 31.3%

Sources: Bloomberg, Company data, Thanachart estimates

Reaffirming BUY

*BEM is a victim of Covid-19
but we reaffirm BUY as...*

Bangkok Expressway & Metro Pcl (BEM) is a direct victim of the COVID-19 crisis as the government's containment measures, especially the lockdown in Bangkok, caused its traffic volume to decline by 15% y-y in 2020 and 20% y-y in 8M21 and ridership to fall by 23% y-y and 41% y-y, respectively. BEM's earnings dropped by 30% y-y in 2020 and we expect the company to post its worst-ever earnings this year with a further fall of 71% y-y. Despite that, we maintain our BUY rating on shares of BEM as:

*...the bad news looks to
have been priced in...*

First, the bad news looks to have been priced into the share price, which is down by 23% from early last year before COVID-19 first emerged.

*...traffic volume & ridership
have started to recover...*

Secondly, after the Bangkok lockdown was eased early this month, BEM's management saw a recovery in its traffic volume and ridership (please see the next section).

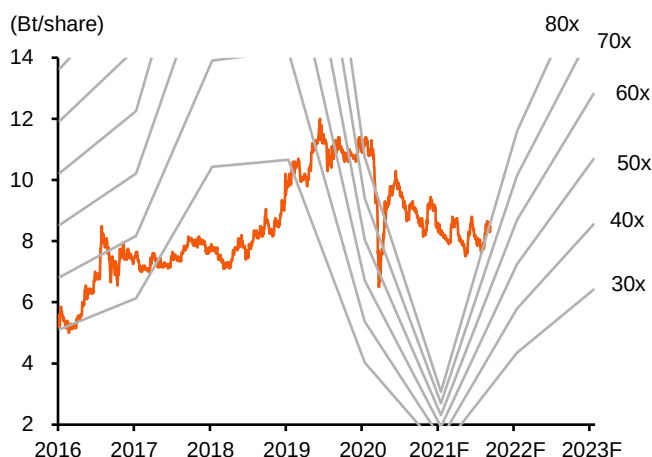
...valuation is undemanding

Thirdly, with a strong earnings recovery outlook, BEM's valuation is still undemanding in our view with PE multiples of 60x in 2022F before falling to 41x in 2023F vs. its 46x pre-COVID average in 2015-19.

Our TP is Bt10/share

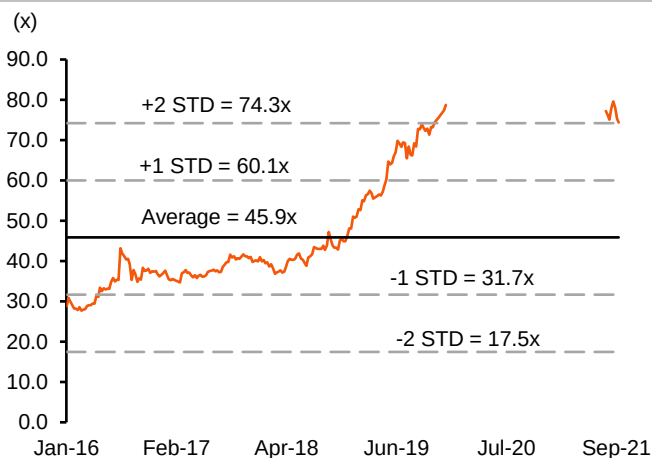
Our DCF-derived SOTP-based 12-month TP (2022F base year) is Bt10/share, out of which we estimate its core business value at Bt8.7 and its SOTP value (from its 18% stake in TTW Pcl (TTW TB, Bt11.7, BUY) and 18% stake in CK Power Pcl (CKP TB, Bt5.35, BUY)) at Bt1.3.

Ex 1: BEM's PE Band



Sources: Bloomberg, Thanachart estimates

Ex 2: BEM's PE Standard Deviation



Sources: Bloomberg, Thanachart estimates

Low break-even level

BEM's revenue can be broken down into...

...60% from highly profitable expressways...

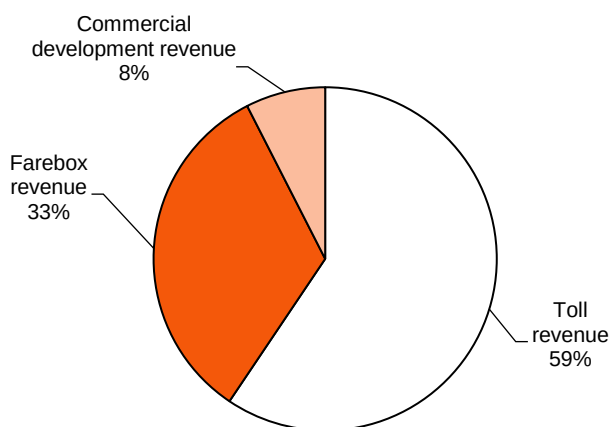
...30% from the still loss-making mass transit business...

...and Bt450m-500m of dividend income

The ongoing COVID-19 crisis caused BEM's traffic volume in August this year to fall to 0.6m cars/day (vs. 0.8m in 8M21 and 1.2m in pre-COVID 2019) and its ridership to 0.06m trips/day (vs. 0.14m in 8M21 and 0.34m in 2019). However, BEM still reported a profit of Bt506m in 1H21 thanks to its low break-even level.

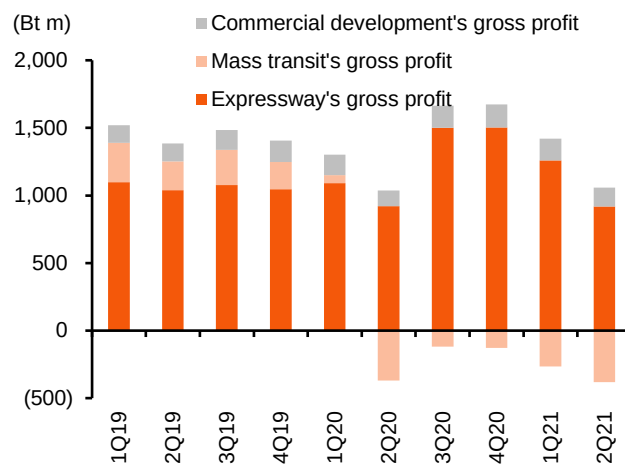
- 1) Some 60% of its revenue comes from its highly profitable expressway business. After its second-stage expressway concession was fully depreciated in 1Q20, we estimate its break-even traffic volume to have fallen to 0.5m cars/day from 0.8m cars/day.
- 2) Another 30% of its revenue comes from its loss-making mass-transit business. Note that the mass-transit business just broke even in 2019 when the operation of the West Blue Line drove its ridership up to 0.34m trips/day before it turned to losses again after the emergence of COVID-19.
- 3) Bt271m of dividend income from TTW and CKP in 1H21.

Ex 3: BEM's Revenue Breakdown in 1H21



Source: Company data

Ex 4: BEM's Gross Profit Breakdown

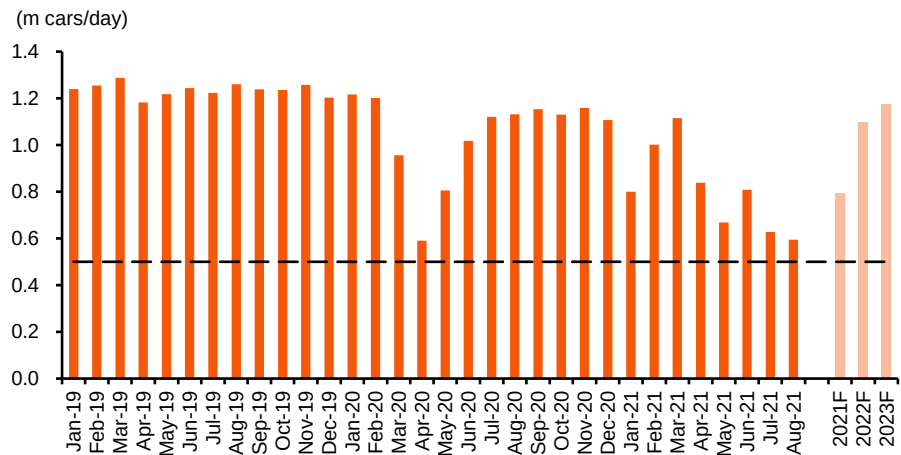


Source: Company data

After the easing of lockdown, BEM's traffic volume and ridership started to recover

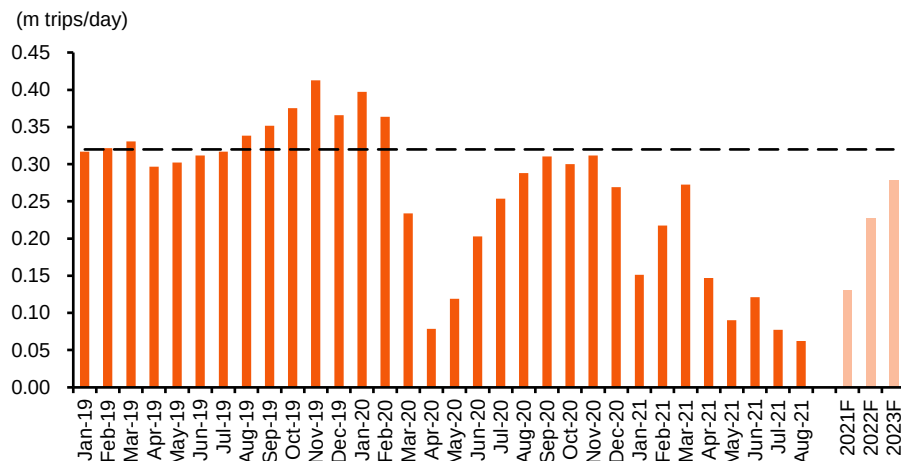
However, after Bangkok's lockdown was eased early this month, management saw traffic volume recover to 0.8m cars/day and ridership to 0.1m trips/day. Given the pent-up demand for travel and private cars being the preferred choice for people during the COVID-19 pandemic, we estimate a strong traffic volume turnaround to 88% of the 2019 pre-COVID level in 2022F and 100% of the 2019 pre-COVID level in 2023F. For ridership, we project a slower recovery to 67% of the 2019 pre-COVID level in 2022F and 83% of the 2019 pre-COVID level in 2023F.

Ex 5: BEM's Traffic Volume



Sources: Company data, Thanachart estimates

Ex 6: BEM's Ridership



Sources: Company data, Thanachart estimates

Ex 7: Key Assumptions

	2019	2020	2021F	2022F	2023F
Expressway's traffic volume (thousand cars/day)	1,237.4	1,049.2	871.0	1,085.4	1,238.2
Mass transit's ridership (thousand trips/day)	336.8	260.5	131.0	227.3	278.4
Gross margin (%)	36.0	37.5	27.2	36.7	39.4
Depreciation & amortization expenses (Bt m)	4,026.5	1,858.0	1,929.0	2,086.3	2,246.2

Sources: Company data, Thanachart estimates

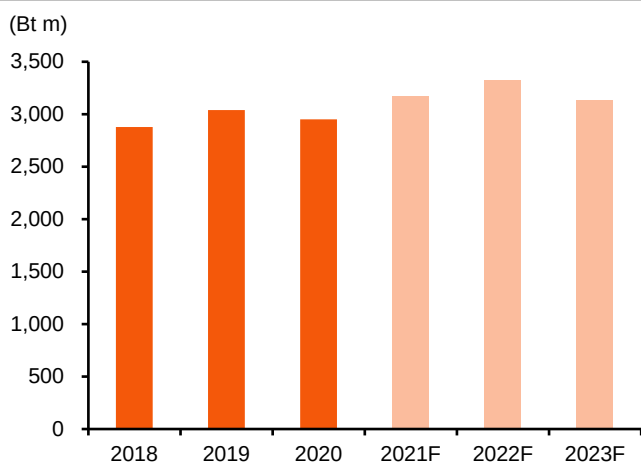
Associates' businesses look solid

We also expect higher dividend income...

...to drive BEM's earnings growth by 47-277% y-y in 2022-23F

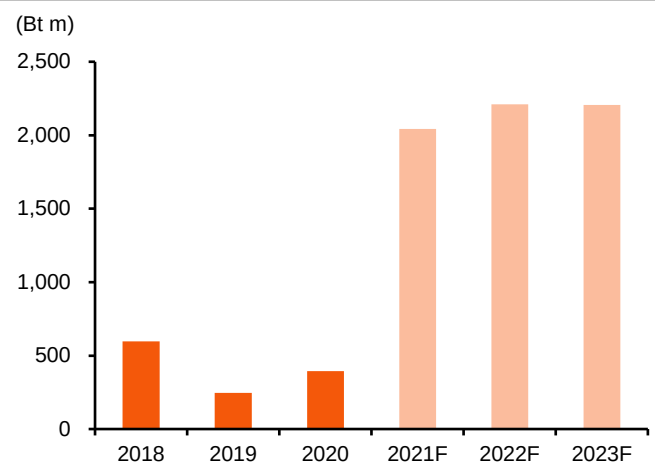
We also expect BEM's dividend income to increase from Bt483m in 2020 to Bt466m-621m in 2021-23F driven by its associates' earnings growth. Its 18%-owned TTW operates a very stable cash-cow tap-water business in Thailand and we estimate its three-year earnings CAGR at 2% in 2021-23F. This would allow TTW to pay BEM dividend income of Bt400m-450m a year in 2021-23F. BEM's 18%-owned CKP is a power plant operator and our analyst, Nuttapop Prasitsuksant, projects the operation of the Xayaburi project to drive its earnings growth by 277% y-y in 2022F and 48% y-y in 2023F. This would also allow CKP to pay BEM dividend income of Bt50m-150m a year in 2021-23F. Given its core business earnings turnaround, we expect BEM's earnings growth at 277% y-y in 2022F and 47% y-y in 2023F.

Ex 8: TTW's Earnings



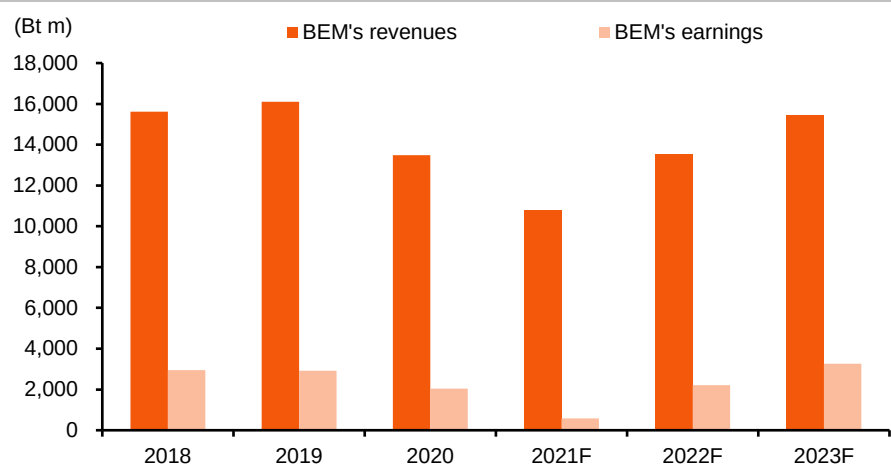
Sources: Company data, Thanachart estimates

Ex 9: CKP's Earnings



Sources: Company data, Thanachart estimates

Ex 10: BEM's Revenue And Earnings



Sources: Company data, Thanachart estimates

Potential upside

Despite facing a delay, we still expect the government to open the bidding for the West Orange Line (Bt129bn) in 2022F as the bid winner would be the operator of both the East and West Orange lines. Without the bid, there would be no operator for the East Orange Line, construction of which is scheduled to be completed in 2023.

BEM is a potential winner of the West Orange Line

BEM and BTS Group Holdings (BTS TB, Bt9.45, BUY) are the only potential bidders for the West Orange Line extension project and we see BEM as the likely winner as:

First, the Orange Line is a subway project and BEM is the only subway operator in Thailand. Therefore, it has operational expertise vs. its competitors.

Second, BEM would enjoy cost competitiveness as the Orange Line would be directly connected to BEM's existing Blue Line network, allowing it to use some of BEM's current facilities.

Finally, BEM would benefit from construction expertise from its parent company, Ch. Karnchang Pcl (CK TB, Bt19.6, BUY) as CK is one of only two contractors in Thailand that have the necessary experience and equipment to undertake large underground construction projects.

If it wins the project, we estimate an additional value of Bt1 on top of our TP

We have yet to factor the West Orange Line project into our model. However, if BEM wins the project and we assume an IRR of 10%, we roughly estimate an additional value of Bt1/share on top of our current TP.

Ex 11: Our SOTP-derived DCF-based Valuation Of BEM

Sum-of-the-parts	% holding	(Bt m)
Enterprise value		200,308
Investment equity value		20,040
TTW	18.47%	10,317
CKP	17.59%	9,723
Total enterprise value		220,349
(Less) Net debt (as at end-2021F)		(65,947)
(Less) Minority interest		(45)
Total equity value		154,357
# of shares (fully diluted) (m shares)		15,285
Sum-of-the-parts		10

Source: Thanachart estimates

Valuation Comparison

Ex 12: Valuation Comparison With Regional Peers

Name	BBG Code	Country	EPS growth		— PE —		— P/BV —		EV/EBITDA		— Div Yield —	
			21F (%)	22F (%)	21F (x)	22F (x)	21F (x)	22F (x)	21F (x)	22F (x)	21F (%)	22F (%)
Guangshen Railway	601333 CH	China	78.0	na	na	31.8	0.6	0.6	9.3	6.1	0.2	1.8
Central Japan Railway	9022 JP	Japan	na	na	282.4	12.3	0.9	0.8	17.9	8.0	0.8	0.8
Keisei Electric Railway	9009 JP	Japan	na	345.7	89.3	20.1	1.5	1.4	28.3	18.9	0.5	0.5
MTR Corp Ltd	66 HK	Hong Kong	112.5	63.5	29.2	17.8	1.5	1.5	26.1	13.7	2.8	2.9
Jungfraubahn Holding	JFN SW	Switzerland	na	na	na	25.1	1.4	1.3	21.9	11.3	0.3	1.4
Jiangsu Expressway	177 HK	China	72.3	8.3	8.0	7.4	1.1	1.1	9.7	8.7	7.1	7.3
Shenzhen Expressway	548 HK	China	na	13.4	5.8	5.1	0.6	0.5	7.4	7.0	8.6	9.7
Zhejiang Expressway	576 HK	China	146.6	8.6	5.7	5.2	0.9	0.8	4.5	4.3	6.8	7.2
Anhui Expressway	995 HK	China	55.2	5.8	4.9	4.7	0.6	0.5	na	3.2	6.1	6.4
Jasa Marga Persero	JSMR IJ	Indonesia	102.1	61.5	28.2	17.5	1.3	1.2	12.2	10.2	0.4	0.8
Bangkok Express & Metro	BEM TB*	Thailand	(71.3)	276.7	227.4	60.4	3.5	3.4	54.1	33.7	0.1	0.4
BTS Group Holdings	BTS TB*	Thailand	(7.7)	(17.7)	52.9	64.3	2.1	2.1	64.6	81.1	1.1	0.9
Average			61.0	85.1	73.4	22.6	1.3	1.3	23.3	17.2	2.9	3.3

Source: Bloomberg

Note: * Thanachart estimates , using Thanachart normalized EPS

** BTS's FY21 financial year ends in March 2021. Its first forecast year is FY22F.

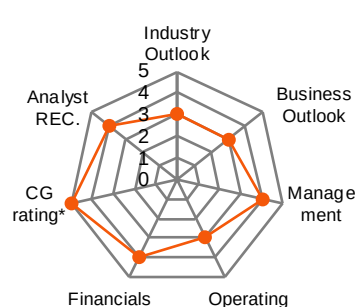
Based on 13-Sep-21 closing prices

COMPANY DESCRIPTION

Bangkok Expressway and Metro Pcl is the amalgamated company between Bangkok Expressway (BECL TB) and Bangkok Metro (BMCL TB). It operates expressway and mass-transit projects in Thailand under build-transfer-operate concession contracts from the Expressway Authority of Thailand and the State Railway of Thailand.

Source: Thanachart

COMPANY RATING



Rating Scale

Very Strong	5
Strong	4
Good	3
Fair	2
Weak	1
None	0

Source: Thanachart; *CG Rating

THANACHART'S SWOT ANALYSIS

S — Strength

- BEM's expressways and subway go through the center of Bangkok, with secure traffic volume and ridership growth.
- Its businesses generate secure and stable cash flows.

O — Opportunity

- The extensions of BEM's networks would help to feed passengers and cars into its systems.
- The government's infrastructure investments will likely create opportunities for BEM to grow.
- There are only two private companies operating mass-transit projects in Thailand at present.

W — Weakness

- BEM's revenue-generating market is limited to Bangkok.
- Its businesses are under concession contracts, thereby leading to continuity risk.

T — Threat

- The government has intervened in the past in BEM's toll and fare rate revisions even though there's a concession contract.
- Delays to the government's infrastructure investments.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	9.64	10.00	4%
Norm profit 21F (Bt m)	1,221	588	-52%
Norm profit 22F (Bt m)	3,306	2,216	-33%
Consensus REC	BUY: 16	HOLD: 3	SELL: 0

HOW ARE WE DIFFERENT FROM THE STREET?

- Our earnings in 2021-22F are lower than the Bloomberg consensus numbers, which we attribute to us being more conservative on BEM's traffic volume and ridership growth.
- However, our TP is slightly higher than the consensus number, likely due to us having a more bullish view on its long-term outlook and SOTP value.

Sources: Bloomberg consensus, Thanachart forecasts

RISKS TO OUR INVESTMENT CASE

- The ongoing COVID-19 crisis could continue to put traffic volume and ridership under pressure, causing a downside risk to our earnings forecasts.
- Government intervention in its toll and fare rate hikes could cause another downside risk to our earnings estimates.

Source: Thanachart

INCOME STATEMENT

FY ending Dec (Bt m)	2019A	2020A	2021F	2022F	2023F
Sales	16,107	13,489	10,772	13,529	15,467
Cost of sales	10,310	8,427	7,840	8,570	9,379
Gross profit	5,797	5,063	2,933	4,959	6,088
% gross margin	36.0%	37.5%	27.2%	36.7%	39.4%
Selling & administration expenses	1,336	1,347	1,185	1,285	1,315
Operating profit	4,460	3,716	1,748	3,674	4,773
% operating margin	27.7%	27.5%	16.2%	27.2%	30.9%
Depreciation & amortization	4,026	1,858	1,943	2,109	2,272
EBITDA	8,487	5,574	3,691	5,784	7,045
% EBITDA margin	52.7%	41.3%	34.3%	42.7%	45.5%
Non-operating income	707	830	963	946	1,021
Non-operating expenses	0	0	0	0	0
Interest expense	(1,723)	(2,113)	(1,972)	(1,846)	(1,706)
Pre-tax profit	3,444	2,433	739	2,774	4,088
Income tax	680	382	148	555	818
After-tax profit	2,764	2,051	591	2,219	3,270
% net margin	17.2%	15.2%	5.5%	16.4%	21.1%
Shares in affiliates' Earnings	173	0	0	0	0
Minority interests	(17)	(4)	(3)	(4)	(4)
Extraordinary items	2,515	4	0	0	0
NET PROFIT	5,435	2,051	588	2,216	3,266
Normalized profit	2,920	2,048	588	2,216	3,266
EPS (Bt)	0.4	0.1	0.0	0.1	0.2
Normalized EPS (Bt)	0.2	0.1	0.0	0.1	0.2

We expect a strong earnings turnaround in 2022F

BALANCE SHEET

FY ending Dec (Bt m)	2019A	2020A	2021F	2022F	2023F
ASSETS:					
Current assets:	4,448	5,044	4,625	5,245	5,681
Cash & cash equivalent	1,861	2,375	2,200	2,200	2,200
Account receivables	482	549	325	408	466
Inventories	0	0	0	0	0
Others	2,104	2,120	2,100	2,637	3,015
Investments & loans	17,217	15,961	15,961	15,961	15,961
Net fixed assets	74,592	76,385	75,756	74,970	74,024
Other assets	15,440	16,226	15,011	13,538	12,063
Total assets	111,697	113,616	111,353	109,715	107,729
LIABILITIES:					
Current liabilities:	11,429	13,734	13,508	13,000	12,307
Account payables	1,938	1,745	1,503	1,643	1,799
Bank overdraft & ST loans	3,250	3,000	3,407	3,177	2,908
Current LT debt	5,666	8,360	8,168	7,616	6,971
Others current liabilities	574	629	429	563	629
Total LT debt	57,529	57,902	56,571	52,747	48,283
Others LT liabilities	3,916	3,947	3,487	4,312	4,898
Total liabilities	72,874	75,582	73,566	70,059	65,488
Minority interest	42	42	45	49	53
Preferreds shares	0	0	0	0	0
Paid-up capital	15,285	15,285	15,285	15,285	15,285
Share premium	5,817	5,817	5,817	5,817	5,817
Warrants	0	0	0	0	0
Surplus	1,248	(147)	(147)	(147)	(147)
Retained earnings	16,431	17,037	16,787	18,652	21,233
Shareholders' equity	38,781	37,991	37,742	39,607	42,188
Liabilities & equity	111,697	113,616	111,353	109,715	107,729

Sources: Company data, Thanachart estimates

CASH FLOW STATEMENT

*Depreciation expenses
fell sharply in 2020...*

*...because of its
concession value being
fully depreciated*

FY ending Dec (Bt m)	2019A	2020A	2021F	2022F	2023F
Earnings before tax	3,444	2,433	739	2,774	4,088
Tax paid	(724)	(366)	(164)	(543)	(815)
Depreciation & amortization	4,026	1,858	1,943	2,109	2,272
Chg In working capital	287	(261)	(17)	57	97
Chg In other CA & CL / minorities	(27)	19	(164)	(414)	(314)
Cash flow from operations	7,007	3,683	2,337	3,983	5,327
Capex	(7,655)	(3,651)	(1,300)	(1,300)	(1,300)
Right of use	0	(87)	(300)	(50)	(50)
ST loans & investments	0	0	0	0	0
LT loans & investments	(4,039)	1,256	0	0	0
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	4,417	(665)	1,041	2,325	2,085
Cash flow from investments	(7,278)	(3,146)	(559)	975	735
Debt financing	2,477	2,817	(1,115)	(4,607)	(5,377)
Capital increase	0	0	0	0	0
Dividends paid	(2,293)	(1,376)	(838)	(350)	(685)
Warrants & other surplus	140	(1,465)	0	0	0
Cash flow from financing	324	(24)	(1,953)	(4,957)	(6,062)
Free cash flow	(648)	32	1,037	2,683	4,027

VALUATION

*Valuation looks attractive to
us at PEs of 60x in 2022F
and 41x in 2023F...*

*...vs. 46x five-year pre-
COVID average*

FY ending Dec	2019A	2020A	2021F	2022F	2023F
Normalized PE (x)	45.8	65.3	227.4	60.4	40.9
Normalized PE - at target price (x)	52.3	74.6	259.9	69.0	46.8
PE (x)	24.6	65.2	227.4	60.4	40.9
PE - at target price (x)	28.1	74.5	259.9	69.0	46.8
EV/EBITDA (x)	23.4	36.0	54.1	33.7	26.9
EV/EBITDA - at target price (x)	25.6	39.4	59.3	37.0	29.6
P/BV (x)	3.4	3.5	3.5	3.4	3.2
P/BV - at target price (x)	3.9	4.0	4.0	3.9	3.6
P/CFO (x)	19.1	36.3	57.2	33.6	25.1
Price/sales (x)	8.3	9.9	12.4	9.9	8.6
Dividend yield (%)	1.0	1.1	0.1	0.4	0.6
FCF Yield (%)	(0.5)	0.0	0.8	2.0	3.0
(Bt)					
Normalized EPS	0.2	0.1	0.0	0.1	0.2
EPS	0.4	0.1	0.0	0.1	0.2
DPS	0.1	0.1	0.0	0.0	0.1
BV/share	2.5	2.5	2.5	2.6	2.8
CFO/share	0.5	0.2	0.2	0.3	0.3
FCF/share	(0.0)	0.0	0.1	0.2	0.3

Sources: Company data, Thanachart estimates

FINANCIAL RATIOS

FY ending Dec	2019A	2020A	2021F	2022F	2023F
Growth Rate					
Sales (%)	3.2	(16.3)	(20.1)	25.6	14.3
Net profit (%)	2.2	(62.3)	(71.3)	276.7	47.4
EPS (%)	2.2	(62.3)	(71.3)	276.7	47.4
Normalized profit (%)	(0.9)	(29.9)	(71.3)	276.7	47.4
Normalized EPS (%)	(0.9)	(29.9)	(71.3)	276.7	47.4
Dividend payout ratio (%)	25.3	74.5	25.0	25.0	25.0
Operating performance					
Gross margin (%)	36.0	37.5	27.2	36.7	39.4
Operating margin (%)	27.7	27.5	16.2	27.2	30.9
EBITDA margin (%)	52.7	41.3	34.3	42.7	45.5
Net margin (%)	17.2	15.2	5.5	16.4	21.1
D/E (incl. minor) (x)	1.7	1.8	1.8	1.6	1.4
Net D/E (incl. minor) (x)	1.7	1.8	1.7	1.5	1.3
Interest coverage - EBIT (x)	2.6	1.8	0.9	2.0	2.8
Interest coverage - EBITDA (x)	4.9	2.6	1.9	3.1	4.1
ROA - using norm profit (%)	2.7	1.8	0.5	2.0	3.0
ROE - using norm profit (%)	7.9	5.3	1.6	5.7	8.0
DuPont					
ROE - using after tax profit (%)	7.4	5.3	1.6	5.7	8.0
- asset turnover (x)	0.1	0.1	0.1	0.1	0.1
- operating margin (%)	32.1	33.7	25.2	34.1	37.5
- leverage (x)	2.9	2.9	3.0	2.9	2.7
- interest burden (%)	66.7	53.5	27.3	60.0	70.6
- tax burden (%)	80.3	84.3	80.0	80.0	80.0
WACC (%)	5.7	5.7	5.7	5.7	5.7
ROIC (%)	3.7	3.0	1.3	2.8	3.8
NOPAT (Bt m)	3,580	3,133	1,398	2,939	3,818
invested capital (Bt m)	103,364	104,879	103,689	100,947	98,151

Sources: Company data, Thanachart estimates

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