Shariah Compliant

Utilities

Malaysia

September 13, 2022

Tenaga Nasional (TNB MK)

A balanced transition

HOLD

Share Price	MYR 8.95
12m Price Target	MYR 8.70 (+1%)
Previous Price Target	*MYR 8.70*

Managing the energy tri-lemma

TNB's increasingly public energy transition plans will be balanced against Malaysia's energy equity and security. ESG scrutiny on TNB has largely taken a backseat in the past year, in our view, as the market focuses on the sanctity of the pass-through mechanism. Maintain HOLD with an unchanged MYR8.70 TP (DCF-based). We prefer Mega First (MFCB MK, BUY, CP: MYR3.43, TP: MYR4.30) in the electricity space.

Articulating its transition plans

Having unveiled its net-zero 2050 target last year, TNB has been publicizing details of its transition plans in recent weeks. The initiatives are broadly categorised along 4 pillars – GenCo, New Energy Division (NED), Grid and Electric Vehicles (EV). Of particular interest are the GenCo initiatives which involve 1) possible early retirement of selected coal plants, and 2) the repowering of these plants with cleaner technology (carbon capture units and hydrogen, among others) and 3) potential ASEAN expansion (in gas and hydro plants).

Capex to climb going forward

TNB expects annual capex to step up from MYR9-14b in the 2020s, to MYR10-20b in the 2030s with initial investments into new green technologies, and peaking at MYR15-24b in the 2040s when these new green technologies become mainstream. TNB is open to various funding options, including partial divestment of GenCo in future via a listing, and allowing equity participation by technology partners in selected plants.

Maintaining forecasts

Our earnings forecasts and MYR8.70 TP (DCF-based assuming 8.7% WACC and 1% LT growth) are unchanged. Coal prices have remained very elevated, meaning ICPT concerns will continue to take centre stage, in our view. By our estimate, a c.3sen/kWh surcharge is required to cover every incremental MYR100/t of coal price above the tariff reference.

FYE Dec (MYR m)	FY20A	FY21A	FY22E	FY23E	FY24E
Revenue	43,976	52,630	48,844	49,677	50,525
EBITDA	13,860	15,326	15,430	15,725	16,077
Core net profit	4,459	5,141	4,660	5,021	5,205
Core FDEPS (sen)	77.9	89.5	81.1	87.4	90.6
Core FDEPS growth(%)	(12.7)	14.8	(9.4)	7.7	3.7
Net DPS (sen)	80.0	40.0	36.6	39.5	40.9
Core FD P/E (x)	13.4	10.4	11.0	10.2	9.9
P/BV (x)	1.1	0.9	0.9	0.8	0.8
Net dividend yield (%)	7.7	4.3	4.1	4.4	4.6
ROAE (%)	7.4	7.6	8.0	8.3	8.2
ROAA (%)	2.5	2.8	2.5	2.7	2.7
EV/EBITDA (x)	7.0	6.4	6.1	5.9	5.7
Net gearing (%) (incl perps)	62.7	72.7	68.1	62.6	57.1
Consensus net profit	-	-	4,379	4,815	5,109
MKE vs. Consensus (%)	-	-	6.4	4.3	1.9

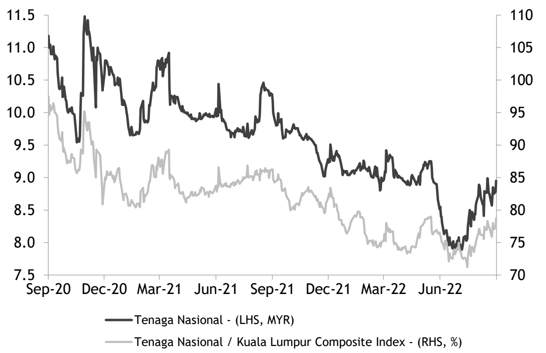
Company Description

Tenaga Nasional engages in the generation, transmission, distribution and sale of electricity and the provision of other related services.

Statistics

52w high/low (MYR)	10.18/7.89
3m avg turnover (USDm)	5.8
Free float (%)	55.6
Issued shares (m)	5,705
Market capitalisation	MYR51.1B
	USD11.3B
Major shareholders:	
Khazanah Nasional Bhd	25.6%
Employees Provident Fund	15.9%
Permodalan Nasional Bhd	9.7%

Price Performance



	-1M	-3M	-12M
Absolute (%)	4	5	(13)
Relative to index (%)	4	3	(9)

Source: FactSet

ESG@MAYBANK IBG
Tear Sheet Insert

Tan Chi Wei, CFA
chiwei.t@maybank-ib.com
(603) 2297 8690

ESG@MAYBANK IBG

chiwei.t@maybank-ib.com

Risk Rating& Score[1]	38.1 (High)
Score Momentum[2]	+2.8
Last Updated	19 Jul 2022
Controversy Score[3] (Updated: 14 Jun 2022)	1 -Customer (quality & safety) incidents

Business Model & Industry Issues

- With the commissioning of Jimah East, Malaysia's diversification into coal plants over the past decade has ended. New plants going forward will be gas or solar-based. The unit cost of generation for both gas and solar plants are for now still higher than coal, although this is essentially borne by consumers via the IBR tariff framework.
- Given the prevailing structure of PPAs in Malaysia, coal will however continue to feature very prominently in Peninsular Malaysia's generation mix for at least the next decade. This means the "coal stigma" will continue to accompany Tenaga for the foreseeable future. Should such pressure increase, Tenaga could consider accelerating its renewable expansion (it already has international solar and wind platforms) or potentially de-merging or spinning off its generation unit.
- The push into renewables has seen the increased adoption of solar via solar farms and rooftop solar. From a land optimisation perspective, the technology is probably better suited for rooftops. With the right incentives, Tenaga's panel leasing business could become more significant in contribution.

Material E issues

- Significant coal exposure with coal accounting for over 50% of Peninsular Malaysia's generation mix. However, many of these coal plants are new and utilises ultra-supercritical technology. Meanwhile, the cost of insuring coal plants has risen by 10-20% annually in recent years.
- Balance of generation is largely gas-based, which is still a fossil fuel and thus create carbon emissions. In response, Tenaga has in recent years, been consciously increasing its renewable capacity in line with the government's target of achieving a 20% renewable mix by 2025.
- Large-scale renewable facilities such as solar farms and hydro dams are typically land-intensive (a 50MW farm requires c.200 acres of land) and could have an effect on local biodiversity. In Peninsular Malaysia, there are no longer suitable sites for large dams while solar farms are typically situated on unused agricultural land.

Material S issues

- Average electricity tariffs in 2020 are c.20% higher relative to 2013 levels, steep for an essential service. Nevertheless, households have largely been insulated, with tariffs for the two lowest bands (c.70% of households) having been kept unchanged for the past decade.
- Tenaga was found liable for causing flash floods at Cameron Highlands (Bertam Valley) in 2013 having discharged water from its hydroelectric dam following heavy rains. Tenaga has since proactively engaged preventive measures such as regular cleaning of reservoir and dam, and conducting annual flood evacuation drills.
- Tenaga is a major employer in Malaysia, with a staff count of about 35,000 people of which 23,000 are represented by unions. 21% of Tenaga's employees are female. It also owns and operates a leading university in Malaysia which enrols c.10,000 students.

Key G metrics and issues

- Tenaga's constitution states a minimum of 2 and a maximum of 12 directors. MoFInc being the special shareholder of Tenaga, has the right to appoint up to six directors.
- There are presently 12 members on Tenaga's board comprising of 1 Executive Director (President/CEO), 3 Non-Independent Non-Executive Directors (including the Chairman) and 8 Independent Non-Executive Directors.
- 3 of the 12 board members (including Chairman and President/CEO are appointees by MoFInc and KhazanahNasional.
- In terms of board gender and diversity, 4 of the 12 board members are female, 3 are non-bumiputeras and 7 are of non-finance/accounting backgrounds.
- Tenaga has been audited by PricewaterhouseCoopers for at least the past decade.
- The cumulative remuneration of the CEOs represents less than 0.1% of Tenaga's 2021 normalised net profit.
- Female representation at the management level remains relatively low at 21% among senior management.
- Tenaga's track record with its international acquisitions has been mixed – it has substantially impaired its associates in Turkey (fully written-off) and India a few years after acquisition.
- Tenaga's balance sheet remains relatively under-levered, with a net debt-to-equity of 73% at end 2021. MFRS 16 with its lease liabilities has inflated the reported net gearing to c.1.3x, still a comfortable level.

[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).

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	Quantitative parameters (Score: 25)					
	Particulars	**Unit**	**2019**	**2020**	**2021**	**TPWR**
E	Scope 1 emissions	m tCO2e	33.79	39.04	39.80	34.5
E	Scope 2 emissions	m tCO2e	0.24	0.22	0.19	0.0
E	**Total**	**m tCO2e**	**34.03**	**39.26**	**39.99**	**34.5**
E	GHG intensity (Scope 1 and 2)	tCO2e/MWh	0.56	0.57	0.55	0.68
E	% Coal capacity	%	46%	46%	43%	**68%**
E	% Renewable Energy capacity	%	20%	20%	19%	29%
S	% of women in workforce	%	21.0%	21.1%	22.1%	8.1%
S	% of women in management roles	%	19.7%	21.7%	23.1%	6.0%
S	Lost time injury frequency (LTIF) rate	number	1.42	1.29	1.03	0.27
S	Contribution & sponsorship	MYRm	40	63	40	22
G	MD/CEO salary as % of reported net profit	%	0.17%	0.12%	0.14%	0.6%
G	Board salary as % of reported net profit	%	0.25%	0.30%	0.26%	1.0%
G	Independent directors on the Board	%	60%	64%	67%	50%
G	Female directors on the Board	%	50%	36%	33%	20%

Qualitative Paramaters (Score: 100)

a) Is there an ESG policy in place and whether there is a standalone ESG committee or is it part of a risk committee?

Yes - it has an established sustainability framework and a sustainability development committee headed by the CEO.

b) Is the senior management salary linked to fulfilling ESG targets?

Yes. ESG-related targets make up 30% CEO's total KPIs.

c) Does the company follow the task force of climate related disclosures (TCFD) framework for ESG reporting?

Yes

e) Does the company have a mechanism to capture Scope 3 emissions - which parameters are captured?

Yes - but Scope 2 and 3 emissions are inherently insignificant for an integrated electricity utility

f) What are the 2-3 key carbon mitigation/water/waste management strategies adopted by the company?

Tenaga has pledged to significantly increase its RE capacity, while also investing in emerging low-emission / green technologies.

g) Does carbon offset form part of the net zero/carbon neutrality target of the company?

Yes

Target (Score: 100)		
Particulars	**Target**	**Achieved**
Increase RE capacity to 8,300MW by 2025	8,300	3,438
Reduce emission intensity by 35% in 2035 vs 2020 baseline	35%	N/A
Net-zero carbon emissions by 2050	Net 0	N/A
Reduce coal capacity by 50% in 2035	50%	0%
Reduce coal capacity by 100% in 2050	100%	0%
Zero fatalities and LTIP <1.0 in 2050	<1.0	1.0
1% of PAT towards environmental and community programs in 2050	1.0%	1.1%

Impact

NA

Overall score: 63

As per our ESG matrix, TNB has an overall score of 63.

ESG score	Weights	Scores	Final Score
Quantitative	50%	25	13
Qualitative	25%	100	25
Target	25%	100	25
Total			**63**

As per our ESG assessment, TNB has an established framework, internal policies, and tangible mid/long-term targets. Reduction of coal capacity is contingent upon the expiry of existing PPAs. TNB's overall ESG score is 63, which makes its ESG rating above average in our view (average ESG rating = 50; refer to Appendix I for our ESG Assessment Scoring).

Articulating its transition plans

TNB has been publicizing details of its transition plans in recent weeks. The initiatives are broadly categorised along 4 pillars – GenCo, New Energy Division (NED), Grid and Electric Vehicles (EV).

1) GenCo

GenCo, which houses TNB's domestic coal, gas and hydro generation assets, will embark on a fast-track decarbonisation program. In particular, management is exploring the possibility of early retirement of selected coal plants.

Broadly, the strategy for plants with PPAs expiring before 2030 involves repowering with gas combined with the option of hydrogen co-firing and the installation of carbon capture units (CCU). Plants with PPAs expiring after 2030 would be repowered by new emerging green technology (such as green hydrogen). This involves renegotiating with the regulators and bondholders on the PPA and redemption terms, processes that TNB has briefly initiated.

Separately, GenCo would be exploring and investing in the hydrogen value chain (with partners). GenCo will also look towards investing internationally (ASEAN focus) in gas and hydro to reduce overall emission intensity. As GenCo grows, TNB is open to partially divesting GenCo via a listing to recycle capital.

2) New Energy Division (NED)

NED houses TNB's large-scale solar and wind assets (largely in Malaysia and the UK). The strategy is relatively straightforward – to continue to grow the RE portfolio both domestically and internationally. NRD will gradually move into asset development for IRR enhancement (currently mainly M&A). New focus markets include other developed markets in Europe, Australia and North Asia.

3) Grid

Aside from capacity and connectivity, the grid needs to be enhanced in order to facilitate the various energy transition initiatives such as variable renewable energy and distributed energy resources. Investment in digitalisation, automation and analytics can also help enhance demand management by clients. With the grid being a regulated asset under the IBR framework, TNB will earn a regulated return on its investment.

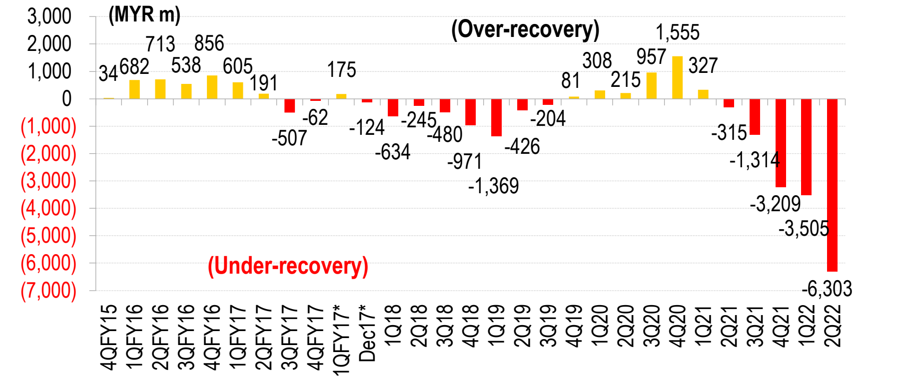
4) Electric vehicles (EV)

TNB will attempt to stimulate the EV industry by fostering cooperation among players in the EV value chain, building more charging infrastructure and reskilling and upskilling its workforce. TNB also intends to electrify its vehicle fleet. Overall, TNB expects 0.5m EVs on the road by 2030.

Coal prices remain stubbornly high

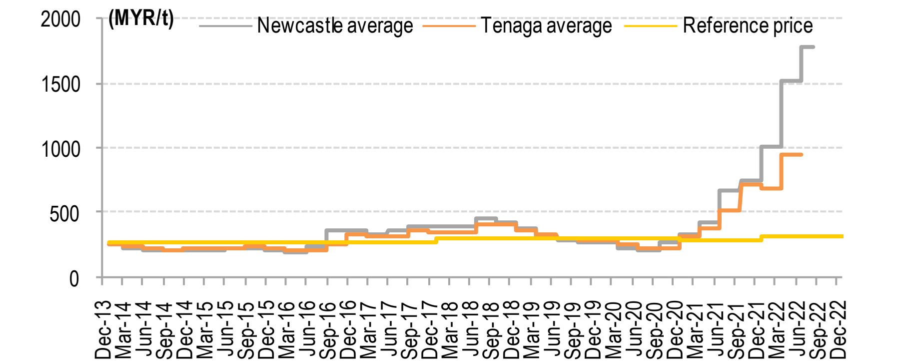
Coal prices have remained elevated, meaning ICPT concerns will continue to take centre stage. The under-recovery of generation cost hit a new high in 2Q22 and coal prices have climbed further since. By our estimate, a c.3sen/kWh surcharge is required to cover every incremental MYR100/t of coal price above the tariff reference (assuming the surcharge is borne by all users).

Fig 1: Generation cost imbalances



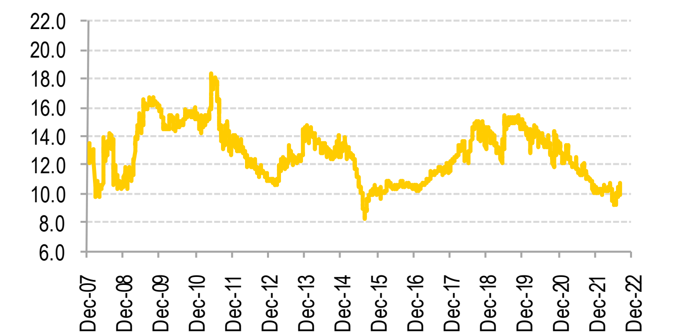
*Source: Company. *Change of financial year end from Aug to Dec.*

Fig 2: Coal prices



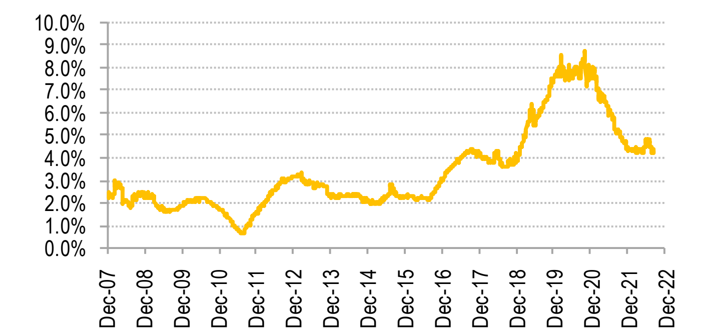
Source: Bloomberg, Maybank IBG Research

Fig 3: Trailing PER



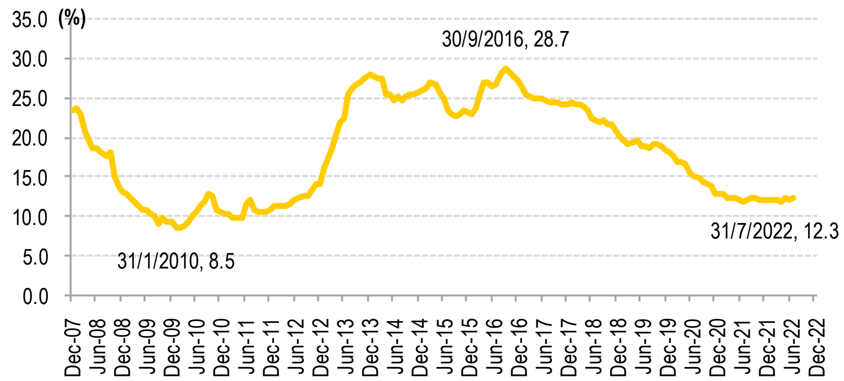
Source: Bloomberg, Maybank IBG Research

Fig 4: Trailing net yield



Source: Bloomberg, Maybank IBG Research

Fig 5: Foreign shareholding



Source: Company

Risk statement

There are several risk factors for our earnings estimates, price target, and rating for Tenaga. Regulatory developments, such as the determination of regulated returns, have direct impact on earnings. Changes in electricity demand patterns or plant outages could also result in loss of earnings for Tenaga.

FYE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Key Metrics					
P/E (reported) (x)	15.6	13.2	11.0	10.2	9.8
Core P/E (x)	13.3	10.4	11.0	10.2	9.8
Core FD P/E (x)	13.4	10.4	11.0	10.2	9.9
P/BV (x)	1.1	0.9	0.9	0.8	0.8
P/NTA (x)	2.9	2.5	2.1	1.9	1.7
Net dividend yield (%)	7.7	4.3	4.1	4.4	4.6
FCF yield (%)	14.5	9.2	9.9	11.6	12.3
EV/EBITDA (x)	7.0	6.4	6.1	5.9	5.7
EV/EBIT (x)	14.2	12.0	11.7	11.2	10.7
INCOME STATEMENT (MYR m)					
Revenue	43,976.0	52,629.5	48,843.9	49,676.9	50,524.9
EBITDA	13,859.6	15,326.4	15,430.2	15,725.2	16,077.2
Depreciation	(7,021.2)	(7,218.1)	(7,302.8)	(7,411.4)	(7,513.1)
Amortisation	0.0	0.0	0.0	0.0	0.0
EBIT	6,838.4	8,108.3	8,127.5	8,313.8	8,564.1
Net interest income /(exp)	(1,638.2)	(1,909.6)	(2,141.4)	(2,179.6)	(2,205.1)
Associates & JV	76.5	193.5	193.5	193.5	193.5
Exceptionals	(253.0)	(858.0)	0.0	0.0	0.0
Other pretax income	0.0	0.0	0.0	0.0	0.0
Pretax profit	5,023.7	5,534.2	6,179.6	6,327.7	6,552.5
Income tax	(793.9)	(1,048.7)	(1,316.9)	(1,104.2)	(1,144.6)
Minorities	(23.7)	(202.9)	(202.9)	(202.9)	(202.9)
Discontinued operations	0.0	0.0	0.0	0.0	0.0
Reported net profit	4,206.1	4,282.6	4,659.8	5,020.7	5,205.0
Core net profit	4,459.1	5,140.6	4,659.8	5,020.7	5,205.0
BALANCE SHEET (MYR m)					
Cash & Short Term Investments	13,415.4	9,208.4	12,304.7	16,037.6	20,062.7
Accounts receivable	10,216.8	13,976.9	13,381.9	13,065.7	13,150.3
Inventory	1,583.8	1,977.1	1,830.9	1,859.3	1,885.6
Property, Plant & Equip (net)	113,213.1	114,105.6	115,802.8	117,391.5	118,378.4
Intangible assets	35,340.3	35,149.6	35,149.6	35,149.6	35,149.6
Investment in Associates & JVs	1,339.2	1,867.1	1,995.6	2,124.1	2,252.6
Other assets	6,324.7	6,315.9	6,315.9	6,315.9	6,315.9
Total assets	**181,433.3**	**182,600.6**	**186,781.4**	**191,943.7**	**197,195.2**
ST interest bearing debt	6,409.1	6,992.5	6,992.5	6,992.5	6,992.5
Accounts payable	10,534.1	8,596.7	7,832.1	7,850.5	7,856.8
LT interest bearing debt	43,043.5	44,685.7	46,911.3	49,136.9	51,362.5
Other liabilities	63,997.0	63,933.0	63,933.0	63,933.0	63,933.0
Total Liabilities	**123,983.4**	**124,208.2**	**125,669.2**	**127,913.2**	**130,145.1**
Shareholders Equity	55,833.2	56,608.4	59,171.3	61,932.6	64,795.4
Minority Interest	1,616.7	1,784.0	1,940.9	2,097.8	2,254.7
Total shareholder equity	**57,449.9**	**58,392.4**	**61,112.2**	**64,030.4**	**67,050.1**
Total liabilities and equity	**181,433.3**	**182,600.6**	**186,781.4**	**191,943.7**	**197,195.2**
CASH FLOW (MYR m)					
Pretax profit	5,023.7	5,534.2	6,179.6	6,327.7	6,552.5
Depreciation & amortisation	7,021.2	7,218.1	7,302.8	7,411.4	7,513.1
Change in working capital	(1,006.9)	(5,798.0)	(23.4)	306.1	(104.6)
Other operating cash flow	5,685.5	5,233.7	(193.5)	(193.5)	(193.5)
Cash flow from operations	15,518.6	13,353.9	14,089.9	14,927.2	14,827.9
Capex	(6,909.7)	(8,415.5)	(9,000.0)	(9,000.0)	(8,500.0)
Free cash flow	8,608.9	4,938.4	5,089.9	5,927.2	6,327.9
Dividends paid	(5,235.8)	(4,568.4)	(2,096.9)	(2,259.3)	(2,342.3)
Equity raised / (purchased)	0.0	0.0	0.0	0.0	0.0
Change in Debt	2,004.5	1,886.0	2,225.6	2,225.6	2,225.6
Other invest/financing cash flow	(2,795.2)	(1,688.1)	(2,122.4)	(2,160.6)	(2,186.1)
Effect of exch rate changes	0.0	0.0	0.0	0.0	0.0
Net cash flow	2,582.4	567.9	3,096.3	3,732.9	4,025.2

FYE 31 Dec	FY20A	FY21A	FY22E	FY23E	FY24E
Key Ratios					
Growth ratios (%)					
Revenue growth	(13.7)	19.7	(7.2)	1.7	1.7
EBITDA growth	(4.0)	10.6	0.7	1.9	2.2
EBIT growth	(8.5)	18.6	0.2	2.3	3.0
Pretax growth	(14.1)	10.2	11.7	2.4	3.6
Reported net profit growth	(14.2)	1.8	8.8	7.7	3.7
Core net profit growth	(12.2)	15.3	(9.4)	7.7	3.7
Profitability ratios (%)					
EBITDA margin	31.5	29.1	31.6	31.7	31.8
EBIT margin	15.6	15.4	16.6	16.7	17.0
Pretax profit margin	11.4	10.5	12.7	12.7	13.0
Payout ratio	108.4	53.4	45.0	45.0	45.0
DuPont analysis					
Net profit margin (%)	9.6	8.1	9.5	10.1	10.3
Revenue/Assets (x)	0.2	0.3	0.3	0.3	0.3
Assets/Equity (x)	3.2	3.2	3.2	3.1	3.0
ROAE (%)	7.4	7.6	8.0	8.3	8.2
ROAA (%)	2.5	2.8	2.5	2.7	2.7
Liquidity & Efficiency					
Cash conversion cycle	(12.9)	13.5	39.6	38.6	37.1
Days receivable outstanding	76.0	82.7	100.8	95.8	93.4
Days inventory outstanding	19.1	15.8	18.5	17.6	17.6
Days payables outstanding	108.0	85.1	79.7	74.9	73.9
Dividend cover (x)	0.9	1.9	2.2	2.2	2.2
Current ratio (x)	0.9	1.0	1.1	1.2	1.4
Leverage & Expense Analysis					
Asset/Liability (x)	1.5	1.5	1.5	1.5	1.5
Net gearing (%) (incl perps)	62.7	72.7	68.1	62.6	57.1
Net gearing (%) (excl. perps)	62.7	72.7	68.1	62.6	57.1
Net interest cover (x)	4.2	4.2	3.8	3.8	3.9
Debt/EBITDA (x)	3.6	3.4	3.5	3.6	3.6
Capex/revenue (%)	15.7	16.0	18.4	18.1	16.8
Net debt/ (net cash)	36,037.2	42,469.8	41,599.1	40,091.8	38,292.3

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

LEE Ju Ye
Singapore | Thailand | Indonesia
(65) 6231 5844
leejuye@maybank.com

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

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

Brian LEE Shun Rong
(65) 6231 5846
brian.lee1@maybank.com

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

FX

Saktiandi SUPAAT
Head of FX Research
(65) 6320 1379
saktiandi@maybank.com.sg

TAN Yanxi
(65) 6320 1378
tanyx@maybank.com.sg

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

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

CHAN Han Chin
(603) 2297 8888
hanchin.chan@maybank-ib.com

ONG Seng Yeow
(65) 6231 5839
ongsengyeow@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

Anand PATHMAKANTHAN *Head of Research*
(603) 2297 8783
anand.pathmakanthan@maybank-ib.com
• Strategy

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

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

LIAW Thong Jung
(603) 2297 8688 tjliaw@maybank-ib.com
• Oil & Gas Services- Regional
• Automotive

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
• Construction • Renewable Energy • REITs

Arvind JAYARATNAM
(603) 2297 8692
arvind.jayaratnam@maybank.com
• Petrochemicals • Technology

Shafiq KADIR, CFA
(603) 2297 8691
msshafiqk.abkadir@maybank-ib.com
• Healthcare • Software

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

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

CHUA Su Tye
(65) 6231 5842 chuasutye@maybank.com
• REITs - Regional

Eric ONG
(65) 6231 5924 ericong@maybank.com
• Healthcare • Transport • SMIDs

Kelvin TAN
(65) 6231 5837 kelvintan1@maybank.com
• Telcos • Industrials

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

PHILIPPINES

Jacqui de JESUS *Head of Research*
(63) 2 8849 8840
jacqui.dejesus@maybank.com
• Strategy • Conglomerates

Rachelleen RODRIGUEZ, CFA
(63) 2 8849 8843
rachelleen.rodriguez@maybank.com
• Banking & Finance • Transport • Telcos

Daphne SZE
(63) 2 8849 8847
daphne.sze@maybank.com
• Consumer

Miguel SEVIDAL
(63) 2 8849 8844
miguel.sevidal@maybank.com
• REITs • Property

Fiorenzo de JESUS
(63) 2 8849 8846
fiorenzo.dejesus@maybank.com
• Utilities

THAILAND

Jesada TECHAHUSDIN, CFA
(66) 2658 6300 ext 1395
jesada.t@maybank.com
• Banking & Finance

Vanida GEISLER, CPA
(66) 2658 6300 ext 1394
Vanida.G@maybank.com
• Property • REITs

Yuwanee PROMMAPORN
(66) 2658 6300 ext 1393
Yuwanee.P@maybank.com
• Services • Healthcare

Wasu MATTANAPOTCHANART
(66) 2658 6300 ext 1392
wasu.m@maybank.com
• Telcos

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

Jaroonpan WATTANAWONG
(66) 2658 5000 ext 1404
jaroonpan.w@maybank.com
• Transportation • Small cap

INDONESIA

Jeffrosenberg CHENLIM *Head of Research*
(62) 21 8066 8680
Jeffrosenberg.lim@maybank.com
• Strategy

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

Richard SUHERMAN
(62) 21 8066 8691
richard.suherman@maybank.com
• Metals & Mining

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

Satriawan, 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
• Banks

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

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

Tyler Manh Dung Nguyen
(84 28) 44 555 888 ext 8085
manhdung.nguyen@maybank.com
• Utilities • Property

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

Nguyen Le Tuan Loi
(84 28) 44 555 888 ext 8088
loi.nguyen@maybank.com
• Industrials

Nguyen Thi Ngan Tuyen
Head of Retail Research
(84 28) 44 555 888 ext 8081
tuyen.nguyen@maybank.com
• Retail Research

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

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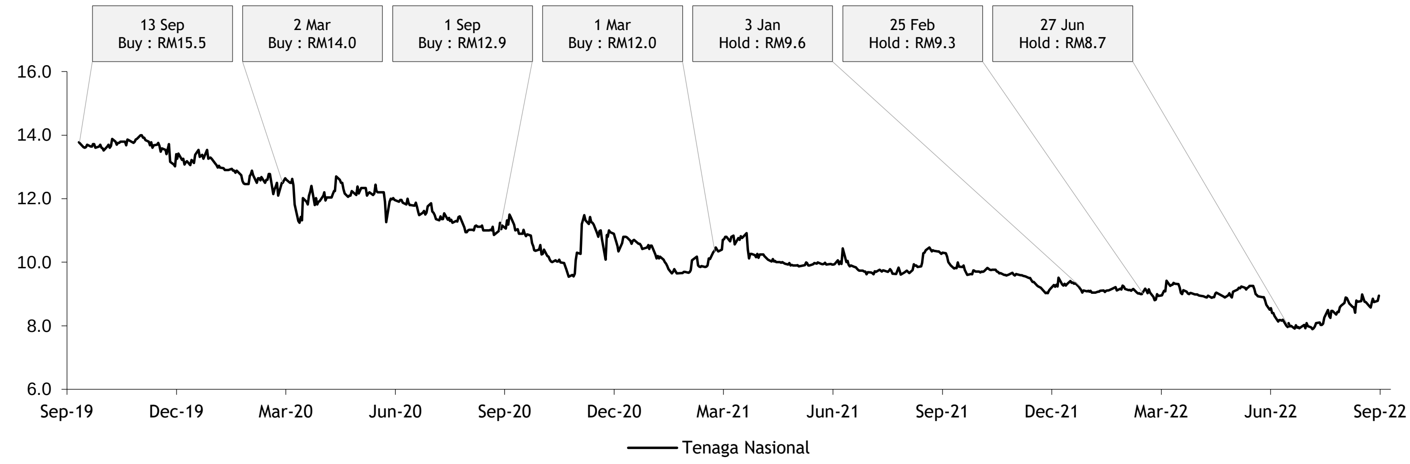

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Malaysia

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

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

New York

Maybank Securities USA Inc
400 Park Avenue, 11th Floor
New York, New York 10022,
U.S.A.

Tel: (212) 688 8886
Fax: (212) 688 3500

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

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

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

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

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)

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

Sales Trading

Kevin Foy
Regional Head Sales Trading
kevinfoy@maybank.com
Tel: (65) 6636-3620
US Toll Free: 1-866-406-7447

Indonesia

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

London

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

New York

James Lynch
jlynch@maybank-keusa.com
Tel: (212) 688 8886

India

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

Philippines

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

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