

PV Transportation (PVT)

Key beneficiary of growing energy imports

Nguyen Vinh Analyst / Oil & Gas & Chemicals July 27, 2020 vinhn@kbsec.com.vn Initiate coverage with BUY rating We initiate our coverage of PVT with a BUY rating and a target price of and target price of VND17,300 VND17,300. Our target price is based on a mid-cycle P/B multiple derived from our three-stage dividend discount model. We apply a mid-cycle valuation for our target price to reflect our view for more modest recovery in freight rates amid an extended period of weak oil prices. Best positioned to capture the Vietnam's growing energy demand has already outstripped local supplies and boom in Vietnam's energy imports shortages will require more energy imports. PVT is the most likely candidate to win theses lucrative transportation contracts for Vietnam's coming energy import boom. Currently, PVT mainly focuses on LPG (Liquefied Petroleum Gas) and crude oil imports - and clearly shown in the company's current fleet expansion plan - but management will now need to prepare for 2022E's opening of the Thi Vai LNG terminal scheduled to go online in 2022E. Await the new fleet expansion plan Management has only announced its fleet expansion plan for 2020E-2021E but we that will need to include LNG expect a new plan for ships purchased for 2022E onwards should reveal the size carriers and timing of expansion into the lucrative LNG market. New tonnage in the near term will likely include a Very Large Crude Carrier (VLCC) that will allow the company to secure supply contracts to transport 2.5 million tons of crude to Nghi Son Refinery.

BUY initiate

| Target Price | VND17,300 |
|----------------------------|-----------|
| Total return (%) | 104.9% |
| Current price (Jul 27) | VND8,930 |
| Consensus target price | VND12,800 |
| Mkt capitalization (USDbn) | USD108mn |

Forecast earnings & valuation

| Fiscal year-end | 2019A | 2020E | 2021E | 2022E |
|---------------------------|-------|--------|-------|--------|
| Revenue (VNDbn) | 7,758 | 7,138 | 8,561 | 10,700 |
| EBIT | 928 | 934 | 1,212 | 1,681 |
| NP attributable to parent | 690 | 538 | 699 | 971 |
| EPS (VND) | 2,450 | 1,912 | 2,485 | 3,451 |
| EPS growth (%) | 5.8 | (22.0) | 30.0 | 38.9 |
| P/E (x) | 3.6 | 4.7 | 3.6 | 2.6 |
| EV/EBITDA (x) | 2.7 | 3.5 | 3.5 | 3.2 |
| P/B (x) | 0.4 | 0.4 | 0.4 | 0.3 |
| ROE (%) | 12.7 | 9.1 | 11.0 | 13.9 |
| Div yield (%) | 13.5 | 11.2 | 13.4 | 15.7 |

Trading data

Free float (%)

Avg trading value (3M) Foreign available (%)

Major shareholders (%)

Share price performance

44.0%

26.6%

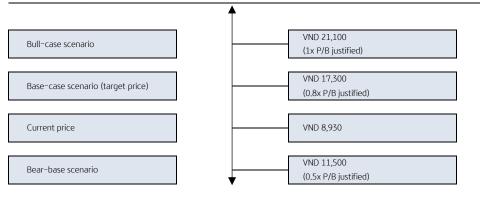
USD0.68mn

PetroVietnam (51%)

| (%) | 1M | 3M | 6M | 12M |
|----------|-------|-------|-------|-------|
| Absolute | -16.9 | -10.7 | -39.7 | -47.6 |
| Relative | -9.9 | -12.3 | -23.8 | -33.7 |



Investment opinion & risks



Revised earnings estimates

| | Revise | ed . | Previo | us | Chang | le |
|------------|--------|-------|--------|-------|-------|-------|
| (VNDbn, %) | 2020E | 2021E | 2020E | 2021E | 2020E | 2021E |
| Revenue | | | | | | |
| EBIT | | | | | | |
| OP | | | | | | |

NP after MI

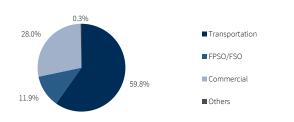
Source: Bloomberg, KB Securities Vietnam

KBSV estimate vs consensus

| | KBSV esti | mates | Consen | sus | Differer | nce |
|-------------|-----------|-------|--------|-------|----------|-------|
| (VNDbn, %) | 2020E | 2021E | 2020E | 2021E | 2020E | 2021E |
| Revenue | 7,138 | 8,561 | 6,567 | 7,455 | 8.7 | 14.8 |
| EBIT | 934 | 1,212 | 758 | 892 | 23.2 | 35.8 |
| OP | 795 | 1,001 | 739 | 882 | 7.6 | 13.5 |
| NP after MI | 538 | 699 | 437 | 527 | 23.1 | 32.7 |

Source: Bloomberg, KB Securities Vietnam

Revenue composition (2019)



Source: Company reports, KB Securities Vietnam

Peer group comparison

| | Mkt | 12m fwd | 3y EPS | 12m fwd | 12m fwd |
|---------------|-----|---------|--------|---------|---------|
| (USDbn, x, %) | Сар | P/E | CAGR | ROE | P/B |
| PVT VN | 0.1 | 5.4 | -6.9 | 9.4 | 0.4 |
| GAS VN | 5.3 | 14.3 | -5.7 | 17.6 | 2.4 |
| PLX VN | 2.2 | 19.8 | 0.0 | 11.8 | 1.9 |
| PVS VN | 0.2 | 6.5 | -7.5 | 6.6 | 0.4 |
| PVD VN | 0.2 | 21.9 | 13.8 | 0.9 | 0.3 |
| BSR VN | 0.8 | -6.7 | -18.7 | 2.1 | 0.6 |

Source: Bloomberg, KB Securities Vietnam

Base-case scenario: catalysts

- 1) Brent prices above USD55 in 2021E
- 2) 4Q earnings recovery
- 3) Recovery in freight rates

Bull-case scenario: upside risk

- 1) Brent prices above USD55 in 2020E
- 2) Strong freight rates
- 3) Correction in used VLCC prices

Bear-case scenario: downside risk

- 1) Coronavirus second wave
- 2) Weak freight rates
- 3) Spike in used VLCC prices

Valuation & target price

1) Valuation method:

3-stage dividend discount model

2) Target price calculation Sustainable ROE 7.0% Cost of equity 13.2%

Target price range:
VND 11,500 - VND 21,000

4) Valuation at target price 9.0x P/E 0.8x P/B

Key beneficiary of growing energy imports

PV Transportation (PVT): Preparing to serve the lucrative LNG transportation segment for the upcoming LNG import boom We initiate our coverage of PVT with a BUY rating and a target price of VND17,300. Our target price is based on a mid-cycle P/B multiple derived from our three-stage dividend discount model. We apply a mid-cycle valuation for our target price to reflect our view for more modest recovery in freight rates amid an extended period of weak oil prices.

Energy shortages will require more energy imports and PVT is the most likely candidate to win theses lucrative transportation contracts for Vietnam's coming energy import boom. Currently, PVT mainly focuses on LPG (Liquefied Petroleum Gas) and crude oil imports – and clearly shown in the company's current fleet expansion plan – but management will now need to prepare for 2022E's opening of the *Thi Vai* LNG terminal scheduled to go online in 2022E.

Our 19.6% CAGR for 2020E-2025E could be overly conservative given new opportunities in LNG terminals and petrochemicals. Fleet expansion plans are only up to 2022E and we await details on potential LNG carriers, chemical tankers or product tankers. The company has budgeted USD300 million in capital expenditure for 14–16 ships but we believe PVT will need to include purchasing or leasing LNG tankers for the *Thi Vai* LNG terminal in 2022E. Any new plan may need to reflect Vietnam's construction of 9 LNG terminals over the next 15 years as well as ships to transport chemical products for the new *Long Son* Petrochemicals plant.

| Table 1. PV Tra | nsportation (PVT) – Valua | tion (DDM) & target price (VND, %) |
|-----------------|---------------------------|------------------------------------|
| Line item | Notation | Notes |

| Line item | Notation | | Notes | | | |
|------------------------------|----------------|--------|---|--|--|--|
| Cost of equity | k _E | 8.9% | r _f + (β _E * m) | | | |
| Re-levered beta | ße | 1.142 | B _A (1+((1−t)*D/E)) | | | |
| Unlevered beta | ßa | 0.635 | PVT unlevered beta | | | |
| Terminal assumptions | | | | | | |
| Sustainable ROE | ROE | 7.0% | Long-term ROE | | | |
| Div payout ratio | р | 70.0% | Long-term payout ratio | | | |
| Sustainable growth | g | 2.1% | ROE * (1 - p) | | | |
| Assumptions | | | | | | |
| Target gearing | D/E | 100.0% | Long-term debt/equity ratio | | | |
| Statutory tax rate | t | 20.0% | Marginal corporate tax rate | | | |
| Market risk premium | m | 8.9% | 10-year expected market return – risk free rate | | | |
| Risk free rate | ۲ _f | 3.0% | 10-year government bond | | | |
| Terminal value as % of firm | value | 71.4% | | | | |
| PV of future dividends (VNC |)bn) | 1,698 | | | | |
| PV of terminal value (VNDb | n) | 4,247 | | | | |
| PV of Firm (VNDbn) | | 5,944 | | | | |
| Total return | | 104.9% | | | | |
| Target price (VND) | | 17,300 | | | | |
| Dividend per share (VND) | | 1,000 | | | | |
| ource: KB Securities Vietnam | 1 | | | | | |

Source: KB Securities Vietnam

Our 12-month target price set to mid-cycle price objective vs fullygrowth loaded valuation

Our valuation is based on the three-stage dividend discount model (DDM) that utilizes the capital asset pricing model (CAPM) to determine an appropriate discount rate for projected cash dividends/stock buybacks for individual stocks. We consider valuations generated from the DDM as fully-growth loaded assessments of value. Additionally, we estimate the ex-growth price-to-book multiple by modifying the Gordon Growth model [(ROE-g)/(COE-g)] to assume zero growth or simply the company's sustainable return on equity (ROE) divided by the cost of equity (COE). Our mid-cycle target prices is then based the average of the fully-growth loaded value of the company and the ex-growth estimate.

Table 2. KBSV - Valuation methodology

| | - | • |
|------------------------|---|---------------------------------------|
| Gordon growth model | | |
| Justified P/B multiple | = | (ROE – g) |
| Ex-growth model | | (COE – g) |
| | | ROE |
| Ex-growth P/B multiple | = | COE |
| Mid-cycle model | | |
| Mid-cycle D/P multiple | _ | Average of: |
| Mid-cycle P/B multiple | - | [DDM valuation & Ex-growth valuation] |
| | | |

Source: KB Securities Vietnam

2Q earnings down by 36% YoY due to: 1) lower freight rates offered to BSR; and 2) drop in FSO day rates from production cuts

3Q likely to see another tough quarter before recovering in 4Q

Management released 2Q earnings of VND157 billion or down 36% YoY due to: 1) a 10% drop in freight rates for the Binh Son Refinery (BSR); and 2) 20% fall in FSO day rates (Floating, Storage & Offloading) for the *Dai Hung Queen*. Results for 1H were 57% of management's conservative business targets for the year. Management agreed to lower freight rates to BSR as part of an *ad hoc* cost sharing agreement to offer some relief over the next two quarters. Weak Brent prices and production cuts largely explain the 20% drop in day rates to the USD40,000 level for FSO *Dai Hung Queen*.

We expect a further drop in 3Q earnings to VND117 billion or down another 26% QoQ on suspended crude oil shipments to BSR during its two-month maintenance shutdown. BSR will conduct its three-year facility overhaul in August and September. That said, we expect earnings to recover to VND292 billion when the purchase of a VLCC tanker (Very Large Crude Carrier) allows the company to secure long-term crude transportation contracts with Nghi Son Refinery (NSR). Currently, margins are thin on its VLCC contract due to the reliance on a leased tanker from SK Shipping.

| Table 3. PV Transportation (PVT) – Fleet expansion plans, 2020E–2021E (vessels, dry | |
|---|--|
| weight tons in thousands) | |

| | Current f | fleet | New ton | nage | Expected fle | eet size |
|------------------|-----------|---------|----------|---------|--------------|----------|
| - | | DWT | | DWT | | DWT |
| Туре | Quantity | (thous) | Quantity | (thous) | Quantity | (thous) |
| Crude oil tanker | 4 | 418 | 3 | 560 | 7 | 978 |
| Product carrier | 11 | 190 | 7 | 133 | 18 | 323 |
| LPG carrier | 14 | 47 | 2 | 170 | 16 | 217 |
| Bullk carrier | 2 | 83 | 1 | 15 | 3 | 98 |
| FPSO/FSO | 2 | 199 | 0 | 0 | 2 | 199 |
| Total | 33 | 938 | 13 | 878 | 46 | 1,816 |

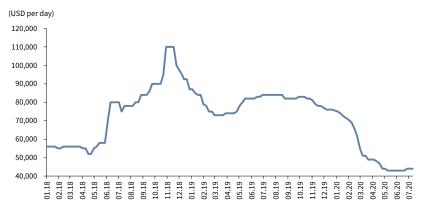
Source: Company reports, KB Securities Vietnam

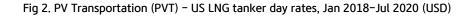
Fig 1. PV Transportation (PVT) – VLCC tanker day rates of Arabian Gulf–China route & Rotterdam–Singapore route, Jan 2018–July 2020 (USD)



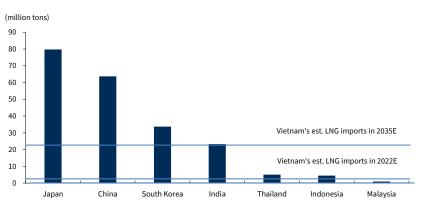
VLCC = Very Large Crude Carrier

Source: Bloomberg, KB Securities Vietnam





Source: Bloomberg, KB Securities Vietnam





Source: Bloomberg, KB Securities Vietnam

LNG the secular growth opportunity

GAS & PVT to benefit most from LNG imports

lack of LNG importing

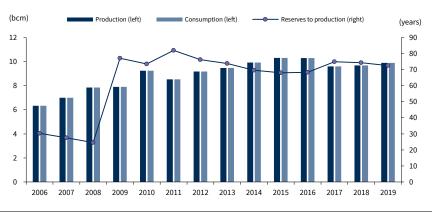
infrastructure

nine LNG terminals that a years. PVT is also the lea these new facilities in the preparing plans to purch Gas consumption held back by Currently, GAS is Vietnan

GAS and PVT should benefit most from the start of LNG imports in 2021E/2022E with the startup of Vietnam's first regasification facilities. Imports will need to make up for increasing shortfalls arising from what we expect will be slowing production volumes at Vietnam's existing gas fields (<u>our forecasts</u> <u>assume extended delays but eventual start up of the new large gas fields</u>). According to Vietnam's long-term LNG road map, PV Gas will own seven out of nine LNG terminals that are scheduled for construction over the next fifteen years. PVT is also the leading candidate to win the transportation contracts for these new facilities in the lucrative transportation segment and is already preparing plans to purchase or charter a fleet of LNG carriers.

Currently, GAS is Vietnam's sole provider of natural gas transported by pipelines from offshore gas fields and we estimate existing production may only satisfy about 79% of real demand from gas-fired power plants in 2020E. Natural gas consumption has equaled production for more than a decade as consumption is limited to locally-available gas supplies due to Vietnam's lack of regasification facilities that prohibits the import of LNG. Moreover, natural gas shortages have been exacerbated by slowing production output from Vietnam's mature gas fields.

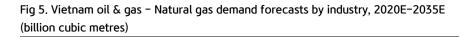
Fig 4. Vietnam oil & gas – Natural gas historical production, consumption & reserves to production ratios, 2008–2019 (billion cubic metres, years)

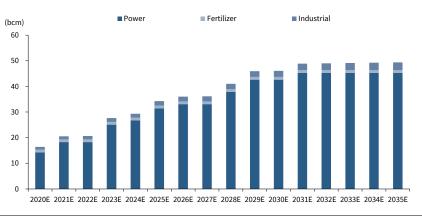


Source: General Statistics Office Vietnam, KB Securities Vietnam

We estimate gas demand from power clients will triple in next 15 years

We estimate that expansion of Vietnam Electricity's (EVN) power grid alone could triple natural gas demand by 2035E given the construction plan for new gas-fired power plants. Most of this demand will need to be met by LNG imports as Vietnam's natural gas production from existing fields is likely to contract by 12.2% annually without the exploitation of new fields.





Source: General Statistics Office Vietnam, KB Securities Vietnam

| Table 4. Vietnam power generation sector - Vietnam Electric (EVN) new power plant |
|---|
| construction plans, 2022E-2028E (megawatts) |

| Power plants | Owner | Capacity | Start up year |
|----------------|--------------------------|-----------|---------------|
| Nhon Trach 3 | PVN | 750 MW | 2022 |
| Nhon Trach 4 | | 750 MW | 2022 |
| Son My 2.1 | AES Corporation, PV GAS | 750 MW | 2023 |
| Son My 2.2 | | 750 MW | 2024 |
| Son My 2,3 | | 750 MW | 2025 |
| Son My 1.1 | EDF, Kyushu, Sojitz, PAC | 750 MW | 2026 |
| Son My 1,2 | | 750 MW | 2027 |
| Son My 1.3 | | 750 MW | 2028 |
| O Mon 3 | EVN (ODA) | 750 MW | 2020 |
| O Mon 4 | EVN | 750 MW | 2021 |
| O Mon 2 | None | 750 MW | 2026 |
| Kien Giang 1 | PVN | 750 MW | 2021 |
| Kien Giang 2 | | 750 MW | 2022 |
| Mien Trung 1 | PVN | 750 MW | 2023 |
| Mien Trung 2 | | 750 MW | 2024 |
| Dung Quat 1 | EVN | 750 MW | 2023 |
| Dung Quat 2 | BOT | 750 MW | 2024 |
| Dung Quat 3 | EVN | 750 MW | 2025 |
| Total Capacity | | 13,500 MW | |

Source: Company reports, KB Securities Vietnam

GAS will lead the facilities investment for LNG terminals needed to close the demand gap

GAS will invest in seven of nine LNG terminals scheduled for completion between 2022E and 2035E. If construction goes to plan, we estimate maximum import capacity at 25 MTPA (million tons per annum) or 150% of natural gas demand by 2035E. The *Hai Linh* terminal owned by Hai Linh Limited will be Vietnam's first LNG terminal and is scheduled for startup in 2021E but should be quickly followed up by the *Thi Vai* terminal owned by PV Gas with commercial operations in 2022E. Moreover, PV Gas has already opened bidding for feasibility studies for *Thi Vai* Phase 2 to accelerate expansion to 2023E.

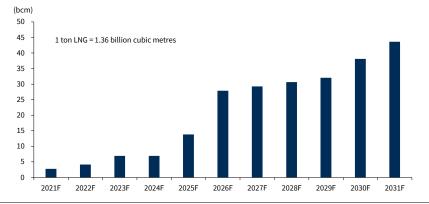


Fig 6. Vietnam oil & gas – LNG output from new terminals, 2021E–2031E (billion cubic metres)

Source: Vietnam Gas Master Plan, KB Securities Vietnam

Table 5. Vietnam oil & gas – Upcoming LNG terminals, 2021E–2035E (million tons per year)

| LNG | Startup | Main | Capacity | |
|---------------------------|-------------------|------------------|-------------------|--|
| import terminal | year | investor | (MTPA) | |
| Thi Vai (Ba Ria Vung Tau) | 2022 | | 1-3 MT | |
| Hon Khoai (Ca Mau) | 2022-25 (phase 1) | | 1MT (phase 1) | |
| | 2025 - (phase 2) | | 2MT (phase 2) | |
| Tien Giang (Tien Giang) | 2022-25 | | 4-6 MT | |
| Son My (Binh Thuan) | 2023-25 (phase 1) | PV Gas | 1-3 MT (phase 1), | |
| | 2027-30 (phase 2) | (GAS) | 3 MT (phase 2) & | |
| | 2031-35 (phase 3) | | 3 MT (phase 3) | |
| Thai Binh FSRU | 2026-30 | | 0.2-0.5 MT | |
| My Giang (Khanh Hoa) | 2030-35 | | 3 MT | |
| Cat Hai (Hai Phong) | 2030-35 | | 1-3 MT | |
| Nam Van Phong (Khanh Hoa) | 2025 | Petrolimex (PLX) | 1 MT | |
| Hai Linh LNG (Vung Tau) | 2021 (phase 1) | Hai Linh Limited | 2-3 MT (phase 1) | |
| | 2023-25 (phase 2) | (unlisted) | 6 MT (phase 2) | |

Source: Vietnam Gas Master Plan, KB Securities Vietnam

Vietnam would join the club of LNG importers as Asia's 8th– largest LNG customer

By 2022E, Hai Linh's 2 MTPA capacity at the *Hai Linh* terminal scheduled for startup in 2021E and GAS's 1 MTPA capacity at the *Thi Vai* terminal scheduled for commercial operations in 2022E would initially rank Vietnam as Asia's 8–largest LNG importer by 2022E. Over our forecast period, Vietnam's LNG imports will likely reach similar levels to Thailand and Indonesia.

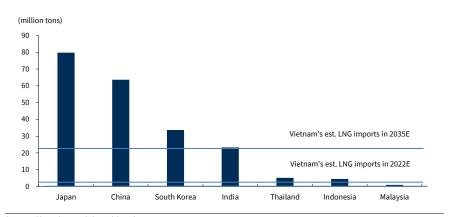
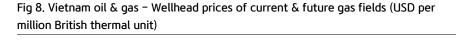
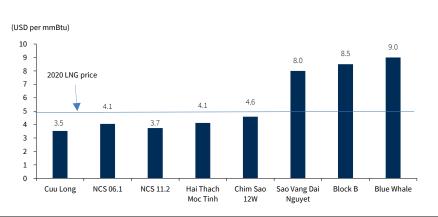


Fig 7. Asia LNG - LNG import by country, 2019 (million tons)

Source: Bloomberg, KB Securities Vietnam

LNG import prices should be low enough to compete favorably with the wellhead prices of Vietnam's new gas fields Prices for US & Russian LNG exports currently trade at around USD5.00 per mmBtu (million British thermal units) and should remain competitively-priced against industry estimates for the wellhead prices (or wholesale prices at the source of production) of Vietnam's major upcoming gas projects. Vietnam's major new gas fields include *Sao Vang-Dai Nguyet* located in the *Nam Con* basin and *White Lion* in the *Cuu Long* basin both located off the southern coast and the two largest fields of *Block B* located in the *Malay-Tho Chu* basin off the southwest coast and *Blue Whale* located in the *Song Hong* basin off the northeastern coast. Industry estimates put wellhead prices at USD8.00 per mmBtu for *Sao Vang-Dai Nguyet*, USD9.00 per mmBtu for *Blue Whale* and USD8.50 per mmBtu for *Block B* (no available estimates for *White Lion*). After adding a 30% estimate for transportation & regasification costs, we expect LNG import prices to be competitive against locally-produced natural gas for power generation companies.





Source: PV Gas, Bloomberg, KB Securities Vietnam

Vietnam's current gas pricing and cost regime is complex

Vietnam's pricing and cost regime for natural gas is complex. Selling prices for all of Vietnam's energy products are based on government pricing formulas (including electricity tariffs), while the cost of gas is set according to a mix of fixed and floating prices depending on the gas field. Some of this has since changed due to the elimination of the *Take or pay* (ToP) segment of the market. Natural gas has been sold to power plants under two pricing schemes: 1) legacy *Take or pay* (ToP) agreements for power plants located in the southeast region; and 2) *Above ToP* prices for gas volumes sold above any existing ToP agreements or gas sold to power plants outside of the southeastern region.

ToP agreements: ToP agreements have since been eliminated but were agreements based on an annual selling prices set at the start of each year using a 2015 base year price of USD5.57 per mmBtu and adding a 2% inflator each year. About 35% of annual volumes at GAS were sold under ToP agreements. GAS recently ended ToP agreements in March 2019 and rolled over to the *Above ToP* pricing formula but uncertainties still exist as to whether GAS will transfer gains from this transition to the government or not.

Above ToP prices: *Above ToP* prices are pegged to Singaporean High Sulphur Fuel Oil (HSFO) prices according to the following formula:

Selling price = Max [46% HSFO price, wellhead price] + transportation & tariffs (including markup)

Selling prices are either 46% of the HSFO price or the wellhead price including transportation costs and tariffs to ensure GAS breaks even for all gas sold and earns its mark up even if HSFO prices fall sharply. Transportation costs are determined by the pipeline used to deliver the gas.

Industrial prices: Prices for natural gas sold to industrial customers are negotiated at the start of the year or based on the following formula:

Selling price = Max [100% HSFO price, wellhead price] + transportation & tariffs (including markup)

Fertilizer companies: Vietnam's two fertilizer companies are also major buyers of natural gas, with both Phu My Fertilizer (DPM) and Ca Mau Fertilizer (DCM) now applying *Above ToP* prices for gas purchases since 2019. Prior to this, DCM received preferential pricing by only paying for the transportation & tariffs for gas purchased from the *PM3-CAA* gas field as part of a subsidy to ensure the company achieved its mandated minimum ROE of 12%. The *PM3-CAA* gas field is a joint-venture between Malaysia and Vietnam located in the Gulf of Thailand.

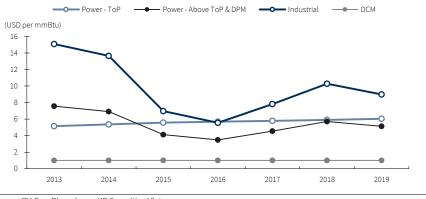


Fig 9. PV Gas - Domestic natural gas selling prices, 2013-2019 (USD per mmBtu)

Source: PV Gas, Bloomberg , KB Securities Vietnam

The pricing mechanism for the cost of gas differs by gas field in a mix of fixed and floating cost structures. Fixed cost pricing is set according to wellhead prices adjusted up by 2% per year, while floating cost pricing is used to create a markup system based on the *Above ToP* pricing mechanism:

Cost price = Max [46% HSFO price, wellhead price]

Vietnam's main gas producing fields are located in the *Nam Con Son* basin off the southern coast, the *Cuu Long* basin due south of the Mekong Delta, the *PM3-CAA* gas field located in the *Malay-Tho Chu* basin off the southwest coast and the *Ham Rong-Thai Binh* gas fields located in the *Song Hong* basin off the northeast coast. The *Nam Con Son* basin primarily produces natural gas and is Vietnam's largest producer, fields in the *Cuu Long* basin are a mix of oil & gas and the *PM3-CAA* and *Ham Rong-Thai Binh* are smaller gas fields.

Nam Con Son & Cuu Long: As Vietnam's largest gas producing basin, gas fields in *Nam Con Son* mostly use fixed prices to supply ToP agreements. *Cuu Long* also has older gas fields that primarily use fixed pricing for customers on the *Above ToP* pricing scheme. Continued use of fixed pricing for the older gas fields has allowed GAS to realize additional gains with the elimination of ToP agreements.

Ham Rong-Thai Binh: Costs from these fields are mostly based on floating prices, with supply mainly used for industrial clients in *Thai Binh* located southwest from Hai Phong in the northern part of Vietnam.

PM3-CAA: Jointly-owned by Vietnam and Malaysia, this smaller field is sole supplier to Ca Mau Fertilizer (DCM) under a special pricing scheme that previously sold gas for only the transportation cost and tariff before moving to the *Above ToP* system in 2019. Gas to other customers is sold on floating prices.

Cost prices for GAS depend on the field supplying the natural gas

| Natural gas | Cost price | Cost price | Selling price | Selling price | |
|-------------|------------|--------------------------------|---------------|--------------------------------|---------------------------------------|
| basin | type | calculation | type | calculation | Customers |
| Cuu Long | Fixed | USD3.53 per mmBtu in 2019 | Floating | MAX (46% HSFO; Wellhead price) | Above ToP power customers |
| | | & 2% per annum increase | | + transportation & tariffs | Phu My Fertilizers (DPM) |
| Nam Con Son | Fixed | USD3.53 per mmBtu in 2019 | Fixed | USD5.81 per mmBtu in 2019 | ToP power customers (up to 3.55 bcm): |
| | | & 2% per annum increase | | & 2% per annum increase | EVN Genco 3, Phu My 3, Phu My 2.2 BOT |
| | Floating | MAX (46% HSFO; Wellhead price) | Floating | MAX (46% HSFO; Wellhead price) | Above ToP power customers |
| | | + transportation & tariffs | | + transportation & tariffs | Phu My Fertilizers (DPM) |
| Malay Tho | Floating | MAX (46% HSFO; Wellhead price) | Floating | MAX (46% HSFO; Wellhead price) | Cau Mau Power |
| Chu | | + transportation & tariffs | | + transportation & tariffs | Cau Mau Fertilizer (DCM) |
| Ham Rong- | Floating | MAX (46% HSFO; Wellhead price) | Floating | 100% HSFO price | Hiep Phuoc industrial zone |
| Thai Binh | | + transportation & tariffs | | or annual negotiated price | Other industrial zones |
| | | | | + transportation & tariffs | |

Table 6. Vietnam oil & gas – Natural gas cost & selling price methods by basin (USD per million British thermal units, billion cubic metres, %)

BCM = Billion Cubic Metres

Source: PV Gas, KB Securities Vietnam

One remaining bogey is the pricing formula for LNG imports and the government has yet to release any details on a pricing regime Vietnam's government has yet to announce any details on the potential pricing mechanism for LNG imports. But after examining LNG import pricing formulas in Thailand, Malaysia and Indonesia, we believe Vietnam will ultimately adopt a regime similar to Thailand's pooling structure. Both markets have similar characteristics, in that, PTT Exploration & Production (PTTEP) plays a similar role to GAS in its home market as a state-owned company that is the sole purchaser, transporter and distributor of natural gas in Thailand. A likely scenario for Vietnam includes using a pooling system to set the selling price for natural gas to power companies as a blended price of domestic wellhead prices and lower LNG import prices. This would effectively allow power companies to use both sources of natural gas to lower its average fuel costs, while allowing LNG importers to sell supply at market prices. Whether this system would also eliminate the current pricing formula pegged to fuel oil prices for locallysourced natural gas is uncertain but GAS has already indicated its desire to move away from the pricing system indexed to fuel oil prices. Importantly, we expect Vietnam to create a pricing regime that would allow a fair return for LNG infrastructure investments given the importance of LNG imports in meeting the country's energy shortfalls.

Thailand: Natural gas pricing divided into two pools (pool 1 is dedicated to the gas separation industry and pool 2 mainly focused on power generation):

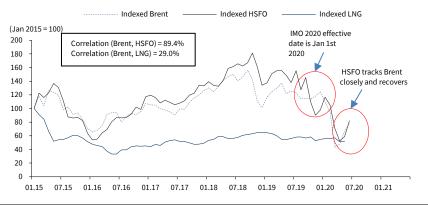
Pool 1 selling price = wholesale price (wellhead price indexed to fuel oil, exchange rate & CPI/PPI + marketing margin, transmission tariff & distribution tariff)

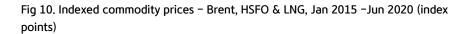
Pool 2 selling price = average (wellhead price, Myanmar import price, LNG import price) + marketing margin, transmission tariff & distribution tariff

Malaysia: Imports LNG at market prices but sold to power plants at a discount:

LNG selling price = LNG FOB * (1- discount rate) * discount rate = 15% for power companies & 10% for non-power clients

Indonesia: LNG import prices based on market prices but power sector receives a sizable 50% subsidy directly from the government.





Source: Bloomberg, KB Securities Vietnam

PV Transportation (PVT) - Three-stage dividend discount model

3-STAGE DDM

| PV OF DIVID | ENDS | | | | | | | |
|----------------|--------------------|-------|-------|-------|-------|-------|-------|--|
| | Sustainable growth | | | | | | | |
| Cost of Equity | 0.6% | 1.1% | 1.6% | 2.1% | 2.6% | 3.1% | 3.6% | |
| 11.7% | 6,434 | 6,600 | 6,782 | 6,983 | 7,206 | 7,455 | 7,735 | |
| 12,2% | 6,120 | 6,265 | 6,424 | 6,599 | 6,792 | 7,007 | 7,246 | |
| 12.7% | 5,834 | 5,962 | 6,102 | 6,255 | 6,423 | 6,608 | 6,814 | |
| 13.2% | 5,574 | 5,687 | 5,810 | 5,944 | 6,091 | 6,252 | 6,431 | |
| 13.7% | 5,337 | 5,437 | 5,546 | 5,664 | 5,793 | 5,933 | 6,088 | |
| 14.2% | 5,119 | 5,208 | 5,305 | 5,409 | 5,522 | 5,646 | 5,781 | |
| 14.7% | 4,919 | 4,999 | 5,084 | 5,177 | 5,277 | 5,386 | 5,504 | |

PV OF EQUITY PER SHARE

| | PV OF EQUIT | y per shaf | RE | | | | | | | | |
|--------------------------------|---------------|------------|--------|--------|-------------|--------|--------|------------------|-------|--------|-------|
| | | | | Sust | ainable gro | wth | | | | | |
| C | ost of Equity | 0.6% | 1.1% | 1.6% | 2.1% | 2.6% | 3.1% | 3.6% | | Ex-gro | wth |
| | 11.7% | 22,900 | 23,400 | 24,100 | 24,800 | 25,600 | 26,500 | 27,500 | | 0.5> | (|
| | 12.2% | 21,700 | 22,300 | 22,800 | 23,400 | 24,100 | 24,900 | 25,700 | | 11,50 |)0 |
| | 12.7% | 20,700 | 21,200 | 21,700 | 22,200 | 22,800 | 23,500 | 24,200 | | 28.89 | % |
| | 13.2% | 19,800 | 20,200 | 20,600 | 21,100 | 21,600 | 22,200 | 22,800 | - | Mid-cy | jcle |
| | 13.7% | 19,000 | 19,300 | 19,700 | 20,100 | 20,600 | 21,100 | 21,600 | _ | 0.8> | < |
| | 14.2% | 18,200 | 18,500 | 18,800 | 19,200 | 19,600 | 20,100 | 20,500 | | 17,30 |)0 |
| | 14.7% | 17,500 | 17,800 | 18,100 | 18,400 | 18,800 | 19,100 | 19,600 | | 93.79 | % |
| | | | | | | | | | | | |
| Projected Distributions | 20154 | 20164 | 20174 | 20104 | 20104 | 20205 | 20215 | 20225 | 20275 | 20245 | 20255 |
| (VNDbn) | 2015A | 2016A | 2017A | 2018A | 2019A | 2020E | 2021E | 2022E | 2023E | 2024E | 2025E |
| Net income | 368 | 416 | 450 | 652 | 690 | 538 | 699 | 971 | 975 | 1,176 | 1,336 |
| Preferred dividend paid – cash | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Preferred dividend per share | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % of par value | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Internally-generated capital | 368 | 416 | 450 | 652 | 690 | 538 | 699 | 971 | 975 | 1,176 | 1,336 |
| Less: capital @ 100% D/E | -249 | -656 | -272 | 298 | 445 | 1,363 | 1,458 | 931 | 362 | 330 | 297 |
| Cash for dividends/buybacks | 618 | 1,072 | 722 | 354 | 2445 244 | 1,565 | 1,456 | 931 40 | 614 | 847 | 1,038 |
| Cash for dividends/buybacks | 010 | 1,072 | 122 | 554 | 244 | 0 | U | 40 | 014 | 047 | 1,050 |
| Common dividend paid – cash | 41 | 232 | 305 | 311 | 340 | 281 | 338 | 394 | 450 | 507 | 563 |
| Common dividend per share | 146 | 824 | 1,083 | 1,106 | 1,209 | 1,000 | 1,200 | 1,400 | 1,600 | 1,800 | 2,000 |
| % of par value | 1.5% | 8.2% | 10.8% | 11.1% | 12.1% | 10.0% | 12.0% | 14.0% | 16.0% | 18.0% | 20.0% |
| Payout ratio | 11.2% | 55.8% | 67.7% | 47.7% | 49.3% | 52.3% | 48.3% | 40.6% | 46.2% | 43.1% | 42.1% |
| Net share buybacks | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total distributions | 41 | 232 | 305 | 311 | 340 | 281 | 338 | 394 | 450 | 507 | 563 |
| Net distribution ratio (%) | 11.2% | 55.8% | 67.7% | 47.7% | 49.3% | 52.3% | 48.3% | 40.6% | 46.2% | 43.1% | 42.1% |
| Discount factor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1.07 | 1.21 | 1.37 | 1.55 | 1.75 | 1.98 |
| | | | | | | | | | | | |

| Cost of equity | | Terminal Assumptions | | Share Information | |
|---------------------|-------|------------------------|--------|-------------------------------------|-------|
| Risk free rate | 3.0% | Sustainable ROE | 7.0% | PV of future dividend flows (VNDbn) | 1,698 |
| Equity risk premium | 8.9% | Dividend payout ratio | 70.0% | PV of terminal value (VNDbn) | 4,247 |
| Unlevered beta | 0.635 | Sustainable growth | 2.1% | Terminal value as % of firm value | 71.4% |
| Re-levered beta | 1.142 | Forecast period growth | 14.9% | Current shares outstanding (mn) | 281.4 |
| Cost of equity | 13.2% | Target gearing | 100.0% | Statutory corporate tax rate | 20.0% |
| Forecast period | 5 Yrs | Transition period | 10 Yrs | | |

| Memorandum | | | | | | | | | | | |
|------------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| (VNDbn) | 2015A | 2016A | 2017A | 2018A | 2019A | 2020E | 2021E | 2022E | 2023E | 2024E | 2025E |
| Reported common equity | 4,325 | 4,333 | 4,662 | 5,140 | 5,691 | 6,103 | 6,608 | 7,384 | 8,109 | 9,020 | 10,066 |
| Debt/equity ratio | 83.6% | 68.4% | 57.7% | 58.1% | 60.3% | 78.6% | 94.7% | 97.3% | 93.1% | 87.3% | 81.2% |
| Debt | 3,618 | 2,962 | 2,690 | 2,988 | 3,433 | 4,797 | 6,255 | 7,186 | 7,548 | 7,878 | 8,175 |
| YoY % Change | -6.5% | -18.1% | -9.2% | 11.1% | 14.9% | 39.7% | 30.4% | 14.9% | 5.0% | 4.4% | 3.8% |

Source: Company reports, KB Securities Vietnam

Present value

PV Transportation (PVT) - Summarized financials & forecasts, 2019-2022E

| Income statement (VNDbn) | 2019A | 2020E | 2021E | 2022E | |
|--|---|---|--|---|---|
| Net sales | 7,758 | 7,138 | 8,561 | 10,700 | |
| Cost of sales | 6,567 | 6,003 | 7,159 | 8,818 | |
| Gross Profit | 1,191 | 1,134 | 1,402 | 1,882 | |
| Financial income | 221 | 132 | 153 | 156 | |
| Financial expenses | 193 | 270 | 363 | 439 | |
| of which: interest expenses | 169 | 217 | 329 | 403 | |
| Gain/(loss) from joint ventures | 34 14 | 0 8 | 0 9 | 0 | |
| Selling expenses General & admin expenses | 249 | 0 193 | 9 182 | 11 191 | |
| Operating profit/(loss) | 990 | 795 | 1,001 | 1,398 | |
| Other income | 34 | 42 | 63 | 79 | |
| Other expense | 7 | 8 | 10 | 13 | |
| Net other income/(expenses) | 26 | 34 | 53 | 66 | |
| Pretax profit/(loss) | 1,016 | 829 | 1,054 | 1,464 | |
| Income tax | 195 | 173 | 211 | 294 | |
| Net profit/(loss) | 821 | 656 | 843 | 1,170 | |
| Minority interests | 131 | 118 | 143 | 199 | |
| Net profit after MI | 690 | 538 | 699 | 971 | _ |
| Operating ratios | | | | | |
| (%) | 2019A | 2020E | 2021E | 2022E | _ |
| Revenue growth | 3.1 | (8.0) | 19.9 | 25.0 | |
| EBIT growth | 15.7 | 0.6 | 29.8 | 38.7 | |
| EBITDA growth | 19.7 | (0.1) | 19.1 | 24.2 | |
| NP after MI growth | 5.8 | (22.0) | 30.0 | 38.9 | |
| Gross profit margin | 15.4 | 15.9 | 16.4 | 17.6 | |
| EBITDA margin EBIT margin | 23.0 12.0 | 24.9 13.1 | 24.8 14.2 | 24.6 | |
| EBIT margin Pre-tax profit margin | 12.0 | 15.1 | 14.2 12.3 | 15.7 13.7 | |
| Net profit margin | 8.9 | 7.5 | 8.2 | 9,1 | |
| | | | | | - |
| Cash flow | 20104 | 20205 | 20215 | 20225 | |
| (VNDbn) | 2019A | 2020E | 2021E | 2022E | - |
| Net profit | 821 | 656 | 843 | 1,170 | |
| Plus: depreciation & amort | 863 | 840 | 909 | 953 (245) | |
| Plus: investing (profit)/loss Change in working capital | (195) (31) | (161) 364 | (240) 289 | (245) (37) | |
| (Inc)/dec - receivables | 218 | (312) | 145 | (172) | ī |
| (Inc)/dec - inventory | 210 | (512) | (6) | (172) | |
| (Inc)/dec – other curr assets | (3) | 60 | (68) | (50) | |
| Inc/(dec) - payables | (253) | 520 | (111) | (21) | |
| Inc/(dec) - advances | 31 | (14) | 14 | 15 | |
| Inc/(dec) - other curr liab | (49) | 99 | 315 | 228 | |
| Other adj for operations | 19 | 2 | (140) | (118) | |
| Operating cash flow | 1,179 | 1,569 | 1,546 | 1,182 | |
| ST investments | 93 | (617) | 301 | (1,813) | |
| Capital expenditures | (2,008) | (2,403) | (3,320) | (858) | |
| Investment properties | 0 | 0 | 0 | 0 | |
| Investment in subsidiaries | (9) | (4) | (4) | (4) | |
| 0.1 | | (7) | (9) | (54) | |
| Other assets | (36) | | ~ ~ | | |
| Other adj for investments | 437 | 84 | 80 | 82 | |
| Other adj for investments Investing cash flow | 437 (1,523) | 84 (2,948) | (2,951) | (2,647) | |
| Other adj for investments Investing cash flow Free cash flow | 437 (1,523) (829) | 84 (2,948) (834) | (2,951) (1,774) | (2,647) 324 | |
| | 437 (1,523) | 84 (2,948) | (2,951) | (2,647) | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt | 437 (1,523) (829) 94 | 84 (2,948) (834) 1,351 | (2,951) (1,774) 1,458 | (2,647) 324 931 | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt Other liabilities | 437 (1,523) (829) 94 351 | 84 (2,948) (834) 1,351 12 | (2,951) (1,774) 1,458 0 | (2,647) 324 931 0 | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt | 437 (1,523) (829) 94 351 60 | 84 (2,948) (834) 1,351 12 (1) | (2,951) (1,774) 1,458 0 6 | (2,647) 324 931 0 40 | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt Other liabilities Issuance/(retirement) of equity | 437 (1,523) (829) 94 351 60 0 | 84 (2,948) (834) 1,351 12 (1) 0 | (2,951) (1,774) 1,458 0 6 0 | (2,647) 324 931 0 40 0 | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt Other liabilities Issuance/(retirement) of equity Dividends paid | 437 (1,523) (829) 94 351 60 0 (340) | 84 (2,948) (834) 1,351 12 (1) 0 (281) | (2,951) (1,774) 1,458 0 6 0 (338) | (2,647) 324 931 0 40 0 (394) | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt Other liabilities Issuance/(retirement) of equity Dividends paid Less: changes in equity Other adj for financing | 437 (1,523) (829) 94 351 60 0 (340) 71 | 84 (2,948) (834) 1,351 12 (1) 0 (281) 37 | (2,951) (1,774) 1,458 0 6 0 (338) 0 | (2,647) 324 931 0 40 0 (394) (0) | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt Other liabilities Issuance/(retirement) of equity Dividends paid Less: changes in equity Other adj for financing Financing cash flow Net increase in cash & equivalents | 437 (1,523) (829) 94 351 60 0 (340) 71 37 | 84 (2,948) (834) 1,351 12 (1) 0 (281) 37 208 | (2,951) (1,774) 1,458 0 6 0 (338) 0 (338) 0 415 | (2,647) 324 931 0 40 0 (394) (0) 822 | |
| Other adj for investments Investing cash flow Free cash flow Issuance/(repayment) of debt ST debt Other liabilities Issuance/(retirement) of equity Dividends paid Less: changes in equity | 437 (1,523) (829) 94 351 60 0 (340) 71 37 274 | 84 (2,948) (834) 1,351 (1) (1) 0 (281) 37 208 1,325 | (2,951) (1,774) 1,458 0 6 0 (338) 0 (338) 0 415 1,541 | (2,647) 324 931 0 40 0 (394) (0) 822 1,400 | |

Balance sheet (VNDbn) 2019A 2020E 2021E 2022E Total assets 10,997 13,369 s15,555 17,525 Current assets 3,841 4,633 4,396 6,395 Cash & equivalents 1,208 1,154 1,290 1,225 ST investments 1,479 2,096 1,795 3,608 Accounts receivable 1,165 1,019 1,183 865 Inventory 127 115 121 158 Other current assets 162 102 170 221 Long-term assets 7,157 8,736 11,160 11,130 27 LT trade receivables 14 26 35 Fixed assets 6,781 6,545 7,043 7,847 Investment properties 0 0 0 0 LT incomplete assets 0 1,793 3,705 2,805 LT investments 199 203 207 211 Goodwill 0 0 0 0 Other LT assets 163 170 179 232 Liabilities 8,948 5 306 7.266 10.141 Current liabilities 2,523 2,923 3,307 3,461 796 Trade accounts payable 1,106 1,161 1,072 49 49 63 Advances from customers 35 ST borrowings 1,015 1,027 1,027 1,027 100 Special reserves 107 100 100 971 Other current liabilities 557 655 1,199 Long-term liabilities 2,784 4,343 5,641 6,681 445 279 347 LT payables 236 LT borrowings 2,419 3,770 5,228 6,160 Other LT liabilities 129 128 134 174 Shareholders' equity 5,691 6,103 6,608 7,384 Paid-in capital 2,814 2,814 2,814 2,814 Share premium 0 0 0 0 Treasury stock 0 0 0 0 Undistributed earnings 991 1,383 1,888 2.664 Reserve & others 576 576 576 576 1.310 1.330 1.330 1.330 Minority interests Total liabilities & equity 10,997 13,369 15,555 17,525 Key ratios (x, %, VND) 2019A 2020E 2021E 2022E Valuations P/E 3.6 4.7 3.6 2.6 P/E diluted 3.6 4.7 3.6 2.6 03 P/B 04 04 04 P/S 0.3 0.3 0.2 0.4 **EV/EBITDA** 1.4 1.4 1.2 1.0 2.7 2.7 EV/EBIT 2.1 1.5 Dividend yield, ordinary (%) 13.5 11.2 13.4 15.7 EPS 2,450 1,912 2,485 3,451 **BVPS** 20,221 21,685 23,478 26,236 SPS 27.567 25.361 30,418 38.020 DPS (annual, ordinary) 1,209 1,000 1,200 1,400 Dividend payout ratio (%) 52.3 48.3 40.6 49.3 Operating performance ROE 12,7 9.1 11.0 13.9 ROA 4.4 4.8 5.9 6.5 ROIC 10.9 8.9 9.6 11.3 Financial structure Total liab/equity 93.2 119.1 135.4 137.3 59.7 80.7 Net debt/equity 39.1 75.1 Current ratio (x) 1.5 1.6 1.3 1.8 Interest coverage (x) 5.5 4.3 3.7 4.2 Activity ratios Asset turnover 0.7 0.6 0.6 0.6 Receivables turnover 7.9 7.0 7.8 9.7 Inventory turnover 55.8 58.9 72.3 76.7 Payables turnover 8.2 7.2 7.3 9.1

Source: Company reports, KB Securities Vietnam

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Investment ratings & definitions

Investment Ratings for Stocks

| (based on expectations for absolute price gains over the next 6 months) | | | | | |
|---|--------------|--------------|--|--|--|
| Buy: | Hold: | Sell: | | | |
| +15% or more | +15% to -15% | -15% or more | | | |
| | | | | | |

Investment Ratings for Sectors

| (based on expectations for absolute price gains over the next 6 months) | | | | | | |
|---|---------------------------------|-------------------------|--|--|--|--|
| Positive: | Neutral: | Negative: | | | | |
| Outperform the market | Perform in line with the market | Underperform the market | | | | |

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