

# Binh Son Refinery (BSR)

Upbeat outlook thanks to high world oil prices

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Analyst Tieu Phan Thanh Quang  
quangtp@kbsec.com.vn

**BSR's NPAT was up significantly from its 2020 low thanks to recovering output & high oil prices**

In 2021, BSR recorded NPAT of VND6,673 billion (up from a loss of VND2,858 billion in 2020) on net revenue of VND101,079 billion (+74.4% YoY). Positive growth was driven by recovering output against its 2020 low due to BSR's fourth maintenance overhaul in 51 days and high oil prices.

**Crude oil prices may continue to spiral in 2022 and 2023, supporting BSR's business activities**

We expect BSR to benefit considerably from the continued oil price rallies thanks to its close correlation with world oil prices. Like GAS, pricing mechanisms of BSR follow the 5–10– and 15–day mean price of Platts Singapore (factory price) plus additional premium under the agreement between BSR and its customers every six months, depending on each type of product.

**BSR will continue to benefit from the controlled pandemic and reduced capacity of Nghi Son Refinery**

We expect that Dung Quat Refinery will be put into operation stably at 108% of the design capacity in 2022 given no maintenance (BSR overhauls in 50–52 days every three years, and the most recent maintenance was in 2020) and make up for the output shortfall due to the reduced capacity of its main competitor, Nghi Son Refinery.

**We recommended BUYING BSR shares with a target price of VND36,800/share**

Based on DCF valuation method, business outlook, and possible risks, we recommend BUYING BSR shares with a target price of VND36,800/share, 29.6% higher than the closing price on March 3, 2022.

**Buy** maintain

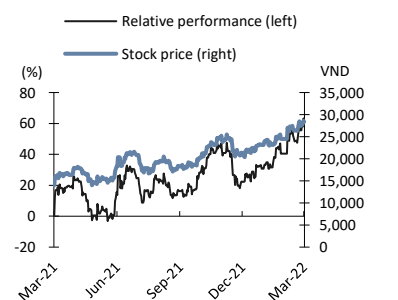
<b>Target price</b>	<b>VND36,800</b>
Upside/Downside	29.6%
Current price	VND28,400
Consensus target price	VND31,850
Market cap (VNDbn)	88,054

<b>Trading data</b>	
Free float	7.9%
3M avg trading value (VNDbn)	287.33
Foreign ownership	7.9%
Major shareholder	PetroVietnam (PVN) (92.1%)

<b>Share price performance</b>				
(%)	<b>1M</b>	<b>3M</b>	<b>6M</b>	<b>12M</b>
<b>Absolute</b>	15.9	36.5	55.2	83.2
<b>Relative</b>	13.9	30.9	37.6	42.3

#### Forecast earnings & valuation

FY-end	2020A	2021A	2022F	2023F
Revenue (VNDbn)	57,959	101,079	143,713	109,871
EBIT (VNDbn)	(3,046)	6,545	10,201	7,958
NPATMI (VNDbn)	(2,819)	6,705	10,310	8,070
EPS (VND)	(909)	2,162	3,325	2,603
EPS growth (%)	-201.2	-337.8	54.0	-22.0
P/E (x)	-10.7	10.5	11.1	14.1
EV/EBITDA (x)	-61.3	7.3	8.0	9.7
P/B (x)	1.0	1.9	2.5	2.4
ROE (%)	-9.2	17.8	22.8	16.5
Dividend yield (%)	0.0	0.0	2.7	4.1



Source: Bloomberg, KB Securities Vietnam

## Updated business performance

**2021A revenue grew by 74.4% YoY, and NPAT rose strongly to VND6,673 billion against the loss in 2020**

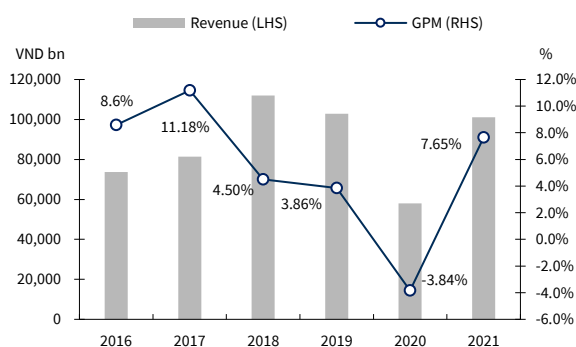
For the whole year of 2021, BSR posted NPAT of VND6,673 billion (up strongly from a loss of VND2,858 billion in 2020) on net revenue of VND101,079 billion (+74.4% YoY). The impressive performance came from the recovery in sales volume in 2021, reaching 6,423 thousand tons (+8.5 % YoY) after the fourth 51-day maintenance overhaul of BSR in 2020. Besides, the selling prices of BSR products followed high Brent crude oil prices in 2021 with an average of USD70/barrel (+67% YoY) vs. USD42/barrel in 2020.

**Profit margin climbed from -3.8% in 2020 to 7.7% in 2021 thanks to high oil prices**

In 2020, BSR's cost of goods sold surpassed revenue due to a sharp drop in Brent prices in 1Q20 compared to 4Q19 (Brent dropped by 29% QoQ, and BSR had an inventory turnover of about 30 days and used First In, First Out (FIFO) accounting method). However, the situation reversed in 2021 for the following reasons:

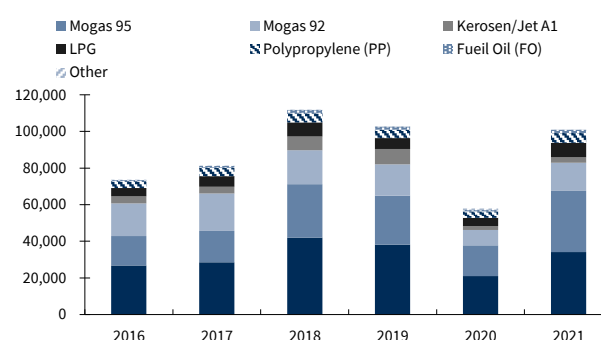
- In 2021, high Brent crude oil prices helped the selling prices of BSR products advance by 61.2% YoY on average.
- Petroleum demand bounced back when the social distancing measures were relaxed in 1H21 and 4Q21, helping reduce BSR's inventory turnover from 56 days in 2020 to 37 days in 2021.

Fig 1. BSR – 2016A–2021A business results (VNDbn, %)



Source: Binh Son Refinery, KB Securities Vietnam

Fig 2. BSR – Revenue breakdown (VNDbn)



Source: Binh Son Refinery, KB Securities Vietnam

Table 1. BSR – 2020A–2021A business results

VND bn	2020	2021	% YoY	Notes
<b>Revenue (VND bn)</b>	<b>57,959</b>	<b>101,079</b>	<b>74.4%</b>	Robust revenue growth thanks to high volume and selling price
Diesel	20,975	34,097	62.6%	
Gasoline A95	16,854	33,403	98.2%	Volume increased 17% YoY and average selling price increased 66.8% YoY
Gasoline A92 & E5	8,330	15,382	84.7%	Volume increased 7.2% YoY and average selling price increased 68.5% YoY
Jet A1	2,083	3,001	44.1%	
Fuel Oil (FO)	1,038	1,768	70.3%	
LPG	4,562	7,939	74.0%	Volume increased by 22.3% YoY and average selling price increased by 68.7% YoY
Other	4,117	5,489	33.3%	
<b>Gross profit</b>	<b>(2,225)</b>	<b>7,732</b>	<b>N/A</b>	
GPM (%)	-3.84%	7.65%		Positive gross profit thanks to the positive movement from oil prices
SG&A expenses	(821)	(1,187)		
% SG&A / Revenue	-1.42%	-1.17%		
Operating profit	(3,046)	6,545		
Financial Income	666	1,017		
Financial expenses	(498)	(619)		
<b>Profit before tax</b>	<b>(2,852)</b>	<b>6,978</b>	<b>N/A</b>	
<b>Profit after tax</b>	<b>(2,858)</b>	<b>6,673</b>	<b>N/A</b>	
NPM (%)	-4.93%	6.60%		
<b>Production volume (mn tons)</b>	<b>5,931</b>	<b>6,413</b>	<b>8.1%</b>	
<b>Sales volume (mn tons)</b>	<b>5,922</b>	<b>6,423</b>	<b>8.5%</b>	
Diesel	2,470	2,547	3.1%	
Gasoline A95	1,667	1,950	17.0%	
Gasoline A92 & E5	825	884	7.2%	
Jet A1	200	215	7.5%	
Fuel Oil (FO)	145	156	7.6%	
LPG	398	487	22.4%	
Other	217	184	-15.2%	
<b>Average input price (USD/bbl)</b>				
Brent	42	70	66.8%	
BSR's weighted brent price	48	72	48.8%	
<b>BSR's average output price (USD/bbl)</b>				
Diesel	49.9	78.8	57.9%	
Gasoline A95	51.5	87.2	69.3%	
Gasoline A92 & E5	51.5	88.8	72.4%	
Jet A1	57.4	77.4	34.8%	
Fuel Oil (FO)	45.6	73.3	60.7%	
LPG (USD/ton)	495.3	702.6	41.9%	

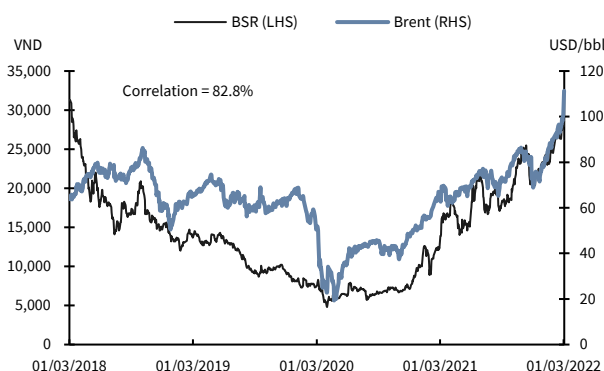
Source: Binh Son Refinery, KB Securities Vietnam

**Crude oil prices may continue to spiral in 2022 and 2023, supporting BSR's business activities**

Brent crude oil prices witnessed a significant recovery in 2021 from the 2020 bottom, exceeding USD100/barrel since September 2014 after Russia attacked Ukraine. Besides, upstream activities have been tightened to cut costs amid the COVID-19 pandemic. In addition, the OPEC+ oil output boost fell short of the target with an increase of only 50,000/400,000 barrels per day in 2021. As a result, we forecast Brent crude oil to hit USD90/barrel this year, similar to oil price forecasts of major financial institutions. At the same time, we expect BSR to benefit considerably from the uptrend of oil prices thanks to its close correlation with oil prices. In particular, like GAS, the pricing mechanisms of BSR follow the 5-10- and 15-day mean price of Platts Singapore (factory price) plus additional premium under the agreement between BSR and its customers every six months, depending on each type of product.

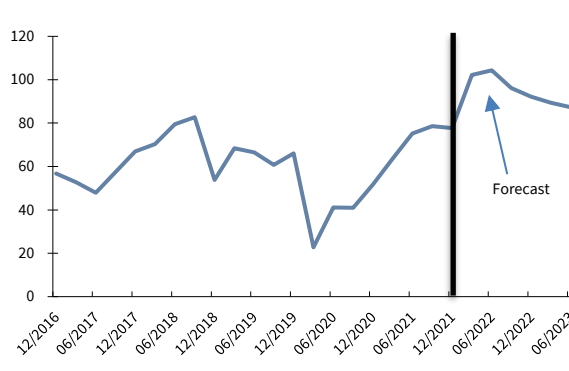
In addition, the crack spread (the overall pricing difference between a barrel of crude oil and the petroleum products refined from it) of BSR also profited from rising oil prices. We expect that as industrial production, tourism, and transportation recover from the pandemic, the factory price of petroleum products will go up faster than crude oil prices in 2022, meaning widened crack spreads for refineries, including BSR.

**Fig 3. BSR – Correlation between BSR & Brent**



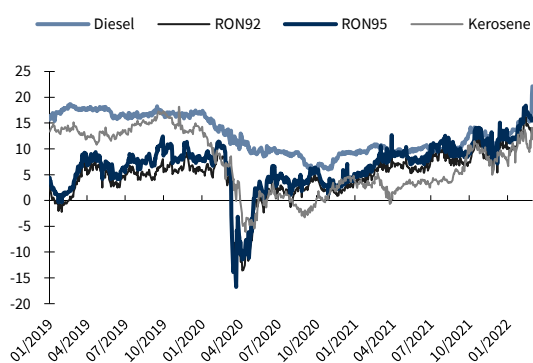
Source: Bloomberg, KB Securities Vietnam

**Fig 4. Bloomberg consensus – World oil prices (USD/barrel)**



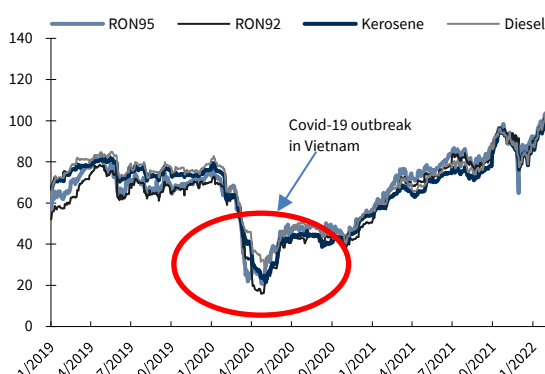
Source: Bloomberg, KB Securities Vietnam

**Fig 5. BSR – Crack spread of main products (USD/barrel)**



Source: Bloomberg, KB Securities Vietnam

**Fig 6. BSR – Prices of main products (USD/barrel)**



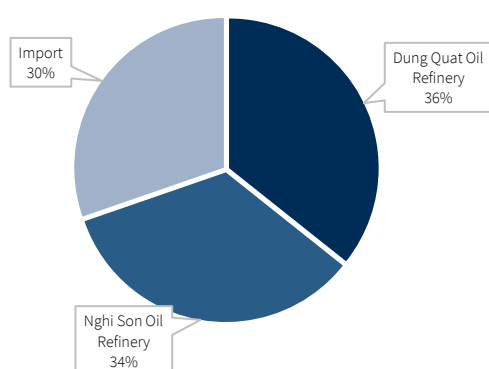
Source: Bloomberg, KB Securities Vietnam

### BSR continued to benefit from the controlled pandemic and reduced capacity of Nghi Son Refinery

Vietnam's oil refining industry is in the early stages of development with two refineries, namely Dung Quat and Nghi Son, put into operation in 2009 and 2018, respectively. As of the end of last year, Dung Quat represented nearly 36% of the domestic market share, Nghi Son accounted for 34%, and the remaining 30% was imported products. However, in the wake of continuous financial distress, Nghi Son Refinery had to lower its operational efficiency to 80% of its design capacity. In our view, this may benefit BSR in the short run against the backdrop of high barriers to entry in the oil and gas sector and no alternative source other than imports. We, therefore, expect that Dung Quat will operate stably in 2022 with an efficiency of 108% thanks to no maintenance (BSR overhauls every three years in 50 – 52 days, and the most recent one was in 2020) and offset the output shortfall resulting from reduced capacity of Nghi Son Refinery.

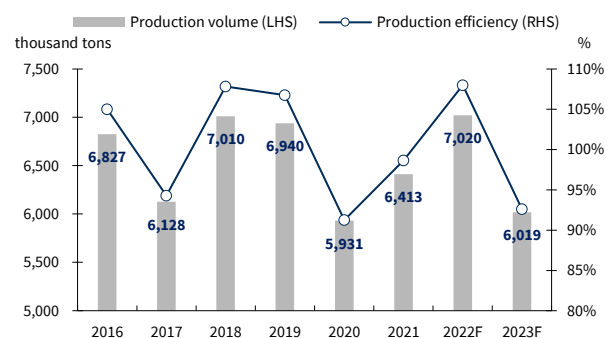
Furthermore, we take a positive stance for the recovery of gasoline demand after the pandemic since all Vietnamese people got at least two shots, and nearly 100% got the booster shot. It will help Vietnam safely adapt to the pandemic and gradually reopen the economy, pushing domestic gasoline demand. BMI Research estimated that the petroleum consumption of Vietnam could grow at a CAGR of 4.7% in the 2021–2025 period, much higher than the global growth rate of 1.3% in case of no other “black swan” events such as COVID-19. As a result, we expect domestic gasoline consumption to be back to its growth trend when the pandemic is gradually under control beyond 2022.

Fig 7. Vietnam – Oil & gas market share (%)



Source: Ministry of Industry and Trade, KB Securities Vietnam

Fig 8. BSR – 2016A–2023F output (thousand tons, %)



Source: Binh Son Refinery, KB Securities Vietnam

## Forecast business performance

**2022F revenue and NPAT are expected to grow strongly by 42.2% YoY and 53.8% YoY**

We estimate BSR's NPAT to reach VND10,261 billion (+54% YoY) on revenue of VND143,713 billion (+42% YoY) in 2022F on the assumptions that:

- The oil prices in 2022 will average USD90/barrel (+28.6% YoY).
- Production efficiency should reach 108% of the design capacity.
- Sales volume is estimated at 7,024 million tons (+9.4% YoY).
- Average selling price may rise by 30% YoY thanks to high world oil prices.

**2023F revenue and NPAT should decrease by 23.5% YoY and 21.7% YoY due to the fifth maintenance**

We forecast BSR's NPAT at VND8,031 billion (-22% YoY) on revenue of VND109,871 billion (-24% YoY) in 2023F on the assumptions that:

- The oil prices in 2023 will average USD80/barrel (-11% YoY).
- Production efficiency is 92.65% of the design capacity due to the fifth overhaul in 52 days.
- Sales volume may hit 6.042 million tons (-14% YoY).
- Average selling price should fall by 10.7% YoY, assuming lower oil prices.

## BSR – 2021A–2023F business results

VND bn	2021A	2022F	2023F	Notes
<b>Revenue (VND bn)</b>	<b>101,079</b>	<b>143,713</b>	<b>109,871</b>	2023 revenue decline due to the 5th overhaul last 52 days
Diesel	34,097	55,558	42,297	
Gasoline A95	33,403	40,333	31,025	
Gasoline A92 & E5	15,382	19,989	14,790	
Jet A1	3,001	8,098	6,166	Output volume and selling prices increase in 2022 & 2023 base on expectations of resumption of aviation operations
Fuel Oil (FO)	1,768	2,517	1,935	
LPG	7,939	11,015	8,676	Volume increased 7.2% YoY and average selling price increased 68.5% YoY
Other	5,490	6,203	4,983	
<b>Gross profit</b>	<b>7,732</b>	<b>11,889</b>	<b>9,249</b>	
GPM (%)	7.65%	8.27%	8.42%	
SG&A expenses	(1,187)	(1,688)	(1,291)	
% SG&A / Revenue	-1.17%	-1.17%	-1.18%	
Operating profit	6,545	10,201	7,958	
Financial Income	1,017	1,096	1,572	Financial income in 2023 is higher thanks to higher amount of cash in 2022
Financial expenses	(619)	(530)	(641)	
Profit before tax	6,978	10,801	8,923	
Profit after tax	6,673	10,261	8,031	
NPM (%)	6.60%	7.14%	7.31%	
<b>Production volume (mn tons)</b>	<b>6,413</b>	<b>7,020</b>	<b>6,019</b>	
<b>Sales volume (mn tons)</b>	<b>6,423</b>	<b>7,024</b>	<b>6,042</b>	
Diesel	2,547	2,971	2,548	
Gasoline A95	1,950	1,825	1,591	
Gasoline A92 & E5	884	888	743	
Jet A1	215	424	376	Output volume increase in 2022 & 2023 base on expectations of resumption of aviation operations
Fuel Oil (FO)	156	176	150	
LPG	487	562	482	
Other	184	178	152	
<b>Average input price (USD/bbl)</b>				
Brent crude oil	70	90	80	
BSR's crude oil input	72	96	86	
<b>Average selling price (USD/bbl)</b>				
Diesel	78.8	110.3	98.0	
Gasoline A95	87.2	113.4	100.1	
Gasoline A92	88.8	115.4	101.9	
Jet A1	77.4	106.1	90.9	
Mazut (FO)	95.8	115.6	106.3	
LPG (USD/ton)	495.3	702.6	847.3	

Source: Binh Son Refinery, KB Securities Vietnam

## Valuation

**We recommend BUYING BSR shares with a target price of VND36,800**

Based on the DCF valuation method, we recommend BUYING BSR shares with a target price of VND36,800/share, 29.6% higher than the closing price on March 3, 2022.

**The valuation includes an investment of USD300 million to produce EURO 5 products**

Our valuation includes BSR's USD300 million investment to enhance the quality of finished products, meeting EURO 5 emission standards as per Decision No. 49/2011/QĐ-TTg of the Prime Minister. Accordingly, manufactured, assembled and imported brand-new cars and motorbikes must comply with level 5 exhaust emission standards – EURO 5 from January 1, 2022. We also note that our valuation does not include the planned investment of USD1.8 billion to upgrade input processing and raise overall capacity until further detailed information.

**Table 9. BSR – DCF valuation**

VND bn	2017A	2018A	2019A	2020A	2021A	2022F	2023F	2024F	2025F	2026F
EBIT	7,935	3,949	2,870	-3,046	6,545	10,201	7,958	8,965	8,410	7,932
Corporate tax	-438	-229	-181	-6	-304	-540	-892	-1,033	-984	940
<b>NOPAT</b>	<b>8,373</b>	<b>4,178</b>	<b>3,051</b>	<b>-3,040</b>	<b>6,849</b>	<b>10,741</b>	<b>8,850</b>	<b>9,998</b>	<b>9,394</b>	<b>8,872</b>
Plus: Depreciation & Amortization	2,579	2,648	2,670	2,552	2,309	2,321	2,064	1,839	1,642	1,468
Less: Working capital change	-1,429	-403	26	1,296	304	2,235	2,512	1,937	2,105	2,164
Less: CAPEX	-529	-443	-269	-173	-62	-2,156	-3,296	-2,175	-339	-316
<b>UFCF</b>	<b>8,994</b>	<b>5,980</b>	<b>5,478</b>	<b>635</b>	<b>9,400</b>	<b>13,141</b>	<b>10,130</b>	<b>11,599</b>	<b>12,802</b>	<b>12,188</b>
Discount factor						1.14	1.30	1.48	1.68	1.92
<b>PV</b>						<b>11,527</b>	<b>7,792</b>	<b>7,837</b>	<b>7,620</b>	<b>6,348</b>

Source: KB Securities Vietnam

**Table 10. BSR – DCF valuation**

Risk-free rate	2.50%	Terminal growth rate	2%
Equity risk premium	10.0%	PV of Terminal Value	54,411
Beta	1.50	PV of Free Cash Flows	41,124
<b>Cost of equity</b>	<b>17.5%</b>	<b>Total value of FCF and TV</b>	<b>95,535</b>
Cost of debt	7.0%	Plus: Cash & ST investments	29,976
Corporate tax rate %	20%	Less: Debt	-11,262
<b>Cost of debt after tax</b>	<b>5.6%</b>	Less: Minority Interest	-54
Equity %	70%	<b>Equity Value</b>	<b>114,195</b>
<b>WACC</b>	<b>13.9%</b>	No. of shares outstanding (mn shares)	3,100.5
		<b>Value per share (VND)</b>	<b>36,800</b>
		Current price (03/03/2022)	28,400
		<b>Upside</b>	<b>29.6%</b>

Source: KB Securities Vietnam



## Risks

### **Lower/higher-than-expected oil prices may cause fluctuations in revenue and profit**

A freefall in oil prices will lead to decreased inventory value and negative gross profit. BSR production cycle is 15 days, while inventory turnover is 30 days. In 1Q20, BSR saw a loss of VND2,332 billion due to a 30% decrease in oil prices and dwindling demand under the adverse impact of the COVID-19 pandemic. However, we assess this as low risk because oil prices have stayed high in the context of disruptions in the supply and demand of oil and gas across the globe. The spiraling tensions between Russia and Ukraine may cause fluctuations in oil prices. Along with BSR's close correlation with Brent crude oil prices, it will lead to the upside and downside risks of our target price.

### **BSR may start the expansion investment project of USD1.8 billion**

As we mentioned earlier, BSR plans to expand and upgrade Dung Quat Refinery from 6.5 million tons/year to 8.5 million tons/year, and the plant can process both sour crude oil and sweet crude oil instead of only sweet crude oil at present. However, BSR may face difficulties in raising capital for the project since PetroVietnam (PVN) does not guarantee the loan for this project. We do not cover this project in our valuation until BSR finds financing and starts this project.



## KB SECURITIES VIETNAM RESEARCH

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**Nguyen Xuan Binh**  
Head of Research  
binhnx@kbsec.com.vn

### Equity

**Duong Duc Hieu**  
Head of Equity Research  
hieudd@kbsec.com.vn

**Nguyen Anh Tung**  
Senior Analyst – Financials & Information technology  
tungna@kbsec.com.vn

**Pham Hoang Bao Nga**  
Senior Analyst – Property  
ngaphb@kbsec.com.vn

**Le Anh Tung**  
Senior Analyst – Oil & Gas & Banks  
tungla@kbsec.com.vn

**Nguyen Ngoc Hieu**  
Analyst – Power & Construction Materials  
hieunn@kbsec.com.vn

**Tieu Phan Thanh Quang**  
Analyst – Industrial Real Estate & Logistics  
quangtpt@kbsec.com.vn

**Luong Ngoc Tuan Dung**  
Analyst – Consumers & Retailing  
dunglnt@kbsec.com.vn

**Research Division**  
research@kbsec.com.vn

### Macro/Strategy

**Tran Duc Anh**  
Head of Macro & Strategy  
anhtd@kbsec.com.vn

**Le Hanh Quyen**  
Analyst – Macroeconomics & Banks  
quyenlh@kbsec.com.vn

**Thai Huu Cong**  
Analyst – Strategy & Mid cap Stocks  
congth@kbsec.com.vn

**Tran Thi Phuong Anh**  
Analyst – Strategy & Mid cap Stocks  
anhttp@kbsec.com.vn

### Support team

**Nguyen Cam Tho**  
Assistant  
thonc@kbsec.com.vn

**Nguyen Thi Huong**  
Assistant  
huongnt3@kbsec.com.vn

## KB SECURITIES VIETNAM (KBSV)

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### Head Office:

Levels G, M, 2 & 7, Sky City Tower, 88 Lang Ha Street, Dong Da District, Hanoi, Vietnam

Tel: (+84) 24 7303 5333 – Fax: (+84) 24 3776 5928

### Hanoi Branch:

Level 1, VP Building, 5 Dien Bien Phu, Ba Dinh District, Hanoi, Vietnam

Tel: (+84) 24 7305 3335 – Fax: (+84) 24 3822 3131

### Ho Chi Minh Branch:

Level 2, TNR Tower Nguyen Cong Tru, 180-192 Nguyen Cong Tru Street, District 1, HCMC, Vietnam

Tel: (+84) 28 7303 5333 – Fax: (+84) 28 3914 1969

### Saigon Branch:

Level 1, Saigon Trade Center, 37 Ton Duc Thang, Ben Nghe Ward, District 1, HCMC, Vietnam

Tel: (+84) 28 7306 3338 – Fax: (+84) 28 3910 1611

## CONTACT INFORMATION

Institutional Client Center: (+84) 28 7303 5333 – Ext: 2656

Private Customer Care Center: (+84) 24 7303 5333 – Ext: 2276

Email: [ccc@kbsec.com.vn](mailto:ccc@kbsec.com.vn)

Website: [www.kbsec.com.vn](http://www.kbsec.com.vn)

## Investment ratings & definitions

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### 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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