HA DO GROUP (HSX: HDG)

Energy expansion

(VND bn)	1Q-FY20	4Q-FY19	*+/- qoq*	1Q-FY19	*+/- yoy*
Net revenue	1,082	1,209	-11%	901	20%
PAT	182	197	-8%	265	-31%
EBIT	296	284	4%	323	-8%
EBIT margin	27.4%	23.5%	+400bps	35.8%	-800bps

Source: HDG, Rong Viet Securities

1Q/2020 – Main contribution from real estate business

- Net sales and NPATMI came at VND 1,082 billion (+20% YoY) and VND 182 billion (-31% YoY), fulfilling 20% and 20% of the year's target, respectively.
- The profit was driven by the real estate segment, with a contribution of 54% to total profit. HDG has started to hand over four Iris towers in Centrosa Garden project to customers, corresponding to a consolidated revenue of VND 734 billion.
- The energy segment recorded VND 171 billion in revenue (+ 16% YoY) and VND 123 billion in gross profit (+ 6% YoY). Total output was 71kWh (+19% YoY). During 1Q, revenue growth came from new contribution of the Hong Phong solar power plant (VND 48 billion which started operation in June 2019). On the other hand, revenue from hydropower plants decreased by 17% (reaching VND 122 billion).

H2/2020 - Expecting the launch of the Charm Villas project

- HDG continues to deliver units in Iris towers of the Centrosa Garden project in 2Q, which still remains the major income driver for 2020-2021. We project that revenue and gross profit will be VND 752 billion and VND 396 billion. Besides, the launch of the Charm Villas project will be the key point in 2020. The launching time has been delayed and rescheduled to late-2020, due to the effects of the Covid-19 epidemic.
- The energy segment in 2Q will see a slight change compared to 1Q's results, as there is no new plant coming into operation. Accordingly, we project revenue and gross profit of VND 180 billion (+5% QoQ) and VND 122 billion (-1% QoQ), respectively. During late-2020 and early-2021, there will be two new plants going into operation, namely the Song Tranh 4 hydropower plant (capacity 48MW) and an infra solar-power plant (capacity 50MW). Therefore, the growth of this segment will accelerate from 2021 on.
- Projected revenue and NPATMI in 2020 will be VND 4,925 billion (+13% YoY) and VND 1,190 billion (+28% YoY), respectively.

Valuation and recommendation

Rong Viet Securities maintains an optimistic view on HDG's business activities: 1) Healthy cash flow generated from the remaining customer receivables of the Centrosa Garden project (VND 1,600 billion), and stable cash flow from the energy segment, 2) Debts that matured in 2020-2021 was not under high pressure to be re-paid and 3) Current valuation is at a reasonable level. P/B 2020 ratio is 1.0x, based on the current stock price.

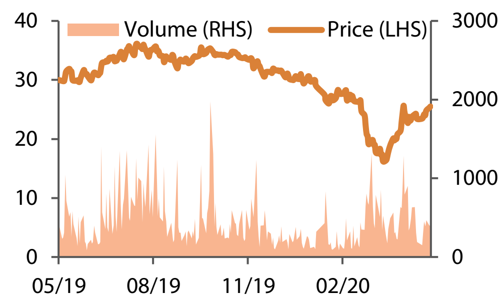
*Using the RNAV method, Rong Viet Securities sets a target price for HDG at VND 32,600. We have a **BUY** on the stock with a total estimated return of 20%.*

BUY	**+20%**
Target price (VND)	32,600
Current market price (VND)	27,250

Stock Info	
Sector	Real estate
Market Cap (VND billion)	3,008
Current Shares O/S	118,649,000
Avg. Daily Volume (in 20 sessions)	416,439
Free float (%)	44.9
52 weeks High	36,123
52 weeks Low	16,200
Beta	1.24

	FY2019
EPS	5,119
EPS Growth (%)	36%
Diluted EPS	5,119
P/E	6.1
P/B	1.4
Cash dividend yield (%)	3.2
ROE (%)	32%

One-year price performance



Major Shareholders (%)	
Mr. Nguyen Trong Thong	35.1
Mr. Nguyen Van To	8.9
Venner Group	4.7
Foreign ownership room (%)	32.1

Duong Lai

(084) 028- 6299 2006 – Ext 1522

duong.ld@vdsc.com.vn

Exhibit 1: 1Q FY2020 Results

(VND Bn)	1Q-FY20	4Q-FY19	+/- (qoq)	1Q-FY19	+/- (yoy)
Net revenue	1,082	1,209	-10.5%	901	20.0%
Gross profit	423	418	1.2%	425	-0.4%
SG&A	-55	-79	-31.1%	-61	-10.5%
Operating income	369	339	8.7%	364	1.3%
EBITDA	423	369	14.5%	407	3.9%
EBIT	296	284	4.1%	323	-8.2%
Financial expenses	-79	-76	4.3%	-45	77.4%
- Interest Expenses	-78	-64	20.7%	-44	75.3%
Dep. and amortization	54	30	80.4%	43	25.2%
Non-recurring items (*)					
Extraordinary items (*)					
PBT	295	301	-2.1%	321	-7.9%
PAT	182	197	-7.7%	265	-31.3%
(*) Adjusted PAT	0	0	0	0	0

Source: HDG, Rong Viet Securities

Exhibit 2: 1Q FY2020 Performance Analysis

Particulars	1Q-FY20	4Q-FY19	*+/- (qoq)*	1Q-FY19	*+/- (yoy)*
Profitability Ratios (%)					
Gross Margin	39.1	34.6	+450bps	47.1	-800bps
EBITDA Margin	39.1	30.6	+850bps	45.2	-610bps
EBIT Margin	27.4	23.5	+380bps	35.8	-840bps
Net Margin	16.8	16.3	+50bps	29.4	-1,126bps
Adjusted Net Margin	0.0	0.0	0.0	0.0	0.0
Turnover *(x)					
-Inventories	0.5	0.4	0.0	0.6	-0.1
-Receivables	2.1	1.7	0.4	2.5	-0.4
-Payables	6.4	7.0	-0.7	8.8	-2.5
Leverage (%)					
Total Debt/ Equity	99.8%	98.0%	+170bps	95.8%	+400bps

Source: Rong Viet Securities, (*) Annualized turnover

Exhibit 3: 2Q FY2020 Performance Forecast

Particulars (VND Bn)	2Q-FY20	+/- qoq	+/- yoy
Revenue	1,154	7%	18%
Gross profit	544	29%	19%
EBIT	453	53%	21%
NPAT	260	43%	95%

Source: Rong Viet Securities

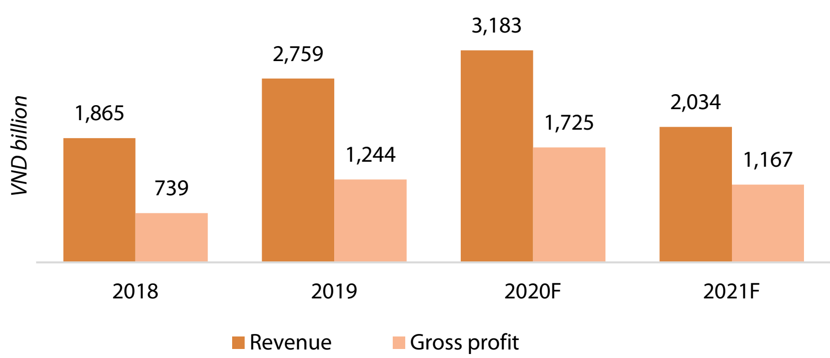
Update

Real Estate: Launching the Charm Villas

The revenue and profit for 2020 are quite certain. At the Centrosa Garden project, HDG has sold nearly 100% of total units and completely recorded as revenues for 2021. Currently, the remaining revenue and profit after tax are VND 4,014 billion and VND 1,034 billion, respectively. We project that HDG will hand over 70% and 30% of the remaining units in 2020 and 2021. Profit growth in 2021 will depend on sales of new launches this year, including the Charm Villas and Noongtha projects.

HDG owns land banks at relatively favorable locations. However, the development progress has been delayed due to prolonged legal procedures over the years. In the short term, we believe that the Charm Villas is the only one that possesses the most favorable factors bringing significant cash flow to the company: ***1) Legal status is nearly completed 2) Infrastructure conditions have been developed, and 3) Locations in Hanoi.*** However, this project has been delayed for over a year. We suppose that the real estate market has showed signs of weakening, hence, the launching time is the key factor. This may affect the absorption rate for real estate projects. Total remaining units for sale is 376 low-rise units, corresponding to an expected revenue and after-tax profit of VND 3,200 billion and VND 1,300 billion, respectively. In terms of construction progress, there are 185 bare-shell units being ready for sale. In 2020, HDG only needs to pay an additional VND 200 billion for LURs obligations. Hence, the risk to develop this project is very low, while the cash flow will be significant. We assume that HDG can start to hand over from 4Q/2020, with total expected revenue of VND 400 billion this year.

Figure 1: Revenue and gross profit of the real estate segment



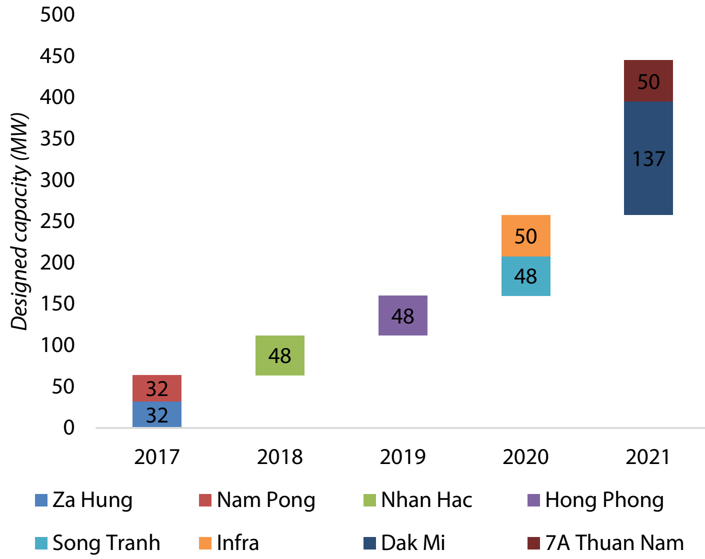
Source: HDG, RongViet Securities

Growth drivers from the energy sector

For 2020-2021, HDG plans to put into operation four new projects, with a total designed capacity of 285MW. Specifically, there are two hydropower, a solar power and a wind power plant.

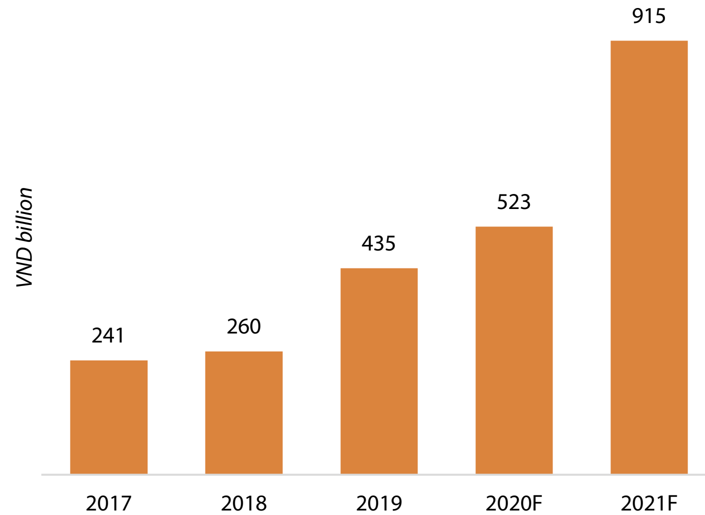
In 2020, the total output is estimated at 450 million kWh (+20% YoY). Accordingly, we project that gross profit of the energy segment will be VND 523 billion (+ 23% YoY). Growth will mainly come from the contribution of the Song Tranh plant (expected to generate electricity in 4Q/2020) and the full-year contribution of the Hong Phong 4 plant. Currently, we have not factored in the infra solar-power project (Ninh Thuan province) into our model.

Figure 2: Expanding total capacity (MW



Source: HDG, RongViet Securities

Figure 3: Gross profit projections for the energy business

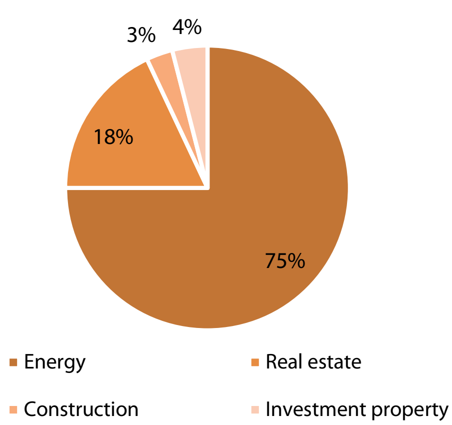


Source: HDG, RongViet Securities

High debt level but not too much pressure - Healthy cash flow

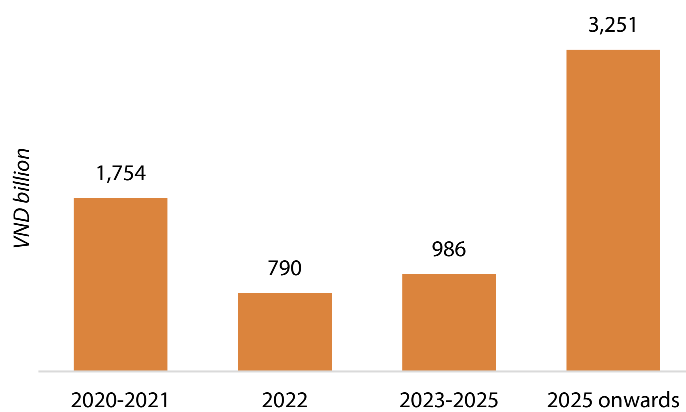
HDG's current debt balance was VND 5,821 billion, accounting for 43% of total assets, at the end of 2019. The financial leverage was high, but the majority of borrowings were used for energy projects with long duration (normally 10 years). In the period of 2020-2021, the total outstanding debt maturing will be VND 1,700 billion, mainly from the real estate segment. The remaining receivables from customers in the Centrosa Garden project is VND 1,600 billion, partly offsetting the debt repayment. In addition, HDG also plans to issue VND 800 billion in convertible bonds in H2-2020 without warrants and collaterals. The minimum conversion price will be VND 40,000/share.

Figure 4: Debt breakdown by segment * (31/12/2019)



Source: HDG

Figure 5: Debt maturity schedule* (31/12/2019)



Source: HDG

1Q2020 results: driven by real estate

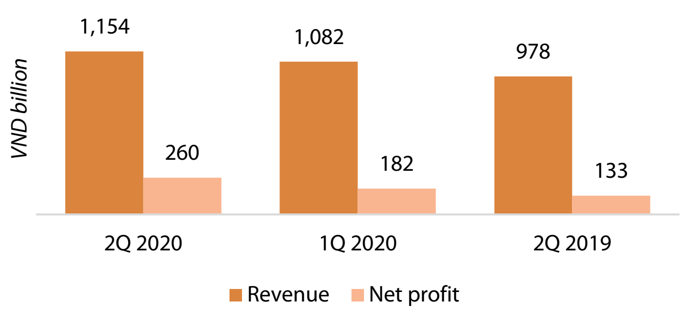
Net sales and NPATMI came at VND 1,082 billion (+20% YoY) and VND 182 billion (-31% YoY), fulfilling 20% of the year's target. Real estate contributed the most, accounting for 54% of profit after tax. HDG started to hand over four Iris towers to customers, equivalent to VND 734 billion in consolidated revenue. The energy segment recorded VND 171 billion in revenue (+ 16% YoY) and VND 123 billion (+ 6% YoY) in gross profit.

The energy segment recorded VND 171 billion in revenue (+ 16% YoY) and VND 123 billion (+ 6% YoY) in gross profit. During 1Q, the revenue growth driver was from the contribution of the Hong Phong solar power plant (VND 48 billion) which started operation in June 2019. On the other hand, revenue from the hydropower plants decreased by 17% (VND 122 billion). Total output was 71kWh (+19% YoY).

We project that revenue and net profit in Q2/2020 will be VND 1,154 billion (+18% YoY) and VND 260 billion (+ 95% YoY):

- Continuous deliveries from the Centrosa Garden project, with estimated revenue of VND 750 billion.
- 2Q: Start of the rainy season will lead to higher profits for the hydropower plants. The two projects located in Nghe An province will see higher income. Quang Nam province is still in the dry season, leading to flat income in the Za Hung plant compared to 1Q figures. In general, revenue and profit for the energy segment will only see a slight change, with no contribution from the new projects. Accordingly, we forecast that revenue and gross profit in 2Q will be VND 180 billion (+5% QoQ) and VND 122 billion (-1% QoQ), respectively.

Figure 6: Projected revenue and profit for 2Q 2020



Source: HDG, RongViet Securities

Valuation

HDG is a company with good assets and a healthy cash flow from energy projects. In our opinion, the company faces low risk in its real estate development activities.

Using the RNAV valuation method, our target price is VND 32,600. We revised HDG's valuation down from our Dec 2019 strategy report due to: 1) Average discount rate is increased to 14% and 2) Apply book value for real estate projects that have not been implemented in 2020, likes Greenlane, Thu Duc and Bao Dai. For the energy projects, currently, we have not factored the valuation of two projects, the infra solar power (Ninh Thuan) and 7A wind power. Our estimated total return is 20% higher than the closing price on 05/14/2020. We have a **BUY** on this stock.

Table 1: HDG valuation (VND billion)

	Method	NPV	% Stake	Effective NPV
RESIDENTIAL				**3,276**
Hado Centrosa Garden	DCF	974	89%	867
Hado Charm Villas	DCF	1,255	100%	1,255
Nongtha Central Park	DCF	241	100%	241
Others	BV	914	100%	914
OFFICE & HOTEL				**1,426**
IBIS	DCF	546	100%	546
South Office	DCF	254	100%	254
Airport Office	DCF	198	100%	198
Centrosa malls	DCF	167	89%	149
Others	BV	279	100%	279
ENERGY				**3,438**
Za Hung	DCF	818	52%	426
Nam Pong	DCF	609	52%	317
Nhan Hac	DCF	972	52%	505
Song Tranh 4	DCF	393	60%	236
Dak Mi 2	DCF	1,271	98%	1,246
Hong Phong	DCF	854	83%	709
Total				**8,140**
(+) Net cash				696
(-) Net debt				-4,977
Net asset value				**3,860**
Total outstanding shares (million)				119
Price per share				**32,600**

Source: Rong Viet Securities

(VND Billion)

INCOME STATEMENT	FY2018	FY2019	FY2020F	FY2021F
Revenue	3,203	4,343	4,925	4,454
COGS	-2,002	-2,515	-2,523	-2,189
Gross profit	1,201	1,828	2,403	2,265
Selling Expense	-68	-52	-148	-134
G&A Expense	-204	-229	-288	-261
Finance Income	58	87	73	45
Finance Expense	-118	-236	-365	-400
Other profits	43	-7	0	0
Gain/loss in associates	-1	0	0	0
PBT	911	1,390	1,675	1,517
CIT	-159	-273	-314	-228
Minority's Interest	144	185	171	141
PAT to Equity S/H	608	932	1,190	1,148
EBIT	929	1,546	1,967	1,871
EBITDA	1,045	1,643	2,176	2,266

FINANCIAL RATIO	FY2018	FY2019	FY2020F	FY2021F
Growth				(%)
Revenue	39.4%	35.6%	13.4%	-9.6%
Operating Income	153.8%	57.2%	32.4%	4.1%
EBITDA	125.6%	66.4%	27.2%	-4.9%
PAT	240.6%	53.4%	27.7%	-3.6%
Total Assets	29.5%	27.2%	1.8%	6.3%
Equity	26.0%	24.9%	29.5%	24.2%
Profitability				
Gross margin	37.5%	42.1%	48.8%	50.9%
EBITDA margin	32.6%	37.8%	44.2%	50.9%
EBIT margin	29.0%	35.6%	39.9%	42.0%
Net margin	19.0%	21.5%	24.2%	25.8%
ROA	5.6%	6.7%	8.4%	7.6%
ROE	23.1%	28.4%	28.0%	21.7%
Efficiency				
Receivable Turnover	1.5	2.5	2.4	1.9
Inventory Turnover	-0.5	-0.7	-1.1	-1.0
Payable Turnover	-4.0	-3.5	-4.2	-3.3
Liquidity				
Current	1.4	1.6	1.8	2.9
Quick	0.6	0.7	1.0	1.8
Finance Structure				
Total Debt/Equity	100.5%	177.4%	149.3%	132.1%
Current Debt/Equity	35.9%	36.1%	12.6%	14.8%
Long-term Debt/Equity	64.6%	141.4%	136.8%	117.3%

(VND Billion)

BALANCE SHEET	FY2018	FY2019	FY2020F	FY2021F
Cash and cash equivalents	652	401	494	810
Short-term investments	111	249	130	190
Accounts receivable	2,129	1,716	2,068	2,315
Inventories	3,758	3,498	2,303	2,163
Other current assets	109	199	188	292
Property, plant & equipment	2,875	4,743	6,219	8,929
Acquired intangible assets	540	2,856	2,495	15
Long-term investments	336	39	39	39
Other non-current assets	142	155	175	241
Total assets	**10,902**	**13,866**	**14,120**	**15,004**
Accounts payable	497	710	604	657
Short-term borrowings	4,403	3,014	2,216	1,339
Long-term borrowings	943	1,183	533	783
Other non-current liabilities	1,697	4,637	5,811	6,190
Bonus and Welfare fund	27	22	0	0
Technology-science, dev. fund	9	29	29	29
Total liabilities	**8,276**	**10,586**	**9,878**	**9,725**
Common stock and APIC	950	1,187	1,187	1,187
Treasury stock (enter as -)	0	0	0	0
Retained earnings	735	1,096	2,167	3,196
Other comprehensive income	0	0	0	0
Inv. and Dev. Fund	23	51	35	36
Total equity	**2,626**	**3,280**	**4,248**	**5,278**
Minority Interest	**881**	**859**	**859**	**859**

VALUATION RATIO	FY2018	FY2019	FY2020F	FY2021F
EPS (VND)	3,768	5,119	9,719	9,225
P/E (x)	8.3	6.1	2.5	2.6
BV (VND)	24,860	22,129	28,253	36,481
P/B (x)	1.3	1.4	1.0	0.7
DPS (VND/share)	1,000	1,000	1,000	1,000
Dividend yield (%)	3.2	3.2	3.7	3.7

VALUATION MODEL	Price	Weight	Average
RNAV	32,600	100%	32,600
Target price (VND)			**15,900**

VALUATION HISTORY	Price	Recommendation	Period
12/11/2018	30,800	Buy	One-year
31/05/2019	37,200	Accumulate	One-year
05/05/2020	32,600	Buy	One-year

RESULT UPDATE

This report is created for the purpose of providing investors with an insight into the discussed company that may assist them in the decision-making process. The report comprises analyses and projections that are based on the most up-to-date information with the objective that is to determine the reasonable value of the stock at the time such analyses are performed. Through this report. we strive to convey the complete assessment and opinions of the analyst relevant to the discussed company. To send us feedbacks and/or receive more information. investors may contact the assigned analyst or our client support department.

RATING GUIDANCE

Ratings	BUY	ACCUMULATE	REDUCE	SELL
Total Return including Dividends in 12-month horizon	>20%	5% to 20%	-20% to -5%	<-20%

ABOUT US

RongViet Securities Corporation (RongViet) was established in 2007. licensed to perform the complete range of securities services including brokerage. financial investment. underwriting. financial and investment advisory and securities depository. RongViet now has an operating network that spreads across the country. Our major shareholders. also our strategic partners. are reputable institutions. i.e Eximbank. Viet Dragon Fund Management. etc... Along with a team of the professional and dynamic staffs. RongViet has the man power as well as the financial capacity to bring our clients the most suitable and efficient products and services. Especially. RongViet was one of the very first securities firms to pay the adequate attention to the development of a team of analysts and the provision of useful research report to investors.

The **Analysis and Investment Advisory Department** of RongViet Securities provides research reports on the macro-economy. securities market and investment strategy along with industry and company reports and daily and weekly market reviews.

ANALYSIS & INVESTMENT ADVISORY DEPARTMENT

Lam Nguyen
Head of Research
lam.ntp@vdsc.com.vn
+ 84 28 6299 2006 (1313)

Duong Lai
Senior Analyst
duong.ld@vdsc.com.vn
+ 84 28 6299 2006 (1522)
- Real Estate
- Building Materials

Vu Tran
Senior Analyst
vu.thx@vdsc.com.vn
+ 84 28 6299 2006 (1518)
- Oil & Gas
- Fertilizer

Trinh Nguyen
Senior Analyst
trinh.nh@vdsc.com.vn
+ 84 28 6299 2006 (1551)
- Steel
- Construction
- Utilities

Tu Vu
Analyst
tu.va@vdsc.com.vn
+ 84 28 6299 2006 (1511)
- Macroeconomics

Son Tran
Analyst
son.tt@vdsc.com.vn
+ 84 28 6299 2006 (1527)
- Retails
- Food & Beverages
- Pharmaceutical

Tung Do
Analyst
tung.dt@vdsc.com.vn
+ 84 28 6299 2006 (1521)
- Logistics
- Aviation

Tam Pham
Analyst
tam.ptt@vdsc.com.vn
+ 84 28 6299 2006 (1530)
- Insurance
- Fishery

Anh Nguyen
Analyst
anh2.ntt@vdsc.com.vn
+ 84 28 6299 2006 (1531)
- Banking

Hoang Nguyen
Analyst
hoang.nt@vdsc.com.vn
+ 84 28 6299 2006 (1538)
- Market Strategy

Hoang Bui
Analyst
hoang.bh@vdsc.com.vn
+ 84 28 6299 2006 (1514)
- Natural Rubber
- Agriculture

Tu Pham
Analyst
tu.pm@vdsc.com.vn
+ 84 28 6299 2006 (1536)
- Steel

Khoa Ngo
Analyst
khoa.nc@vdsc.com.vn
+ 84 28 6299 2006 (1519)
- Retails

Bernard Lapointe
Senior Consultant
bernard.lapointe@vdsc.com.vn
+ 84 28 6299 2006

Ha Tran
Assistant
ha.ttn@vdsc.com.vn
+ 84 28 6299 2006 (1526)

Vi Truong
Assistant
vi.ttt@vdsc.com.vn
+ 84 28 6299 2006 (1517)

DISCLAIMERS

This report is prepared in order to provide information and analysis to clients of Rong Viet Securities only. It is and should not be construed as an offer to sell or a solicitation of an offer to purchase any securities. No consideration has been given to the investment objectives, financial situation or particular needs of any specific. The readers should be aware that Rong Viet Securities may have a conflict of interest that can compromise the objectivity this research. This research is to be viewed by investors only as a source of reference when making investments. Investors are to take full responsibility of their own decisions. VDSC shall not be liable for any loss, damages, cost or expense incurring or arising from the use or reliance, either full or partial, of the information in this publication.
The opinions expressed in this research report reflect only the analyst's personal views of the subject securities or matters; and no part of the research analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or opinions expressed in the report.
The information herein is compiled by or arrived at Rong Viet Securities from sources believed to be reliable. We, however, do not guarantee its accuracy or completeness. Opinions, estimations and projections expressed in this report are deemed valid up to the date of publication of this report and can be subject to change without notice.

IMPORTANT DISCLOSURES FOR U.S. PERSONS

This research report was prepared by Viet Dragon Securities Corp. ("VDSC"), a company authorized to engage in securities activities in Vietnam. VDSC is not a registered broker-dealer in the United States and, therefore, is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. This research report is provided for distribution to "major U.S. institutional investors" in reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act").

Additional Disclosures

This research report is for distribution only under such circumstances as may be permitted by applicable law. This research report has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient, even if sent only to a single recipient. This research report is not guaranteed to be a complete statement or summary of any securities, markets, reports or developments referred to in this research report. Neither VDSC nor any of its directors, officers, employees or agents shall have any liability, however arising, for any error, inaccuracy or incompleteness of fact or opinion in this research report or lack of care in this research report's preparation or publication, or any losses or damages which may arise from the use of this research report.

VDSC may rely on information barriers, such as "Chinese Walls" to control the flow of information within the areas, units, divisions, groups, or affiliates of VDSC.

Investing in any non-U.S. securities or related financial instruments (including ADRs) discussed in this research report may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the U.S. Securities and Exchange Commission. Information on such non-U.S. securities or related financial instruments may be limited. Foreign companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect within the United States.

The value of any investment or income from any securities or related financial instruments discussed in this research report denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related financial instruments.

Past performance is not necessarily a guide to future performance and no representation or warranty, express or implied, is made by VDSC with respect to future performance. Income from investments may fluctuate. The price or value of the investments to which this research report relates, either directly or indirectly, may fall or rise against the interest of investors. Any recommendation or opinion contained in this research report may become outdated as a consequence of changes in the environment in which the issuer of the securities under analysis operates, in addition to changes in the estimates and forecasts, assumptions and valuation methodology used herein.

No part of the content of this research report may be copied, forwarded or duplicated in any form or by any means without the prior.

RESEARCH DISCLOSURES

Third Party Research

This is third party research. It was prepared by Rong Viet Securities Corporation (Rong Viet), with headquarters in Ho Chi Minh City, Vietnam. Rong Viet is authorized to engage in securities activities according to its domestic legislation. This research is not a product of Tellimer Markets, Inc., a U.S. registered broker-dealer. Rong Viet has sole control over the contents of this research report. Tellimer Markets, Inc. does not exercise any control over the contents of, or the views expressed in, research reports prepared by Rong Viet.

Rong Viet is not registered as a broker-dealer in the United States and, therefore, is not subject to U.S. rules regarding the preparation of research reports and the independence of research analysts. This research report is provided for distribution to "major U.S. institutional investors" and other "U.S. institutional investors" in reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act").

Any U.S. recipient of this research report wishing to effect any transaction to buy or sell securities or related financial instruments based on the information provided in this research report should do so only through Tellimer Markets, Inc., located at 575 Fifth Avenue, 27th Floor, New York, NY 10017. A representative of

Tellimer Markets, Inc. is contactable on +1 (212) 551 3480. Under no circumstances should any U.S. recipient of this research report effect any transaction to buy or sell securities or related financial instruments through Rong Viet. Tellimer Markets, Inc. accepts responsibility for the contents of this research report, subject to the terms set out below, to the extent that it is delivered to a U.S. person other than a major U.S. institutional investor.

None of the materials provided in this report may be used, reproduced, or transmitted, in any form or by any means, electronic or mechanical, including recording or the use of any information storage and retrieval system, without written permission from.

Rong Viet is the employer of the research analyst(s) responsible for the content of this report and research analysts preparing this report are resident outside the U.S. and are not associated persons of any U.S. regulated broker-dealer. The analyst whose name appears in this research report is not registered or qualified as a research analyst with the Financial Industry Regulatory Authority ("FINRA") and may not be an associated person of Tellimer Markets, Inc. and, therefore, may not be subject to applicable restrictions under FINRA Rules on communications with a subject company, public appearances and trading securities held by a research analyst account.

Tellimer Markets, Inc. or its affiliates has not managed or co-managed a public offering of securities for the subject company in the past 12 months, has not received compensation for investment banking services from the subject company in the past 12 months, and does not expect to receive or intend to seek compensation for investment banking services from the subject company in the next three months. Tellimer Markets, Inc. has never owned any class of equity securities of the subject company. There are no other actual, or potential, material conflicts of interest of Tellimer Markets, Inc. at the time of the publication of this report. As of the publication of this report, Tellimer Markets, Inc. does not make a market in the subject securities.

About Tellimer

Tellimer is a registered trade mark of Exotix Partners LLP. Exotix Partners LLP and its subsidiaries ("Tellimer") provide specialist investment banking services to trading professionals in the wholesale markets. Tellimer draws together liquidity and matches buyers and sellers so that deals can be executed by its customers. Tellimer may at any time, hold a trading position in the securities and financial instruments discussed in this report. Tellimer has procedures in place to identify and manage any potential conflicts of interests that arise in connection with its research. A copy of Tellimer's conflict of interest policy is available at www.tellimer.com/regulatory-information.

Distribution

This report is not intended for distribution to the public and may not be reproduced, redistributed or published, in whole or in part, for any purpose without the written permission of Tellimer. Tellimer shall accept no liability whatsoever for the actions of third parties in this respect. This report is for distribution only under such circumstances as may be permitted by applicable law.

This report may not be used to create any financial instruments or products or any indices. Neither Tellimer, nor its members, directors, representatives, or employees accept any liability for any direct or consequential loss or damage arising out of the use of all or any part of the information herein.

United Kingdom: Distributed by Exotix Partners LLP only to Eligible Counterparties or Professional Clients (as defined in the FCA Handbook). The information herein does not apply to, and should not be relied upon by, Retail Clients (as defined in the FCA Handbook); neither the FCA's protection rules nor compensation scheme may be applied.

UAE: Distributed in the Dubai International Financial Centre by Exotix Partners LLP (Dubai) which is regulated by the Dubai Financial Services Authority ("DFSA"). Material is intended only for persons who meet the criteria for Professional Clients under the Rules of the DFSA and no other person should act upon it.

Other distribution: The distribution of this report in other jurisdictions may be restricted by law and persons into whose possession this document comes should inform themselves about, and observe, any such restriction.

Disclaimers

Tellimer and/or its members, directors or employees may have interests, or long or short positions, and may at any time make purchases or sales as a principal or agent of the securities referred to herein. Tellimer may rely on information barriers, such as "Chinese Walls" to control the flow of information within the areas, units, divisions, groups of Tellimer.

Investing in any non-U.S. securities or related financial instruments (including ADRs) discussed in this report may present certain risks. The securities of non-U.S. issuers may not be registered with, or be subject to the regulations of, the U.S. Securities and Exchange Commission. Information on such non-U.S. securities or related financial instruments may be limited. Foreign companies may not be subject to audit and reporting standards and regulatory requirements comparable to those in effect within the United States. The value of any investment or income from any securities or related financial instruments discussed in this report denominated in a currency other than U.S. dollars is subject to exchange rate fluctuations that may have a positive or adverse effect on the value of or income from such securities or related financial instruments.

Frontier and Emerging Market laws and regulations governing investments in securities markets may not be sufficiently developed or may be subject to inconsistent or arbitrary interpretation or application. Frontier and Emerging Market securities are often not issued in physical form and registration of ownership may not be subject to a centralised system. Registration of ownership of certain types of securities may not be subject to standardised procedures and may even be effected on an ad hoc basis. The value of investments in Frontier and Emerging Market securities may also be affected by fluctuations in available currency rates and exchange control regulations. Not all of these or other risks associated with the relevant company, market or instrument which are the subject matter of the report are necessarily considered.