CMC Joint stock company (CVT: HOSE)



Prospective growth from the new products.

FULL REPORT

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Demand for tile, especially Granite tile continues to increase in coming times.

CVT is medium-sized manufacturer with total capacity of 18mn m2/year, achieving great gross profit other margin compared competitors in the sector.

Stable growth of financial performances over the last 7 years, and expect to continue in 2018 thanks to the new line of product.

Risks derived from the cycle of economy and new product.

Healthy economy combining with fast growth population and high urbanization rate are the positive drives for the development of construction and building materials industry in general and tile sector in particular. At present, while there is an oversupply of ceramic tile, total capacity of Granite tile production in Vietnam is limited, which stimulates the growth of tile manufacturers in coming times.

Total design capacity of CVT reached 18mn m2/year, securing 4th rank in the list of 80 Vietnamese tile manufacturers. Gross profit margin of CVT is 23.8%, the highest rate among that of the listing tile manufactures, contributed by the efficient distribution system, factories adjacent to resources mines and especially the flexible production lines capable of altering products for public tastes in each period.

CAGR of profit of CVT in 7 years is 28.32%. In early 2018, phase 3 of CMC2 factory was put into operation, producing a new product which is the high-end soluble salt and virtrified granite tile. These new products will be launched in 2H2018 and is expected to be the key catalyst for development of the Company in 2018. Forward revenue in 2018 is VND 1,389bn, up by 17.6% yoy and net profit is VND 204.2bn, up by 17.5% yoy.

CVT is facing risks derived from the 10-year-cycle of the economy-real estates and particularly the market absorption with soluble salt - virtrified granite tile. This product offers a great deal of advantages yet its high price will create a barrier to the sale effectiveness, thus adversely impact on expected earnings.

Buy

Target price	VND36,850
Upside/Downside	42.6%
Current price (24/08/2018)	25,850 VND
Target price	36,850 VND
Market cap	VND948.5 tỷ VND
	(40.6 triệu USD)

Trading data	
Outstanding share	36,690,887
Avg. Daily volume (3M)	463,414
% Foreign owned	13.31%
Dividend per share	VND1,000

6M	12M
-26.4%	
-9.3%	
	3.370

Forecast earnings & valuation				
FY-End	2017A	2018F	2019F	
Revenue (VNDbn)	1,181.1	1,389.1	1,616.4	
Growth rate (%)	5. 7%	17.6%	16. 4%	
Gross profit (VNDbn)	281.5	353.6	427.1	
Gross margin (%)	23.8%	25.5%	26.4%	
Net profit (VNDbn)	173.8	204.2	251.9	
Growth rate (%)	14.3%	17.5%	23.4%	
EPS	4,736	5,565	6,864	
EPS growth	14.3%	17.5%	23.4%	
P/E	5. 28	4. 49	3. 64	



Source: KBSV

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MARKET OVERVIEW

Construction industry grows steadily with 14.53% CAGR over 17 years.

Vietnam's population has been significantly increasing over 17 years and is projected to reach 95 million in 2018.

Urbanization rate is expected to reach 50.7% by 2039.

More than half of Vietnam's population will join the global middle class by 2035.

Needs for changing and renovating houses and moving out increases demands for construction.

Construction industry overview

The construction and building materials industry in Vietnam, which tends to move in the same direction with the economy and real estates market, is currently thriving thanks to the positive macro factors. Its contribution to total GDP 2017 was VND 609,498bn, up by 12.3% yoy, accounting for 5.38% of total GDP. Average CAGR of construction industry reached 14.53% between 2000 and 2017, a little higher than that of total GDP at 14.85%. The rapid and sustainable development of the industry is contributed by the Government's policy to accelerate urbanization, demand for changing and renovating houses, and moving out as well as the high population growth rate, which keep house construction in high demand.

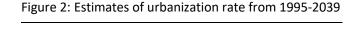
According to GSO, Vietnam's population has been significantly increasing over recent years, rising from 77.6mn to 93.7 million people during 2000-2017 and is projected to reach 95 millon in 2018. Ha Noi and Ho Chi Minh are the two most densely populated cities in Vietnam, accommodating 15.6mn people which accounts for 16.5% of the country's total population (Figure 4). It is forecasted that Vietnam's population will be 108.46mn people by 2049 with 1.05% CAGR.

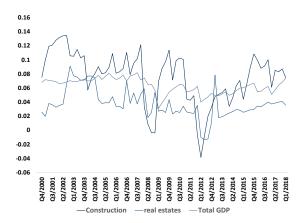
Statistics of GSO illustrate that though urbanization rate of Vietnam was only recorded at 33%, it is expected to sustain the growth over the years and to reach 50.7% by 2039 (Figure 2). Migration of rural workers to cities as a result of structural change in labor market is mainly responsible for the increase of new apartments demand, especially the reasonably priced segment.

Sustainable GDP growth leads to the increase of GDP per capital and expansion of middle class. According to World Bank, since 2014, there has been 1.5 million Vietnamese people on average to join the global middle class each year. This figure is expected to rise to 33 million people in 2020. The fast middle class expansion promotes the real estates market thanks to the growing demand and buying power, and better affordability of housing.

Savill's studies suggest that about 31 million people, equivalent to 27% of Vietnamese population are currently staying in low quality apartments. In addition, the fact that a part of the youngsters nowadays tends to live alone instead of staying with their families also increase the demand for new small-sized apartments. According to GSO, the rate of total number of residents living alone to total population has climbed considerably from 4.6% in 1989 to 9.1% in 2014 and is projected to rise to 10.1% by 2019.

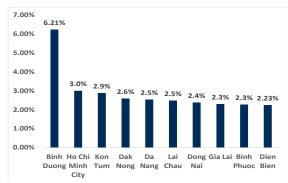
Figure 1: Growth rate of Construction-Real estates-GDP





Source: GSO, KBSV

Figure 3: Fastest growing populated provinces



Source: Citypopulation, KBSV

50.00%

50.00%

40.00%

30.00%

20.75%

24.12%

27.10%

30.50%

33.88%

34.51%

36.10%

39.65%

43.29%

47%

47%

47%

47%

47%

40.00%

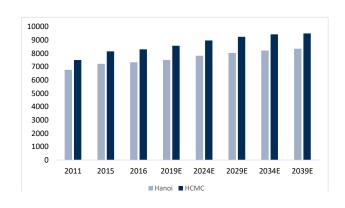
10.00%

10.00%

1995 2000 2005 2010 2015 2016 2019E 2024E 2029E 2034E 2039E

Source: GSO, KBSV

Figure 4: Ha Noi and Ho Chi Minh's population (mn people)



Tile market

Global Ceramic tile market had a steady growth in both supply and demand. According to the latest update, total global tile output in 2016 had substantially improved compared to the sharp drop in 2015. In particular, total output went up by 5.7% yoy, reaching 13,056 million m2 (Figure 5). Its CAGR was recorded at 5.1% from 2007 to 2016 in which Asia had the largest contribution, accounting for 71.5% of total output, mostly coming from China, Vietnam, Iran and India. The next contributors are Central South America and European Union with 10% and 8.3% respectively (Figure 6). In addition, North America experienced the most impressive growth of output, up by 8.5% yoy while there was a dip of 9% yoy in the output of Central America.

A total of 12,793mn m2 Ceramic tile was sold in 2016, up by 5.0% yoy in which Asia was responsible for the largest portion of 69% of total sales. Also, tile consumption in Asia has the fastest growth, at 8.8% yoy while those of Central South America and Africa fell to 7.7% and 5.5% yoy respectively because countries which have great demand for tiles including Brazil, Nigeria, Libya and Egypt experienced a drop in consumption.

Vietnam's tile capacity ranks 5th in the world, most production is Ceramic tile with over 80 manufacturers Vietnamese tile is one of the few leading sectors in the global market. Total Ceramic tile output in 2016 reached 485mn m2, 1st rank in South East Asia and 5th rank in the world.

There are currently 80 manufacturers in tile & brick sector with variety of scales and quality. Most manufacturing factories are located in the North of Vietnam, adjacent to the material sources to lower transportation costs. Besides the long-established enterprises with great reputation such as Hoang Anh Gia Lai, Viglacera, Dong Tam, Thach Ban, CMC, ect., there are some international firms like Taicera, Bach Ma and Prime along with the new private firms with high capacity including Catalan (15mn m2/year), Toko (15mn m2/year), Tasa (24mn m2/year).

Granite capacity is only 60mn m2/year, plenty room for improvement.

The trend to use Granite tile to substitute Ceramic tile has become popular in recent years thanks to the overwhelming advantages of Granite tile including high durability and aesthetical design. Granite stone is the popular materials used in most of the large-scaled projects such as high buildings, offices, hospitals and a great number of residential apartments. According to Vietnam Federation of Civil Engineering Associations, demand for Granite stone is expected to reach 140mn m2/year in 2020 while the current capacity is only 60mn m2/year, therefore, each year Vietnam's capacity must improve by 20% on average to satisfy the consumption needs, which is contrast to the oversupply situation of Ceramic tile.

Domestic tile manufacturing is secured by import tariff.

According to Decree 153/2017/NĐ-CP, 20% tariff is applied to most of the imported construction tile and brick products from China and 5% tariff for tile products from countries in ASEAN. The purpose of this tariff is to protect the domestic manufacturers from the fierce competition of Chinese firms which possess the largest volume of tile output.

Figure 5: Total Ceramic tile output in the world (mn m2)

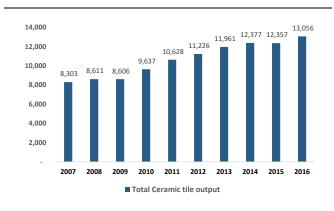
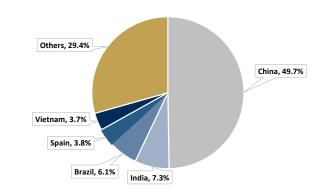


Figure 6: Global Ceramic tile manufacturing structure 2016



Source: Acimac

Source: Acimac

CMC JSC.

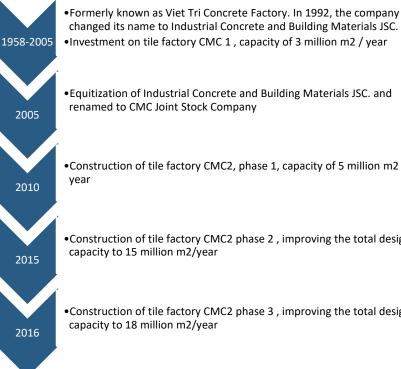
CMC JSC operates in the building materials sector focusing on ceramic tile, granite tile and bricks.

CMC JSC has vast experience in the sector, previously formed as a stateowned enterprise since 1985.

CMC was listed on HNX on November 2009 as stock CVT and moved to HSX on September 2017.

Overview

Company history



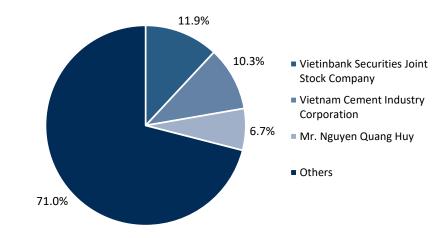
Construction of tile factory CMC2, phase 1, capacity of 5 million m2 /

• Construction of tile factory CMC2 phase 2, improving the total designed capacity to 15 million m2/year

• Construction of tile factory CMC2 phase 3, improving the total designed capacity to 18 million m2/year

On 23 July 2018, Vietinbank Securities JSC purchased more than 2.7 million shares of CVT to become its largest shareholder, holding 4.38 million shares accounting for 11.94%. Other major shareholders are Vicem Company Limited with 10.3% and CMC's Chairman cum CEO Nguyen Quang Huy with 6.7%.

Ownership structure



CVT has a capacity of 18mn m2/year, which is the average of the sector

Obvious competitive advantages with the greatest gross profit margin among the listed tile manufacturers

Position in the industry

At present, CVT's design capacity is 18mn m2/year, ranking 4th in total output volume among 80 tile manufacturers. Prime group has the greatest capacity of 90mn m2/year, followed by Royal Group and Tasa Ceramic with 30mn m2/year và 26mn m2/year. Meanwhile there was not much difference in the capacity of lower-grade manufacturers (Figure 7).

Gross profit margin of the Company in 2016 and 2017 remained at 23.55%, the highest rate among the listed manufacturers, followed by Thanh Thanh Ceramic Tile with only 15.7% (figure 8). The huge gap in gross profit margin between CVT and other competitors is contributed by: (1) Favorable geographic location, adjacent to the material sources; (2) A widespread network of 70 retail distributors in the North, (3) flexible production lines capable of altering products for public's tastes. Given oversupply situation, meanwhile other manufacturers simultaneously improve their capacity and seek new products, thanks to its great profit margin CVT is eligible for deducting its selling price to gain competitive advantages.

Figure 7: Design capacity of tile manufacturers (mn m2/year)

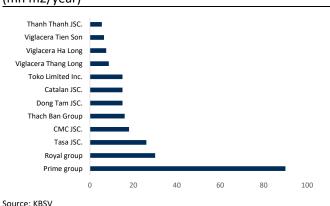
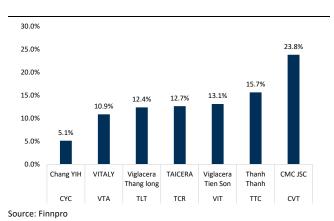


Figure 8: Gross profit margin of some tile manufacturers



Distribution network

A widespread network in the North includes 70 distributors.

CVT's products are promoted via the widespread network of 70 retail distributors across the nation in which 70% of them is located in the North of Vietnam. According to CVT's BOD, the Company does not want to expand the business to the Central and the South due to considerable transportation expense that poses enormous obstacles to compete with the local manufacturers in those regions. In the near future, CVT likely increase discounts for its distributors for competitiveness enhancement.

Business operation

Product structure

Main products includes Ceramic and Granite tile with top quality and wide selection of models.

CVT are currently providing a variety of main products including Ceramic tile, Granite tile, brick and roof tile. CVT products come with a diversity of colors and size with superior quality. CVT and Prime groups are the two manufacturers to offer the widest selection of models which are frequently updated to suit customers' appetite.

Ceramic tile accounts for the largest contribution of 70%, yet there is a shift in the structure of product.

High expectation from two new products: soluble salt Granite tile and virtrified tile.

accounts for the largest portion of 70.9% equivalent to 4.2mn m2, followed by Granite tile taking 24.6%. Despite the greatest contribution of Ceramic tile, it has been gradually replaced by Granite products. Ceramic sales dropped by 6% while that of Granite rose by 4.7% in the first 6 months of 2017. This is an indispensable replacement as Granite tile has been showing superior advantages over Ceramic tile in terms of design and durability.

By 02/2017, total sales of CVT achieved 5.92mn m2 in which Ceramic tile

In 1H2018, CVT launched 2 new products which are soluble salt tile and vitrified tile. The soluble salt granite tile has improved the shortcomings of the traditional Granite tiles including consistency in color, sharpness of patterns and high rate of A-standard -products. Vitrified tile is a three-layer-tile with a vitreous facade, thus preventing scratches and color fade. The product has superior gloss, sharp patterns and colors and especially nearly absolute resistance to water. Thanks to the outstanding characteristics, the two highend products promise to be offered at higher prices with better gross profit margins. According to the Company, the two products are provided to distributors ranging from VND 300,000-350,000/m2 and VND 400,000-500,000/m2 on the market depending on the distributors. Based on this price, gross profit margin is 30% which is higher than the current margin of 23%, thus, the Company likely adjust the selling prices based on the market absorption.

Production line

CMC1 factory has been fully depreciated but there is no specific plan for changing the land purpose.

The CMC1 factory is operating on 100% design capacity, set up in 1991 with two manufacturing lines with total capacity of 5mn m2/year, producing ceramic tile using Italian technology, types of bricks and blazed roof tiles. Even though CMC1 is employing an outdated and fully depreciated technology, and Ceramic tile do not achieve economic efficiency, the new updated information says that CVT BOD does not have any specific plans on changing the purpose of CMC1 land as its previous statement. In addition, roof tile product of CMC1 factory is doing quite well as there were 70,000 m2 of roof tile sold in June and July, contributing VND 8.4bn (USD 36,051) of revenue.

CMC2 has 13mn m2 of total capacity, flexible to alter output products.

The CMC2 factory has a total capacity of 13mn in phase 1, contributing 5mn m2 of tile using 2-step-firing-process, phase 2 completed in Q3/2015 contributes 5mn m2 of large-sized granite tile and phase 3 completed in late 2017 contributes 5mn m2 of soluble salt vitrified granite tile. Especially, CMC2's manufacturing line is capable of flexibly altering the output product such as changing from imitated granite tile to high-end ceramic tile of phase 1, which helps CVT quickly adapt to the shift in public's appetite.

Production line for the two new products is under pilot run, expected to complete the target of 1mn m2 by year end.

CVT plans to produce 1mn m2 of soluble salt tile and virtrified tile in 2018, completing a third of total design capacity of CMC2 phase 3. By the end of July, CVT had conducted a pilot run on 100,000 m2 of tile with 50% successful rate and 15% of A-rating output. In early August, CVT purchased a new Chinese technology, anticipating to improve the rate of A-rating output to 75%. Also, the Company needs to assess the absorption rate of the new product to determine its production volume in 2H2018. According to the latest update, 65% of output is qualified for A-rating thanks to the new

technology.

Figure 9: Revenue by product

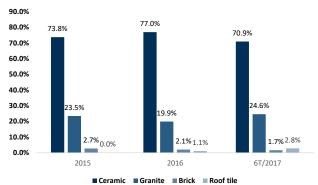


Figure 10: List of CVT's factories and production lines

Factory	Beginning year	Capacity(m 2/year)	Product	Current Situation
CMC1 Factory	1997	5	Italy technology ceramic tile	over capacity, fully depreciated, outdated technology
CMC2 phase 1	Aug-12	5	High end ceramic tile	Full capacity
CMC2 phase 2	Aug-15	5	Granite tile	Full capacity
CMC2 phase 3	Dec-17	3	soluble salt tile and virtrified tile	100,000 m2 pilot run, expected to produce 1 mn m2 in 2018
ource: CVT				

Source: CVT

Source: CVT Prospectus 2017

Cost structrure

Input materials account for the

largest portion in total operating cost, equivalent to 56.5% in 2017.

Price of Fensfat and cay, the two major materials is projected to remain stable.

Therma coal accounts for 25% of total operating cost. The price is expected to range from USD70 -USD75/ton.

Operating cost of CVT in 2017 was VND 928.2bn (USD 39.75mn), up by 15.4% yoy with CAGR of 21.15% (Figure 12). Input material cost accounts for the largest portion of 56.5% of total cost, which is typical for a tile manufacturer. Labor cost took 22%, a considerable increase compared to that in previous years ranging from 11%-13%, due to the construction of new production line. Depreciation cost and outsource fee remained stable at 10%. Depreciation cost in 2018 is expected to rise sharply to 36% due to CMC2. The manufacturer will be greatly affected by the price fluctuation of materials which accounts for a large portion in the cost structure.

Fensfat and cay are the two major contributors in the material cost structure of CVT, accounting for about 45% to 20% respectively (Figure 11). Fensfat mostly come from Lao Cai, Yen Bai, Phu Tho while cay mostly originates from Hai Duong, Quang Ninh, Bac Giang. These sources of materials are expected to remain stable. According to Decision no. 152/2008/QĐ-TTG of the Government, there has been a constant climb of exploited Fensfat and clay by 510 thousand and 330 thousand tons/year during 2016-2020. The reliable supply and network of distributors has helped CVT secure its stable and competitive cost for production.

Coal is the vital material for furnace, used to be the sole input source, which accounts for 25% of total operating cost (Figure 11). Price of coal has been dramatically fluctuated recently, there has been a sharp rise of coal price in Australia from USD 70/ton, reached a peak at USD 90/ton in Q1/2018 and then decreased and fluctuated at USD 70/ton range In Q2/2018 (Figure 13). In early Q3/2018, coal price increased to USD 80/ton as peak season has begun and fuel deficit is projected. However, the price returned to USD 70/ton owing to excess supply and that heavy rainfall in China made temperature drop and increased the competitiveness of hydropower plants over thermal power plants. There is a high possibility that price of coal will not fluctuate much in the later quarters of the year due to low demand for electricity. According to World Bank, price of coal is expected to enter a long term downtrend as China is turning to the more environment-friendly types of fuel, however, this

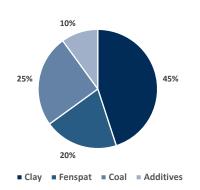
CNG replaces thermal coal in CMC2

factory phases 3.

process will take time.

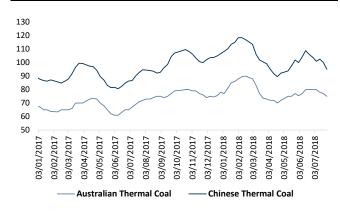
CVT has started to use CNG as a substitute for thermal coal in CMC2 factory phase 2. Though CNG is 10% more expensive than coal, it offers several exceptional advantages: (1) Less time firing in furnace, (2) Saving maintenance cost, (3) No dust in the brick bone, increasing the rate of product type 1. Currently, CVT only purchases CNG from local suppliers, however, price of CNG is moving in the same direction with that of FO oil (Figure 14). At present, even though CNG does not contribute much in the total material volume, the impact of CNG price increase will build up gradually in the future when CMC2 factory phase 3 runs at full capacity and CMC2 phase 4 comes into operation.

Figure 12: Cost structure of materials



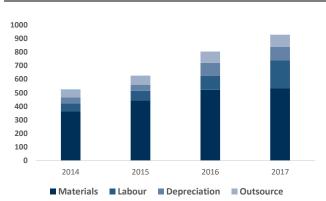
Source: CVT, KBSV

Figure 14: Coal price movements 2017-2018 (USD/ton)



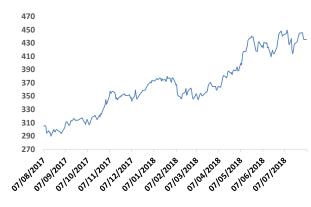
Source: Bloomberg

Figure 13: Cost structure 2014-2017



Source: BCTC CVT, KBSV

Figure 15: FO oil price movements (USD/ton)



Source: Bloomberg

Financial analysis

Business performance had impressive growth in 2018, but likely slow down in 1H2018.

In 2017, the Company earned VND 1,181bn of revenue, up by 5.7% yoy. This the 7th consecutive year of growth since the Company went public. CARG of revenue was 23.6% during 2010 – 2017. Gross profit margin reached 23.8%, slightly hiking by 0.3% yoy while selling cost and administration cost did not change much. Net profit in 2017 was VND 173.8bn, up by 14.3% yoy (Figure 15).

In 1H2018, net revenue achieved VND 573.6bn, up by 16.7% yoy while cost of goods sold was up by 21.3% due to depreciation and expense for pilot run of

Total asset increased by 13.5% due to material purchase for CMC2 phase 3.

Payables accounts a great portion in the capital structure, increasing sharply compared to opening balance. CMC2 phase 3, which made gross profit margin fall by 3% yoy, recorded at 22%. Net profit in 1H2018 only reached 72.6%, down by 5.3% yoy.

Total asset by Q2/2018 was VND 1,403bn, up by 13.5% compared to opening balance and up by 39.5% compared to that of 2016. Non-current asset was the biggest contributor, accounting for 50% of total asset, significantly increasing by VND 270bn in the first 6 months thanks to the completion of CMC2 phase 3. Inventory reached VND 550bn, equivalent to 39.2% of total asset, up by 57.8% compared to opening balance, including mostly input materials as CVT has to purchase material early for the operation of CMC2 phase 3.

Debt/asset ratio of CVT by Q2/2018 was 61% which is the average of the sector (Figure 16). Total payables by Q2/2018 was VND 859.7bn, up by 23.4% compared to that in earlier this year, mostly because of bank loans to finance for CMC2 phase 3 and to purchase materials. In case the soluble salt – vitrified tile project fails to meet expectations, it will create pressure on the performance of CVT as the Company is subjected to higher interest expense in the coming time.

Figure 15: Financial performance 2013-2017 (VND bn)

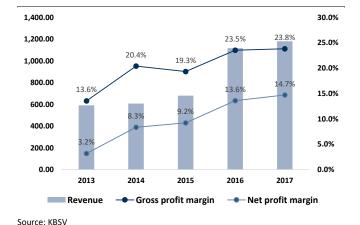
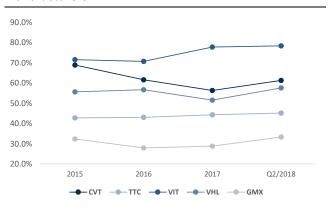


Figure 16: Payable/total asset ratio of some tile manufacturers



Source: KBSV

Situations in the real estates -

macroeconomy.

Risk

Demand for CVT's products depend greatly on the real estates market. The domestic and international macro-economic situations, especially foreign exchange, interest rate subject to high volatility due to trade war could be the barrier for the entry of new capital to the real estates market. Besides, Circular 563/NHNN-TTGSNH that restricts credit for real estates and construction sector to balance the finance for manufacturing will partly influence the capital mobilization and project implementation of real estate companies.

Performance of the new product the soluble salt – vitrified tile has great impact on CVT's earnings

We highly appreciate the ability to meet requirements for product quality of the production line of soluble salt - vitrified tile of CMC2 phase 3 as the rate of A-rating-product has reached 65%, however, market absorption is not definite. This high-end product is expected to be offered ranging from VND 400,000 - 500,000/m2, which is cheaper than the EU imported tile ranging from VND 700,000-1,000,000/m2 and higher than the common type of tile ranging from VND50,000-200,000/m2. Currently, only the high-end model of Dong Tam Company is offered at this price range and the sales rate of this product is not high, according to KBSV's research. The negative case is that the product receive poor response, which adversely impacts CVT's earnings and stock price.

VALUATION

2018 Earning Forecast

CVT's after-tax-profit in 2018 is forecast to reach VND 197.6bn, up by 13.6% yoy which is equivalent to EPS forward of VND5,565/share and PE forward of 4.48x

In 2018, we forecast CVT's revenue to reach VND 1,389bn, up by 17.6% yoy, based on the following catalysts:

CMC1 and CMC2 phase 1 & 2: Total sales in 2018 will increase by 5.57%, equivalent to 15,165,884 m2, as a result of maintaining the current output volume in CMC1 and maximizing the production in CMC2. Average selling price/m2 is projected to climb by 1.8% owing to altering products with higher selling prices which are granite and high-end ceramic.

CMC phase 3: We estimate that CMC2 phase 3 will generate 700,000 m2 of sales in 2018. Average selling price/m2 to distributors is VND 300,000. Expected revenue in 2018 is VND 210bn (USD 9mn).

Gross profit margin is expected to have a slight rise, reaching 25.5%, up by 1.7% than that in 2017 mainly because: (1) Average selling price increases as the Company switches to the high quality products, (2) Input price of major materials including Clay, Fenspat, Coal stabilizes, (3) Higher cost of CNG is compensated by higher selling price.

There is likely a significant increase in selling expense as the Company needs to increase marketing expense to promote the new products, thus total selling cost and general and administration cost will be up to 5%.

In case the products of CMC2 phase 3 fail to meet expectations, CVT's net profit will be VND 148bn, down by 15% yoy.

CVT's revenue will suffer from a great drop if the new soluble salt – vitrified tile of CMC2 – phase 3 receives poor response from the market, meanwhile the Company's expense in 2018 remains high due to depreciation of the new factory. In a negative scenario, we estimate CMC2 phase 3 will generate 300,000m2 of sales in 2018, resulting in net profit to be VND 148bn (USD 6.34mn), equivalent to EPS forward of VND 4,027.

Figure 18: Revenue forecast 2018

VND bn	2017A	2018E	2019F	2020F
Revenue	1181.1	1,389.1	1,616.4	1,827.7
Cost of good sold	899.6	1,035.6	1,189.3	1,323.4
Gross profit	281.5	353.6	427.1	504.3
Selling and admin expense	48.9	69.5	80.8	91.4
Interest expense	23.7	36.9	42.0	44.2
Net profit before tax	217.5	255.5	315.2	381.0
Net profit after tax	173.8	204.2	251.9	304.5
EPS	4,736	5,565	6,864	8,299

Source: KBSV

Valuation

In a positive scenario that the new product – soluble salt vitrified tile receive great respond from the market, we use two valuation methods which are Free cash flow to equity (FCFE) and Relative multiple valuation (P/E) to compare with other similar manufacturers; and in a negative scenario that the products do not meet expectation, we use only Relative multiple valuation (P/E). FCFE is not applied in the negative scenario as there is a lack of available information on the plan of CMC2 phase 3 in the coming years in case the new products do not succeed. We highly appreciate the potentially positive performance of the soluble salt – vitrified granite tile therefore the possibility of positive scenario is 60% and that of negative scenario is 40%.

Free cash flow to equity (FCFE)

Net profit margin and cash flow are expected to improve significantly since 2018 when CMC2 phase 3 is operational. As there is no specific plan available for fixed asset investment, we temporarily leave them out of the expansion plan forecast. Cost of capital is estimated at 15.54% based on the assumptions: Risk-free-rate is 5.5%, equivalent to the 10-year-government bond yield; Expected profit of the market is assumed to be 16.5%, equivalent to average-5-year-yield of the market; CVT's beta is 0.91; Long term growth rate is 1%.

Relative multiple valuation (P/E)

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CVT is traded at P/E trailing of 5.43x and P/E forward of 4.48x in positive scenario and 6.43x in negative scenario, which is considered attractive in comparison with other manufacturers in the sector in particular and in the whole market in general.

CVT is a medium-sized tile manufacturer with a steady profit growth rate over the past 7 years. Even though we need more time to assess the success of the soluble salt — vitrified granite tile, the potential success of this product is highly appreciated. Based on the valuation result and company's prospect in the coming time, we recommend a BUY for CVT. Target price is VND 36,850/share, upside 42.55% compared to the price on 24/08/2018.

Figure 19: Assumption for FCFE method

Assumption	Value
Cost of equity	15.5%
Risk free rate	5.5%
Risk premium	11.0%
Beta	0.913
Perpetual growth	1.0%
Forecasted time	5 year

Nguồn: KBSV

Figure 20: P/E comparison

	Ticker	Market capitalization	P/E trailing Pr	oportion	P/E based on proportion
Thanh Thanh Jsc	TTC	130,691,616	7.76	10.0%	0.78
Viglacera Tiên Sơn Jsc	VIT	187,196,774	5.67	14.4%	0.82
Viglacera Hạ Long	VHL	850,000,000	5.66	65.3%	3.70
My Xuan Brick Tile Pottery And Construction JSC	GMX	132,861,200	6.44	10.2%	0.66
P/E average					5.95

Nguồn: KBSV

Figure 21: CVT Valuation

Positive assumption	60%				
Method	Present	2018F	Forecast price	Proportion	Price based on proportion
P/E	5.43	4.48	33,111	50%	16,556
FCFE			57,772	50%	28,886
Price					45,442
Negative assumption	40%				
Method	Present	2018F	Forecast price	Proportion	Price based on proportion
P/E	5.43	6.43	23,961	100%	23,961
Price					23,961
Target price					36,849

Nguồn: KBSV

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APPENDIX

Financial statements

2016 1,189.6 -71.8 1,117.7 -854.6 263.2 1.9 -36.9 -35.9 0.0 -5.2 -41.5	2017 1,257.2 -76.1 1,181.1 -899.6 281.5 3.8 -27.5 -27.4 0.0 -7.8 -41.1	92/2018 363.7 -22.9 340.8 -271.0 69.8 0.1 -11.3 -9.8 0.0 -3.0 -7.7
-71.8 1,117.7 -854.6 263.2 1.9 -36.9 -35.9 0.0 -5.2	-76.1 1,181.1 -899.6 281.5 3.8 -27.5 -27.4 0.0 -7.8	-22.9 340.8 -271.0 69.8 0.1 -11.3 -9.8 0.0 -3.0
1,117.7 -854.6 263.2 1.9 -36.9 -35.9 0.0 -5.2	1,181.1 -899.6 281.5 3.8 -27.5 -27.4 0.0 -7.8	340.8 -271.0 69.8 0.1 -11.3 -9.8 0.0 -3.0
-854.6 263.2 1.9 -36.9 -35.9 0.0 -5.2	-899.6 281.5 3.8 -27.5 -27.4 0.0 -7.8	-271.0 69.8 0.1 -11.3 -9.8 0.0 -3.0
263.2 1.9 -36.9 -35.9 0.0 -5.2	281.5 3.8 -27.5 -27.4 0.0 -7.8	69.8 0.1 -11.3 -9.8 0.0 -3.0
1.9 -36.9 -35.9 0.0 -5.2	3.8 -27.5 -27.4 0.0 -7.8	0.1 -11.3 -9.8 0.0 -3.0
-36.9 -35.9 0.0 -5.2	-27.5 -27.4 0.0 -7.8	-11.3 -9.8 0.0 -3.0
-35.9 0.0 -5.2	-27.4 0.0 -7.8	-9.8 0.0 -3.0
0.0 -5.2	0.0 -7.8	0.0
-5.2	-7.8	-3.0
-41.5	-41.1	-7.7
181.6	208.9	47.8
9.4	8.7	2.3
-0.6	-0.1	-1.3
8.8	8.6	1.0
0.0	0.0	0.0
190.3	217.5	48.8
-38.3	-43.7	-10.1
0.0	0.0	0.0
-38.3	-43.7	-10.1
152.0	173.8	38.7
0.0	0.0	0.0
0.0		38.7
	0.0 190.3 -38.3 0.0 -38.3	0.0 0.0 190.3 217.5 -38.3 -43.7 0.0 0.0 -38.3 -43.7 152.0 173.8

Cashflow statement

Indirect - VNDbn	2015	2016	2017
Net profit/(loss) before tax	80.49	190.34	217.47
Depreciation and amortisation	44.78	96.62	98.47
Provisions	0.47	0.00	-0.58
Unrealised foreign exchange gain/loss	0.10	-0.18	0.00
Profit/loss from investing activities	-0.34	-2.25	-4.04
Interest expense	19.55	35.91	27.38
Operating profit/(loss) before changes in Working Capital	145.05	320.43	338.70
(Increase)/decrease in receivables	-30.26	12.29	1.67
(Increase)/decrease in inventories	-78.29	-9.06	-81.88
Increase/(decrease) in payables	37.68	21.70	13.69
(Increase)/decrease in prepaid expenses	-1.89	-9.57	6.93
Interest paid	-19.37	-35.94	-27.57
Corporate Income Tax paid	-23.62	-23.82	-50.29
Other receipts from operating activities	0.00	-2.95	-6.58
Other payments on operating activities	-2.73	-4.27	-4.32
Net cash inflows/(outflows) from operating activities	26.57	268.81	190.34
Purchases of fixed assets and other long term assets	-256.25	-90.82	-253.25
Proceeds from disposal of fixed assets	0.00	0.51	1.53
Collection of loans, proceeds from sales of debts instruments	0.00	0.00	-20.00
Dividends and interest received	0.34	1.74	3.81
Net cash inflows/(outflows) from investing activities	-255.91	-88.57	-267.91
Proceeds from issue of shares	0.00	0.00	14.40
Proceeds from borrowings	773.76	895.07	957.85
Repayment of borrowings	-613.03	-953.68	-950.42
Dividends paid	-7.96	-47.80	-19.48
Net cash inflows/(outflows) from financing activities	152.77	-106.41	2.34
Net increase in cash and cash equivalents	-76.56	73.83	-75.23
Cash and cash equivalents at the beginning of period	151.79	75.42	149.24
Effect of foreign exchange differences	0.19	0.00	0.00
Cash and cash equivalents at the end of period	75.42	149.24	74.01

Balance sheet

VNDbn	2015	2016	2017	Q2/2018
CURRENT ASSETS	384	465	510	674
Cash and cash equivalents	75	149	74	72
Cash	40	54	54	72
Cash equivalents	35	95	20	0
Short-term investments	33 0	95	20	0
Accounts receivable	26	34	57	55
Trade accounts receivable	26	34 25	38	55 46
	22	25 6	38 18	10
Prepayments to suppliers	4	6	18	2
Other receivables				
Provision for doubtful debts	-3	-3	-2	-2
Inventories	258	267	349	537
Other current assets	25	16	10	10
Short-term prepaid expenses	4	15	3	0
VAT to be claimed	21	0	7	10
Other taxes receivable	0	0	0	0
LONG-TERM ASSETS	548	541	727	739
Long-term trade receivables	0	0	0	0
Fixed assets	252	507	434	714
Tangible fixed assets	252	507	434	714
Cost	591	941	962	1,292
Accumulated depreciation	-339	-435	-528	-578
Long-term incomplete assets	292	31	286	4
Long-term cost of work in progres	1	1	1	1
Construction in progress	290	30	284	2
Other long-term assets	4	3	8	20
Long-term prepayments	4	3	8	20
TOTAL ASSETS	932	1,006	1,237	1,412
LIABILITIES	642	619	697	867
Current liabilities	384	463	531	672
Trade accounts payable	148	136	220	243
Advances from customers	2	6	10	11
Taxes and other payable to State	8	25	13	9
Payable to employees	10	11	14	7
Accrued expenses	1	1	0	1
Other payables	13	40	28	27
Short-term borrowings	199	241	239	363
Bonus and welfare funds	3	3	7	13
Long-term liabilities	258	157	166	195
Long-term borrowings	258	157	166	195
OWNER'S EQUITY	290	387	540	545
Capital and reserves	290	387	535	539
Paid-in capital	192	192	282	367
Share premium	10	10	15	15
Investment and development fur	25	33	64	49
Undistributed earnings	63	152	174	109
TOTAL RESOURCES	932	1,006	1,237	1,412
TOTALALGOUNCES	332	1,000	1,237	1,712

Source: KBSV

Financial ratio

	2013	2014	2015	2016	2017
Current Ratio	0.77	1.29	1.00	1.01	0.96
Total Liabilities/Total Assets	0.75	0.63	0.69	0.62	0.56
EBIT	49.03	88.56	95.26	216.52	232.58
EBITDA	78.90	130.69	140.04	313.14	331.05
Gross profit margin	13.56%	20.43%	19.34%	23.55%	23.83%
Net profit margin	3.19%	8.35%	9.21%	13.60%	14.71%
Asset Turnover Ratio	1.23	1.06	0.86	1.15	1.05
Equity Turnover Ratio	4.99	3.34	2.56	3.30	2.55
ROE %	15.92%	27.89%	23.62%	44.95%	37.49%
ROA %	3.92%	8.84%	7.90%	15.69%	15.49%
Account Receivable Turnover	28.36	34.73	36.54	47.09	37.65
Inventory Turnover	3.83	3.11	2.50	3.26	2.92
Account Payable Turnover	5.67	5.74	4.75	6.02	5.05
P/E	11.15	8.30	9.10	3.50	4.50
P/B	1.72	1.75	1.74	1.31	1.39
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Investment Rating for Company

Buy: +15% or beyond

Hold: between +15% and -15%

Sell: -15% or beyond

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