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Constructora Tenda S.A.

Building a strong BUY

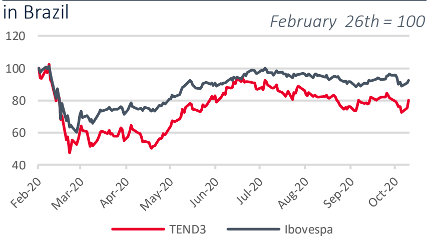
Rating: BUY | Target price: BRL 36.4 | Upside: 22.5% November 4th, 2020

Exhibit 1: Market Snapshot

Industry	Real Estate
Sector	Homebuilders
Ticker	TEND3
Stock Exchange	B3
Current Price	BRL 29.76
Market Cap	3,105.3mn
ADTV (3 months)	31.52mn
Rating	BUY

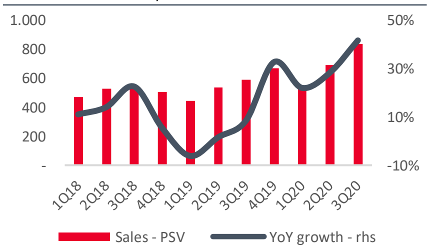
Source: Bloomberg

Exhibit 2: TEND3 x Ibov since first case of Covid-19 in Brazil



Source: Bloomberg

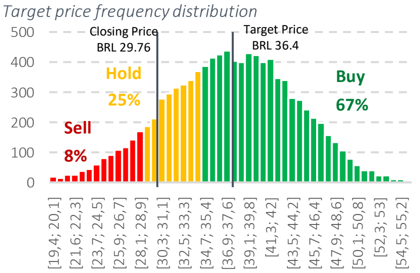
Exhibit 3: Quaterly PSV sales



Source: Bloomberg

Exhibit 4: Monte Carlo Simulation

Target price frequency distribution



Source: Team 45

Solid potential growth: initiating with a BUY

We issue a BUY recommendation on **Construtora Tenda S.A. (TEND3; Tenda)**, the third largest homebuilder in Brazil, with a 2021YE DCF-based target price of BRL 36.4 per share, presenting a 22.5% upside, and an implied P/E 2021 multiple of 12.2x and P/BV 2021 multiple of 2.1x. In our view, Tenda enjoys: (i) favorable positioning in a largely under attended market; (ii) efficient operation with a best-in-class execution leading to (iii) high returns, strong potential growth and solid earnings momentum not fairly priced-in.

Low-income housing is a commodity game and we see a winner

Within the low-income segment, there is no significant product differentiation, as units built are very similar amongst large companies in order to reach minimum marginal cost and competitive prices. That way, we believe pricing is the key differentiating factor for consumers when purchasing low-income housing. Assuming the product is roughly the same and that prices are the main trigger for sales, the winner of this game will be the company that better combines low prices with high speed of sales (SOS) and return rates – and that's where Tenda stands.

Nowhere to go but up

Being exclusively focused on the low-income segment provides Tenda two major advantages against peers: (i) high exposure to the most resilient of the Brazilian housing sector and (ii) scalability to standardize its units and face construction with an industrial approach, reducing costs and working capital needs, leading to the high return levels over the past few years. Furthermore, given Brazil's large housing deficit, demand is not a concern, as it exceeds current market capacity. Material changes in governmental social housing program "Casa Verde e Amarela" (CVA) are also not expected to happen in the mid-to-long term, supporting growth in upcoming years.

Resilient market: record sales amid pandemic

In the past two quarters (2Q20 and 3Q20), Tenda has reported record sales volumes, in line with other low-income homebuilders. We relate the positive trend to the resiliency and acceptance of the low-income consumers to online sales channels, added to credit support initiatives from Caixa and and discount in prices granted during the period (that could put pressure on margins in the short-term). As the Covid-19 uncertainty reduces, new launches recover and sales continues strong on this trend, we expect results to continue accelerating. Yet, the stock underperformed Ibovespa Index by 16.5 p.p, a gap that should close in the near term in our view.

Main risks to our assumptions

The main downside risk to our analysis lies in mortgage availability (funded by FGTS and provided by Caixa Econômica Federal) with the potential deterioration in the macroeconomic environment. A higher-than-expected unemployment rate could put pressure into the FGTS' cash flow in the short-term, limiting its ability to fund housing programs that sustain the low-income housing market like CVA. Problems with Caixa and GTS could also hurt cash transfers to the homebuilders, putting pressure on cash flow generation. Also, the recent wave of homebuilder IPOs could increase land costs as capitalized players compete in the land market driving prices up.

Exhibit 5: Summary estimates

Estimates summary (BRL mn)	2015A	2016A	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E
Net Revenues	**851**	**1.053**	**1.358**	**1.681**	**1.950**	**2.207**	**2.651**	**2.971**	**3.222**	**3.445**	**3.664**
Gross Margin	*28,8%*	*30,7%*	*34,5%*	*34,8%*	*33,2%*	*31,5%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*
EBIT	**30**	**88**	**123**	**219**	**291**	**268**	**350**	**403**	**439**	**469**	**497**
EBIT Margin	3,6%	8,4%	9,1%	13,0%	14,9%	12,1%	13,2%	13,6%	13,6%	13,6%	13,6%
EPS	0,28	0,52	0,99	1,95	2,73	2,10	2,98	3,45	3,81	4,12	4,42
YoY growth	-121,5%	86,4%	88,3%	97,5%	39,8%	-23,0%	41,7%	15,9%	10,4%	8,1%	7,3%
FCF	(260)	(11)	274	358	215	562	263	122	136	155	181
ROE	2,8%	5,3%	9,7%	17,0%	20,7%	14,5%	18,3%	18,9%	18,6%	18,0%	17,4%
ROIC	2,2%	5,4%	10,3%	19,3%	20,0%	16,3%	23,4%	25,0%	25,2%	25,2%	25,1%

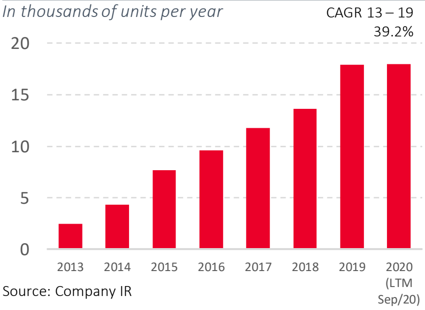
Source: Team 45

Exhibit 6: Tenda's national presence

Source: Company IR

Exhibit 7: Units launched by Tenda

In thousands of units per year



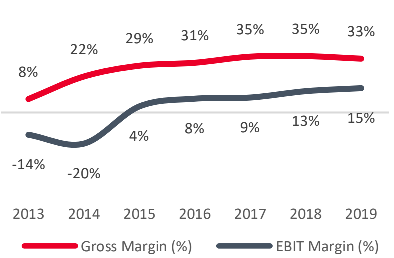
Source: Company IR

Exhibit 8: Main changes in Business Plan

	Legacy (2007 - 2011)	New Business Model (2013 – Today)
Geography	National Presence	Focus on 7 Metropolitan Areas
Segment	MCMV segments 2 and 3	MCMV segment 1.5 and 2
Product	Broad range of SKUs	Standard Product
Construction Method	Structural Masonry	Aluminum Forms Work System
Development's Financing	After Launch	Before Launch
Clients' Financing	After Sales	Integrated with Sales Process
Sales Structure	Own Stores + Third Party Salesforce	Own Stores/ Salesforce

Source: Company IR

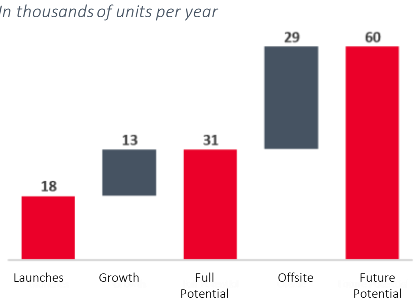
Exhibit 9: Historical gross and net margins



Source: Company IR

Exhibit 10: Addressable market through offsite

In thousands of units per year



Source: Company IR

BUSINESS DESCRIPTION

Efficiency is Tenda's last name

Founded in 1993, Tenda is the third largest homebuilder in Brazil, with 17,956 units launched in Jun/2020 LTM, distributed in nine metropolitan areas (see Exhibit 6). Operations are exclusively focused on low-income buildings, mostly financed by the "Casa Verde e Amarela" (CVA) social housing program.

Strategic plan shift: a turnaround towards efficiency

In 2013, after a period of underperformance, Tenda went through a shift in its strategic plan led mainly by the recent nominated CEO Rodrigo Osmo. The new business plan, based on the 4 pillars detailed below, supported a turnaround for the company towards operational excellence and effective construction costs management brought by a new industrial approach to the business (see Exhibit 8).

(i) **Disciplined operation:** Tenda adopts a disciplined launching and sales process, which are only initiated once the project is already licensed and approved to be part of CVA. This practice reduces risks related to financing problems or municipal authorizations.

(ii) **Credit guarantee:** Sales are concluded only after the approval of credit eligibility for each client, avoiding cancellations.

(iii) **Own stores sales:** Most of the company's sales are made through own stores by an exclusive sales team. This allows a better qualification of the sales force when compared to outsourced staff, and an alignment of interests between the employee and the company, as the sales team receive commissions by concluded sales.

(iv) **Construction method:** All of Tenda's projects are made of concrete construction using an aluminum form work system. This is a specialized process that requires skills from the construction workers – all hired by the company through long-term contracts and not per project – providing an industrial approach for the construction, that is concluded twice as fast when compared to the regular method.

Efficient geographical distribution to scale business

Scalability is the main competitive advantage of Tenda's construction method, which results in a positive cost reduction per project. However, its application is only feasible in locations where the company can build, at least, 1,000 units per year. Tenda focused to scale its business by operating in 9 of the 13 metropolitan areas where the method is viable, a smart approach towards geographical distribution. This enabled the company to boost its launches throughout the years since its restructure (see Exhibit 7).

Do only one thing but be the best at it

One of Tenda's main margin expansion strategies is product standardization. The company currently operates with a standard building project with units typically of 40 sqm. This project is available in three models: (i) four story building, without elevator; (ii) ten story building, with one elevator; or (iii) 20 story building, with two elevators. The third model sets up the verticalization of buildings and was recently launched for the first time as a potential growth path in metropolitan areas.

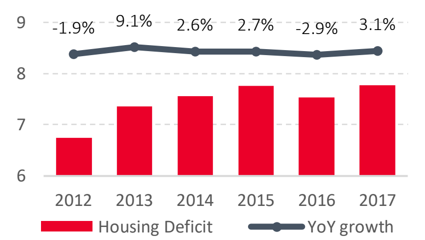
The aluminum form work system is by design perfectly aligned with the standardization of projects, providing a very agile and efficient production cycle for Tenda. According to suppliers in the sector, productivity gains can be up to 85% and manpower required in the construction drops by 40%. Hence, the constructive process gets extremely fast, with each floor taking approximately 2 days to be constructed. The full construction of a project takes around 11 months to be finished, against 20 months of the traditional masonry method of construction, predominant in Brazil. The agility provided by the method also allows the construction to be postponed until units are mostly sold and transferred (in line with the two first principles of the business model), minimizing working capital needs.

Other future possible paths of growth: all eyes on offsite

The company is investing on additional growth opportunities through offsite construction, an opportunity to enter medium to small cities using the successful scalability of Tenda's business model. While the initiative could double the addressable market of the company to 60k units per year (see Exhibit 10), providing additional upside to our estimates (explored in the valuation section and Appendix 37), the company may have problems in terms of logistics and bureaucratic processes to enter new municipalities. However, we see limited downside impacts if the project fails, as the company is not leveraging itself in order to make the investment (see appendix 22). As the project is still at its initial steps, operations are expected to start only by 2023, with incipient figures when compared to total launches, but with overall better margins than regular operations.

Exhibit 11: Housing deficit in Brazil

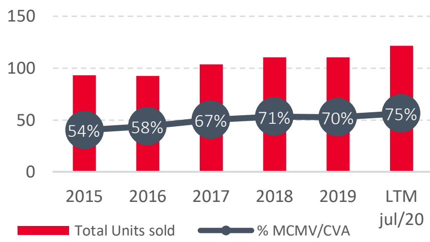
Millions of units



Source: FGV, Abrainc

Exhibit 12: Brazilian housing sales

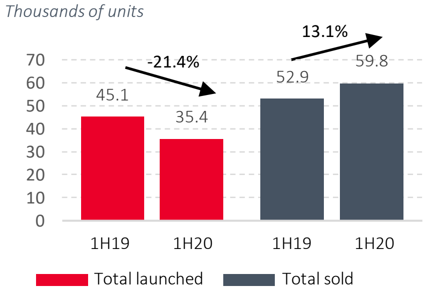
Thousands of units – 20 different players



Source: Abrainc, Fipe

Exhibit 13: Launches x sales performance

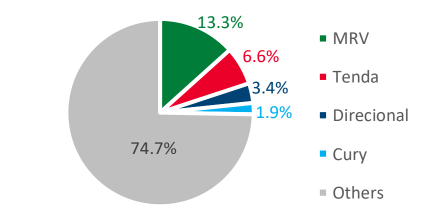
Thousands of units



Source: Abrainc, Fipe

Exhibit 14: CVA (former MCMV) market share

Launched units/contracted units MCMV brackets 1.5 and 2 in 2019*

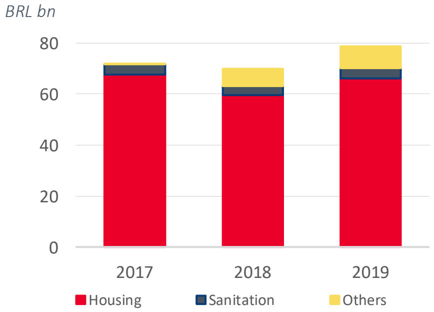


Source: Company's IR, Regional Development Ministry

**Considers 100% of launches from MRV and ex-bracket 1 from Direcional*

Exhibit 15: FGTS's investment breakdown evolution

BRL bn



Source: FGTS, Team 45

INDUSTRY OVERVIEW AND COMPETITIVE POSITIONING

Where resilient demand and government support meet

The Brazilian low-income housing sector had a solid performance in recent years, marked by resilience during the periods of deep crisis in Brazil. We see strong growth prospects in the medium/long-term for the sector, mainly due to the high Brazilian housing deficit and a favorable scenario created by the low-income housing program supported by the government. Main risks to the segment are possible shifts in the housing program, which we find unlikely in the short-term, funding limitations from FGTS and a further deterioration of the macroeconomic scenario, especially in terms of employment.

Resilient low-income demand

As the COVID-19 crisis hit, homebuilders braced for the impact (as did most of the sectors) and held back on new launches. Yet, current data indicates that the impact was much stronger on the supply side (launches) than in terms of demand (sales). According to the Brazilian Association of Real Estate Incorporators (Abrainc), the number of launches in the 1st half of 2020, considering aggregate data from 20 players in the sector, fell by 21.4% compared to the same period in 2019, while sales in the same period increased by 13.4% (see Exhibits 12 and 13). We believe this result shows resiliency and acceptance of the low-income consumers to online sales channels, added to support initiatives from Caixa (extended grace period by six months) and some discount in prices during the period.

The housing deficit in Brazil is of around 7.8mn units (see Exhibit 11), of which more than 91.7% are demanded by families with income in the range of up to 3 minimum wages (total amount of BRL 3,135 per month), according to Fundação Getulio Vargas (FGV). In our view, this characteristic of the Brazilian housing deficit represents an important growth opportunity for construction companies focused on the low-income segment, as it indicates a likely continuation of housing programs like "Casa Verde e Amarela" (CVA), the major source of revenue of the players in the low-income segment.

Understanding "Casa Verde e Amarela" program

In August 2020, the government announced the launch of the "Casa Verde e Amarela" program (CVA), replacing the "Minha Casa Minha Vida" program (MCMV), created in 2009. Essentially, MCMV was created to address the housing deficit in Brazil, giving the low-income families the opportunity to buy its own house through subsidies and 30-year financing with low interest rates. Families with a household income up until BRL 9k are eligible to the program, which is divided into different brackets according to the families' monthly income. Each bracket holds specific parameters for unit price cap, interest rates and subsidy levels.

With the new program, the income brackets remained practically unchanged (see Appendix 18), while financing interest rates were reduced for all groups covered by the program. In a nutshell, the announcement of CVA brought a positive signal to the market, which previously anticipated a great regulatory risk reflected by the possibility of discontinuation of the program after the change in the federal government in 2018.

Where the money comes from?

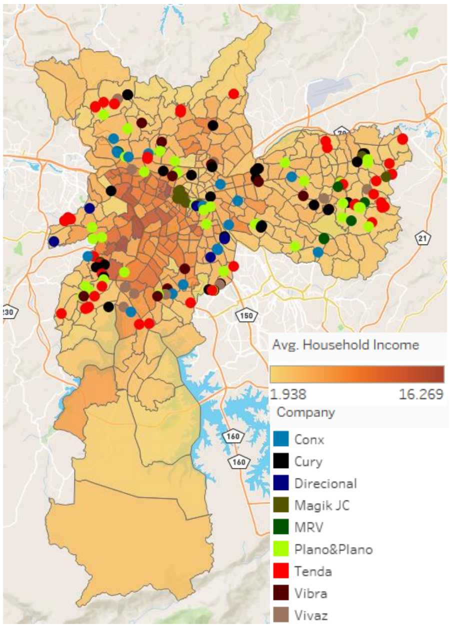
In order to better understand the CVA program benefits and risks for homebuilders, it is important to analyze the Federal Service Guarantee Fund (FGTS) operations, which is the source of the financial resources used by the program (see Appendix 19). Constitutionally, all workers with a signed labor contract (CLTs) are required to contribute with 8% of their gross monthly income to FGTS. The amount raised by the fund is invested and yields for the employee a referential rate (TR) + 3.0% (currently, TR is at 0%). The contributor can withdraw its resources invested in the fund under certain special conditions. Usually, this occurs when the individual is dismissed from its job without cause or when the necessary contribution period for retirement is reached.

To strengthen governmental social initiatives, a relevant share of the resources raised by the fund (around 85%-88%, historically – see Exhibit 15) is invested in housing, mainly via the CVA program. Because of this dynamic, it is essential for low-income homebuilders that FGTS is well capitalized, in order to have robust budget for housing investments and thus boost the potential demand Brazil has.

Covid-19 may play a role even after the pandemic

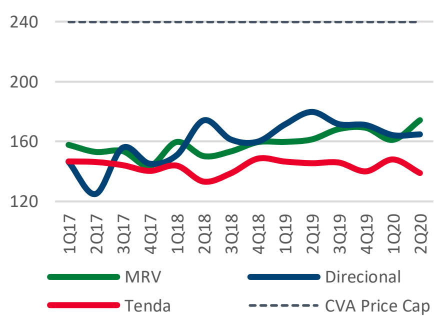
Given the current scenario, two factors represent a high risk for homebuilders regarding FGTS: (i) rise in unemployment caused by the pandemic, which is expected to worsen after coronavirus emergency aid ends; and (ii) increase in extraordinary FGTS withdrawals. Due to the pandemic scenario, the government implemented the possibility to low-income contributors to withdraw part of their resources from the fund to help them face the crisis.

Exhibit 16: Launches in São Paulo vs. Avg. Income



Source: Company Data; Team 45

Exhibit 17: Unit price evolution – BRL thousands



Source: Companies' IR; Team 45

Exhibit 18: CVA program summary

Bracket	Income Range	Interest Rates	Unit Price Cap
1	< BRL 2.0k	TR + 4.75% to 5.00%	BRL 180k
2	BRL 2.0k - 4.0k	TR + 5.00% to 6.50%	BRL 220k
3	BRL 4.0k - 7.0k	TR + 7.66%	BRL 240k

Source: Casa Verde e Amarela; Team 45

Exhibit 19: IPOs in the Brazilian homebuilders segment

Company	Ticker	Amount raised (BRL M)	Date
Mitre	MTRE3	1,024.0	Feb/20
Moura Dubeux	MDNE3	1,250.0	Feb/20
Lavvi	LAVV3	1,027.0	Sep/20
Plano & Plano	PLPL3	39.5	Sep/20
Cury	CURY3	170.0	Sep/20
Melnick	MELK3	713.5	Sep/20
TOTAL	-	**4,224.1**	-

Source: CVM

The union of these two factors may eventually result in a situation of fragility and scarcity of resources to FGTS, as it will reduce inflows (less employees contributing) and raise outflows (jobless withdrawing part of their balance). Therefore, the fund's cash balance could be hurt, reducing the funding availability for the housing program.

Low-income Housing: a commodity game

The homebuilding sector is quite fragmented given Brazil's extensive territory and almost unlimited demand for houses (see Exhibit 14). The competition is stronger in big metropolitan areas, where large players stand out with scale gains and cost dilutions. This creates a scenario of more competitive prices per unit sold than in other regions.

Homebuilder players are usually divided by their income focus group. Main players in the middle-high income segment are Cyrela (CYRE3), Even (EVEN3) and EZTEC (EZTC3). In the low-income segment, major players are Tenda (TEND3), MRV Engenharia (MRVE3), Direcional (DIRR3) and Cury (CURY3).

It all comes down to prices and returns

Within the low-income segment, there is no significant differentiation in the supply side, as units built are very similar amongst large companies in order to reach minimum marginal cost and competitive prices. Financing conditions are also very similar due to the CVA program, in which the interest rate is fixed by bracket, regardless of the current basic interest rate (Selic). Therefore, the current lowest interest rates in Brazil have little to no effect over demand in low-income housing. In this scenario, efforts rely on attracting customers mainly through a better consumer-company relationship and potential higher intangible benefits such as better location of properties, with proximity to points such as schools, hospitals, subway stations, etc. It is also part of the industry strategy to look for ways to reduce construction costs as much as possible, so that the properties can be offered at the most attractive price. The target public of low-income homebuilders such as Tenda is concentrated in classes C and D, those attended by the "Casa Verde e Amarela" program.

Location matters, but it is not the main factor

The decision process regarding a house acquisition is based in two main pillars: (i) location; and (ii) price. We recognize that the low-income segment demand is much more sensible to price than it is to location, but considering the unit cap price of BRL 240k imposed by the CVA (which also offers the same financing conditions to every company), one could assume that people would look for a better located house.

In order to discover the level of differentiation location can play in the Brazilian low-income housing market, we conducted a study to compare where companies are placing their launches, analyzing housing locations in the city of São Paulo, Brazil' biggest city in terms of population and the largest housing market in the country. As shown in Exhibit 16, most of the companies position their launches in a similar pattern that covers slight peripherical areas, with lower household income. This pattern allies cost and strategic positioning, in geographical terms. Therefore, we didn't see much differentiation between companies in this aspect.

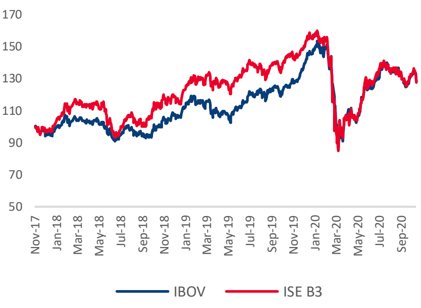
Prices are the name of the game

Since location does not seemed to be a decision factor, we shifted our focus to pricing. In this matter, Tenda thrived with its industrial approach towards construction and portfolio standardization, offering prices up to 13% lower than the competition and 35% lower than the CVA's unit price cap (see Exhibit 17). Such position establishes Tenda as the cheapest homebuilder in the market and the go-to name for families in the bracket 1 of CVA, with a total household income of up to BRL 2k (see Exhibit 18). We see Tenda as the only major player that can attend the new Bracket 1 (after the changes from MCMV to CVA, see appendix 18). On top of that, Direcional and MRV, Tenda's main competitors, are now shifting their efforts to gain market share in the mid-income segment, in line with their strategy of creating a real estate platform, leaving plenty of room for Tenda to further expand its market share in the low-income segment.

A new challenge ahead: the boom of IPOs

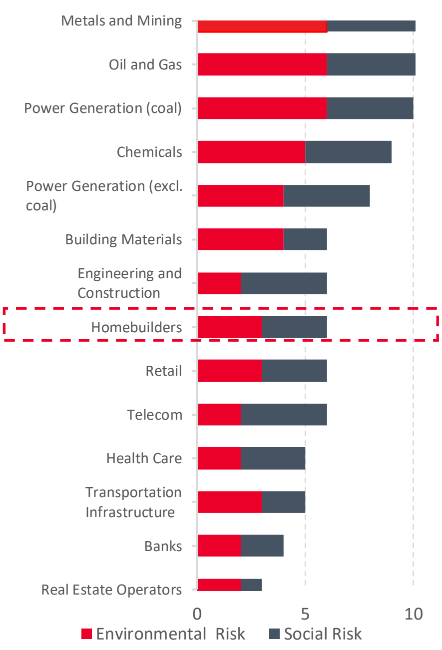
While we expect a strong growth for homebuilder companies on the demand side, the real estate sector should face a big challenge on the supply side: the boom of IPOs (see Exhibit 19). Currently, there are around 20 players aiming to go public in the upcoming quarters. Even though it is a consensus that most of these offerings are likely to not be concluded due to limited resources, such capital injection in the market (could amount up to BRL 20 bn) should heat the market for land, leading to an increase in land prices, putting pressure to margins. However, we believe this scenario shouldn't impact significantly Tenda's operations due to its increasing land swap negotiations and larger range of prices per unit to increase as its prices are well below the CVA price cap and its peers.

Exhibit 20: ISE B3 x Ibov historical performance



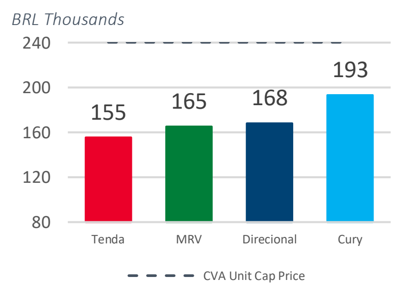
Source: Company IR

Exhibit 21: S&P ESG risks rank of main sectors



Source: S&P Capital

Exhibit 22: Prices per unit by company



Source: Companies IR

Exhibit 23: Governance score board summary

	Score	Max	Rating	Weight	Wtd. Avg.
Board of Directors	27	35	77%	20%	15.4%
Fiscal Council	12	15	80%	10%	8.0%
Executive Management	27	30	90%	30%	27.0%
Committees	17	20	85%	10%	8.5%
Shareowner Rights	29	30	97%	30%	29.0%
TOTAL	**112**	**130**			**87.9%**

Source: Team 45

ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG)

Great potential but still a long way to run

With the increasing relevance of ESG topics in recent years, Tenda has been taking its first steps towards disclosure of initiatives and impacts, especially in terms of the environmental pillar. Although we can see a strong potential for the company from a ESG point of view – with a special highlight on offsite construction (see Appendix 22), we evaluate that, in this matter, Tenda is being outperformed by its main comparable MRV, which already publishes its Sustainability Report and is part of ISE B3.

Companies with strong ESG practices have historically generated a higher alpha as seen by the Corporate Sustainability Index from B3 (ISE B3 – see Exhibit 20). ISE B3 is the main ESG index in Brazil and considers the 40 companies listed in B3 that best adopt ESG practices, which we considered to weight Tenda's ESG underperformance. Currently, the only homebuilder listed in the B3's sustainability index is MRV.

Pretty much on average when it comes to ESG

According to a S&P Global Ratings ESG risks rank (see Exhibit 21), homebuilders are ranked in the 17th place amongst 34 sectors of the economy, considering environmental and social risks. This leaves the sector in a comfortable place considering its impacts when compared to other sectors with higher risks, but still with some challenges to be faced.

Environmental: big challenges and lack of data but a lot of opportunities

Homebuilders are naturally exposed to environmental impacts, mainly related to (i) climate change; (ii) large amount of waste; (iii) extensive use of water and energy; and (iv) air, water, and sound pollution (see appendix 21).

As mentioned, Tenda still doesn't disclose its practices regarding the environmental pillar of ESG. While this is a clear weakness due to lack of measurements, we believe that the company's business model fits well with an environmentally conscious construction. Tenda's focus on improving efficiency and reducing costs could be a great booster of reduction of waste and energy/water use during construction, although it could also stimulate the use of non eco-friendly cheaper materials and inappropriate waste disposal. At the same time, exclusive operations to low-income families provides the creation of proper sewage treatment systems across the country. At last, we believe that the fast cycle of construction should also pollute the urban environment relatively less than regular constructions. Despite of all these opportunities and risks, we reiterate that we cannot quantify Tenda's environmental impact at this moment.

Social: positive impact by definition

Tenda's business has by definition a great positive social impact within its operations. Exclusively addressing the low income population, Tenda offers the possibility of an affordable home, up to 13% cheaper than its main comps acting in the CVA program (see Exhibit 22). On top of that, its apartments are strategic located near subway and transportation lines, which allows a reduction of time spent in transportation and a consequent improvement in quality of life. We also see Tenda with an important social influence regarding its employees. As the construction method using aluminum form work system requires workers with specific qualifications, the company adopts a policy to directly hire all of its employees – including construction workers – instead of outsourcing it. This policy assures stability to employees, which is very uncommon in the homebuilding sector, as construction workers usually are contracted per project.

Although we see Tenda strongly positioned in the social pillar, we believe the company could disclose more figures to help stakeholders better assess Tenda's social impacts. We also highlight that one of the most important social impacts to evaluate in the sector is the safety of construction workers on site (See appendix 21). However, we don't have enough data to weight Tenda's position in this matter.

Governance: material proof of how important this is

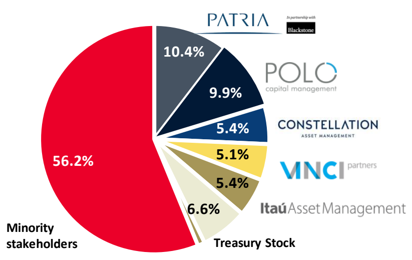
Outstanding Corporate Management

Rodrigo Osmo took over as Tenda's CEO in 2012, when the Company was still part of Gafisa and under financial stress due to a poorly executed expansion plan. His main mission was to redeem receivables that Tenda kept in its balance into cash. Osmo successfully implemented the new business plan that guaranteed a turnaround for the company towards operational excellence and low construction costs. Of the 11 current members of Management, 9 were part of the team that put the new plan into practice.

Presence of large stakeholders but majority of independent Directors

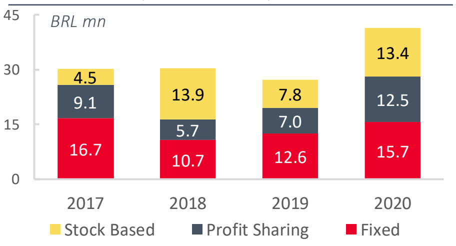
Tenda's corporate governance is formed by an Executive Committee, a Board of Directors, and a Fiscal Council, of which we evaluate as very good in our analysis (see Exhibit 23 and Appendix 29).

Exhibit 24: Shareholder structure



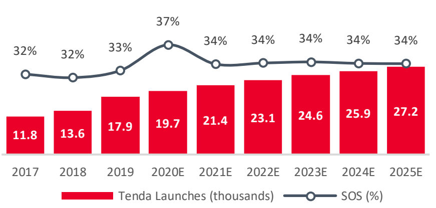
Source: Company IR

Exhibit 25: Compensation composition



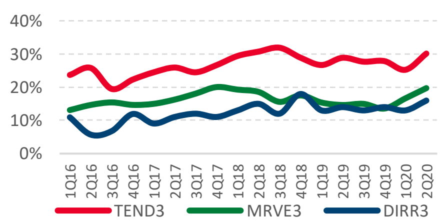
Source: Company IR

Exhibit 26: Estimated unitslaunches per year x SOS



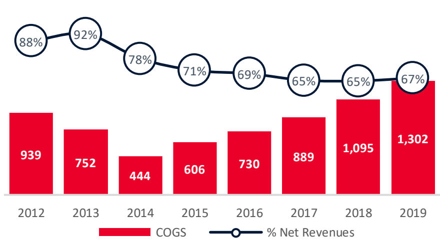
Source: Company IR, Team 45

Exhibit 27: Historical net SOS by company



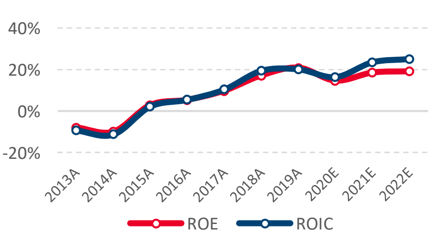
Source: Companies' IR

Exhibit 28: COGS in real terms



Source: Company IR

Exhibit 29: ROE and ROIC evolution



Source: Company IR, Team 45

Tenda is listed in B3 in the Novo Mercado's segment, the highest level of corporate governance in Brazil, with a free float of +90% of shares outstanding. The company has large stakeholders, such as Pátria Investments, Polo Capital, Constellation, Vinci Equities, and Itaú Asset Management, that together accounts for 36.1% of shares (see Exhibit 24 and Appendix 25). We see the presence of these players as positive because of their extensive constructive track record in previous investments. Additionally, the majority of members of the Board of Directors are independent (4 out of 7), which is positive in our view because it prevents minorities from being harmed in situations where interests are not aligned among shareholders. The members representing large stakeholders should also benefit the company through their previous investment's experiences. Nevertheless, we highlight a negative lack of diversity among the company's committees, as all of its members are men.

Aligning management interests with shareholders'

Since its listing in 2017, Tenda adopts a variable compensation policy, based on short and long-term goals. The variable payment of the Executive Committee is attached to the company's stock performance and to profit sharing, that has improved recently (See Exhibit 25). We see this policy as positive and effective to better align management interests with shareholders.

INVESTMENT SUMMARY

Execution to perfection

In this case, size matters

Considering the incredibly large demand from the low-income population in the housing segment in Brazil, we believe that social programs such as CVA will hardly be extinct, regardless of the political position of the current government. That said, we recognize a large addressable market for Tenda's operations, guaranteeing continuous demand in the long-term, in addition to a favorable and abiding government support.

In this extensive market, we expect Tenda to gain market share in CVA program mainly on the back of organic expansion into new metropolitan areas. The company has provided guidance of its intentions to enter new metropolitan areas, a strategy already implemented before, which resulted in gains of market share in the old MCMV (from 3.0% of total launches in 2016 to 6.6% in 2019). We believe the company will be able to maintain its regional expansion strategy for the next years and operate in 13 metropolitan areas by the end of 2030 (currently, they operate in nine). This should boost launches to the potential market of 31k units per year by 2029 (vs. potential market of 40k units per year from MRV that has a much higher regional exposure, present in 21 states of the country).

But remember: we're playing a commodity game

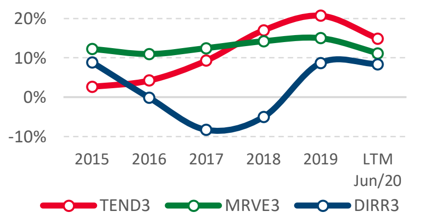
As we have already mentioned, the low-income segment has little to no differentiation between units of large homebuilders; and through our consumer analysis, we concluded that the key factor for an investment is pricing (see Appendix 13 and 14). Assuming the product is roughly the same and that prices are the trigger, the winner of this game will be the company that better associate lower prices with higher speed of sales (SOS) and return rates – and that's where Tenda stands (see Exhibits 26 and 27). Hence, we believe Tenda should benefit in the long-term from: (i) extensive addressable market and organic growth; (ii) lower prices vs. peers; (iii) construction and sales efficiency resulting in a fast cash generation cycle; and (iv) solid ROE and ROIC. Additionally, the record high sales in the last two quarters should provide strong momentum over future earnings (due to delayed recognition of revenues), which we believe is not yet priced-in, creating an attractive window of opportunity to invest in the stock.

They were looking for perfection... and they found execution to perfection

The industrial approach on site has proven to be very efficient in terms of speed of construction and amount of materials used. However, aluminum form work system is not exclusive to Tenda's operations. Data from Caixa Econômica Federal show that in 2015, 52% of CVA houses were already constructed by this method. Thus, the key is Tenda's efficient and precise execution. Management focused operations on metropolitan areas with higher habitational deficit where scalability was possible (see Appendix 17), enabling a cost reduction (see Exhibit 28) and a fast construction and cash generation cycle (see Exhibit 33).

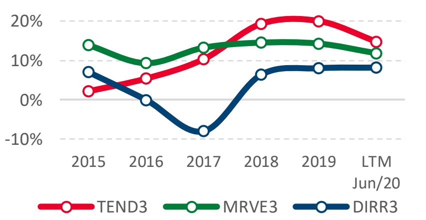
The high scalability allows the company to offer the lower prices in the market, up to 13% below peers, along with higher returns rates vs. comps (ROE at 20.7% in 2019, 590bps above average – see Exhibit 29). We expect a continuation of strong return rates based on the company's high SOS. Furthermore, we see Tenda in a more comfortable position to deal with an eventual increase in construction/land costs, being able to maintain its margins through swap negotiations and larger range of prices per unit to increase as its prices are well below the CVA price cap and its peers.

Exhibit 30: Historical ROE by company



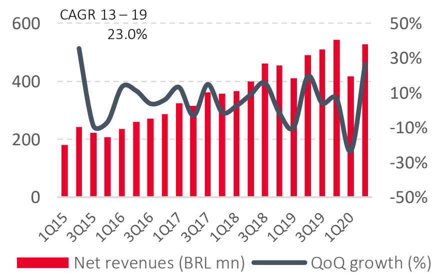
Source: Companies' IR

Exhibit 31: Historical ROIC by company



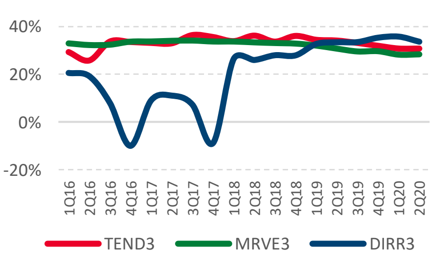
Source: Companies' IR

Exhibit 32: Quaterly net revenues



Source: Company IR

Exhibit 33: Historical gross margins by company



Source: Companies' IR

Exhibit 34: Construction costs inflation simulation

Inflation rate 2020-21'	0%	2%	4%	6%	8%	10%
Gross Margin 2021E	32,0%	30,9%	29,7%	28,6%	27,4%	26,3%
Margin decrease		-1,1%	-2,3%	-3,4%	-4,6%	-5,7%

Source: Team 45

FINANCIAL ANALYSIS

Let numbers speak

Solid financial recovery and outperformance

Tenda continues to prove the financial consistency of its new business model by concentrating efforts in cost reduction and construction efficiency. Through robust operational results (see appendix xx), the company was able to increase their net revenues at an accelerated pace (CAGR 2015-2019 of 23.0% – see exhibit 32) and to achieve high return rates. Tenda became one of the most profitable Brazilian low-income homebuilder in terms of ROE and ROIC, even during the Covid-19 pandemic (see Exhibit 30 and Appx. 20).

The quarterly figures show an important seasonality factor in homebuilders, which is a significant decrease in terms of sales and revenues in the first quarters of the year. This happens mostly due to a behavioral factor from the consumer base, in which people tend to avoid making important investment decisions in holidays season. Especially in 1Q20, revenues suffered from the seasonality impact, as well as from a non-recurring increase in cancellations due to problems in CVA's funding availability, impacting earnings, and thus the return rates for the year.

Efficient asset turnover guarantees higher ROE

Although Tenda does not have highest EBIT margin among its peers (12.0% vs. MRV's 11.7% and Direcional's 14.0% in LTM Jun/2020), it has a decent advantage in its capability to generate returns over assets, with an asset turnover rate of 0.56 against 0.39 from MRV and 0.30 from Direcional. This shows how Tenda's focus in reducing the duration of its construction cycle and increasing efficiency is pivotal for the company's superior financial performance. In terms of taxes and financial expenses, there is no significant difference between the main players in the segment (see Exhibit 35).

Gross margins: not the best, but certainly most resilient

Over the last year, homebuilders have been suffering pressure to reduce their margins due to a considerable increase in construction costs. Although the company can negotiate prices with its suppliers, salaries of construction workers are obligatorily adjusted by the National Real Estate Index (INCC). Therefore, we can see a direct impact on the companies' margins, including Tenda's, as the company avoided to increase its prices per unit even with costs pressures (see Exhibit 33). Gross margins, for instance, dropped 230bps from 2017 to 2019, reaching 30,7% in LTM Jun/2020 vs. 28.2% of MRV and 33.6% of Direcional.

In order to better analyze the impact on margins from higher construction costs as well from possibly higher land costs, we performed a sensitivity analysis of the impacts of inflation fluctuations on gross margins. We also ran scenarios of increase in prices per unit until the average prices from peers, as the company has this range to compensate inflation pressures in the future, if necessary. Through our simulation, we concluded that Tenda is well positioned to deal with a potential increase in costs, being less harmed in terms of margins vs. comps (see exhibit 34 and appendix 11).

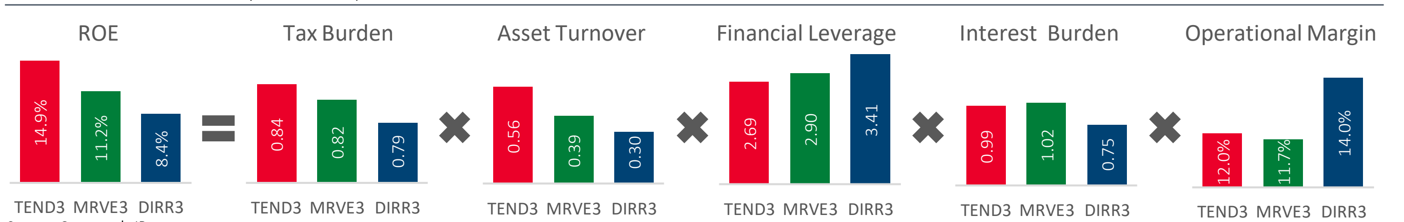
Healthy balance sheet

Tenda is currently in a more comfortable liquidity position in terms of balance sheet vs. peers, with a net debt/EBITDA of -0.6x (See exhibit 36). The major part of its debt is long-term (62%), which contributes to an even less risky scenario in terms of leverage. This liquidity situation is favorable for low-income homebuilders especially in eventual scenarios of instability and delays of cash transfers from Caixa. The net cash position enables the company to face eventual delays on these receivables without the need to hurt its working capital or to issue emergencial debt.

Working capital dynamics

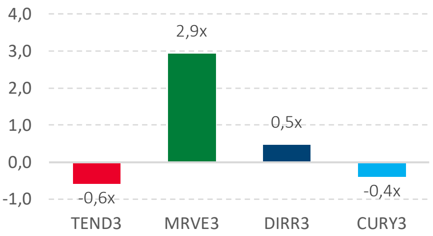
Tenda's operating efficiency also reflected in solid working capital dynamics and higher return metrics vs. peers. The company has been able to reduce its cash conversion cycle along the years (see Exhibit 38), in a way that is possible to finance most of its operations without the necessity to raise capital through third-parties.

Exhibit 35: ROE DuPont Analysis in 5 components



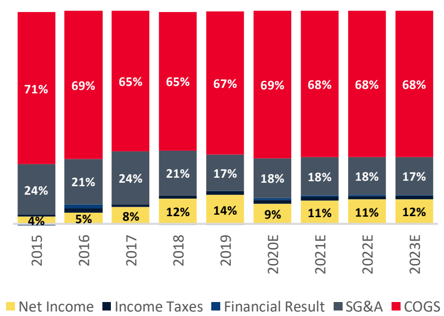
Source: Company's IR

Exhibit 36 Net debt/EBITDA by company
(LTM Jun/20)



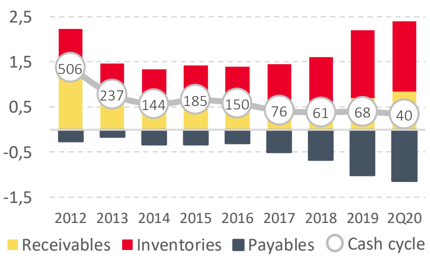
Source: Companies' IR

Exhibit 37: P&L breakdown
As % of net revenues



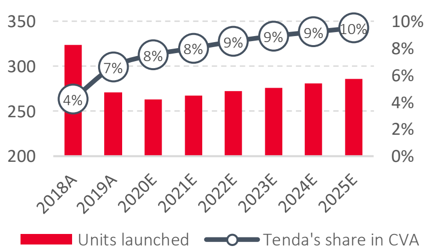
Source: Company IR, Team 45

Exhibit 38: Working capital & cash conversion cycle
In BRL billions, cash conversion cycle in days



Source: Company IR

Exhibit 39: CVA launches and Tenda's market share
In thousands of units



Source: Company IR, Team 45

Most of this reduction was due to a better administration of the company's receivables account, mainly through commercial and sales policies that were aligned with customer's interest to receive their housing finance as quickly as possible. The sales team only receives their commission if they conclude the sale (transfer contract to the financing agent) in less than 90 days.

VALUATION

Best of both worlds: solid fundamentals and unfairly priced stock

We issue a BUY recommendation on Construtora Tenda S.A. (TEND3) at a FYE21 target price of BRL 37.6 per share, representing an upside of 39.9% as of November 4th 2020. The method adopted for the valuation was a 10-year nominal Discounted Cash Flow to Firm model.

Main growth assumption: market share gain in CVA program

We estimated Tenda's revenues considering: (i) number of units launched per year based on its CVA market share; (ii) price per unit; (iii) speed of sales; and, (iv) speed of construction. The company discloses that its potential market is of 31k units launched per year, of which we expect to be reached by 2029. In our view, this growth should happen through gain in CVA program by two venues: (i) organic expansion into four new metropolitan areas and (ii) market share expansion in areas that Tenda currently operates, as competitors start to focus on mid-to-high income segments. We expect both factors to result in a gain of market share in CVA program, reaching the threshold of 10.4% by 2030, with the first venue having much more weight on our estimates. At this point, we don't consider launches from offsite due to the level of uncertainties regarding logistics and bureaucratic risks.

Steady curve of CVA launches

In order to estimate the number of units launched per year by Tenda, we set a curve of CVA launches. Since the beginning of CVA program, the number of units launched per year under the brackets in which Tenda operates have been historically stable around 300k per year. Considering the high habitational deficit and minor limitations to the CVA program, we considered a gradual growth of units launched per year under the program, indexing it to the Brazilian's GDP growth forecasts. By this method, the number of units launched under the brackets 2/3 from CVA program should reach the mark of around 312k by the end of 2030 (see Exhibit 39).

Maintenance of low prices

We expect the company to maintain its average ticket per unit launched in line with figures reported in the last three quarters (1Q20 to 3Q20), in order to maintain its competitive pricing. Especially in 3Q20, prices per unit launched increased substantially by 12.1% due to sales of vertical projects that have ticket above average. We expect this trend to be maintained, partially offset by growth in areas with cheaper tickets. We also consider a inflation adjustment by 2025. In our view, this is the most realistic scenario, given that houses sold under the CVA program have price caps that historically have not been adjusted by inflation every year.

Regular project assumptions

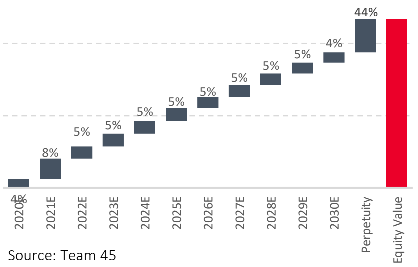
Homebuilders have a key accounting factor, which is that revenues are recognized as the percentage of built construction, a method called percentage of completion (POC). As sales start before the beginning of construction, values are maintained in backlog for some time before being recognized, creating a delay to sales performance reflect into revenues. In order to be as strict as possible in our revenues forecasts, we estimated a curve of speed of construction and a curve of speed of sales for a regular project to recognize the company's revenues (See Appendix 2).

Exhibit 40: Financial and operational highlights

Financial Highlights (BRL mn)	2016A	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
P&L figures															
Gross Revenues	**1.171**	**1.420**	**1.747**	**2.005**	**2.346**	**2.820**	**3.230**	**3.465**	**3.684**	**3.898**	**4.186**	**4.407**	**4.584**	**4.753**	**4.893**
YoY Growth	*29,0%*	*21,3%*	*23,0%*	*14,8%*	*17,0%*	*20,2%*	*14,5%*	*7,3%*	*6,3%*	*5,8%*	*7,4%*	*5,3%*	*4,0%*	*3,7%*	*2,9%*
Net Revenues	**1.053**	**1.358**	**1.681**	**1.950**	**2.207**	**2.651**	**2.971**	**3.222**	**3.445**	**3.664**	**3.935**	**4.164**	**4.355**	**4.539**	**4.697**
EBIT	**88**	**123**	**219**	**291**	**268**	**350**	**403**	**439**	**469**	**497**	**536**	**568**	**593**	**619**	**640**
EBIT Margin	*8,4%*	*9,1%*	*13,0%*	*14,9%*	*12,1%*	*13,2%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*
EBTIDA	**101**	**137**	**236**	**311**	**289**	**373**	**429**	**467**	**501**	**532**	**574**	**608**	**636**	**665**	**689**
Net Income	**57**	**107**	**200**	**264**	**207**	**293**	**339**	**375**	**405**	**435**	**474**	**506**	**535**	**565**	**592**
EPS	0,52	0,99	1,95	2,73	2,10	2,98	3,45	3,81	4,12	4,42	4,82	5,15	5,44	5,75	6,02
Liquidity ratios															
Net Debt	(88)	(228)	(313)	(200)	(285)	(548)	(670)	(805)	(961)	(1.142)	(1.301)	(1.518)	(1.769)	(2.037)	(2.337)
Net Debt/EBITDA	0,14x	-0,65x	-0,97x	-1,01x	-0,69x	-0,76x	-1,28x	-1,43x	-1,61x	-1,81x	-1,99x	-2,14x	-2,39x	-2,66x	-2,96x
Profitability ratios															
ROE	5%	10%	17%	21%	14%	18%	19%	19%	18%	17%	17%	16%	16%	15%	14%
ROIC	5%	10%	19%	20%	16%	23%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Operational metrics															
PSV Launches	**1.342**	**1.695**	**1.913**	**2.575**	**2.943**	**3.215**	**3.471**	**3.688**	**3.881**	**4.202**	**4.413**	**4.584**	**4.760**	**4.893**	**5.029**
YoY Growth	*23,3%*	*26,3%*	*12,8%*	*34,6%*	*14,3%*	*9,2%*	*8,0%*	*6,3%*	*5,2%*	*8,3%*	*5,0%*	*3,9%*	*3,8%*	*2,8%*	*2,8%*
PSV Sales	**1.418**	**1.808**	**2.047**	**2.239**	**3.024**	**3.051**	**3.328**	**3.555**	**3.764**	**4.012**	**4.281**	**4.479**	**4.653**	**4.811**	**4.947**
YoY Growth	*17,3%*	*27,5%*	*13,3%*	*9,4%*	*35,0%*	*0,9%*	*9,1%*	*6,8%*	*5,9%*	*6,6%*	*6,7%*	*4,6%*	*3,9%*	*3,4%*	*2,8%*
SOS	**31%**	**32%**	**32%**	**33%**	**37%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**	**34%**

Source: Company IR, Team 45

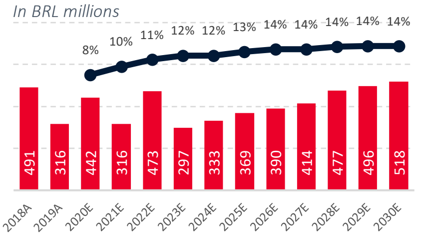
Exhibit 41: Tenda's Equity Value Breakdown



Source: Team 45

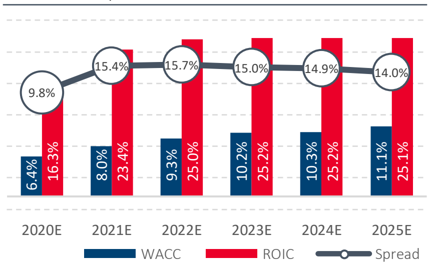
Exhibit 42: Free cash flow to equity x Ke

In BRL millions



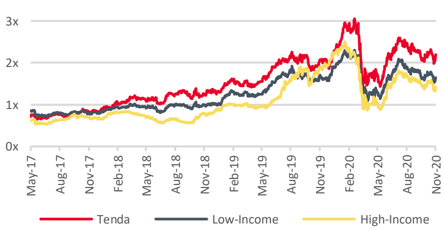
Source: Team 45

Exhibit 43: Spread between ROIC and WACC



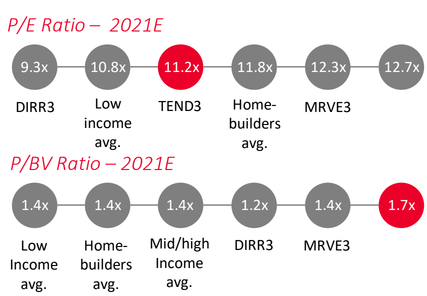
Source: Company IR, Team 45

Exhibit 44: Tenda vs. homebuilders P/BV



Source: Bloomberg

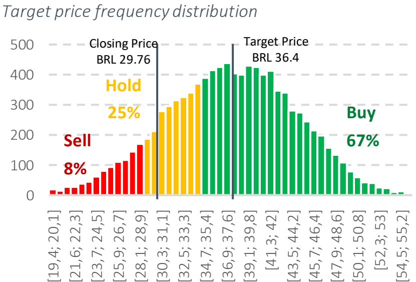
Exhibit 45: Multiple Analysis



Source: Capital IQ

Exhibit 46: Monte Carlo Simulation

Target price frequency distribution



Source: Team 45

Conservative working capital and capex assumptions

We assumed that working capital accounts should remain at similar levels as it has been the last twelve months, as we don't see room for much improvement in the cash cycle at this point. In terms of capex, although homebuilders are very capital intensive, Tenda doesn't have high capex levels, which usually are only for maintenance, around 1%-2% of revenues. We've maintained the trend and don't expect high values of capex over the next years.

Consistent margins aligned with the "new reality" and solid returns

We estimated the company's costs considering a margin recovery over 2021 and 2022, after a weak margin in 2020 due to discounts and low performance in the 1Q. We assumed a more conservative scenario, in which the company will be able to recover its margins, but not at the same levels observed in 2018-2019 due to cost pressures and to still reflect discounts of 2020 sales in future earnings. Despite of lower margins, we expect the company to deliver solid returns over the next years, even with in a higher interest rate environment (see Exh. 43).

DCF methodology

We calculated our discount rate (cost of equity) based on the Capital Asset Pricing Model for the Brazilian market. In order to get the fair value of each cash flow, we calculated a discount rate for each period, using quarterly values from 3Q20 to 4Q22 and annualized values from 2023 to 2030, varying our risk-free rate to consider higher interest rates for Brazil in the next years (See Appendix 33). To calculate the cost of equity, we used: (i) annualized interest yield curve for the Brazilian treasury bonds as risk-free rate, that considers the increase in interest rates in Brazil; (ii) an adjusted beta of 1.115 (Bloomberg 5Y adjusted); (iii) an equity risk premium of 5.0% following the academic literature developed over this topic. Through this method, we arrived in a dynamic cost of equity (see exhibit 42).

Our estimated terminal growth rate considers a 3.0% long-term Brazilian inflation target from the Central Bank and a long-term real growth for the homebuilding sector of 1.0% (due to the supportive extensive market in the long-term), thus arriving at a growth estimate of 4.0% in perpetuity.

Relative valuation: slight premium on efficiency and high returns

We compared the implied multiples from our DCF-based valuation to local homebuilder players in the low and mid-high income segment, in order to analyze if the stock has potential growth already priced-in. In terms of P/E 2021, Tenda is currently trading at 11.3x, below the overall sector average of 11.8 and above the low-income average of 10.8x, while our target price has an implied P/E 2021 ratio of 12.3x. Low-income homebuilders usually trade at lower P/E because of their fast construction cycle when compared with the mid-high segment. However, Tenda's P/E 2021 is still below average of the low-income segment and below its main comparable MRV (12.3x), which has the same construction cycle period (with 85% of its sales in the low-income segment).

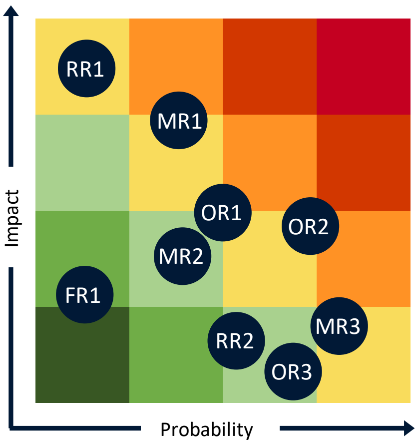
Looking at P/BV, Tenda has historically traded at a premium to homebuilders average (see Exhibit 44), reflecting, in our view, the company's capital structure (net cash). Currently, Tenda is trading at 1.7x P/BV 2021 ratio, above the 1.4 sector average and its main peers (MRV 1.4x; Direcional 1.2x). Through our DCF, we arrived at an implied 2.1x P/BV 2021 ratio. Taking into account both of the multiples, we believe that Tenda's strong earnings momentum, operational excellence and growth potential should support a valuation premium vs. peers, which is still not priced-in.

Looking at different scenarios and stressing our assumptions

We ran optimistic and pessimistic scenarios in which we changed some of our main assumptions. Optimistic scenario resulted in a target price of BRL 40.0 and 34.5% upside considering: (i) more aggressive gains of market share; (ii) more agressive recovery in margins; and (iii) successful implementation of offsite business model with margin gains by 2025. Pessimistic scenario resulted in a target price of BRL 22.6 and 24% downside considering: (i) less funding for CVA program, resulting in a more conservative growth in number of units launched by the program per year; (ii) slower gains of market share; (iii) non-successful implementation of offsite, with only a cash burn; and (iv) higher income taxes.

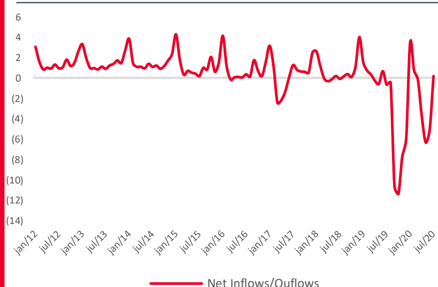
We used a Monte Carlo Analysis in order to measure the probability of our buy recommendation scenarios. By running 10k simulations with different assumptions, we concluded that a buy recommendation would be kept in 67% of the cases (see Exhibit 40 and appendix 36).

Exhibit 47: Risks Matrix - Tenda



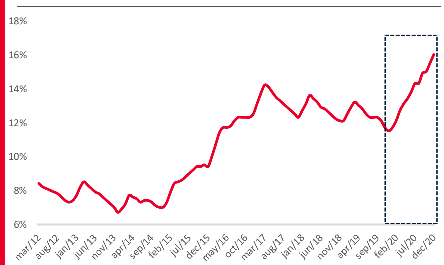
Source: Team 45

Exhibit 48: FGTS Inflows/Outflows (BRL bn)



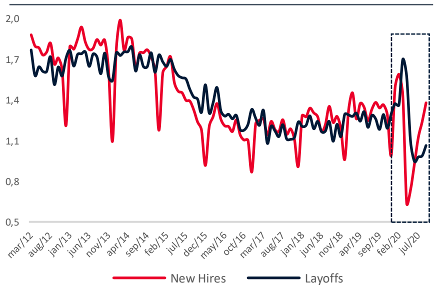
Source: FGTS; Team 45

Exhibit 49: Unemployment rate (%)



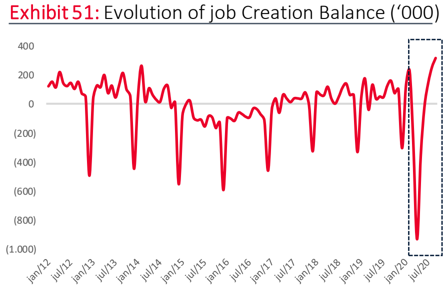
Source: Caged; Team 45

Exhibit 50: Evolution of New Hires and Layoffs (mm)



Source: Caged; Team 45

Exhibit 51: Evolution of job Creation Balance ('000)



Source: Caged; Team 45

INVESTMENT RISKS

Addressing risks to our analysis

Market risks

MR1 | Sharp Increase in Unemployment Rate

Probability: Medium | **Impact:** High

A sharp increase in the unemployment rate could impact FGTS' capacity to finance programs like 'Casa Verde e Amarela'. As shown in Exhibit 49, the Covid-19 outbreak impacts in the unemployment rate can already be seen, but not in its full extent. Market expects a ~110bps rise in the unemployment rate until the end of the year (jumping from the current ~14.4% to ~15.5%). Although there is a significant risk related to FGTS' financing capacity, we believe the recovery of the economy and consequent new jobs creation will drive employment to pre-crisis levels at a relative fast pace, as seen in Exhibits 49, 50 and 51, reinforcing FGTS' capacity to finance programs like 'Casa Verde e Amarela.

MR2 | Strong capitalization of competitors shall increase land's price

Probability: Medium | **Impact:** Medium

Regarding the risk of an increase in land acquisition's cost, despite the high probability given that recent IPO processes already carried out, we believe its impact will be lower than expected a few months ago, considering that most IPO prospects have already been cancelled or postponed.

MR3 | Delay in FGTS' installment payments

Probability: High | **Impact:** Low

We believe that there is a strong probability of new delays in FGTS' installment payments, as seen in September 2020, negatively impacting Tenda's working capital. However, the impact of such event is low, considering that the company has a strong balance sheet position, hence prepared for such risk.

Regulatory risks

RR1 | End of CVA program

Probability: Low | **Impact:** High

The risk related to the discontinuity of federal housing programs was significantly reduced with the launch of CVA, which reinforced the government position regarding the actual housing deficit in Brazil.

RR2 | Delays in approvement process for new construction methods by Caixa

Probability: Medium | **Impact:** Low

Caixa's approving process for new construction methods, such as off-site, shall take more time than expected. Delays in this process may impact the implementation and viability of Tenda's off-site initiative.

Operational risks

OR1 | Significantly increase in building materials costs

Probability: High | **Impact:** Low

We believe that there must be an increase in construction materials' prices in the coming years. This trend shall benefit homebuilders more efficient operationally, maintaining their competitive advantages, therefore this risk is less concerning for Tenda.

OR2 | Difficulty in establishing a good relationship with local governments

Probability: Medium | **Impact:** Medium

Tenda's geographic expansion also depends on the relationship with local governments for the regularization of future launches. Therefore, if there is any trouble to establish a good relationship with local governments, mainly in the interior of the country, it shall cause significant impact on Tenda's operations, especially in the off-site initiative.

OR3 | Off-site construction unviability

Probability: Medium | **Impact:** Low

If the off-site construction model is confirmed to be unfeasible, its impact to Tenda's operation will be minor, as the company is not leveraging itself for the project and is not fully dependent on it to grow.

Financial risks

FR1 | Increase in cancellations, impacting Tenda's margins

Probability: Low | **Impact:** Low

We believe that there is a low probability for a significant increase in Tenda's cancellations, since it only carries out the sale after the financing approval by Caixa. Finally, Tenda's high speed of sale softens the impacts of a higher rate of cancellations.

Appendix

APPENDIX 1

Glossary

BCB	Banco Central do Brasil (Brazilian Central Bank)
bps	Basis points
CAGR	Compound Annual Growth Rate
CDI	Certificado de Depósitos Interbancários (Certficate of Interbank Deposits)
Caixa	Caixa Econômica Federal – Acronyms of the state owed Bank that financing the housing program
COGS	Cost of Good Solds
CVA	Casa Verde Amarela – New name of the Brazilian housing program, substituting Minha Casa Minha Vida
D/E	Debt to Equity ratio
EBITDA	Earnings Before Interest Taxes Depreciation and Amortization
EMBI	JP Morgan's Emerging Markets Bonds Index
EPS	Earnings per Share
ESG	Environment Social and Governance
EV	Enterprise Value
FGTS	Fundo de Garantia do Tempo de Serviço – Fund of compulsory savings managed by Brazilian government
Fwd	Forward
High Income	Homebuilders that constructs high-end houses/appartments
INCC	Índice Nacional de Custos da Construção – National Construction Cost Index
ISE B3	Business Sustainability Index, selection of 30 most relevant companies listed in B3 regarding ESG initiatives
Ke	Cost of equity
lhs	Left-hand side
LTM	Last twelve months
Low Income	Homebuilders that constructs affordable houses/apartments, focused on offering lowers price
MCMV	Minha Casa Minha Vida – Old name of the Brazilian housing program
RS, BA, SP	Rio Grande do Sul, Bahia and São Paulo states
N, NE,CO,SE,S	5 macrorregions of Brazil, respectively North, Northeast, Mid-west, Southeast and South
NTM	Next Twelve Months
PoC	Percentage Of Completion Method
PSV	Potential Sales Value
P/E	Price-to-earnings ratio
P/BV	Price to Book Value ratio
rhs	Right-hand side
ROE	Return on Equity
ROIC	Return on Invested Capital
SBPE	Sistema Brasileiro de Poupança e Empréstimos (Brazilian Savings and Loan System)
Selic	Sistema Especial de Liquidação e Custodia (Special Clearance and Escrow System) is the basic Brazilian interest rate
SG&A	Sales, General and Administrative expenses
SKU	Stock keeping unit
SoS	Speed of Sales
SWOT	Strengths, Weaknesses, Opportunities and Threats analysis
TEND3	Tenda's Ticker
TR	Taxa Referencial (Reference Interest Rate) Interest rate created in 1991 which aims to fight inflation. Nowadays, this rate is equal to 0% a year
WACC	Weighted average cost of capital

APPENDIX 2

Main Assumptions

Tenda's construction curve assumptions	1Q	2Q	3Q	4Q	5Q	6Q	7Q	8Q	9Q	10Q	11Q	12Q	13Q	14Q	15Q	16Q
Regular Project Assumptions																
Speed of sales	25%	25%	20%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accumulated curve	*25%*	*50%*	*70%*	*90%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Speed of construction (POC)	0%	0%	15%	25%	20%	20%	10%	5%	5%	0%	0%	0%	0%	0%	0%	0%
Accumulated curve	*0%*	*0%*	*15%*	*40%*	*60%*	*80%*	*90%*	*95%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Recognition of launches revenue																
Speed of sales x Speed of construction	0%	0%	11%	36%	60%	80%	90%	95%	100%	100%	100%	100%	100%	100%	100%	100%
Difference	*0%*	*0%*	*11%*	*26%*	*24%*	*20%*	*10%*	*5%*	*5%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Inverted																
Speed of sales	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	20%	20%	25%	25%
Recognition of launches revenue	0%	0%	0%	0%	0%	0%	0%	5%	5%	10%	20%	24%	26%	11%	0%	0%
Offsite Project Assumptions																
Speed of sales	25%	25%	20%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accumulated curve	*25%*	*50%*	*70%*	*90%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Speed of construction (POC)	0%	0%	25%	25%	20%	20%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Accumulated curve	*0%*	*0%*	*25%*	*50%*	*70%*	*90%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Recognition of launches revenue																
Speed of sales x Speed of construction	0%	0%	18%	45%	70%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Difference	*0%*	*0%*	*18%*	*28%*	*25%*	*20%*	*10%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Inverted																
Speed of sales	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	20%	20%	25%	25%
Recognition of launches revenue	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	20%	25%	28%	18%	0%	0%

Launches assumptions		2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Units Launched MCMV - brackets 1,5 & 2		**270.693**	**262.897**	**267.629**	**271.965**	**276.044**	**281.013**	**286.071**	**291.221**	**296.463**	**301.799**	**307.231**	**312.761**
yoy growth		*-16,4%*	*-2,9%*	*1,8%*	*1,6%*	*1,5%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*
CVA program elasticity to GDP	0,6												
Real GDP growth		1,1%	-4,8%	3,0%	2,7%	2,5%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%
Tenda's launched units		**17.894**	**19.737**	**21.430**	**23.137**	**24.589**	**26.155**	**27.198**	**28.270**	**29.076**	**29.901**	**30.746**	**31.612**
Growth %		*31,2%*	*10,3%*	*8,6%*	*8,0%*	*6,3%*	*6,4%*	*4,0%*	*3,9%*	*2,8%*	*2,8%*	*2,8%*	*2,8%*
% Tenda share in MCMV		*6,6%*	*7,5%*	*8,0%*	*8,5%*	*8,9%*	*9,3%*	*9,5%*	*9,7%*	*9,8%*	*9,9%*	*10,0%*	*10,1%*
% Gains in market share		2,4%	0,9%	0,50%	0,50%	0,40%	0,40%	0,20%	0,20%	0,10%	0,10%	0,10%	0,10%
Average ticket per unit (PSV)													
PSV per unit (R$ '000)		**144,5**	**150,0**	**150,0**	**150,0**	**150,0**	**150,0**	**154,5**	**154,5**	**154,5**	**154,5**	**154,5**	**154,5**

APPENDIX 3

Revenue Buildup

Summary	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Gross revenues	**823**	**552**	**907**	**1.171**	**1.420**	**1.747**	**2.005**	**2.346**	**2.820**	**3.230**	**3.465**	**3.684**	**3.898**	**4.186**	**4.407**	**4.584**	**4.753**	**4.893**
YoY growth		*-33,0%*	*64,4%*	*29,0%*	*21,3%*	*23,0%*	*14,8%*	*17,0%*	*20,2%*	*14,5%*	*7,3%*	*6,3%*	*5,8%*	*7,4%*	*5,3%*	*4,0%*	*3,7%*	*2,9%*
Regular																		
Launches	-	-	-	-	-	-	-	71	2.088	3.230	3.465	3.684	3.898	4.186	4.407	4.584	4.753	4.893
Unsold Inventory	-	-	-	-	-	-	-	739	581	-	-	-	-	-	-	-	-	-
Inventory already sold (backlog)	-	-	-	-	-	-	-	536	151	-	-	-	-	-	-	-	-	-
PSV (VGV) – launches	339	613	1.089	1.342	1.695	1.913	2.575	2.943	3.215	3.471	3.688	3.881	4.202	4.413	4.584	4.760	4.893	5.029
Inventory	2.786	2.985	3.262	3.869	4.496	4.203	5.221	5.749	6.259	6.653	7.138	7.562	8.141	8.665	9.053	9.419	9.730	10.014
Sales – PSV	**1.089**	**919**	**1.208**	**1.418**	**1.808**	**2.047**	**2.239**	**3.024**	**3.051**	**3.328**	**3.555**	**3.764**	**4.012**	**4.281**	**4.479**	**4.653**	**4.811**	**4.947**
YoY growth		*-15,6%*	*31,4%*	*17,3%*	*27,5%*	*13,3%*	*9,4%*	*35,0%*	*0,9%*	*9,1%*	*6,8%*	*5,9%*	*6,6%*	*6,7%*	*4,6%*	*3,9%*	*3,4%*	*2,8%*
Backlog	**1.134**	**666**	**975**	**1.146**	**1.184**	**1.974**	**2.198**	**1.834**	**110**	-	-	-	-	-	-	-	-	-
Speed of sales (SOS)	30%	27%	30%	31%	32%	32%	33%	37%	34%	34%	34%	34%	34%	34%	34%	34%	34%	34%

Launches	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Launches – PSV	**339**	**613**	**1.089**	**1.342**	**1.695**	**1.913**	**2.575**	**2.943**	**3.215**	**3.471**	**3.688**	**3.881**	**4.202**	**4.413**	**4.584**	**4.760**	**4.893**	**5.029**
Launches PSV – Forecast	-	-	-	-	-	-	-	2.147	3.215	3.471	3.688	3.881	4.202	4.413	4.584	4.760	4.893	5.029
% yoy growth		*81,0%*	*77,6%*	*23,3%*	*26,3%*	*12,8%*	*34,6%*	*14,3%*	*9,2%*	*8,0%*	*6,3%*	*5,2%*	*8,3%*	*5,0%*	*3,9%*	*3,8%*	*2,8%*	*2,8%*
Number of launched units (quarter)	2.460	4.315	7.711	9.579	11.768	13.636	17.894	19.737	21.430	23.137	24.589	25.874	27.198	28.562	29.669	30.806	31.668	32.551
Number of launched units (year)	2.460	4.315	7.711	9.579	11.768	13.636	17.894	19.737	21.430	23.137	24.589	25.874	27.198	28.562	29.669	30.806	31.668	32.551
% yoy growth		*75,4%*	*78,7%*	*24,2%*	*22,9%*	*15,9%*	*31,2%*	*10,3%*	*8,6%*	*8,0%*	*6,3%*	*5,2%*	*5,1%*	*5,0%*	*3,9%*	*3,8%*	*2,8%*	*2,8%*
PSV per unit (R$ '000)	142	142	141	139	144	141	144	148	150	150	150	150	155	155	155	155	155	155
Number of projects launched	**7**	**14**	**30**	**40**	**45**	**49**	**63**	**58**	**64**	**68**	**73**	**77**	**80**	**84**	**87**	**90**	**93**	**96**
Units per launch	1.350	1.276	1.043	958	1.045	1.096	1.138	1.324	1.393	1.393	1.393	1.393	1.393	1.393	1.393	1.393	1.393	1.393
Recognized revenue for launches	-	-	-	-	-	-	-	**71**	**2.088**	**3.230**	**3.465**	**3.684**	**3.898**	**4.186**	**4.407**	**4.584**	**4.753**	**4.893**
Sales	-	-	-	-	-	-	-	**689**	**2.787**	**3.328**	**3.555**	**3.764**	**4.012**	**4.281**	**4.479**	**4.653**	**4.811**	**4.947**
Launches sales	-	-	-	-	-	-	-	493	643	694	738	776	840	883	917	952	979	1.006
Inventory sales	-	-	-	-	-	-	-	197	2.144	2.634	2.818	2.987	3.172	3.399	3.562	3.701	3.832	3.941
Backlog	-	-	-	-	-	-	-	**869**	**4.572**	**5.459**	**5.814**	**6.143**	**6.524**	**6.954**	**7.268**	**7.542**	**7.793**	**8.006**
Inventory	-	-	-	-	-	-	-	**2.182**	**6.320**	**6.846**	**7.332**	**7.755**	**8.334**	**8.858**	**9.247**	**9.612**	**9.924**	**10.208**

APPENDIX 4

Income Statement

In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Gross revenues	**1.747**	**2.005**	**2.346**	**2.820**	**3.230**	**3.465**	**3.684**	**3.898**	**4.186**	**4.407**	**4.584**	**4.753**	**4.893**
% Growth YoY		*14,8%*	*17,0%*	*20,2%*	*14,5%*	*7,3%*	*6,3%*	*5,8%*	*7,4%*	*5,3%*	*4,0%*	*3,7%*	*2,9%*
Deductions	(65)	(55)	(139)	(169)	(258)	(243)	(239)	(234)	(251)	(242)	(229)	(214)	(196)
% Gross Revenues	*-3,7%*	*-2,8%*	*-5,9%*	*-6,0%*	*-8,0%*	*-7,0%*	*-6,5%*	*-6,0%*	*-6,0%*	*-5,5%*	*-5,0%*	*-4,5%*	*-4,0%*
Net Revenues	**1.681**	**1.950**	**2.207**	**2.651**	**2.971**	**3.222**	**3.445**	**3.664**	**3.935**	**4.164**	**4.355**	**4.539**	**4.697**
% Growth YoY		*16,0%*	*13,2%*	*20,1%*	*12,1%*	*8,4%*	*6,9%*	*6,4%*	*7,4%*	*5,8%*	*4,6%*	*4,2%*	*3,5%*
Costs of Goods Sold (COGS)	(1.095)	(1.302)	(1.513)	(1.803)	(2.020)	(2.191)	(2.343)	(2.492)	(2.676)	(2.832)	(2.961)	(3.087)	(3.194)
Gross Profit	**586**	**648**	**694**	**848**	**951**	**1.031**	**1.102**	**1.173**	**1.259**	**1.333**	**1.394**	**1.453**	**1.503**
% Gross Margin	*34,8%*	*33,2%*	*31,5%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*	*32,0%*
Selling Expenses	(145)	(163)	(190)	(234)	(247)	(264)	(279)	(297)	(318)	(333)	(346)	(358)	(368)
General and Administrative Expenses	(124)	(117)	(144)	(157)	(181)	(198)	(213)	(228)	(243)	(260)	(273)	(286)	(297)
Other Operating Revenue/Expenses	(81)	(57)	(71)	(84)	(94)	(102)	(109)	(116)	(124)	(132)	(138)	(143)	(148)
EBITDA	**236**	**311**	**289**	**373**	**429**	**467**	**501**	**532**	**574**	**608**	**636**	**665**	**689**
% EBITDA Margin	*14,0%*	*16,0%*	*13,1%*	*14,1%*	*14,4%*	*14,5%*	*14,5%*	*14,5%*	*14,6%*	*14,6%*	*14,6%*	*14,7%*	*14,7%*
Adjusted EBITDA	**272**	**381**	**308**	**406**	**455**	**493**	**527**	**561**	**602**	**637**	**666**	**695**	**719**
% Adj. EBITDA Margin	*16,2%*	*19,5%*	*13,9%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*	*15,3%*
Depreciation and Amortization	(16)	(20)	(21)	(23)	(26)	(29)	(32)	(35)	(38)	(41)	(44)	(47)	(49)
EBIT	**219**	**291**	**268**	**350**	**403**	**439**	**469**	**497**	**536**	**568**	**593**	**619**	**640**
% EBIT Margin	*13,0%*	*14,9%*	*12,1%*	*13,2%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*	*13,6%*
Financial Result	**9**	**9**	**(20)**	**(18)**	**(18)**	**(14)**	**(9)**	**(4)**	**1**	**7**	**14**	**22**	**31**
Financial Income	43	61	37	43	61	65	70	75	80	86	94	102	111
Financial Expenses	(34)	(52)	(56)	(61)	(79)	(79)	(79)	(79)	(79)	(79)	(79)	(79)	(79)
EBT	**228**	**300**	**248**	**332**	**385**	**425**	**459**	**493**	**537**	**575**	**607**	**641**	**671**
% EBT Margin	*13,6%*	*15,4%*	*11,2%*	*12,5%*	*12,9%*	*13,2%*	*13,3%*	*13,5%*	*13,7%*	*13,8%*	*13,9%*	*14,1%*	*14,3%*
Incomes Taxes and Contributions	**(28)**	**(36)**	**(41)**	**(39)**	**(45)**	**(50)**	**(54)**	**(58)**	**(64)**	**(68)**	**(72)**	**(76)**	**(80)**
Deferred income tax and social contribution	(2)	(4)	(6)	(6)	(7)	(8)	(8)	(9)	(10)	(11)	(11)	(12)	(12)
Current Income Tax and Social Contribution	(25)	(31)	(35)	(34)	(39)	(43)	(47)	(50)	(55)	(58)	(62)	(65)	(68)
Minority Shareholders	(1)	(1)	1	1	1	1	1	1	1	1	1	1	1
Effective Tax Rate	*11,6%*	*11,7%*	*16,9%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*	*12,0%*
Net Income before extraordinary	**200**	**264**	**207**	**293**	**339**	**375**	**405**	**435**	**474**	**506**	**535**	**565**	**592**
Result from Discontinued Operations	0	0	0	0	0	0	0	0	0	0	0	0	0
Other/extraordinary	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Income	**200**	**264**	**207**	**293**	**339**	**375**	**405**	**435**	**474**	**506**	**535**	**565**	**592**
% Net Margin	*11,9%*	*13,5%*	*9,4%*	*11,0%*	*11,4%*	*11,6%*	*11,8%*	*11,9%*	*12,0%*	*12,2%*	*12,3%*	*12,4%*	*12,6%*

APPENDIX 5

Balance Sheet

Balance Sheet (BRL millions)	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Current Assets	**1.788**	**2.506**	**3.248**	**3.674**	**3.898**	**4.167**	**4.448**	**4.768**	**5.093**	**5.431**	**5.785**	**6.150**	**6.532**
Cash and cash equivalents	856	1.071	1.632	1.895	2.017	2.153	2.308	2.489	2.648	2.865	3.116	3.385	3.685
Receivables from clients	318	407	623	700	730	777	825	875	937	985	1.024	1.061	1.091
Properties for sale	533	937	880	948	1.013	1.090	1.158	1.237	1.327	1.392	1.449	1.501	1.545
Other accounts receivable	44	74	89	103	107	114	121	128	137	144	150	155	160
Land for sale	37	18	23	28	32	34	37	39	42	45	47	49	51
Non-Current Assets	**833**	**972**	**1.092**	**1.212**	**1.306**	**1.407**	**1.500**	**1.602**	**1.720**	**1.812**	**1.892**	**1.966**	**2.030**
Receivables from clients LT	158	219	179	206	215	229	243	258	276	290	302	313	322
Properties for sale LT	516	537	691	745	796	856	910	972	1.043	1.094	1.138	1.179	1.214
Others	55	72	69	86	98	106	113	119	128	135	141	146	151
Intangible, Property and Equipment	65	102	106	118	132	146	160	174	189	203	217	231	244
Investments	39	43	46	57	65	70	75	79	85	90	94	97	100
Total Assets	**2.621**	**3.479**	**4.339**	**4.887**	**5.204**	**5.574**	**5.949**	**6.370**	**6.813**	**7.243**	**7.677**	**8.116**	**8.562**
Current Liabilities	**454**	**579**	**1.108**	**1.292**	**1.350**	**1.412**	**1.469**	**1.534**	**1.601**	**1.657**	**1.706**	**1.750**	**1.789**
Loans and financing	7	9	197	197	197	197	197	197	197	197	197	197	197
Debentures	3	6	319	319	319	319	319	319	319	319	319	319	319
Obligations for purchase of land and advances from customers	258	341	320	452	470	502	530	568	603	628	653	673	692
Material and service suppliers	21	39	60	74	83	89	96	102	110	116	122	127	132
Taxes and contributions	27	30	48	49	55	60	64	68	73	78	81	85	88
Others	137	155	165	202	227	245	263	280	300	319	334	349	362
Non-current liabilities	**964**	**1.548**	**1.726**	**1.906**	**1.958**	**2.037**	**2.107**	**2.198**	**2.283**	**2.348**	**2.409**	**2.461**	**2.508**
Loans and financing	98	51	333	333	333	333	333	333	333	333	333	333	333
Debentures	434	805	498	498	498	498	498	498	498	498	498	498	498
Obligations for purchase of land and advances from customers LT	361	602	799	958	996	1.064	1.123	1.204	1.278	1.332	1.383	1.427	1.467
Deferred taxes	8	12	15	19	21	23	24	26	28	29	31	32	33
Provision for contingencies	33	29	31	38	43	46	50	53	57	60	63	66	68
Other creditors	-	-	-	-	-	-	-	-	-	-	-	-	-
Others LT	29	49	49	60	68	73	79	84	90	95	100	104	108
Shareholders' Equity	**1.204**	**1.352**	**1.505**	**1.688**	**1.895**	**2.125**	**2.373**	**2.638**	**2.928**	**3.237**	**3.562**	**3.906**	**4.265**
Shareholders' Equity	1.198	1.351	1.504	1.688	1.894	2.124	2.372	2.637	2.928	3.236	3.561	3.905	4.264
Capital Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
Minority Shareholders	6	1	1	1	1	1	1	1	1	1	1	1	1
Total Liabilities and Equity	**2.621**	**3.478**	**4.339**	**4.887**	**5.204**	**5.574**	**5.949**	**6.370**	**6.813**	**7.243**	**7.677**	**8.116**	**8.562**

APPENDIX 6
Cash Flow

In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Net Income	**200**	**264**	**207**	**293**	**339**	**375**	**405**	**435**	**474**	**506**	**535**	**565**	**592**
D&A	16	20	21	23	26	29	32	35	38	41	44	47	49
Change in working capital	**18**	**(62)**	**113**	**178**	**(48)**	**(29)**	**(26)**	**(14)**	**(44)**	**(26)**	**(19)**	**(22)**	**(14)**
Receivables	(67)	(179)	(192)	(118)	(42)	(68)	(69)	(72)	(91)	(68)	(56)	(53)	(44)
Inventories	(88)	(406)	(102)	(127)	(119)	(140)	(124)	(143)	(165)	(118)	(103)	(95)	(81)
Payables	173	344	215	305	71	111	98	130	121	92	85	73	66
Operational Cash Flow	**235**	**222**	**340**	**494**	**317**	**375**	**411**	**456**	**467**	**521**	**560**	**589**	**627**
Capex	(18)	(57)	(25)	(35)	(39)	(43)	(46)	(49)	(52)	(55)	(58)	(60)	(62)
Cash flow from investments	**(18)**	**(57)**	**(25)**	**(35)**	**(39)**	**(43)**	**(46)**	**(49)**	**(52)**	**(55)**	**(58)**	**(60)**	**(62)**
Debt addition (decrease)	272	328	477	0	0	0	0	0	0	0	0	0	0
Capital increase/dividend	(160)	(116)	(53)	(109)	(133)	(145)	(158)	(169)	(183)	(198)	(210)	(221)	(233)
Others (net non-operating assets)	29	16	16	31	19	16	17	15	18	17	15	14	12
Cash flow from Financing	**141**	**229**	**439**	**(78)**	**(113)**	**(128)**	**(141)**	**(154)**	**(165)**	**(181)**	**(195)**	**(207)**	**(220)**
Δ Cash Flow	**358**	**394**	**754**	**380**	**164**	**204**	**224**	**253**	**250**	**285**	**307**	**322**	**344**
BoP	2.662	3.732	5.246	6.974	7.723	8.265	8.824	9.490	10.171	10.893	11.817	12.846	13.969
EoP	3.020	3.947	5.808	7.237	7.845	8.401	8.979	9.671	10.330	11.110	12.068	13.114	14.269

APPENDIX 7
Working Capital

In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Receivables	**520**	**699**	**891**	**1.009**	**1.051**	**1.119**	**1.188**	**1.260**	**1.351**	**1.419**	**1.475**	**1.528**	**1.573**
Change	(67)	(179)	(192)	(118)	(42)	(68)	(69)	(72)	(91)	(68)	(56)	(53)	(44)
# days	91	112	117	115	115	115	115	115	115	115	115	115	115
Receivables from clients	318	407	623	700	730	777	825	875	937	985	1.024	1.061	1.091
Change	(40)	(89)	(216)	(77)	(29)	(47)	(48)	(50)	(63)	(47)	(39)	(37)	(31)
# days of sales (PSV)	56	65	82	80	80	80	80	80	80	80	80	80	80
Other accounts receivable	44	74	89	103	107	114	121	128	137	144	150	155	160
Change	12	(30)	(15)	(14)	(4)	(7)	(7)	(7)	(9)	(7)	(6)	(5)	(4)
# days of sales (PSV)	8	12	12	12	12	12	12	12	12	12	12	12	12
Receivables from clients LT	158	219	179	206	215	229	243	258	276	290	302	313	322
Change	38	60	(39)	27	9	14	14	15	19	14	12	11	9
# days of sales (PSV)	28	35	24	24	24	24	24	24	24	24	24	24	24
Payables	**668**	**1.012**	**1.227**	**1.532**	**1.603**	**1.714**	**1.813**	**1.942**	**2.063**	**2.154**	**2.239**	**2.312**	**2.378**
Change	173	344	215	305	71	111	98	130	121	92	85	73	66
# days	133	151	181	181	181	181	181	181	181	181	181	181	181
Obligations for purchase of land and advances from customers	258	341	320	452	470	502	530	568	603	628	653	673	692
Change	54	83	(21)	132	18	32	28	38	35	26	24	21	19
# days of launches (PSV)	49	48	44	50	50	50	50	50	50	50	50	50	50
Material and service suppliers	21	39	60	74	83	89	96	102	110	116	122	127	132
Change	(1)	17	21	14	9	7	7	6	8	7	6	5	5
# days of COGS	7	11	15	15	15	15	15	15	15	15	15	15	15
Taxes and contributions	27	30	48	49	55	60	64	68	73	78	81	85	88
Change	(0)	3	18	1	6	4	4	4	5	5	4	4	3
# days of COGS	9	8	12	10	10	10	10	10	10	10	10	10	10
Obligations for purchase of land and advances from customers LT	361	602	799	958	996	1.064	1.123	1.204	1.278	1.332	1.383	1.427	1.467
Change	121	241	197	158	38	68	59	81	73	54	51	44	40
# days of launches (PSV)	68	84	110	106	106	106	106	106	106	106	106	106	106
Inventories (COGS)	**1.087**	**1.493**	**1.595**	**1.721**	**1.840**	**1.980**	**2.105**	**2.248**	**2.413**	**2.531**	**2.634**	**2.729**	**2.810**
Change	(88)	(406)	(102)	(127)	(119)	(140)	(124)	(143)	(165)	(118)	(103)	(95)	(81)
# days	102	107	106	106	106	106	106	106	106	106	106	106	106
Properties for sale	533	937	880	948	1.013	1.090	1.158	1.237	1.327	1.392	1.449	1.501	1.545
Change	(16)	(404)	57	(68)	(65)	(77)	(68)	(79)	(91)	(65)	(57)	(52)	(44)
# days of inventories (PSV)	46	65	56	56	56	56	56	56	56	56	56	56	56
Land for sale	37	18	23	28	32	34	37	39	42	45	47	49	51
Change	27	19	(5)	(5)	(4)	(3)	(3)	(2)	(3)	(3)	(2)	(2)	(2)
# days of COGS	12	5	6	6	6	6	6	6	6	6	6	6	6
Properties for sale LT	516	537	691	745	796	856	910	972	1.043	1.094	1.138	1.179	1.214
Change	(99)	(21)	(154)	(53)	(51)	(60)	(54)	(62)	(71)	(51)	(45)	(41)	(35)
# days of inventories (PSV)	44	37	44	44	44	44	44	44	44	44	44	44	44
TOTAL WORKING CAPITAL	**939**	**1.179**	**1.259**	**1.198**	**1.289**	**1.385**	**1.481**	**1.566**	**1.701**	**1.795**	**1.870**	**1.945**	**2.004**
Total change in working capital	18	(241)	(80)	60	(90)	(97)	(95)	(86)	(135)	(94)	(75)	(75)	(59)
# days	61	68	42	40	40	40	40	40	40	40	40	40	40

APPENDIX 8

Free Cash Flow

In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Perpetuity
EBIT	**219**	**291**	**268**	**350**	**403**	**439**	**469**	**497**	**536**	**568**	**593**	**619**	**640**	
Taxes	(26)	(34)	(42)	(40)	(46)	(53)	(56)	(60)	(64)	(68)	(71)	(74)	(77)	
Depreciation	16	20	21	23	26	29	32	35	38	41	44	47	49	
Working Capital	18	(241)	(80)	60	(90)	(97)	(95)	(86)	(135)	(94)	(75)	(75)	(59)	
Gross Cash Flow	**229**	**36**	**167**	**394**	**292**	**318**	**349**	**387**	**375**	**446**	**490**	**516**	**554**	
Capex	(18)	(57)	(25)	(35)	(39)	(43)	(46)	(49)	(52)	(55)	(58)	(60)	(62)	
Free Cash Flow to firm	**211**	**(21)**	**142**	**359**	**253**	**275**	**303**	**338**	**323**	**391**	**432**	**456**	**492**	
Change in Debt	272	328	477	(0)	0	0	0	0	0	0	0	0	0	
Financial Result	9	9	(20)	(18)	(18)	(14)	(9)	(4)	1	7	14	22	31	
Free Cash Flow to Equity	**491**	**316**	**599**	**340**	**235**	**262**	**294**	**334**	**324**	**397**	**447**	**478**	**523**	**5.279**

APPENDIX 9

Discount Rate Breakdown & DCF

Discount Rate		3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Perpetuity
Risk Free Rate		0,5%	0,5%	0,6%	0,7%	0,9%	1,0%	1,2%	1,3%	1,4%	1,4%	6,5%	6,5%	7,5%	8,0%	8,0%	8,6%	8,8%	8,7%	8,7%
Beta	1,115	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1	1,1
Market Risk Premium	5,0%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	1,2%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%
Cost of Equity		1,8%	1,9%	2,0%	2,1%	2,3%	2,3%	2,6%	2,6%	2,8%	2,7%	12,1%	12,1%	13,0%	13,6%	13,6%	14,2%	14,4%	14,3%	14,3%
Discount Rate		0,0	1,9%	3,8%	6,0%	8,4%	10,9%	13,8%	16,8%	20,0%	23,3%	38,2%	55,0%	75,2%	99,0%	126,0%	158,0%	195,1%	237,3%	237,3%
g	4,0%																			
Annualized risk free		1,9%	2,0%	2,4%	2,9%	3,6%	4,0%	4,8%	5,2%	5,7%	5,5%	6,5%	6,5%	7,5%	8,0%	8,0%	8,6%	8,8%	8,7%	8,7%
Discounted FCFE		**53,9**	**76,5**	**57,2**	**141,5**	**43,9**	**58,5**	**34,3**	**32,9**	**69,6**	**45,0**	**189,2**	**189,7**	**190,5**	**162,8**	**175,9**	**173,1**	**162,0**	**155,1**	**1.565,0**
Debt/Total Capital		32%	31%	30%	28%	28%	28%	27%	27%	26%	26%	24%	23%	21%	20%	19%	18%	17%	16%	16%
Equity/Total Capital		68%	69%	70%	72%	72%	72%	73%	73%	74%	74%	76%	77%	79%	80%	81%	82%	83%	84%	84%
Cost of Debt		1,1%	1,1%	1,1%	1,1%	1,1%	1,1%	1,1%	1,1%	1,1%	1,1%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%
Effective Tax rate		-15%	-13%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%
Annualized cost of Debt (2Q20)	4,6%																			
WACC		**1,6%**	**1,6%**	**1,7%**	**1,8%**	**1,9%**	**2,0%**	**2,1%**	**2,2%**	**2,3%**	**2,3%**	**10,2%**	**10,3%**	**11,1%**	**11,7%**	**11,8%**	**12,4%**	**12,7%**	**12,7%**	**12,7%**

	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Annualized WACC	6,4%	8,0%	9,8%	10,2%	10,3%	11,1%	11,7%	11,8%	12,4%	12,7%	12,7%

FCFE	
Equity Value	**3.577**
% perp.	*43,8%*
Shares Outstanding	98.289
Market Cap	**2.925.081**
PO	**R$ 36,39**
Current price	R$ 29,76
Upside	**22,3%**

APPENDIX 10

Indebtness & Cost of Debt

Type of Operation	Due date	Yield (year)	Value	Financial Expenses	% total
SFH	01/07/2020 - 03/2024	8,30%	178.546	14.819	13%
Bank Loans	mar/24	4,83%	352.800	17.040	26%
CRI Tenda	jan/21	2,80%	314.800	8.814	23%
Debenture Tenda 14	set/23	3,65%	152.200	5.555	11%
Debenture Tenda 15	mar/24	3,30%	151.300	4.993	11%
Debenture Tenda 16	dez/24	3,20%	198.600	6.355	15%
Total	**-**		**1.348.246**	**57.577**	**100%**

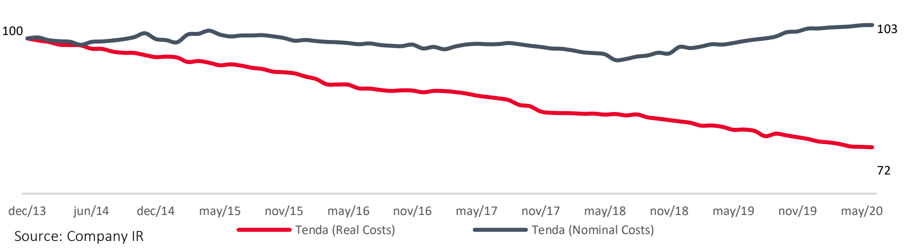
Debt Amortization Table	30/06/2020
2020	12.600
2021	689.500
2022	249.400
2023	265.400
2024	131.500
2025 onward	0
Total	**1.348.400**

Average weighted cost of debt	Debt Balance	% total	Average cost
CDI	1.169.800,0	86,76%	CDI + 1,98%
TR	178.500,0	13,24%	TR + 8,30%
Total	**1.348.300,0**	**100%**	**4,6%**

APPENDIX 11
Construction costs analysis

Tenda is focused on providing the lowest price, which means its costs are a central piece in the puzzle. Although costs related to construction have gained share of the company's total costs (Exhibit 52), costs related to land acquisition have experienced a substantial increase over the last few years, given the increasing competition for land in the main metropolitan areas. Despite that, Tenda's COGS had a slight improvement between 2015 and 2017. This can be related to the company's operational efficiency (through an industrial approach in construction) and the use of aluminum forms work system. In real terms, construction costs have been significantly reduced over the last few years.

Exhibit 56: Tenda's Cost Construction Evolution



Source: Company IR

Construction materials inflation

To analyze Tenda's cost structure, we need to look at the real estate materials' market. The National Real Estate Index (INCC) ended September with 1.44% rise, the highest figure since July 2013, accumulating 5.33% in the last 12 months (see exhibit 53). The rise can be explained by the BRL devaluation during the Covid-19 pandemic and the 2.6% readjustment in construction materials' prices, followed by a 0.2% increase in workforce costs. For this reasons, we expect the increase in materials costs to continue, which may negatively impact Tenda's operating results in the short-term. It is important to point out that the company is able to negotiate with its suppliers both prices and terms of the materials due to its scalability, with the possibility to set prices for a whole project before the beginning of the construction. However, wages of construction workers are mandatorily adjusted by the INCC index, what shall put pressure on costs. The evolution of material costs in the recent years proves Tenda's operational efficiency, since it managed to reduce costs in real terms, even with the increase in INCC. In 3Q20, the company already disclosed a pressure in margins due to a increase in materials, caused by the BRL devaluation and the INCC increase. We do not expect such movement to continue for much longer, but if it does, it could affect Tenda's figures considerably, representing a potential downside to our analysis (see our risks section).

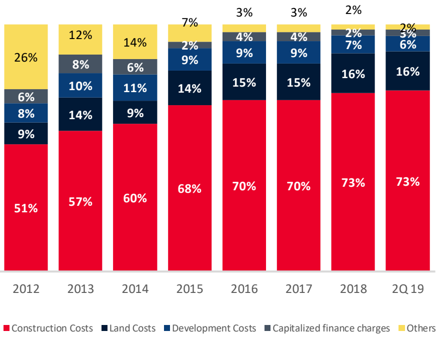
Material costs and price per sqm

In order to complete analyze the costs dynamics, we also compared costs between different areas, through the material component of the CBIC (Basic Unitary Cost for Construction) indicator (see Exhibit 54), which is composed by prices of concrete blocks, concrete, bricks, windows, etc., per sqm in five Brazilian states, chosen by the representativeness in Tenda's operations (São Paulo, Rio de Janeiro, Bahia, and Rio Grande do Sul represent almost 50% of the company's revenues). The figures shows a sharp increase in prices amongst all areas analyzed, taking us to the conclusion that the sqm price suffer little geographical variation, the opposite of what is happening with material costs.

High supplier concentration

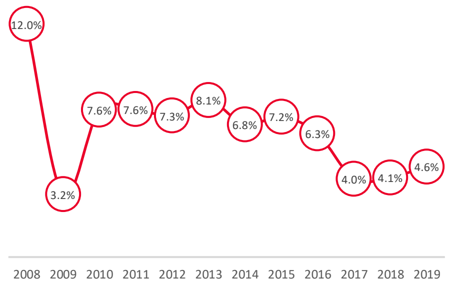
Another factor that can impact Tenda's costs upwards is the dependency on its aluminum form supplier, currently Tenda only have one supplier. The company already announced that it is negotiating with other possible suppliers in order to not be exposed to this specific supplier (see more in our risk analysis).

Exhibit 52: Tenda's cost breakdown



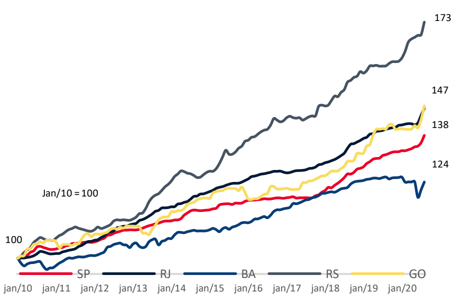
Source: Company IR

Exhibit 53: INCC



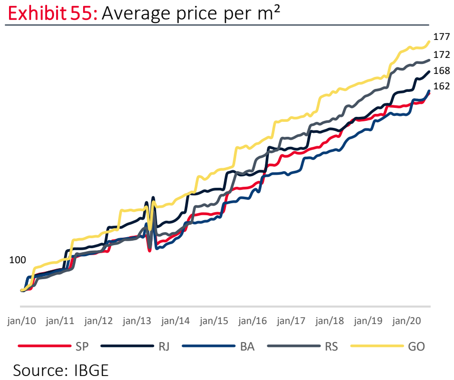
Source: FGV

Exhibit 54: Material costs per m²



Source: CBIC

Exhibit 55: Average price per m²

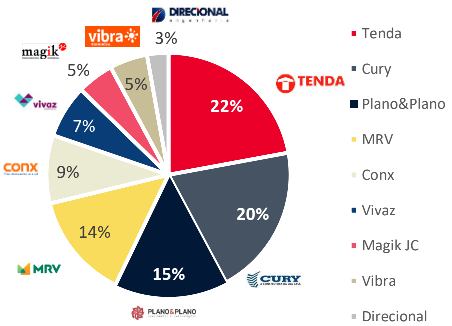


Source: IBGE

APPENDIX 12
Increase in construction costs simulation

Inflation rate 2020-21'	0%	2%	4%	6%	8%	10%
Gross Margin 2021E	32,0%	30,9%	29,7%	28,6%	27,4%	26,3%
Margin decrease		-1,1%	-2,3%	-3,4%	-4,6%	-5,7%

Exhibit 57: Sample's weight by company visited



Source: Team 45

Exhibit 58: Final results

Location Index	Avg. Min. Dist	Median	#
Magik JC	3.32	2.74	1°
Vibra	8.12	7.72	2°
MRV	10.04	7.09	3°
Conx	10.16	6.30	4°
Direcional	10.26	10.84	5°
Cury	10.37	10.22	6°
Tenda	10.65	9.39	7°
Plano & Plano	10.68	9.11	8°
Vivaz	13.01	9.14	9°

Source: Team 45

APPENDIX 13

Study case: geographic location

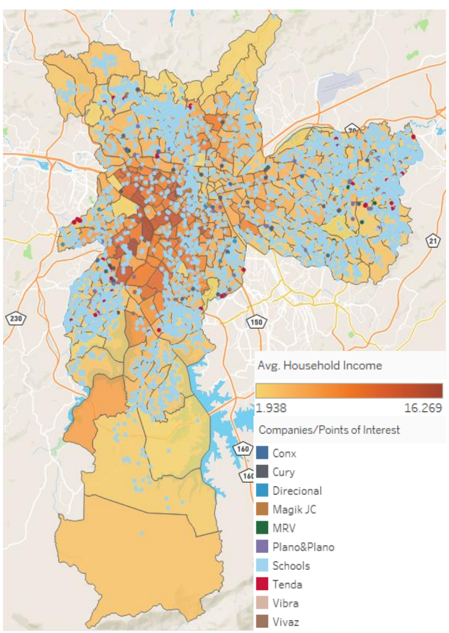
We carried out a location study of the main low-income homebuilders in the city of São Paulo. We collected the location of projects that were available in their websites, regardless if it was finished or under construction, and compared to the location of subway stations, schools and hospitals. In total, 248 projects were gathered in all regions of the city of São Paulo. The weight of each company in our sample is shown in Exhibit 57. We also collected the location of all 4,047 public schools, 157 subway stations and 477 hospitals in the city. To analyze the distances, we elaborated an index composed of a weighted average of the distances (Exhibit 58), with higher weight to services more recurrent (Schools and Subway: 37.5%; Hospitals: 25%).

In our analysis, Tenda is in the 7th place among the 9 construction companies studied, mainly due to the high distance to subway stations. However, it is worth mentioning that there is not much difference between the companies results, considering that the standard deviation, excluding Magik JC (an outlier), is 1.33 points. This small difference shows the lack of penetration of low-income homebuilders in central regions, due to the high land costs of these regions, that would tight margins given the CVA unit price cap. Therefore, we concluded that location is not a competitive differential for any of the companies, which led us to look for other differentiators, such as prices and consumer's journey (See appendix 14).

Outlier: Magik JC

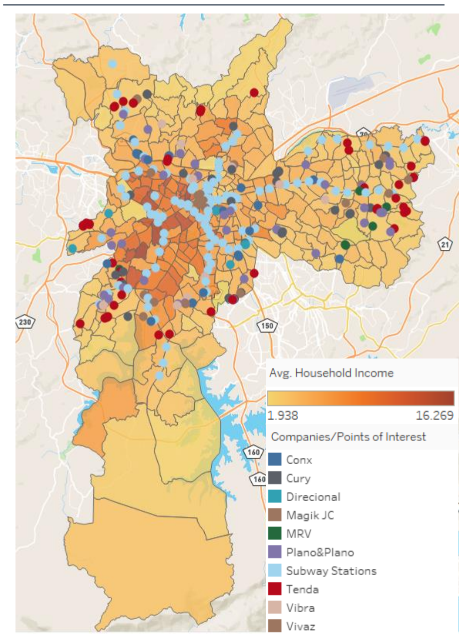
We found Magik JC to be an outlier since its business proposition is different from other homebuilders. Magik JC's projects are apartments of up to 30sqm with one bedroom concentrated in São Paulo's downtown, where prices are higher. Meanwhile, Tenda, MRV and other low-income homebuilders offer, on average, apartments of up to 40sqm with two bedroom on areas that are more distant from downtown, in order to offer better prices (see Appendix 14).

Exhibit 59: Projects x schools regional distribution



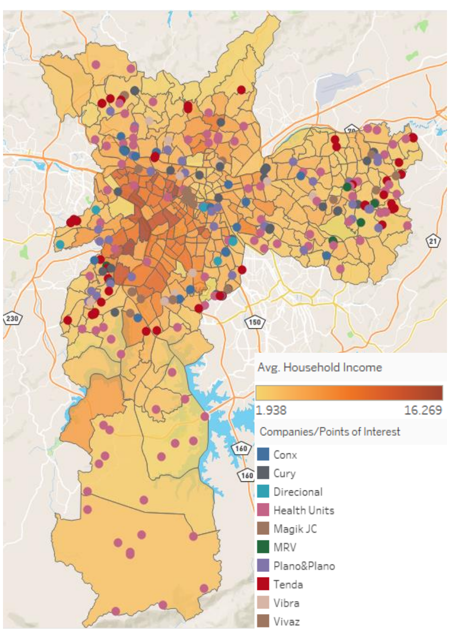
Source: Team 45

Exhibit 60: Projects x subways regional distribution



Source: Team 45

Exhibit 61: Projects x hospitals regional distribution



Source: Team 45

Exhibit 62: Schools – final results

Schools	Avg. Min. Dist	Median	#
Magik JC	0.19 Km	0.18 Km	1°
Vibra	0.24 Km	0.25 Km	2°
Tenda	0.32 Km	0.27 Km	3°
Cury	0.33 Km	0.34 Km	4°
Plano & Plano	0.34 Km	0.31 Km	5°
Direcional	0.35 Km	0.42 Km	6°
Conx	0.37 Km	0.34 Km	7°
Vivaz	0.45 Km	0.37 Km	8°
MRV	0.54 Km	0.65 Km	9°

Source: Team 45

Exhibit 63: Subways – final results

Subways	Avg. Min. Dist	Median	#
Magik JC	0.92 Km	0.76 Km	1°
Vivaz	1.54 Km	1.26 Km	2°
Conx	1.55 Km	0.94 Km	3°
Direcional	1.80 Km	1.43 Km	4°
Vibra	1.90 Km	1.65 Km	5°
Cury	1.91 Km	1.80 Km	6°
Plano & Plano	1.96 Km	1.80 Km	7°
MRV	2.13 Km	0.80 Km	8°
Tenda	2.28 Km	2.24 Km	9°

Source: Team 45

Exhibit 64: Hospitals – final results

Hospitals	Avg. Min. Dist	Median	#
MRV	0.89 Km	0.92 Km	1°
Magik JC	1.33 Km	1.30 Km	2°
Tenda	1.81 Km	1.98 Km	3°
Plano & Plano	1.89 Km	1.79 Km	4°
Direcional	1.89 Km	1.98 Km	5°
Conx	1.95 Km	1.63 Km	6°
Cury	1.97 Km	1.94 Km	7°
Vibra	2.26 Km	2.20 Km	8°
Vivaz	2.32 Km	2.02 Km	9°

Source: Team 45

APPENDIX 14

Channel checks: consumer's journey to buy an apartment

After the conclusion that location is not a competitive advantage (see Appendix 13), we decided to check in person the sales' channels from each company, to better understand the consumer's journey to buy an apartment. We visited 8 sales stands located in the west and center regions of São Paulo (see Exhibit 65) and simulated the purchase of a property by a consumer with a monthly family income of up to BRL 3,500. In this survey, we were able to analyze both subjective aspects that impact on the decision-making process, such as the environment, the brokers' service, waiting time, level of detail when answering our questions, as well as technical aspects, such as the average price of the projects visited, the inclusion of ITBI (Property Transfer Tax) in the price and discuss payment conditions.

Tenda: it was always about prices

The survey proved that Tenda's main differentiator is its prices and its Internalized Sales Team. When comparing the prices we've collected, we concluded that Tenda's prices are, on average, 30% lower than its competitors. However, their units do not present benefits such as rainwater reuse and solar panels installed. Therefore, Tenda proved its focus is to promote the lowest possible price. Another positive aspect was Tenda's Sales Team, that is very in-line with the company goals, in our view. According to the answers we got, the sales team have stability of employment, but only receive bonuses from their individual performance, considering effective sales (after cancellations), which is not the standard in the market.

We also highlight Tenda's flexibility regarding payments. The company offers the possibility of paying only BRL 100 in advance and finances the amount not subsidized by CEF in up to 72 installments. Regarding prices, Tenda's units ranged between BRL 130k and BRL 190k.

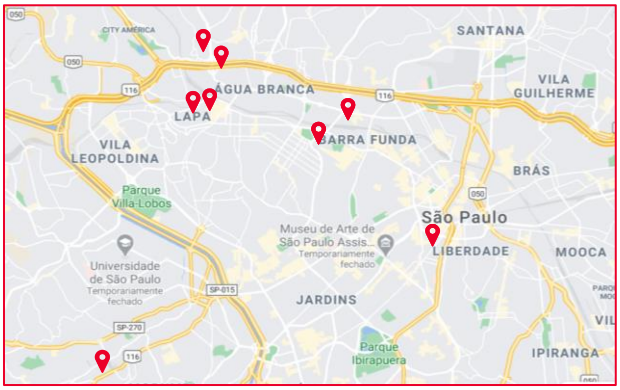
MRV

In MRV's case, the service speed stood out. It took less than 2 minutes between registration and service. The major highlight was the use of solar panels, reuse of rainwater and use of LED in all lamps. There is also flexibility regarding payments, the finance plan for the amount not subsidized offers installments up to 62-months, requesting only BRL 100 in advance. Finally, the possibility of visiting decorated units is a differentiator aspect to the Tenda's experience. MRV's prices ranged from BRL 200k to BRL 260k, surpassing CVA's unit price cap.

Vivaz

Service time at Vivaz took 3 minutes. The average delivery time of the unit takes 30 months, above all competitors. The finance plan regarding the amount not subsidized is in line with the market, with installments lasting until the end of the construction. Prices vary between BRL 200k and BRL 230k.

Exhibit 65: Stands' location



Source: Google Maps; Team 45

Cury

In our survey, Cury's environment and service proved to be the best. The technical and detailed descriptions, the possibility of visiting decorated units made the experience at Cury very close to a medium or even high-income sales stand. The wait period of 2 minutes, as in MRV, was best-in-class, but Cury offers the possibility of making small changes in the unit's project. However, there is not the same flexibility regarding financing the no-subsidized amount, with installments lasting until the end of construction period. Prices vary between BRL 210k and BRL 270k, surpassing CVA's unit price cap.

Vibra

Vibra's sales stand had the worst location and took us 20 minutes to be serviced, the longest in the survey. The company do not standardize its units and the financing plan is in line with the market, following the construction schedule. ESG was the main highlight, all Vibra's projects have water reuse and use LED lamps in common areas. Units' prices vary between BRL 190-240k.

Magik JC

Magik JC's projects have a privileged location, therefore they are the most expensive in our survey, ranging from BRL 200-270k. Another highlight is the focus on social media to advertise its units. Regarding the financing plan, installment period is limited by the construction schedule.

Plano & Plano

Regarding Plano & Plano projects, it is worth mentioning the installment plan conditions, which can be up to 60-months, but limited to the construction period. The service was in line with the competition. The company also offers the possibility to make small changes in the unit in some of its projects. A negative point is the lack of ESG initiatives, like rainwater reuse and individual energy panels. Finally, prices ranged between BRL 150-230k.

Exhibit 66: Channel checks Summary

Company	Tenda	Cury	Plano&Plano	MRV	Vivaz	Magik	Vibra
Time to service	5 min	2 min	10 min	2 min	3 min	1 min	20 min
Financing Installments (amount not subsidized)	72-months	Until the end of Construction	60-months	62x	Until the end of Construction	Until the end of Construction	Until the end of Construction
Price (BRL '000)	130-190	200-260	150-230	200-260	200-230	200-270	190-240
ESG Initiatives	No	Yes	No	Yes	No	Yes	Yes
Construction Period	11 months	24 months	24 months	11 months	30 months	20 months	24 months
Offers possibility of smalls changes in projects	No	Yes	Yes	No	No	No	No

Source: Team 45

APPENDIX 13

Main comparables description

MRV MRV is the largest homebuilder in Latin America, with national presence. The company operates both in the low- and mid--income segments. In 2019, MRV launched ~42k units, with a total PSV of BRL 6,901 mm.

DIRECIONAL Direcional is the third largest homebuilder in Brazil in units launched. It operates in the low-income segment and have presence in Brazil's 5 regions. In 2019, Direcional launched ~11.3k units, totaling a PSV of BRL 1,712 mn.

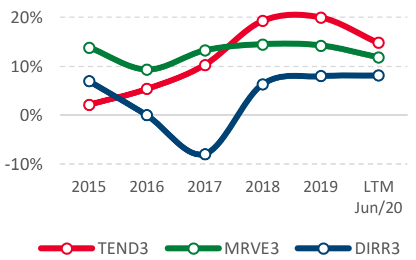
CURY Cury is one of the largest low-income residential developer in Brazil. Cury was a Cyrela's company until its IPO in 3Q20, cashing BRL 170 mn in the offering. In 2019, Cury launched ~1.2k units, totaling a PSV of BRL 923 mn.

PLANO&PLANO Plano e Plano launched ~7k units in 2019, totaling a PSV of BRL 1,229 mn. The company concluded its IPO in 3Q20, cashing BRL 39 mn in the offering. Plano e Plano operates in São Paulo metropolitan area, servicing the low-income segment.

APPENDIX 14

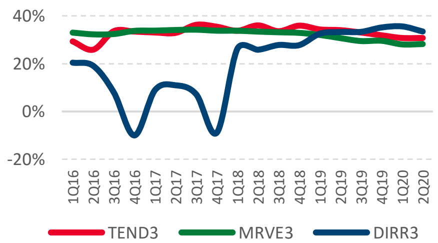
Operational data comparison with peers

Exhibit 67: Historical ROIC by company



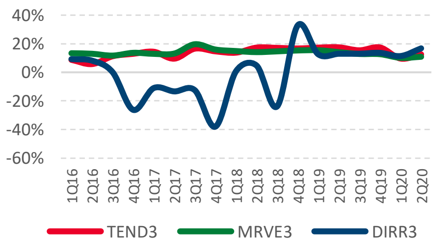
Source: Companies' IR

Exhibit 68: Historical gross margins by company



Source: Companies' IR

Exhibit 69: Historical EBIT margin by company



Source: Companies' IR

Exhibit 70: Habitational deficit x companies' presence

Source: Abrainc/FGV, Companies IR

APPENDIX 15

Regional competition

We analyzed the regional competition landscape to see how Tenda is positioned against its peers in this matter. Tenda operates in nine metropolitan areas of the country in which is possible to implement its scalable business. This compares with the 100% national presence from MRV and twelve states presence from Direcional. Despite of lower national presence, Tenda is focused on the areas with higher habitational deficit, which reflects the company's operational focus (see Exhibit 70). According to guidance from the respective companies, Tenda has a potential market of 31k units per year by entering in four more states, while MRV has a potential market of 40k units per year, being present in twice as more states.

Salvador and Rio de Janeiro housing market study

Regional markets usually have high levels of pulverization due to smaller homebuilders across the country. We decided to analyze the housing market from Salvador, capital city of Bahia, and Rio de Janeiro, capital city of Rio de Janeiro, in order to understand how small players affects main players, such as Tenda and MRV. Those market were chosen due to its significancy in habitational deficit levels and to see the relevance of homebuilders outside São Paulo.

As large players have scale in its operations, their developments usually are cheaper than its local competitors, positively impacting their sales. Analyzing the market share in those regions in terms of launches, we concluded that even though there is specific aspects in market dynamics for each region, the overall trend is very similar to the national market dynamic (MRV and Tenda's dominance – see exhibits 71, 72 and 73). Therefore, we don't see regional competition as a potential threat to Tenda's business model.

Exhibit 71: Housing deficit by composition by state

State	%
São Paulo	22.7%
Rio de Janeiro	9.0%
Minas Gerais	8.7%
Bahia	6.3%
Maranhão	5.3%

Source: FGV/ABRAINC

Exhibit 72: Salvador regional competition

Company	Market Position
TENDA	1ª
MRV	2ª
SERTENGE	3ª
gráfico	4ª
HORUS	5ª

Source: Companies IR

Exhibit 73: Rio de Janeiro regional competition

Company	Market Position
TENDA	1ª
MRV	2ª
DIRECIONAL	3ª
ROSSI	4ª
Riooito	5ª

Source: Companies IR

Exhibit 74: MCMV program summary

Bracket	Income Range	Interest Rate	Subsidies
1	< BRL 1.8k	Zero	< 90% of Property Price
1.5	BRL 1.8k - 2.6k	TR + 5.0%	< BRL 47.5k
2	BRL 2.6k - 4.0k	TR + 5.0% to 7.0%	< BRL 29k
3	BRL 4.0k - 7.0k	TR + 8.16%	None
	BRL 7.0k - 9.0k	TR + 9.16%	

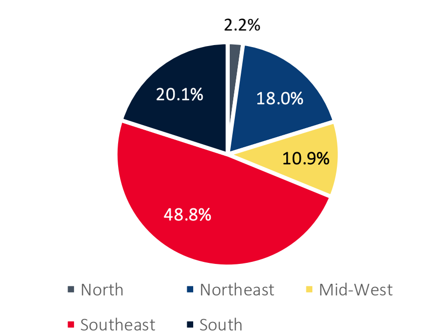
Source: Ministry of Economy

Exhibit 75: CVA program summary

Bracket	Income Range	Interest Rate North-Northeast	Interest Rates Others
1	< BRL 2.0k	TR + 4.25% to 4.50%	TR + 4.75% to 5.00%
2	BRL 2.0k - 4.0k	TR + 4.75% to 6.50%	TR + 5.00% to 6.50%
3	BRL 4.0k - 7.0k	TR + 7.66%	TR + 7.66%

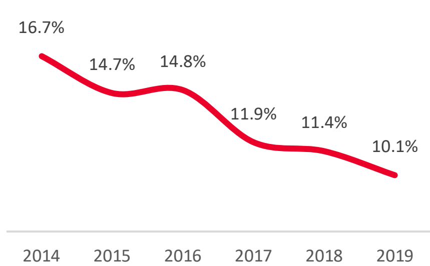
Source: Ministry of Economy

Exhibit 76: MCMV Footprint



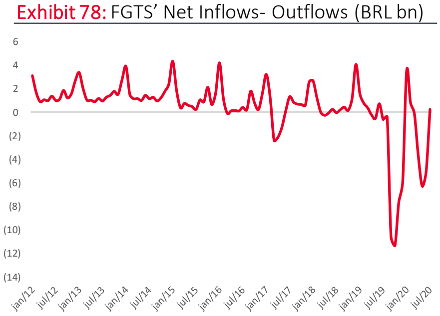
Source: Regional Development Ministry

Exhibit 77: FGTS' ROE Evolution



Source: FGTS, Team 45

Exhibit 78: FGTS' Net Inflows- Outflows (BRL bn)



Source: FGTS, Team 45

APPENDIX 18

Governmental programs: Minha Casa Minha Vida and Casa Verde e Amarela

The Minha Casa Minha Vida program (MCMV) was created in 2009 to address the housing deficit in Brazil, giving the low-income families the opportunity to buy its own house through subsidies and 30-year financing with low interest rates. Families with a household income up until BRL 9k were eligible to the program, which is divided into four different brackets according to the families' monthly income. Each bracket holds specific parameters for unit price cap, interest rates and subsidy levels (see Exhibit 74).

The first bracket includes families with a monthly income of up to BRL 1.8k. In this segment, 100% of the units are acquired by the Caixa Econômica Federal (CEF) upon launching and the government subsides up to 90% of the unit price. The remaining amount is financed at zero interest rate by CEF. In brackets 1.5 and 2, families acquire units from the homebuilder after credit approval from a financing agent (CEF or Banco do Brasil (BB)). Subsidies is mostly provided by FGTS fund. Finally, bracket 3 is a market-based solution fully financed by local banks, without government's subsidies.

MCMV turns into CVA: main changes

The Brazilian Government announced on August 25th the new housing program called 'Casa Verde e Amarela' (CVA), which will substitute the previous housing program 'Minha Casa Minha Vida'. The new program maintains the brackets division, based on the same parameters. CVA sets 3 brackets, as 'Faixa 1.5' was removed (see Exhibit 75). According to the government, CVA is expected to raise the number of families into the housing program from 1.2 million to 1.6 million until 2026, as the program extend the fund to small reforms and land plot regularization.

The main changes from the MCMV to CVA are (i) 75bps reduction in the interest rate for North and Northeast regions and 50bps reduction for South, Southeast and Midwest lower brackets beneficiaries, which shall raise the families' affordability and overall demand for low-income houses; (ii) new rules for CEF remuneration from FGTS, which will be diluted over four years (previously received upfront), ultimately reducing pressure over FGTS' cash flow in upcoming years; (iii) focus on North and Northeast, both regions that currently hold the largest housing deficit in Brazil and were not the main focus from the previous program (see Exhibit 76). We see these changes as positive for low-income homebuilders, as the changes shall increase the families' affordability and, consequently, the demand for low-income housing units.

Main risks

MCMV always raised concerns about its long-term sustainability given its funding sources and political bond. FGTS was the main source of funding both for the old MCMV and the new CVA program, it has already committed to invest BRL 65.5 bn and BRL 65 bn in the program in 2020 and 2021, respectively. Any changes in FGTS regulation or fund availability could compromise its capacity to invest in the housing segment. Given the current macroeconomic scenario and the pandemic possible outcomes in Brazilian unemployment rate, we believe this risk has never been higher, despite the new regulation regarding the CEF remuneration that was adopted in the CVA.

Tenda is exclusively focused on the Bracket 2 of the CVA program, which relies on a combination of cash subsidies and lower interest rates mortgages, any change in the program or in Bracket 2 would impact the company's business model and its potential growth. We do not see relevant changes in the program in the next years, CVA was released ~2 months ago and it reinforced the government position regarding the actual housing deficit in Brazil, making the program even more affordable both for low-income families and for FGTS' cash flow. Given the program relevance for political popularity, we do not attribute any risk of this matter, specially after a right government reiterated the program (created by a left government back in 2009).

On top of that, a high risk related to Tenda's business is the suspension of FGTS' installment payments for housing programs, as we saw in September 2020. The Federal Government approved the suspension of installment related to housing program contracts finances by FGTS for up to 6 months of families with a monthly income of up to BRL 4k.

APPENDIX 19

Fully understanding FGTS

The 'Fundo de Garantia do Tempo de Serviço' (FGTS) or Guarantee Fund for Time of Service was created in 1966 to protect employees and to offset the end of the employment stability regulation. At the time, it was an optional contribution. Since 1988, employees under CLT (Brazil's Labor Law) were obligated to contribute with 8% of its gross salary to the fund.

This contribution is the only funding FGTS has, with employees been grated the right to withdraw their capital in specific situations. On top of that, FGTS' regulation also penalizes companies promoting layoffs, charging a 10% fee on employees' deposits plus a 40% fee also based on an employee's FGTS balance. The workers' balance remuneration are determined by law at TR + 3% p.a., with a potential additional payout of part of the fund's annual profits. Such cost of funding when compared with loans returns of ~6-7% + TR per year makes the fund considerably profitable, with an average ROE of ~13.3% since 2014 (Exhibit 77).

The combination of its mandatory contributions and withdrawals restrictions leads to a resilient funding source. Employees can only withdraw in the following situations: (i) Layoff, in case the employee is let go without fair reason; (ii) End-of-employement contract due to force majeure; (iii) Retirement; (iv) Serious diseases; (v) Housing acquisition, among others.

Housing acquisitions terms: Withdrawals intended for housing acquisition do not have a limit, with the only criteria being the cheaper between the market value of the asset or the valuation of the CEF auditor. Around 80% of FGTS' budget is to finance popular housing programs (mostly through CVA), in addition to infrastructure and sanitation projects.

Main risks

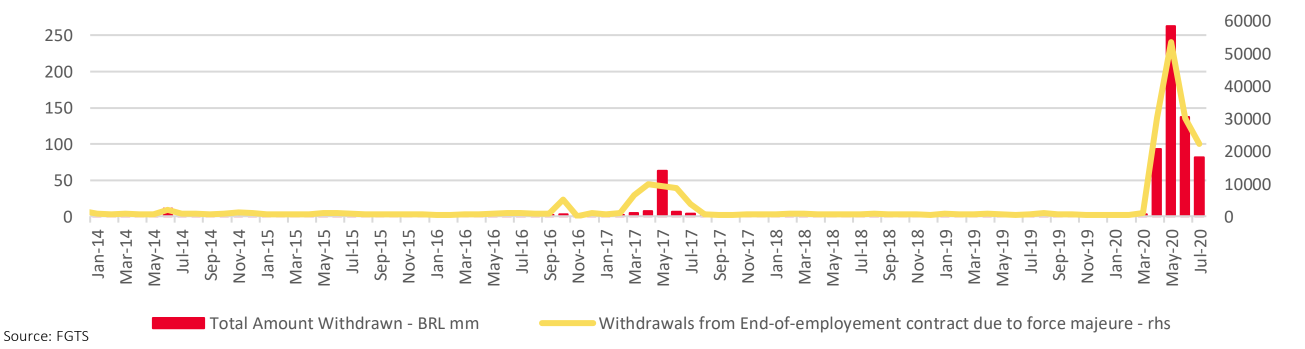
Extraordinary Withdrawals: Over the past few years the government allowed contributors to make extraordinary withdrawals. In 2017, withdrawals of balances from inactive accounts amounted BRL 44 bn. In 2019, all workers could withdraw up to BRL 500.0, totaling BRL 28 bn. In 2020, contributors could withdraw an addition up to BRL 1,045.0, which shall amount BRL 36 bn. We do not believe such disbursements will compromise the fund's short-term liquidity, but they put additional risk on the fund's capacity of fund housing programs in the long run, limiting its growth potential.

Government Risks: FGTS' is a program ruled by the government, who is able to make changes in its policies, remuneration and funding. In August 2020, local newspapers affirmed that the government was studying the possibility of reducing the employees' monthly mandatory contribution to FGTS from 8% to 6% of its gross salaries, in order to reduce National Congress resistance to the approval of a new transaction tax. Such measure, if approved, shall cause immense pressure on the fund's capacity to fund housing programs, limiting its growth potential and pressure its liquidity in the short-term.

Macroeconomic Uncertainty: With nearly 100% of its inflows coming from employees' mandatory contributions, the fund is heavily exposed to Brazil's macroeconomic trajectory and growth. The Covid-19 outbreak brought a very challenging scenario to Brazil's current economy and future growth (given the current fiscal risk the spends with the pandemic put us to). We did not see major changes in Brazil's unemployment rate so far, but the market expects a ~170 bps rose by the end of the year (jumping from the current ~13.8% to ~15.5%). Such movement represents a major risk for FGTS' balance both in the short and long-term, once it will reduce inflows (less employees contributing) and raise outflows (jobless withdrawing part of their balance).

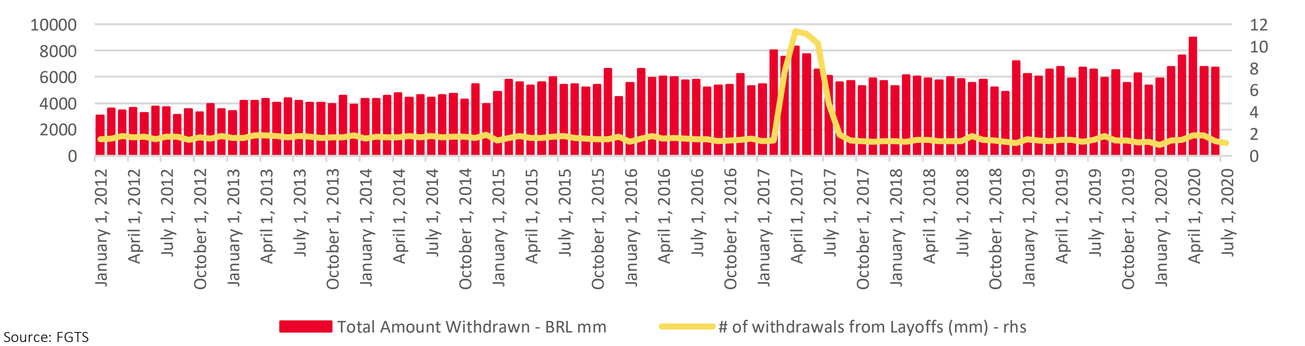
However, with we take a deep look into FGTS' outflow breakdown, its possible to see that the fund's balance already suffered the effects of a possible steep the unemployment rate, with a jump in outflows from the lines that may be affected by this effect (Layoffs and End-of-employment contract due to force majeure), as shown in Exhibits 79 and 80. With this in mind, we do not see a major effect in FGTS' outflow due to a raise in the unemployment rate, giving that part of this withdrawals were already made. In our view, the government pandemic assistance to the low-income population delayed the effect of the current unemployment rate in the official unemployment rate (the official rate is measured by people who are looking for a job).

Exhibit 79: number of withdrawals from End-of-employment due to Force Majeure and Total Amount Withdrawn



Source: FGTS

Exhibit 80: #Withdrawals From Layoffs and Total Amount Withdrawn



Source: FGTS

Exhibit 81: Net Sales during the pandemic (BRL mm)

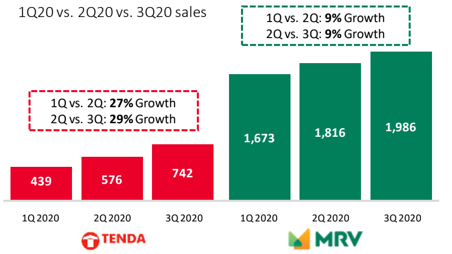
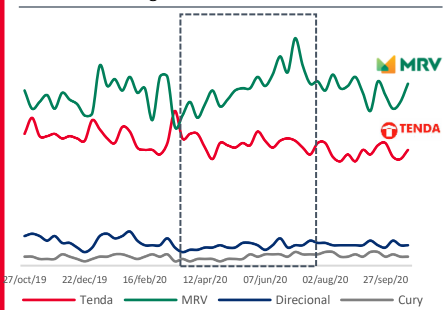


Exhibit 82: Digital transformation initiatives

Company	Virtual Tour	3D plan	Virtual Signature	App
TENDA	✓	✓	✓	✓
CURY	✗	✗	✓	✗
PLANO&PLANO	✓	✗	✓	✓
MRV	✓	✓	✓	✓
vivaz	✓	✗	✓	✓
magik	✓	✗	✓	✓
vibra	✓	✗	✓	✓

Source: Companies websites; Team 45

Exhibit 83: Google Search LTM



Source: Google Trend

APPENDIX 20

Covid-19 and the ignition on digital transformation

The covid-19 outbreak had a significant impacts for low-income homebuilders. Although the pandemic significantly impacted the income of a significant portion of the population, some sectors, like homebuilding, obtained good operational results, breaking sales records quarter after quarter. However, the social distancing policies ignited yet another run: the digital transformation.

2Q20: the best quarter for the majority of the sector

The Covid-19 pandemic positively impacted operational results of the main low-income homebuilders in Brazil, especially Tenda. The company had a strong growth in net sales in the period, reaching the best quarter in its the history and a QoQ growth of 27% in 2Q and 29% in 3Q (see Exhibit 81). Such results in the given scenario can be explained by promotions grated by Caixa in housing financing (including units bought via “Casa Verde e Amarela” program), like the 6-month extension of the grace period. Homebuilders also lowered its prices, granting discounts (usually the discounts are granted in the amount not subsidized by Caixa). We believe that the rise in home-office conditions also played an important role, with the population now spending much more time at home than they usually did.

UX and the Digital Transformation

In addition to the aforementioned reasons, changes in the purchase process also had an impact in the sales increase, with customers now having more tools and information in the websites, like 3D plants and virtual tours, consequently improving the consumers’ experience. Part of the purchase process was added to the websites as well, allowing the start of the financing approving process through the internet, avoiding possible embarrassments related to the approval.

It is important to point out that the digital transformation process of low-income homebuilders in Brazil did not start during the pandemic, as MRV and Tenda already had digital transformation initiatives. Other conveniences, such as the companies’ apps and the possibility of using electronic signatures to finalize contracts, simplifies the process of buying a property, reducing the time spent and improving the consumer's experience. We believe that this trend is here to stay and, in the short-time, will benefit companies that have already implemented such initiatives (see Exhibit 82). In this scenario, MRV stands out as it has a strong initiative regarding the digital transformation. The proof of the benefits of these initiatives for companies better positioned in these aspects is shown in Exhibit 83. During the pandemic, MRV's organic Google searches have grown significantly, a trend not seen in Tenda's searches, although Tenda’s searches are much higher than Direcional’s and Cury’s. The company already expressed its intention to improve their digital experience and consequent relevancy online, a strategy that, in our view, may positively impact the company's results in long-term.

APPENDIX 21

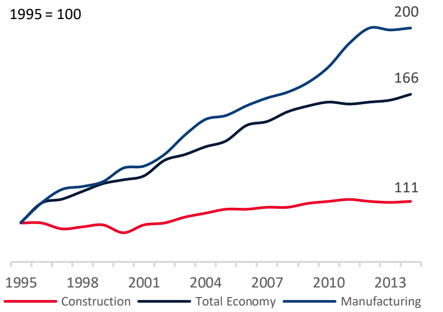
ESG: environmental and social impacts of homebuilders

We collected data from the social and environmental impact of the homebuilding sector, detailed below, to asses which could be Tenda’s current impact in these terms. We concluded that the sector has an overall positive social impact, despite of large safety problems, and strong environmental impacts. Considering we don’t have enough data to evaluate the company’s actions towards these impacts, we weight Tenda as an underperformance in terms of ESG.

Exhibit 84: Homebuilders Social and Environmental impact Summary

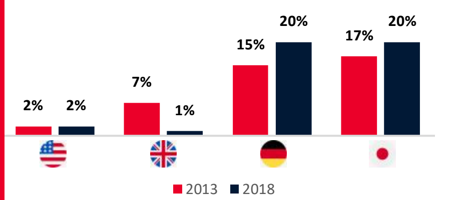
Category	Impact	Source
	SOCIAL	
Workers safety	Construction sector has the second most work-related accidents in Brazil (over 5.5% of all work accidents in Brazil in 2019) and is the second in work-related casualties (with 11.76 casualties for each 100 registered jobs, double the average rate).	Proteste Institute and National Sanitation Information System (SNIS)
Quality of life	Brazilians spends daily on average 1h20 in traffic. This time is increased for the low-income population that lives in peripherical areas. 16% of Brazilians do not have access to treated potable water and 47% do not have access to sewage network.	
	ENVIRONMENTAL	
Carbon emission and climate change	40% of worldwide greenhouse gas emissions come from construction and operations of buildings	Greengage
Large amount of waste	U.S. construction industry accounts for 160 mn tons (25%) of non-industrial waste generation a year. Only 20% of construction waste is recycled or reused in Brazil	Environmental Protection Agency (EPA) and Brazilian Association for Construction Waste Recycling (Abrecon)
Extensive use of water and energy	Water consumption to build one house of only 36m² in the standards of “Minha Casa, Minha Vida” is up to 158m³ (or 158k liters). The global buildings sector consumes around 36% of the world’s energy	Abrecon

Exhibit 85: Real gross value added per worker (USD)



Source: McKinsey

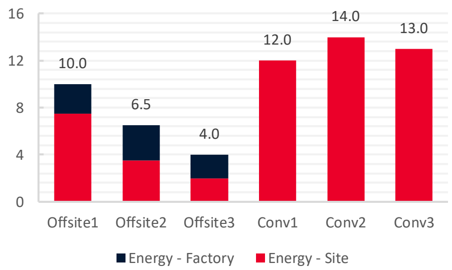
Exhibit 86: New single-family homes built offsite (%)



Source: BCG

Exhibit 87: CO2 emissions due to use of energy

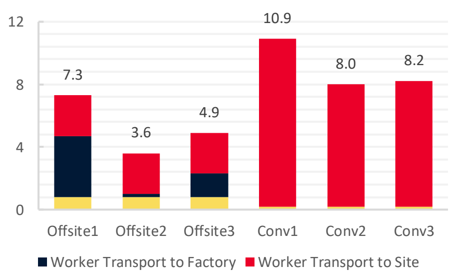
In metric tons



Source: Virginia University

Exhibit 88: CO2 emissions due to transportation

In metric tons



Source: Virginia University

Exhibit 89: Triple bottom line benefits of offsite

Category	Improvement over Conventional Construction	Financial Benefit
SOCIAL		
Health & Safety	Up to 80%	N/A
Working Conditions	Significant	N/A
ENVIRONMENTAL		
Reduced Traffic	Up to 60%	Small
Reduced Energy Used	Up to 80%	Small
Reduced Waste	Up to 90%	Significant
Reduced Energy-in-Use	Up to 25%	Small
ECONOMIC		
Faster Construction	Up to 60%	Large
Improved cash-flow	Significant	Large
Reduced Defects	Up to 80%	Significant

Source: Buildoffsite

APPENDIX 22

More details on offsite

Offsite is a method of construction where the planning, designing, and fabrication of construction components are done off the construction site. The concept aims to centralize the construction process in a factory and use the construction site only for assembly the parts. Despite being adopted since the beginning of the 20th century, offsite use is still limited in major markets. The offsite method has some major advantages over traditional construction, such as:

Higher quality and safety: As components are fabricated in controlled environments, there is a better quality control process to ensure a high standard procedure and lower defect rates. Moreover, standardization and automation shall lower the defect rate. The move of most of the construction process to controlled environments reduces work-accidents.

Agile construction: Factories can operate all days of the week, in three shifts. Also, as just the assembly is made at the construction site, the whole process is less exposed to the climate conditions, avoiding delays in the construction.

Cost savings: The industrial-scale of the operation should provide better terms with suppliers, enabling an even larger economy of scale. The application of manufacturing engineering concepts in the factory may also maximize workers' efficiency. Moreover, conventional construction wastes around 10% of all bought materials, which accounts for 4% of the costs. The manufacturing process can reduce this waste to around 2%, through better design and material recycling. A study conducted by the University of Hong Kong concluded that the waste produced by concrete formwork can be reduced by 60% with the offsite construction. Offsite has a clear advantage when it comes to staff allocation since the number of staff needed on the construction can be reduced in up to 55%, in comparison with traditional construction.

Reduced CO2 emissions: Offsite concentrates material transportation into larger, packed trucks, that cause fewer traffic jams and emits less CO2 than a series of smaller vehicles delivering small loads. Studies conducted by Virginia University in three identical offsite and onsite buildings show that, in terms of pollution associated with transport, the offsite construction presents a reduction of around 20% in CO2 emissions. The same study also estimated that offsite uses ~30% of the energy needed in traditional construction methods, reducing CO2 emissions as well.

Tenda's motivations

Tenda's interest in offsite relates to its expansion, as the current method of construction needs at least 1k units per year to operate at satisfying profit levels, with potential total market of 31k units per year (of which we expect the company to reach in 2030). Therefore, offsite construction will enable the company to expand to small and medium cities, doubling its potential market to 60k units per year.

In Brazil, there are offsite methods already approved by Caixa for use in CVA projects. The most prominent ones are precast concrete panels or frames; steel frames and wood-frames, which are wood beams or panels that are fabricated offsite and assembled at the construction site. The wood-frame is the most promising one, not just economically but also environmentally, since wood captures carbon from the environment in its growth process, reducing the company's carbon footprint. We see wood-frame as a viable and sustainable option for Tenda, although there are some uncertainties regarding supply and the recent increase in prices (esp. in USA).

We don't see major risks if the offsite initiative doesn't work because Tenda is not leveraging itself to make the investment. The company has reported in 1H20 BRL 12.3mn in expenses related to the offsite project, figure with little relevance in the company's current cash position. We don't discard, however, a balance sheet effect from a possible acquisition of a transportation company, if the projects continues.

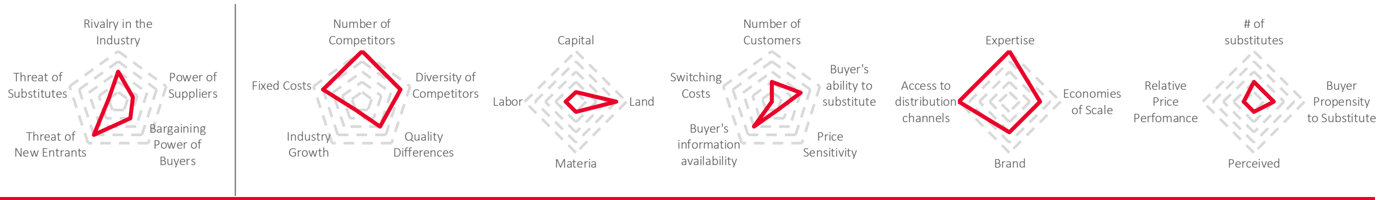
As much as we see offsite construction as positive for the company's growth, we recognize risks and challenges that Tenda will face in the process, such as **(i) logistics:** given Brazil's large territory, it will be necessary eventually to transport the walls through long distances, an operation that the company doesn't have the expertise (and the reason why we believe in an acquisition); and **(ii) regulatory framework:** each municipality has its specific regulations regarding the approval of construction projects, that will cost time and money to be approved. As an example, we listed the stages of a construction approval in the city of São Paulo (See Exhibit 90), in which we found that 52 documents were needed in the process. This amount of bureaucratic process in a large amount of municipalities may hurt the company in terms of delays in the approvals due to lack of relationship with local governments and extra bureaucratic costs to license constructions.

Exhibit 90: Stages to get a construction project aproved in the city of São Paulo

Stages	1st	2nd	3rd	4th	5th
Stage Description	Land Subdivision	Presentation and analysis of the project by local governments	Obtained certificate of approval by techinical institutions	Environment approval by environmental institutions	Utilities companies declaration
Needs approval by local governments?	✓	✓	✓	✓	✓

Number of documents and approvals required in the process: ***52***

APPENDIX 23
Porter's five forces analysis



Force	Criteria	Rationale
Rivalry in the industry	Number of Competitors	There are over 52.000 construction companies in Brazil.
	Diversity of Competitors	In addition to major homebuilders, the market encompasses local construction companies that operate with small scale.
	Quality Differences	Houses usually represent the largest purchase of the buyer's life, which makes them concerned with various aspects of the product, including quality (specially in the form of localization).
	Industry Growth	Given that market demand should grow continuously due to a high habitational deficit, the participants are battling over a piece of a growing pie.
	Fixed Costs	Low, since small local companies can work entirely on demand.
Power of Suppliers	Capital	Caixa is the source of capital for almost every CVA project, and has limited power since they operate over government approved guidelines.
	Land	Land has unique characteristics that may give power to its owners. Besides, there is a natural limitation of available land in desired spots.
	Materials	There is a wide range of providers of construction materials. In the low income segment, there is no major differentiation aside from price.
	Labor	Given the 14.4% unemployment rate in Brazil, a shortage of labor is no feasible, specially considering that major homebuilders provide in house training for its workers.
Bargaining Power of buyers	Number of Customers	Considering the habitational deficit in Brazil, the number of potential customers is high and is improving each year.
	Buyer's ability to substitute	The substitutes of new homes are: live in a rented home, live with the parents, buy a existing home or improve the current home. CVA loans makes the purchase of a newly developed home an attractive choice.
	Price Sensitivity	Price is the major aspect in the low income segment. Affordability is, then, a main driver of demand.
	Buyer's information availability	Buyers can easily access new developments at the homebuilders websites. However, to have information about prices, they must visit the physical sales stands or make a full register on the websites.
	Switching costs	Once the sale is made, buyers do not have any ability to switch between suppliers.
Threat of New Entrants	Expertise	House Development is a low complexity activity, which explains the high number of small and local homebuilders in the country.
	Economies of Scale	Significant in metropolitan regions, where the amount and concentration of developments allows the negotiation of special terms with suppliers.
	Brand Identity	Large advertised, solid brands provide more confidence in the purchases that represents major commitments to the buyer.
	Access to distribution channels	Labor subcontracting and materials procurement are local activities available even for a natural person.
Threat of substitutes	# of substitutes	Despite the option of rent a home or buy a existing one, the Brazilian habitation deficit and growth population are high enough to make the number of substitutes insufficient.
	Buyer propensity to substitute	The substitutes of new homes are: live in a rented home, live with the parents, buy a existing home or improve the current home. CVA loans makes the purchase of a newly developed home an attractive choice.
	Perceived level of differentiation	The ownership of a new developed home is much more attractive to buyers than any substitute.
	Relative Price Performance	CVA allows buyers to pay for the loan amount very similar to what would be paid to rent a home. Given the preferred choice of having its own home, it's very unlikely that a substitute option can outperform it in a relative price analysis.

APPENDIX 24
SWOT analysis

S
- High operational efficiency
- Well positioned in CVA program
- Higher speed of sales of the market
- Outstanding management

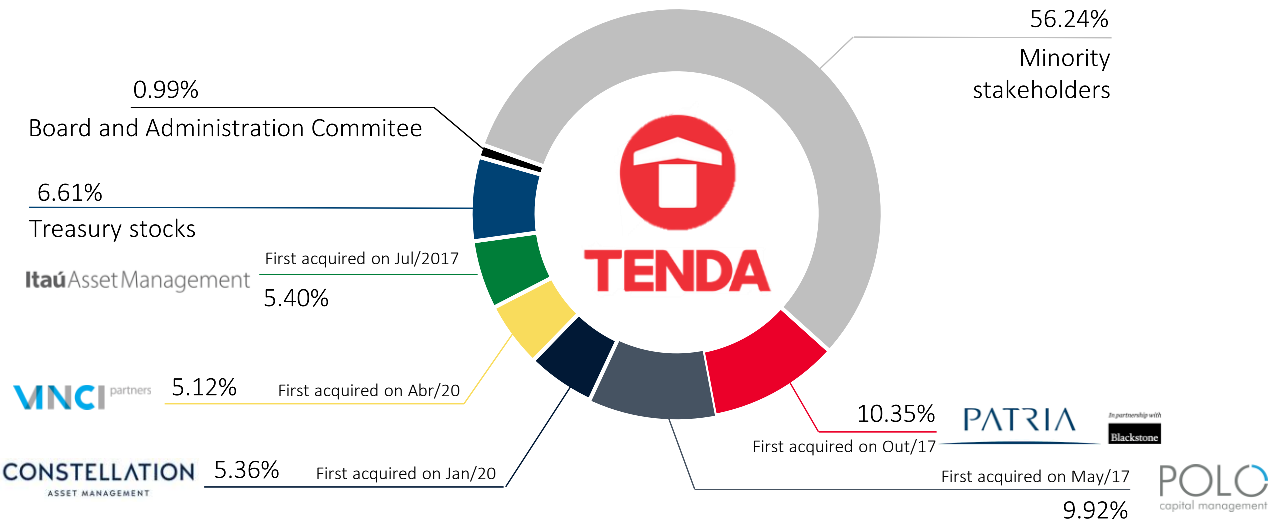
W
- Absence of a Sustainability Report (ESG)
- Limited adressable market in the current operations (only 13 metropolitan área)

T
- Reduction of FGTS's financing capacity
- Fully exposure to CVA program
- Regulatory framework changes
- High unemployment rate

O
- Offsite construction method
- Entry in new metropolitan areas
- Comparables focusing on mid-high income
- Consumer experience

APPENDIX 25

Shareholder's structure



APPENDIX 26

Permanent Committees

Committee	Members	Main atributions
Investments	6	Analysis and recommendations of land acquisition and new developments
Ethics	6	Actions regarding ethical violation of the Company's policies, solving conflicts and making adjustments
Auditing	3	Oversees auditing processes
People	3	Definition of remuneration policies, as well as identification, attraction and selection of directors and board members.

APPENDIX 27

Executive Board

Role	Name	Represents
Chairman	Cláudio José de Andrade	Polo Capital
Member	Eduardo Padal	Polo Capital
Member	Flávio Menezes	Pátria Investiments
Member	José Urbano	Independent
Member	Mario Melo	Independent
Member	Maurício Luchetti	Independent
Member	Rodolpho Amboss	Independent

APPENDIX 28

Executive Committee

Role	*Name*	*Last nomination*	*Areas*	*Education*	*Background*
CEO	Rodrigo Osmo	2017	Head of Executive Committee	Chemical Engineering – University of São Paulo MBA - Harvard Business School	CFO - Gafisa S.A. Director - Alphaville Urbanism S.A. Financial Analyst - GP Investments Consultant - Bain&Co
CFO/Head of RI	Renan Sanches	2018	Finances Investor Relations	Economics - Mackenzie University MBA – FGV	Manager - Gafisa S.A.
Operational Director	Fabricio Arrivabene	2015	Commercial	Production Engineering – Federal University of São Carlos MBA - FEA USP	Regional Director (RJ) - Tenda Sales and Marketing Director- Tenda Sales Director - Gafisa S.A Commercial Manager – AmBev
Operational Director	Luiz Martini	2019	Marketing Business Intelligence Information Technology	Mechanical Engineering- University of São Paulo Aeronautical Engineering (Masters) – ITA	Customer Experience Director - Amazon Retail Director- Omelete Group Marketing Director - Wine.com.br Marketing Global Manager - Natura S.A.
Operational Director	Sidney Ostrowski	2015	Operations	Civil Engineering- Mackenzie University MBA (Real Estate Management) – FAAP	Operations Director- Gafisa S.A
Operational Director	Alex Hamada	2015	Innovation (offsite Construction)	Business Administration - FGV MBA - FGV	Products Director - Walmart Brazil Sales Director – GPA
Operational Director	Daniela Britto	2015	Incorporation Business (SP)	Civil Engineering – Mackenzie University MBA (Finance) - IBMEC	Business Director - Fit Residential Business Manager - Gafisa S.A.
Operational Director	Alexandre Grzegorzewski	2015	Incorporation Business (Brazil)	Civil Engineering – University of São Paulo Business Administration - University of California, Berkeley	Regional Director (Rio de Janeiro - Gafisa S.A
Operational Director	Rodrigo Hissa	2015	Regionals Bahia, Pernambuco and Ceará	Civil Engineering- University of Fortaleza MBA - FGV	Manager - Gafisa S.A.
Operational Director	Ricardo Prada	2015	Regionals Rio Grande do Sul, Paraná and Goiás	Production Engineering – Federal University of Rio de Janeiro MBA - IBMEC	Incorporation Manager- Gafisa S.A
Operational Director	Vinicius Faraj	2018	Operations (Human Resources)	Civil Engineering - USP MBA - FGV	Manager - Gafisa S.A.

Source: Company IR website

APPENDIX 29

Governance Scorecard

To quantify the company's commitment to the best practices of Corporate Governance, we elaborated a scorecard based on the guidelines set on the CFA Institute Corporate Governance of Listed Companies Manual for Investors.

Our evaluation states that the company has a deep commitment to the best practices of Corporate Governance, especially when it comes to the maintenance of Shareholder's Rights. However, we highlight the Board of Directors as a point of attention, due to its lack of diversity and independence.

	Score	Max	Rating	Weight	Wtd. Avg.
Board of Directors	27	35	77%	20%	15.4%
Fiscal Council	12	15	80%	10%	8.0%
Executive Management	27	30	90%	30%	27.0%
Committees	17	20	85%	10%	8.5%
Shareowner Rights	29	30	97%	30%	29.0%
TOTAL	**112**	**130**			**87.9%**

Criteria	Description	Rating	Company Policies
Board of Directors			
Independence	Determine whether the majority of a company's board is composed of independent board members	3	4 out of 7 members are totally independent, without stakes or relations with directors, other companies or major stakeholders. However, the Chairman represents Polo Capital, a major shareholder of the company
Qualifications	Determine whether board members have the necessary qualifications to help the company face its challenges	5	All board members are experienced professionals in the real estate or financial sector
Diversity	Diversity among board members in terms of gender, educational background, and professional qualifications also may promote constructive debate in the boardroom	2	There's no gender diversity, since all board members are male. However, there's diversity in the Board's background, with formation in Business, Engineering, System Analysis, in different universities
Board Member Terms	Determine whether board members are elected annually or whether the company has adopted an election process that staggers board member elections	4	The board members have biannual mandates. However, they can be reelected or deposed at any moment by the shareholders in an Extraordinary General Meeting
Related Party Transaction	Investigate whether the company engages in outside business relationships with management, board members, or individuals associated with management or board members for goods and services on behalf of the company	5	The company has never been part of financial transactions with board members, executives or its relatives
Role Delegation	The separation of the chair and CEO positions is best practice because it ensures that the board agenda is set by an independent voice uninfluenced by the CEO	5	The Company's CEO is Rodrigo Osmo, while its Chairman is Cláudio Andrade
Level of Communications	Evaluate the communications the board has with shareowners and how easy it is for shareowners to meet with the board	3	Most of the communication are made through the Investors Relations Director
Fiscal Council			
Independence	Determine whether the majority of the fiscal council is composed of independent board members	5	All three members of the fiscal council are independent ones, without any ties to major current stakeholders in the company
Qualifications	Determine whether the fiscal council have the necessary qualifications to help the company face its challenges	5	All fiscal council members are experienced professionals in the real estate or financial sector
Transparency	Evaluate if the company has disclosure the minutes of the fiscal council, along with the opinions and votes of the members of the fiscal council, whether dissenting or not, the voting justifications, and any other documents prepared by the members of the fiscal council	2	The company has published only the record of 1 reunion of the fiscal council
Executive Management			
Code of Ethics	Determine whether the company has adopted a code of ethics and whether the company's actions indicate a commitment to an appropriate ethical framework	5	The company has a stablished Code of Ethics that prevents and solves conflicts related to conflict of interests. The code is enhanced by the Ethics Committee, and there's no record of violation of it
Share-Repurchase	Does the company engage in share-repurchase programs? If so, are the goals of the program and its financing clearly stated?	5	The company is very transparent with its share-repurchased programs, financed with resources from its earnings reserve. Every share-repurchase plan must be approved by the shareowners in the General Meeting
Executive Compensation	Is the management compensation plan aligned with the company best interests?	5	The company has a clearly stablished compensation plan, in which at least half the total compensation is based on short or long-term variables, such as EBIT, ROE and Share Price. Also, part of the compensation in form of stock have a vesting period of 2 years, besides a 1-year lock-up period
Communication of Strategies	Evaluate if the management has adequately communicated its long-term strategic plans to shareholders	4	The company provides its long-term strategy and main goals in proper documents
Transparency	Quality of reporting around corporate governance and ESG issues as well as financial reporting to determine if the company offers timely and transparent information	3	The company provides the necessary financial information, in accordance with IFRS. However, its lack of stated ESG policies (especially environmental ones) can be a source of concern
Auditing Practices	Evaluate the quality of the audit performed on the company's financials to determine if the financial information provided is accurate and a true reflection of the company's health	5	The financial information of the company was, in the past 3 years, audited by Deloitte Touce Tohmatsu, a major auditing firm
Committees			
Executive Investments Committee	Determine whether the company has a committee that oversees management's activities regarding major investments related to the strategic plan of the company	4	The current composition is 6 members of the management that approves major capital expenditures and oversees new projects and their respective cash flows. The major issue with this composition is the exclusivity of management members in the committee, which can characterize conflicts of interest
Audit Comitee	Determine whether the board has established a committee of independent board members to oversee the audit of the company's financial reports	3	All three current members of the committee are representatives of major stakeholders in the company. None of the members receives extra remuneration for being part of the committee
Nominations and Compensation Comitee	Determine whether the company has a committee of independent board members responsible for setting board and management remuneration, compensation and nominations	5	All members of this committee are independent ones. The compensation policies of the company are well defined and long-term oriented. None of the members receives extra remuneration for being part of the committee
Executive Ethical Committee	Determine if the company assures that its code of ethics is properly followed	5	This committee is formed by 6 members, allocated in at least 5 different departments: (I) Financial, (II) Legal, (III) Human Resources, (IV) Operations and (V) Compliance
Shareowner Rights			
Ownership Structure and Voting Rights	Examine the company's ownership structure to determine whether it has different classes of common shares that separate the voting rights of those shares from their economic value	5	As a Company on B3's Novo Mercado segment, it only has ordinary shares, with equal vote rights. It means that the voting rights are connected to the cash flows rights
Proxy Voting	Determine whether the company allows shareowners to vote before scheduled meetings of shareowners regardless of whether they are able to attend the meetings in person	4	The company provides the possibility of remote or proxy voting to shareowners who cannot participate in the General Meeting. However, electronic voting has not been stablished yet
Voting for Major Corporate Changes	Determine whether shareowners have the right to approve changes to corporate structures and policies that may alter the relationship between shareowners and the company	4	Shareholders have the right to vote in major corporate changes, as the exit of the company from the Novo Mercado segment; shares repurchases programs, etc.
Shareowner-Sponsored Board Nominations	Determine whether and in what circumstances shareowners are permitted to recommend director nominees to the board or place their own nominees on the proxy ballot	5	The shareowners have the right to include one or more candidates to be a board member
Takeover Defenses	Evaluate the structure of an existing or proposed takeover defense and analyze how it could affect the value of shares in a normal market environment and in the event of a takeover bid	5	The company has 100% tag along mechanism that protects its shareholders against bids that would alienate at least 30% of the total shares
Management Compensation	Evaluate if shareholders have the right to determine management compensation	5	According to the Brazilian Law for Public Companies, it is shareholders duty to determine the executive's compensation pool in General Meeting, with the Board being responsible for its distribution

APPENDIX 30

Main international players

Company	Busines Description	Country	Total Revenue (BRL mm)	Gross Margin (%)	Units (2019)	ROE (%)	P/BV	P/E
LENNAR	Lennar Corporation operates as a homebuilder in the United States. The company's homebuilding operations include the construction and sale of single-family		124,057	22%	51.5K	14%	1.3x	9.8x
SEKISUI HOUSE	Sekisui House constructs, and contracts built-to-order detached houses in Japan and internationally		116,592	20%	51.7K	10%	0.9x	9.6x
D·R·HORTON America's Builder	D.R. Horton operates as a homebuilding company in the United States. The company constructs and sells single-family detached homes		103,836	22%	61.2K	19%	2.2x	12.1x
BARRATT DEVELOPMENTS PLC	Barratt Developments engages in the housebuilding and commercial development businesses in Great Britain		23,198	21%	17.9K	8%	1.0x	12.4x
taylor morrison	Taylor Morrison Home Corporation operates as a public homebuilder in the United States. The company builds single-family and multi-family attached homes		33,923	17%	9.9K	7%	0.8x	13.1x
ПИК группа	PIK Group develops constructs and sells residential real estate properties in Russia. The company engages in the construction of houses and neighborhoods		24,292	28%	40K	56%	2.9x	7.1x
MeritageHomes	Meritage Homes Corporation designs and builds single-family homes in the United States. It develops land, constructs and sells homes for first-time buyers		23,748	21%	2.8K	19%	1.5x	9.0x
Taylor Wimpey	Taylor Wimpey operates as a residential developer in the United Kingdom and Spain. The company builds various homes, such as one-bedroom apartments to six-bedroom detached houses		22,763	23%	13K	12%	0.9x	8.8x

APPENDIX 31

Comps table

Company's Name	Ticker	Mkt Cap (BRL mm)	Revenues LTM (BRL mm)	Gross Mg LTM	EBITDA Mg LTM	Net Mg LTM	ROE LTM	ROIC LTM	P/E LTM	P/BV LTM	P/E 2021E	P/BV 2021E
Low-income homebuilders												
Construtora Tenda S.A.	**TEND3**	**2.925,1**	**1.993,6**	**32%**	**14%**	**10%**	**14,9%**	**7,2%**	**15,8x**	**2,1x**	**11,2x**	**1,80x**
MRV Engenharia e Participações S.A.	MRVE3	8.655,9	6.153,0	29%	12%	9%	11,2%	4,8%	15,8x	1,6x	12,3x	1,45x
Direcional Engenharia S.A.	DIRR3	1.717,0	1.434,8	34%	15%	7%	8,4%	5,0%	17,5x	1,3x	9,4x	1,22x
Cury Construtora e Incorporadora S.A.	CURY3	3.196,0	1.036,7	35%	21%	12%	0,0%	0,0%	25,1x	11,7x	10,0x	0,0x
Mid/high-income homebuilders												
Cyrela Brazil Realty S.A. Empreendimentos e Participações	CYRE3	9.380,0	3.771,5	32%	12%	9%	8,6%	3,1%	26,9x	1,9x	14,9x	1,9x
EZTEC Empreendimentos e Participações S.A.	EZTC3	8.326,4	899,0	43%	23%	35%	9,7%	3,7%	25,7x	2,1x	14,9x	2,0x
Even Construtora e Incorporadora S.A.	EVEN3	2.227,1	1.618,9	26%	12%	7%	7,2%	3,8%	20,5x	1,3x	12,0x	1,2x
Trisul S.A.	TRIS3	2.065,9	804,8	36%	21%	19%	18,1%	7,8%	12,8x	1,9x	9,2x	1,5x
Gafisa S.A.	GFSA3	1.155,6	360,9	25%	1%	-4%	-1,9%	0,0%	NM	0,4x	0,0x	0,0x
Tecnisa S.A.	TCSA3	622,8	276,6	-13%	-57%	-76%	-29,1%	-8,5%	NM	0,7x	153,8x	0,7x
Helbor Empreendimentos S.A.	HBOR3	1.293,8	1.161,7	13%	-5%	-5%	-3,6%	-1,1%	NM	1,0x	11,9x	1,0x
Low Income												
Average		4.123	2.655	32,5%	15,7%	9,2%	8,6%	4,3%	18,6x	4,2x	10,7x	1,12x
Median		3.061	1.714	33,0%	14,6%	9,2%	9,8%	4,9%	16,7x	1,8x	10,6x	1,3x
Mid-high Income												
Average		3.582	1.270	23,2%	1,0%	-2,3%	1,3%	1,3%	21,5x	1,3x	31,0x	1,18x
Median		2.066	899	25,5%	12,0%	6,8%	7,2%	3,1%	23,1x	1,3x	12,0x	1,2x
Total												
Average		3.779	1.774	26,6%	6,3%	1,9%	4,0%	2,4%	20,0x	2,4x	23,6x	1,16x
Median		2.227	1.162	31,6%	12,5%	8,5%	8,4%	3,7%	19,0x	1,6x	11,9x	1,2x

APPENDIX 32

Macroeconomic assumptions

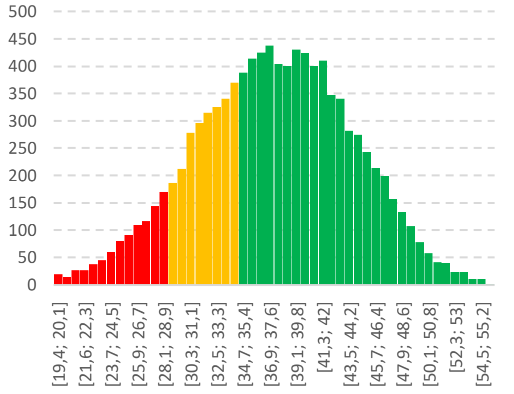
Macro	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Real GDP growth	1,45%	1,14%	-4,80%	3,00%	2,70%	2,50%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%
IPCA	4,25%	4,25%	2.6%	2.6%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%	3,00%
IGP-M	7,54%	7,30%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%	4,00%
INCC	4,03%	4,57%	6,19%	6,19%	6,19%	6,19%	6,19%	6,19%	6,19%	6,19%	6,19%	6,19%	6,19%
Base interest rate (Selic)	6,50%	6,50%	2,00%	3,00%	5,00%	6,00%	6,00%	6,00%	6,00%	6,00%	6,00%	6,00%	6,00%

APPENDIX 10

Monte Carlo Simulation

Variables	Assumption	Prob. Distribution	Distribution Properties		
			Average	Std Dev.	
Net Revenues 2020-30' CAGR	**7,42%**	**Normal**	7,4%	1,0%	-
			Min	**Most prob.**	**Max**
COGS % of Net Revenues	**69%**	**Triangular**	68,0%	68,5%	72,0%
			Min	**Most prob.**	**Max**
SG&A % of Net Revenues	**18%**	**Triangular**	16,0%	18,4%	22,0%
			Average	**Std Dev.**	
Net Working Capital % of net revenues	**57%**	**Normal**	57,0%	1,0%	-
			Average	**Std Dev.**	
Effective Tax Rate	**12%**	**Normal**	12,0%	1,0%	-
			Average	**Std Dev.**	
Discount Rate (Ke)	**14%**	**Normal**	*14,3%*	*1,0%*	-
			Average	**Std Dev.**	
perpetuity growth (g)	**4%**	**Normal**	*4,0%*	*1,0%*	-

Number of simulations = 10,000



Scenarios	Freq	% Total
Sell	767	8%
Hold	2.492	25%
Buy	6.715	67%
Total	**9.974**	**100%**

APPENDIX 28

Scenario Assumptions

Launches		2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Units Launched MCMV - brackets 1,5 & 2		**95.421**	**293.134**	**301.458**	**306.377**	**298.167**	**309.588**	**315.812**	**320.599**	**292.305**	**323.733**	**270.693**	**262.897**	**267.629**	**271.965**	**276.044**	**281.013**	**286.071**	**291.221**	**296.463**	**301.799**	**307.231**	**312.761**
yoy growth			*207,2%*	*2,8%*	*1,6%*	*-2,7%*	*3,8%*	*2,0%*	*1,5%*	*-8,8%*	*10,8%*	*-16,4%*	*-2,9%*	*1,8%*	*1,6%*	*1,5%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*	*1,8%*
Elasticity to GDP	0,6																						
Real GDP growth		-0,1%	7,5%	4,0%	1,9%	3,0%	0,5%	-3,5%	-3,5%	1,0%	1,5%	1,1%	-4,8%	3,0%	2,7%	2,5%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%
FGTS lesser funding impact over launches (units)	0%																						
Bull	0%																						
Base	0%																						
Bear	-30%																						
Tenda's launched units							**4.315**	**7.711**	**9579**	**11.768**	**13.636**	**17.894**	**19.737**	**21.430**	**23.137**	**24.589**	**25.874**	**27.198**	**28.562**	**29.669**	**30.806**	**31.668**	**32.551**
Growth %							*75,4%*	*78,7%*	*24,2%*	*22,9%*	*15,9%*	*31,2%*	*10,3%*	*8,6%*	*8,0%*	*6,3%*	*5,2%*	*5,1%*	*5,0%*	*3,9%*	*3,8%*	*2,8%*	*2,8%*
% Tenda share in MCMV				*1,3%*	*0,0%*	*0,8%*	*1,4%*	*2,4%*	*3,0%*	*4,0%*	*4,2%*	*6,6%*	*7,5%*	*8,0%*	*8,5%*	*8,9%*	*9,2%*	*9,5%*	*9,8%*	*10,0%*	*10,2%*	*10,3%*	*10,4%*
% Gains in market share					-1,3%	0,8%	0,6%	1,0%	0,5%	1,0%	0,2%	2,4%	0,9%	0,50%	0,50%	0,40%	0,30%	0,30%	0,30%	0,20%	0,20%	0,10%	0,10%
Bull														0,50%	0,50%	0,50%	0,40%	0,30%	0,30%	0,20%	0,20%	0,10%	0,10%
Base														0,50%	0,50%	0,40%	0,30%	0,30%	0,30%	0,20%	0,20%	0,10%	0,10%
Bear														0,25%	0,25%	0,25%	0,20%	0,20%	0,15%	0,15%	0,10%	0,10%	0,10%
Average ticket per unit (PSV)																							
PSV per unit (R$ '000)				**98,7**	**0,0**	**142,3**	**141,8**	**141,5**	**139,4**	**144,3**	**141,0**	**144,5**	**150,0**	**150,0**	**150,0**	**150,0**	**150,0**	**154,5**	**154,5**	**154,5**	**154,5**	**154,5**	**154,5**
Bull													150,0	150,0	150,0	150,0	150,0	154,5	154,5	154,5	154,5	154,5	154,5
Base													150,0	150,0	150,0	150,0	150,0	154,5	154,5	154,5	154,5	154,5	154,5
Bear													150,0	145,0	140,0	140,0	140,0	144,2	144,2	144,2	144,2	144,2	144,2
Offsite launches																							
Number of launched units (year)													0	0	0	98	207	326	457	593	739	887	1.042
% of total launches																0,4%	0,8%	1,2%	1,6%	2,0%	2,4%	2,8%	3,2%
Increase in % of total Launches (quarter)	0,10%																						
Bull	0,20%																						
Base	0,10%																						
Bear	0,05%																						

COGS		3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Construction Costs																						
% of net revenues – regular		-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%	-51,0%
Bull		-51,00%	-50,90%	-50,80%	-50,70%	-50,60%	-50,50%	-50,40%	-50,30%	-50,20%	-50,10%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%	-50,00%
Base	Avg. LTM	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%	-51,00%
Bear	2Q20	-51,47%	-51,72%	-51,97%	-52,22%	-52,47%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%	-52,72%
land Costs																						
% of net revenues – regular		-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%
Bull		-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%
Base		-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%	-11,0%
Bear	2Q20	-11,4%	-11,6%	-11,8%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%
Offsite																						
% of net revenues – offsite		-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-65%	-68%	-68%	-68%	-68%	-68%	-68%
% of regular costs		95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%	95,0%						
Margin gains post 2025	0,10%																					
Bull	0,15%																					
Base	0,10%																					
Bear	0,00%																					

Taxes		3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Effective tax rate (%)		-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%	-12%
Bull		-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%
Base		-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%	-12,0%
Bear		-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%	-15,0%

Operating Expenses		3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Selling Expenses																						
% of PSV (12m) - regular (50%)		-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%	-1,9%
Bull		-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%
Base	2Q20	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%	-1,85%
Bear		-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%	-2,00%
G&A Expenses																						
% of net revenues (12m) - regular (50%)		-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%	-1,6%
Bull		-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%
Base	Avg. LTM	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%
Bear		-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%	-1,60%