# TENDA





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# **Initiating with a BUY**





EXTENSIVE ADRESSABLE MARKET



HIGH OPERATIONAL EFFICIENCY
AND SPEED OF SALES



**SOLID RETURNS** 



EARNINGS MOMENTUM
NOT FAIRLY PRICED IN



BRL 29.76
November 4th

TARGET PRICE BRL 36.40

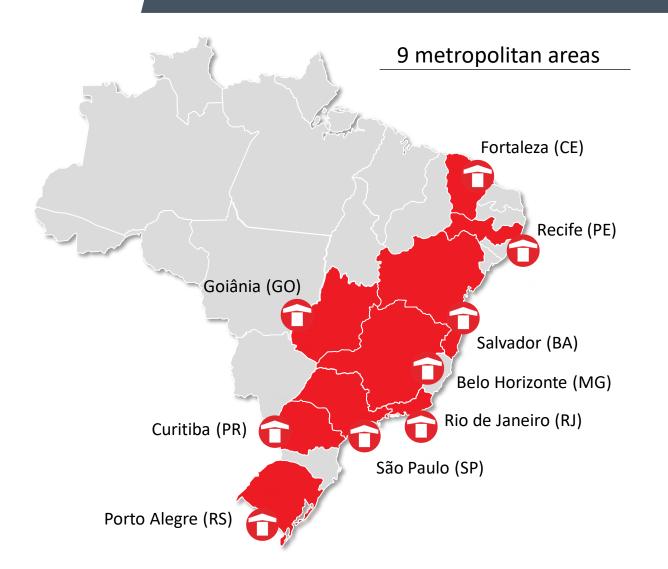
UPSIDE

22.3%

# Third largest homebuilder in Brazil



Source: company IR





**17,956** launched units

Operations exclusively focused in low-income segment



# With a turnaround towards efficiency



Source: company IR, McKinsey



New strategic plan in 2013

### **EFFECTIVE COST MANAGEMENT**

Structured in 4 pillars:



Disciplined operation



Credit guarantee



Own stores sales



Construction method

### But what is so special about it?

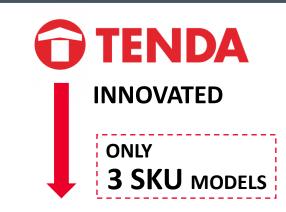
**HIGH INEFFICIENCY** IN THE SECTOR



Traditional construction by bricks

Sector's annual productivity growth has only increased

over the past **20 YEARS** 





#### **STANDARDIZATION**

*Aluminum form work system* 

- **PRODUCTIVITY**
- **OPERATIONAL EFFICIENCY**

**COMMODITY GAME OVERVIEW** 

WE HAVE A WINNER

**EXECUTION TO PERFECTION** 

**VALUATION** 

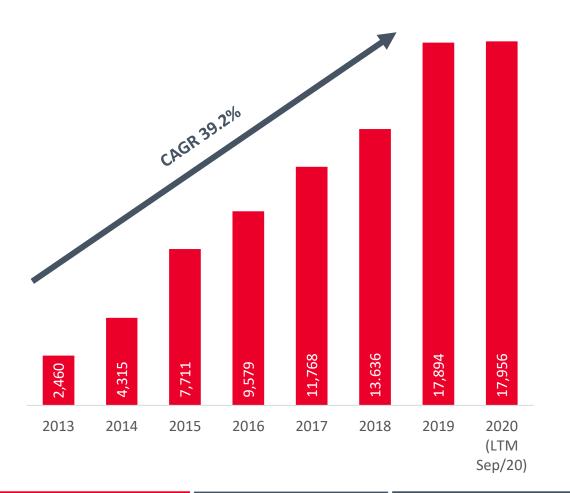
### That delivered results



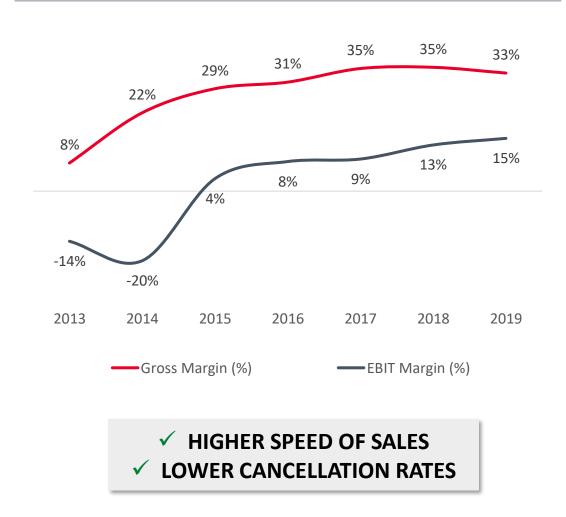
Source: company IR

#### Historical launch of units

Units per year



#### Historical gross and operational margins



OVERVIEW COMMODITY GAME

WE HAVE A WINNER

**EXECUTION TO PERFECTION** 

VALUATION

# A top tier Corporate Governance



Source: company IR

#### Outstanding and experienced management



### Rodrigo Osmo CEO Successfully implemented the new business plan in 2013

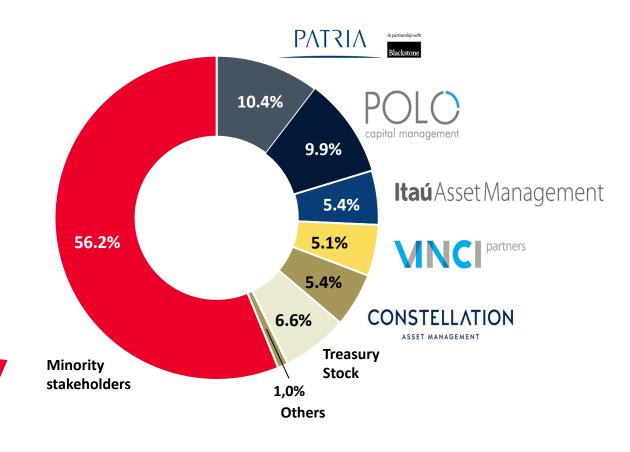
#### **Board of Directors**

**9 out of 11** management members were part of the team that put the new plan into practice



# HIGHLY RESPECTED AND LONG-TERM ORIENTED SHAREHOLDERS

#### Shareholder's structure

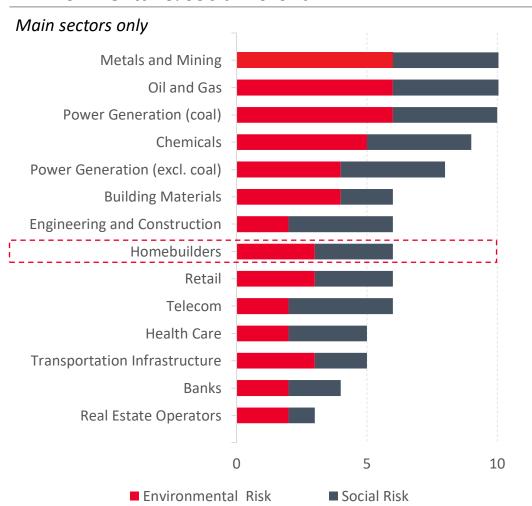


### **Environmental: challenging but with opportunities**



Source: S&P Capital, Company IR, Team 45

#### Environmental & social risks rank



#### COMPANY DOESN'T RELEASE A SUSTAINABILITY REPORT

#### **ENVIRONMENTAL IMPACTS**



- Climate change
- Large amount of waste
- Extensive use of water and energy
- Air, water and sound pollution

Business model fits well with an environmentally conscious construction

Despite of some risks



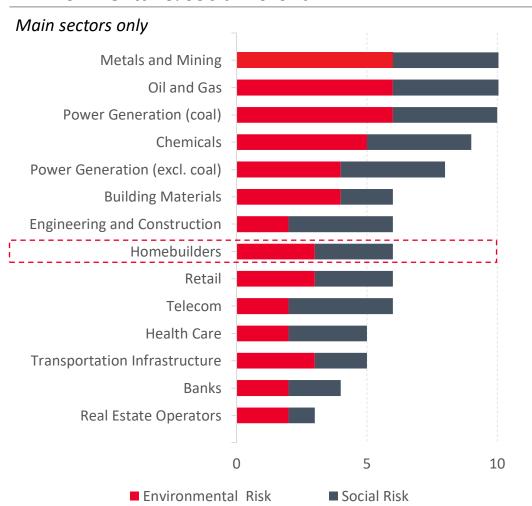
**OVERVIEW COMMODITY GAME** 

### Social: positive impact by definition



Source: S&P Capital, Company IR, Team 45

#### Environmental & social risks rank



#### **COMPANY DOESN'T RELEASE A SUSTAINABILITY REPORT**

#### **SOCIAL IMPACTS**



- ✓ Affordable homes for low-income population in country with high levels of habitational deficit
- / Improvement of quality of life
- Most of employees (including construction workers) are hired directly by the company

Safety of construction workers

No data available from Tenda



OVERVIEW COMMODITY GAME WE HAVE A WINNER EXECUTION TO PERFECTION

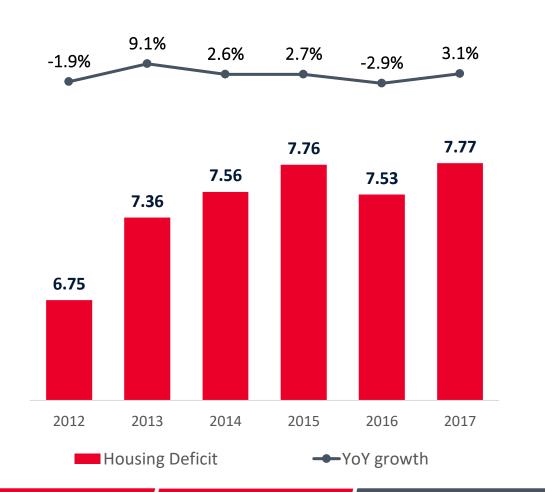
# Sustainable growth perspective



Source: FGV, Abrainc, Fipe

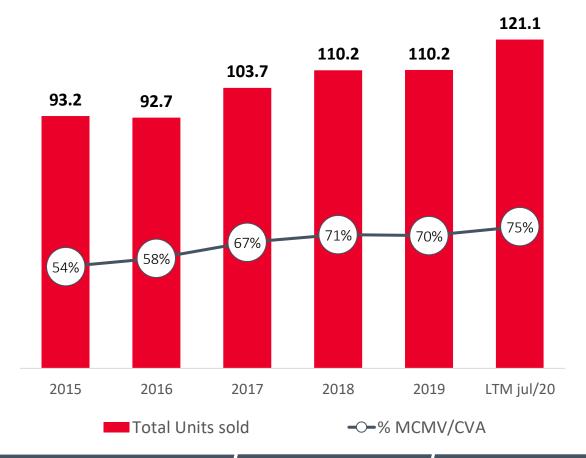


*In millions of units* 



#### Brazilian housing sales

*In thousands of units – 20 largest players* 



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VALUATION

# Understanding "Casa Verde e Amarela" program



Source: Companies' IR, Regional Development Ministry, FGV, Abrainc



Social housing program

substituted Minha Casa, Minha Vida (MCMV)

30 YEARS

Financing of low-income houses

Low interest rates
Fixed and independent of Selic





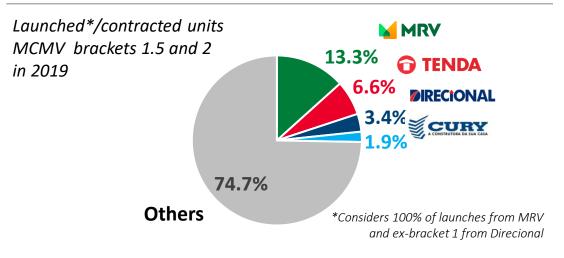
**OVERVIEW** 

Program divided into different brackets according to the families' monthly income

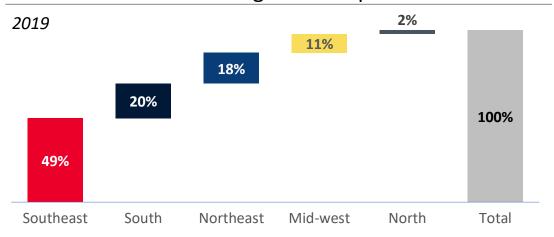
Maximum at BRL 7K

Up to 80% of the unit price is subsidized by the government

#### CVA market share



#### MCMV launched units regional footprint



COMMODITY GAME

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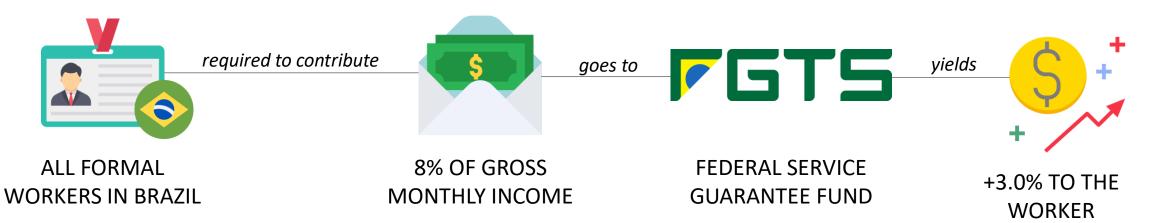
EXECUTION TO PERFECTION VALUE

VALUATION

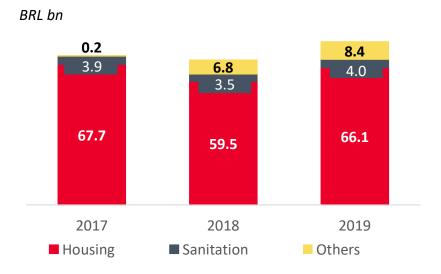
# But where does the money come from?



Source: FGTS, Team 45



#### FGTS's investment breakdown evolution



**85% - 88%** invested in housing Mainly via Casa Verde e Amarela program

**SOLID BASE OF RESOURCES** 



**OVERVIEW** 

**COMMODITY GAME** 

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**EXECUTION TO PERFECTION** 

**VALUATION** 

# But where does the money come from?



Source: FGTS, Team 45



#### **RESTRICTED WITHDRAWLS**

- Individual is dismissed from his job
- Extraordinary withdraws authorized by the government
- First house purchase

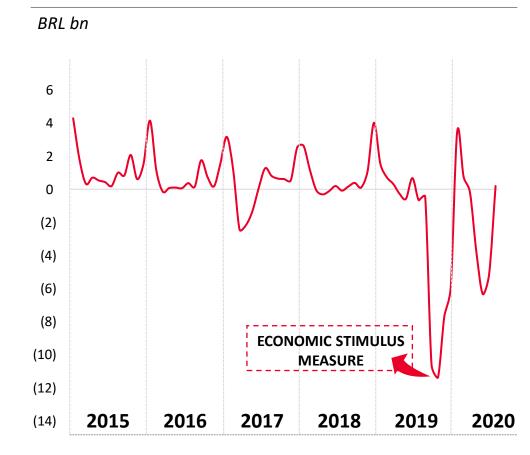




**NEGATIVE EFFECT** 

- Rise in unemployment
- Extraordinary withdraws to support economic conditions during the pandemic

#### FGTS' inflows and outflows



—Net Inflows/Ouflows



**OVERVIEW COMMODITY GAME** 

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**DOUBLE** 

**EXECUTION TO PERFECTION** 

**VALUATION** 

# Sustained growth amidst coronavirus pandemic



Source: Abrainc, Fipe



#### **COVID-19 TRENDS**

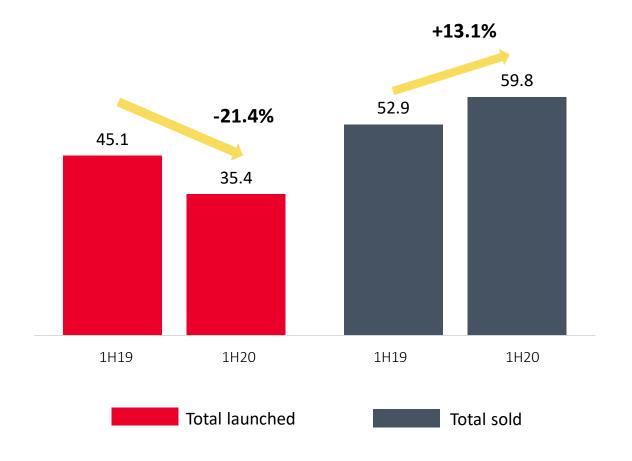
Sales records throughout the sector

- ✓ Acceptance of low-income consumers to online sales channels
- ✓ Credit support initiatives from Caixa
- Discount in prices granted during the period

Resiliency from the sector even in times of economic uncertainty

#### Launches x sales performance

Thousands of units – 20 largest players



OVERVIEW COMMODITY GAME

# But in which segment does the company operate?



Source: Companies' IR, Capital iQ

Low-income	home	builders:	main	play	vers
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		<u> </u>	
Values from 2019	Net revenues (BRL mn)	Gross margin	Units Launched
<b>TENDA</b>	1,950	33.2%	17,894
MRV	6,055	30.4%	39,660
<b>DIRECTONAL</b>	1,458	33.7%	11,212
<b>EURY</b>	1,019	34.9%	6,084
PLANO&PLANO	719	35.5%	7,035

# PSV of launches by company Values from 2019, in BRL mn











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**EXECUTION TO PERFECTION** 

**VALUATION** 

# But we have to understand the consumer's decicion process

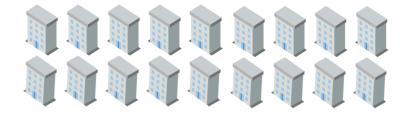




PRICE CAP IN CASA VERDE E AMARELA PROGRAM

**BRL 240K** 





STANDARD PRODUCT AMONG PLAYERS

in terms of construction and of payment conditions

#### WHAT IS THE TRIGGER FOR A PURCHASE?



**BEST LOCATION** 

OR





# Study case: geographic location



Source: Companies website, City Hall of São Paulo, São Paulo State Government, Team 45



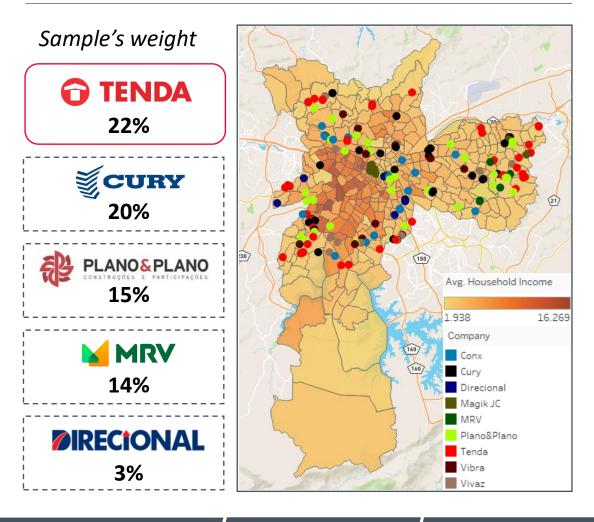
### **BEST LOCATION**

Study case in São Paulo city

Sample description

- ✓ 248 LAUNCHES FROM 9 DIFFERENT HOMEBUILDERS
- ✓ **4,047** PUBLIC SCHOOLS
- **✓ 157** SUBWAY STATIONS
- **√ 477** HOSPITALS

#### Launches by company vs. average household income



OVERVIEW COMMODITY GAME

# Study case: geographic location



Source: Companies website, City Hall of São Paulo, São Paulo State Government, Team 45



### **BEST LOCATION**

Study case in São Paulo city

Study results

Location limited by price cap

No significant differentiation among large companies

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°

#### Launches by company vs. average household income

Sample's weight



22%



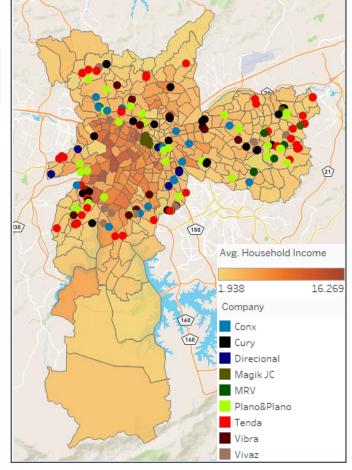






3%

**EXECUTION TO PERFECTION** 



OVERVIEW COMMODITY GAME

### Low-income homebuilding: a commodity game



Source: Companies' IR, Team 45



Homebuilders offer roughly the same product

In terms of









Most important feature in purchase decision process

Similar to a commodity market

PRICES ARE THE MAIN DIFFERENTIAL

### If it's a commodity game, we have a winner



Source: Companies' IR, Team 45

#### Low-income housing: standard buildings where prices are the main differential

Average price per unit launched in 3Q20









Winner will be the company with



leading to





**HIGHER SOS** 



**HIGHEST RETURNS** 

**GOOD COST STRUCTURE** 

**LOWER PRICES** 

**OVERVIEW** 

**COMMODITY GAME** 

WE HAVE A WINNER

**EXECUTION TO PERFECTION** 

which

combined

with

**VALUATION** 

will result in



Source: Companies' IR, Team 45











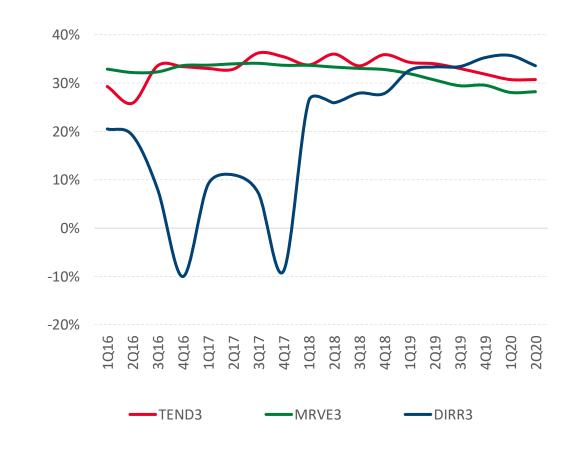








Historical gross margins by company



**OVERVIEW** 

GOOD COST STRUCTURE

**COMMODITY GAME** 

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**VALUATION** 

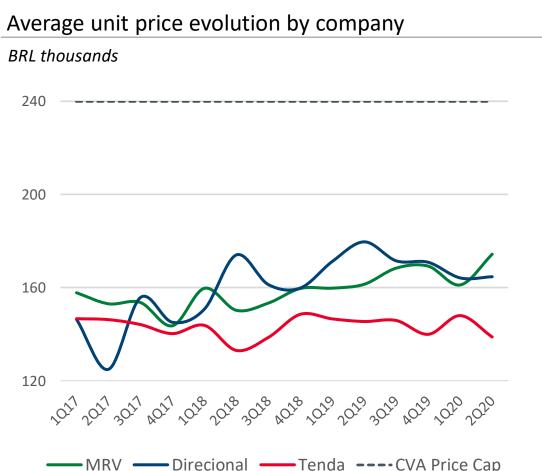
GOOD COST STRUCTURE

LOWER PRICES



Source: Companies' IR, Team 45

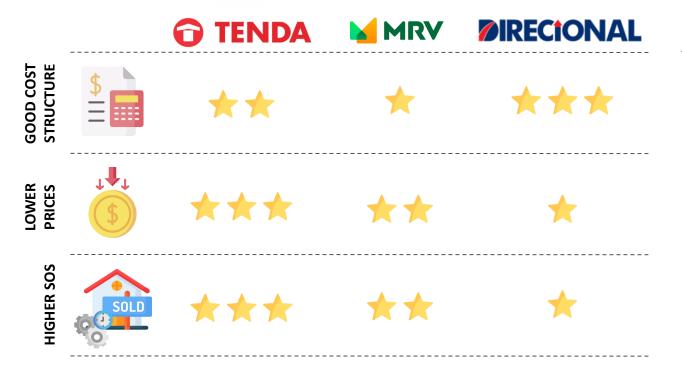


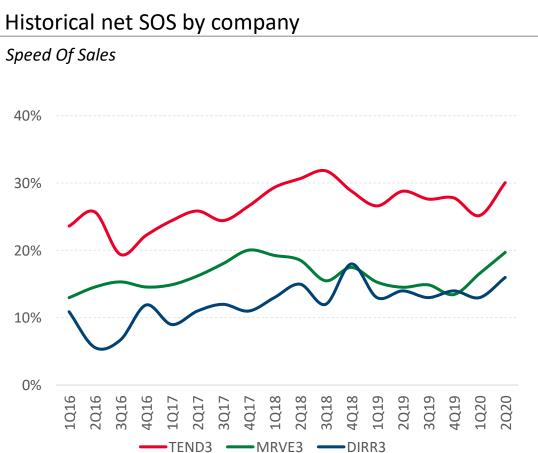


OVERVIEW COMMODITY GAME



Source: Companies' IR, Team 45



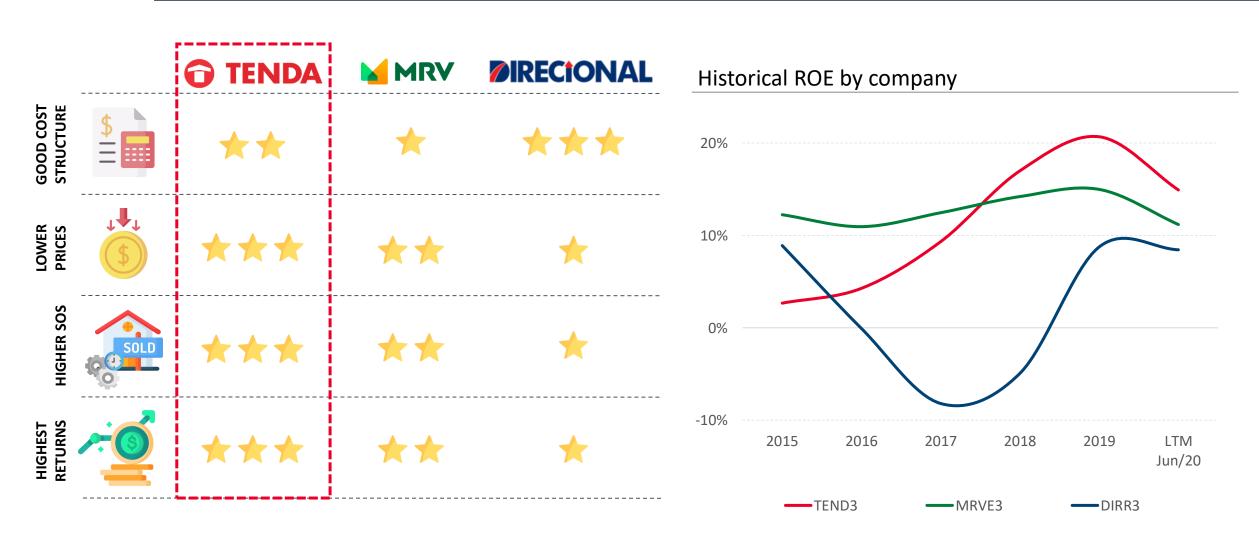


OVERVIEW COMMODITY GAME



Source: Companies' IR, Team 45

RISKS

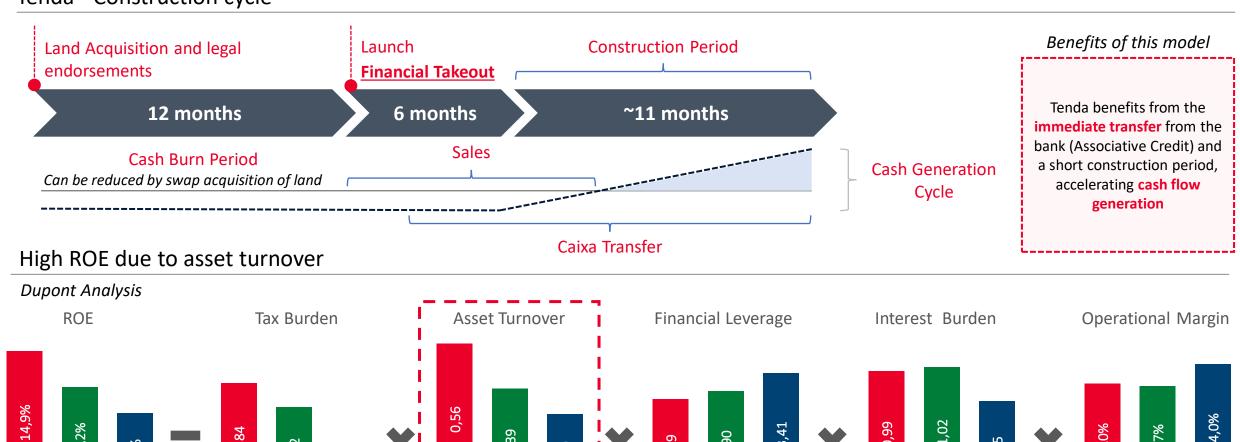


### **Asset turnover leading to higher returns**



Source: Companies' IR, Team 45





**OVERVIEW** 

MRVE3

TEND3

DIRR3

11,2%

**COMMODITY GAME** 

TEND3 MRVE3

0,82

DIRR3

0,84

WE HAVE A WINNER

0,39

TEND3 MRVE3 DIRR3

0,30

**EXECUTION TO PERFECTION** 

TEND3 MRVE3

2,90

DIRR3

2,69

**VALUATION** 

DIRR3

TEND3 MRVE3

1,02

RISKS

DIRR3

TEND3 MRVE3

12,0%

### But what's next?



Source: Companies' IR, FGV, Abrainc, Team 45

#### **ORGANIC GROWTH**

Expansion plan: entering 4 new metropolitan areas



#### STRATEGIC POSITIONING

✓ Higher levels of habitational deficit



Habitacional deficit by region (%)

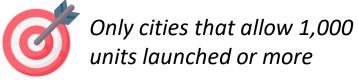
### But what's next?



Source: Company IR, Team 45

### **HIGH SCALABILITY**



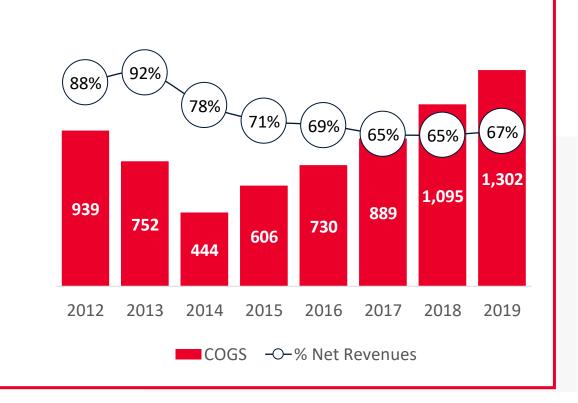




3 SKUs in the portfolio



Aluminum form work system



**LOWER COSTS** 

in real terms

# All eyes on offsite



Source: Company IR



### **ADDITIONAL GROWTH OPPORTUNITIES**

**OFFSITE CONSTRUCTION** 

planning, designing, and fabrication of components are done off the construction site

### **POTENTIALLY DOUBLE TENDA'S** ADRESSABLE MARKET

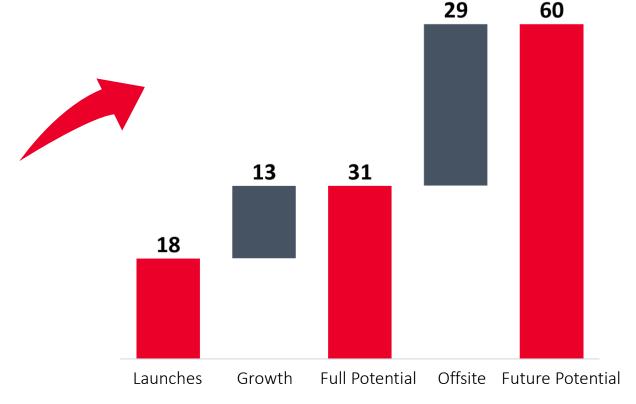
#### **ENTERING SMALLER CITIES**

by gains of scale in markets that were previously unreachable



#### Addressable market through offsite

Thousands of units per year



**OVERVIEW COMMODITY GAME**  WE HAVE A WINNER

**EXECUTION TO PERFECTION** 

**VALUATION** 

# All eyes on offsite



Source: Buildoffsite, City Hall of São Paulo website, Team 45

A model that provides substantial benefits...

Improvement Over Conventional Construction		
Up to 80%		
Significant		
Up to 80%		
Up to 90%		
Up to 60%		
Up to 80%		

#### ...But also holds some risks



#### **LOGISTICS**

Eventually it will be necessary to transport the walls through long distances

Not the company's expertise

Could lead to a **possible acquisition** 



#### **REGULATORY FRAMEWORK**

Each municipality has its specific regulations regarding the approval of construction projects

**52 documents** and approvals required in the construction process in São Paulo city

# All eyes on offsite



Source: Company IR, Team 45

### WE EXPECT OPERATIONS TO **START ONLY BY 2023**

Considered in our bullish scenario



#### **INCIPIENT FIGURES**

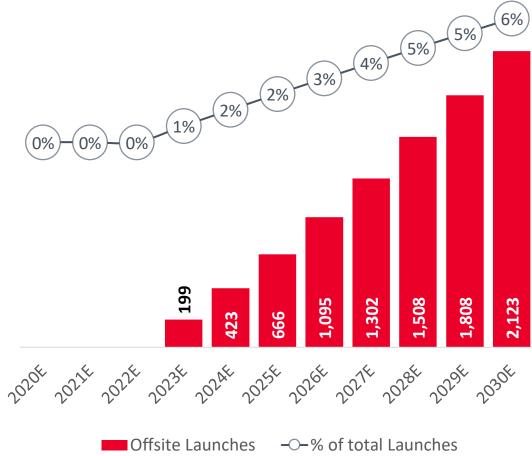
compared to total launches



#### **BETTER MARGINS**

than regular operations

#### Offsite estimated launches x % total launches



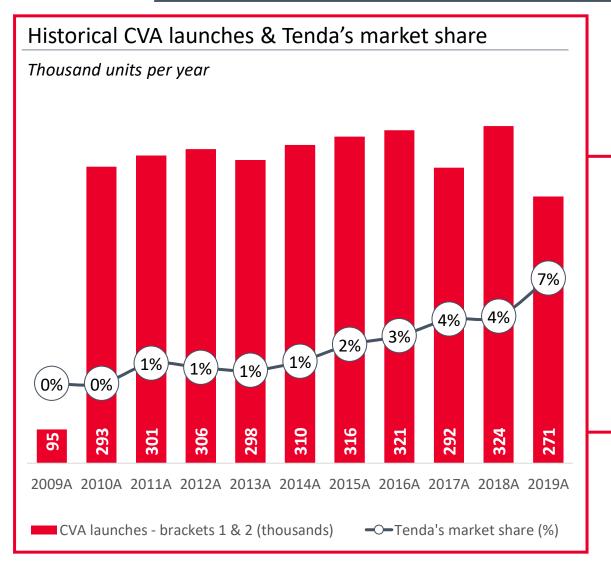
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### **Consistent Launches Performance in CVA...**



Source: Companies' IR, Regional Development Ministry, Team 45



Estimated CVA launches & Tenda's market share

Thousand units per year



**Consistent CVA launches' curve** 



Continuous gains of mkt. share



26

27(

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700

29:

29(

9A 2020E 2021E 2022E 2023E 2024E 2025E 2026E 2027E 2028E 2029E 2030I

CVA launches - brackets 1 & 2 (thous

Tenda's market share (9)

**OVERVIEW** 

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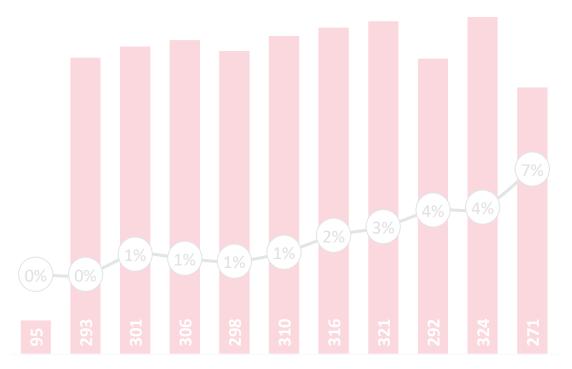
### ...With Market Share Gains



Source: Companies' IR, Regional Development Ministry, Team 45

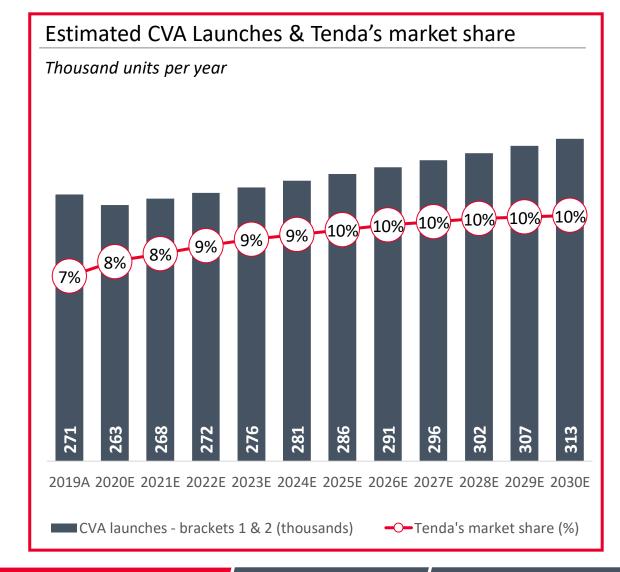
Historical CVA launches & Tenda's market share

Thousand units per year



2009A 2010A 2011A 2012A 2013A 2014A 2015A 2016A 2017A 2018A 2019A

CVA launches - brackets 1 & 2 (thousands) — Tenda's market share (9



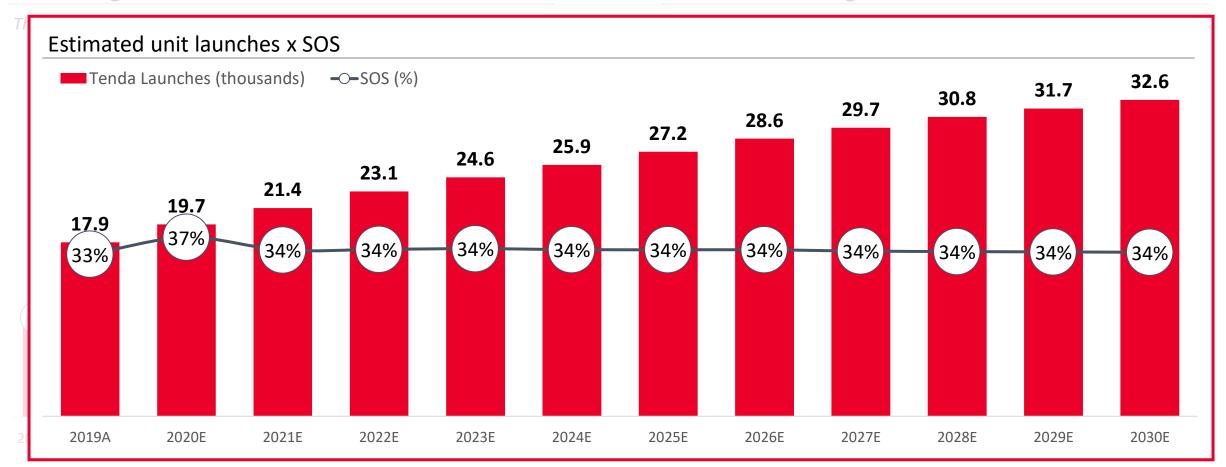
# **Solid Operational Performance**



Source: Company IR, Team 45

Historical growth & market share

Estimated market growth & market share



CVA launches - brackets 1 & 2 (thousands)

Tenda's market share (%

CVA launches - brackets 1 & 2 (thousands

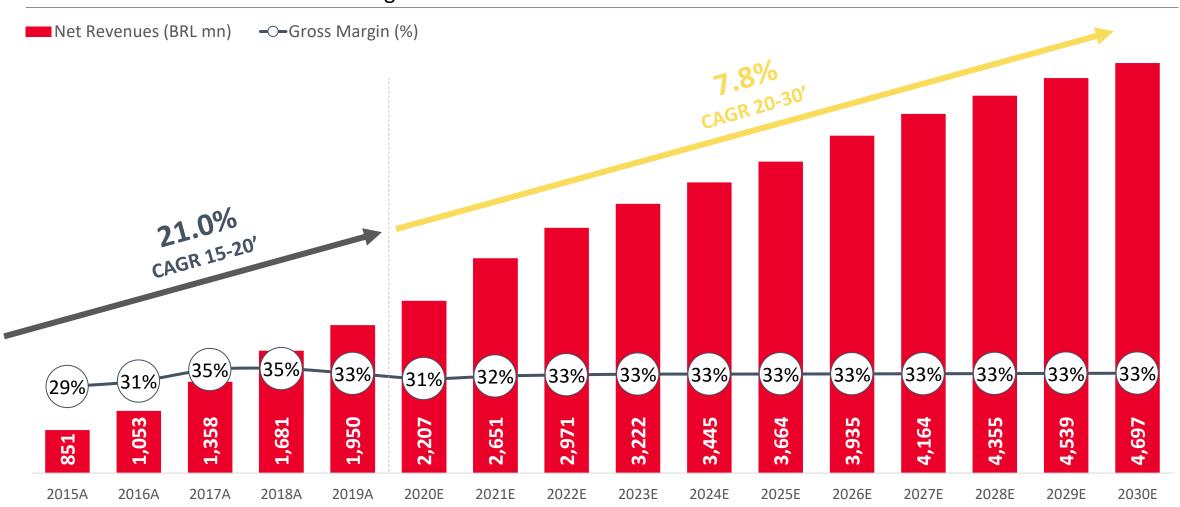
Tenda's market share (%)

# **Financial Growth perspectives**



Source: Company IR, Team 45

#### Estimated Net Revenues x Gross margin



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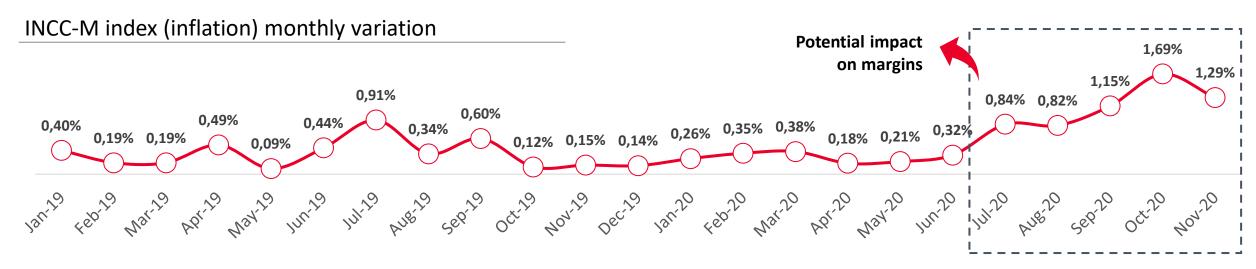
**EXECUTION TO PERFECTION** 

**VALUATION** 

### **Sensitivity Analysis: possible inflation in construction costs**



Source: Company IR, FGV, Team 45



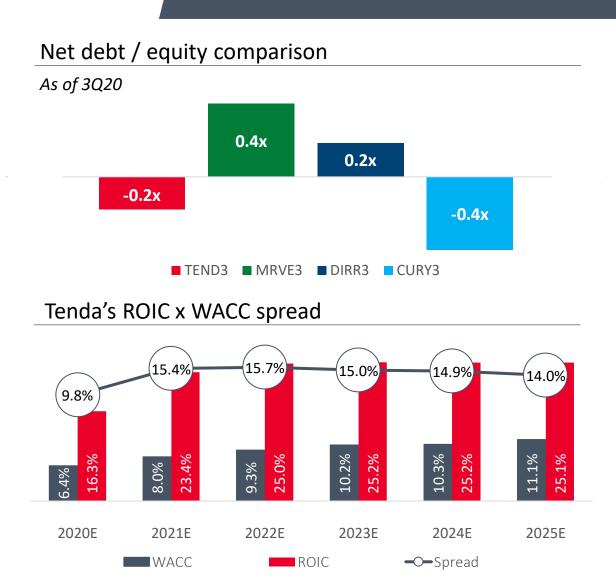
#### Unit economics sensitivity – 2021E

	Current Scenario	Pessimistic	Neutral	Optimistic
Avg. price / unit sold	150,000	150,000	153,000	154,500
Avg. sale price variation	-	0.0%	2.0%	3.0%
Construction costs inflation 2021E	-	12.0%	8.5%	5.0%
Land costs inflation 2021E	-	4.0%	2.0%	2.0%
Gross margin	31.2%	24.5%	27.9%	30.3%

### Financial support to positive spread between ROIC and WACC

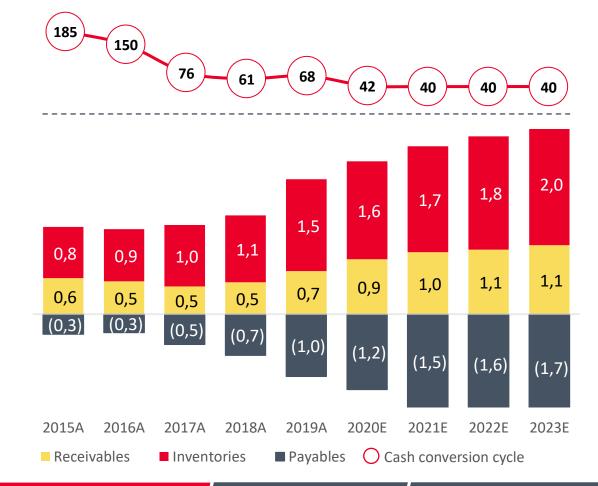


Source: Companies' IR, Team 45



#### Cash conversion cycle / working capital breakdown

Working capital values in BRL mn, cash conversion cycle in days



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VALUATION

### **Estimated Return Ratios**



Source: Companies' IR, Team 45



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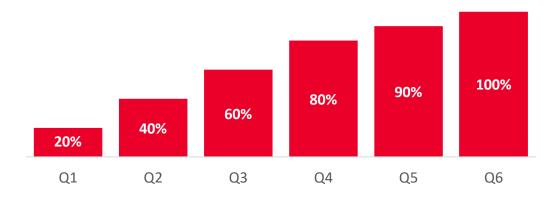
### **Key accounting factor: POC**



Source: Team 45

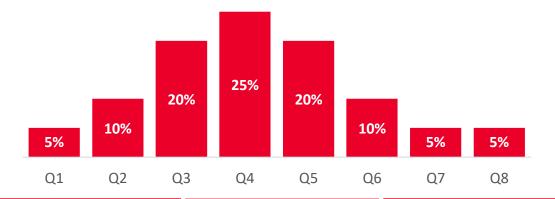
#### Sales speed curve assumption

Total % sold per quarter



#### Construction speed curve assumption

% of additional completion per quarter



#### Percentage of completion method

POC



Revenues are recognized as the percentage of built construction

Sales start before the beginning of construction



Values are maintained in backlog

#### DELAY TO SALES PERFORMANCE REFLECT INTO REVENUES

EARNINGS MOMENTUM FROM RECORD SALES STILL NOT PRICED-IN

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VALUATION

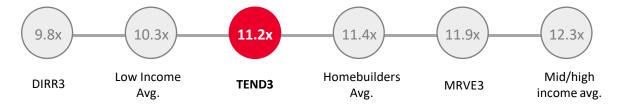
RISKS

### **Multiple Comparison**



Source: CapitaliQ, Team 45

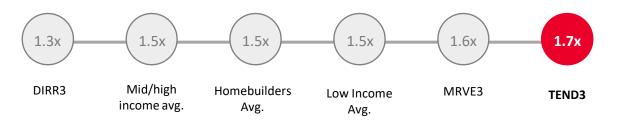
#### Forward P/E multiples (2021)



#### **IMPLIED DCF MULTIPLE** 12.2x P/E 2021

Low-income homebuilders usually trade at *lower P/E because of their fast construction* 

#### Forward P/BV multiples (2021)



#### **IMPLIED DCF MULTIPLE** 2.1x P/BV 2021

Tenda has historically traded at a premium reflecting the company's capital structure (net cash)

#### Tenda vs. Homebuilders historical P/BV



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**EXECUTION TO PERFECTION VALUATION** 

### Discounted Free Cash Flow to Equity



#### Cost of Equity composition

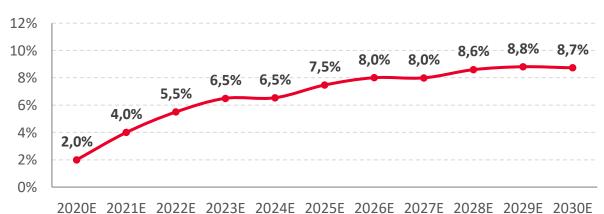
TEND3 levered Beta	1.115
Market risk premium	5.0%
Perpetuity growth rate	4.0%

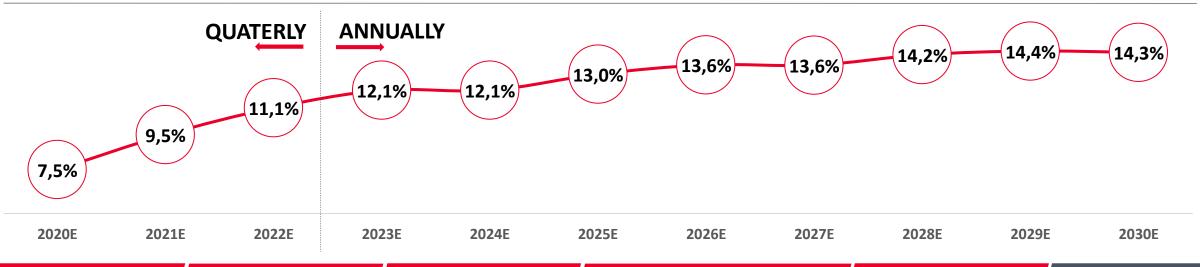
#### **DYNAMIC RISK FREE RATE**

Higher interest rates in Brazil for the next years

#### Tenda's dynamic Cost of Equity

### Risk free rate - Brazil's yield curve





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**VALUATION** 

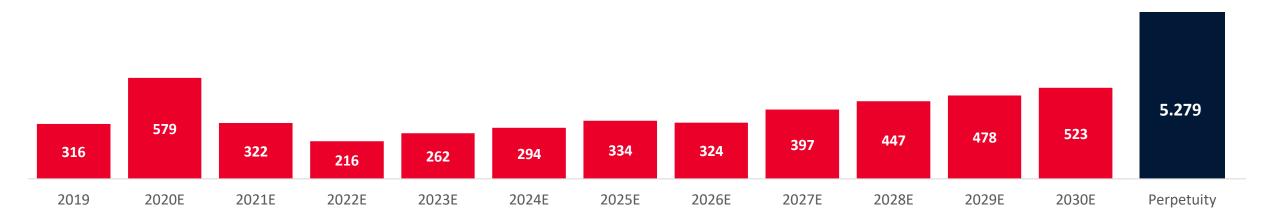
RISKS

### **Discounted Free Cash Flow to Equity**

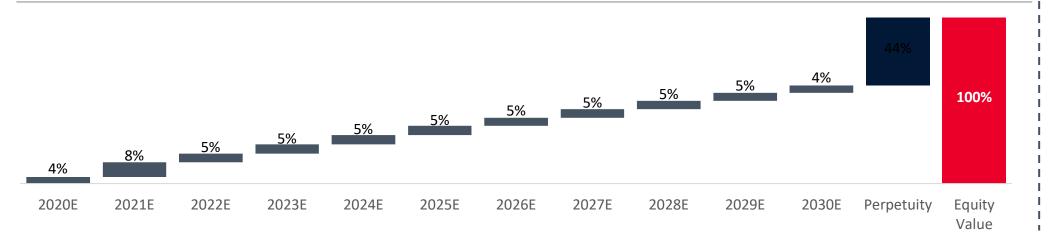


Source: Company IR, Team 45

#### Free Cash Flow to Equity



#### **Equity Value Decomposition**



BRL
3,577M
Equity Value

OVERVIEW COMMODITY GAME WE HAVE A WINNER EXECUTION TO PERFECTION VALUATION RISKS

# **Scenarios comparison**



Source: Team 45

	Gross Revenues CAGR 20-30E'	Accumulated Sales PSV 20-30E'	Accumulated Launches 20-30E'	Avg. EBIT Margin 20-30E'	Target Price	Upside/ Downside
BASE	7.6%	<b>43.9 bn</b> BRL	295,000	13.4%	R\$ 36.39	<b>22.3%</b> Upside
BULL	8.4%	<b>44.5 bn</b> BRL	308,000	14.6%	R\$ 40.03	<b>34.5%</b> Upside
BEAR	5.3%	<b>37.2 bn</b> BRL	265,000	10.3%	R\$ 22.60	<b>-24.0%</b> Downside

OVERVIEW COMMODITY GAME

### We reiterate our BUY recommendation



Source: Team 45

#### Our recommendation

**BUY** 

**CLOSING PRICE** 

**BRL 29.76** 

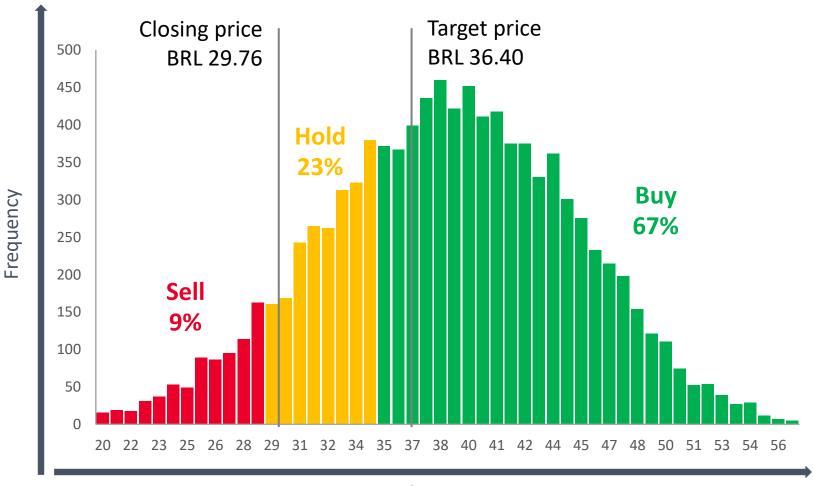
TARGET PRICE

**BRL 36.40** 

**UPSIDE** 

22.3%

#### Monte Carlo analysis



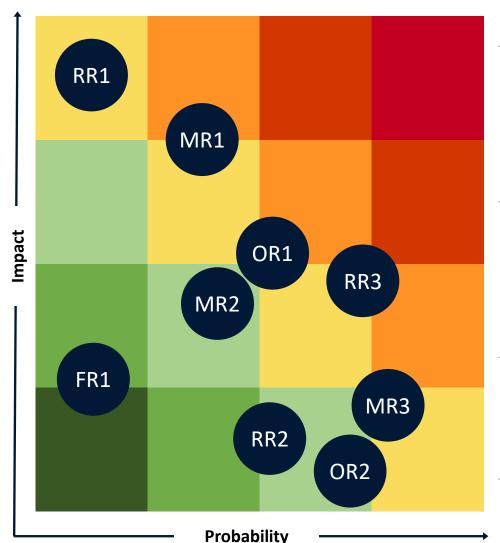
**Share Price** 

OVERVIEW COMMODITY GAME WE HAVE A WINNER EXECUTION TO PERFECTION VALUATION RISKS

### Addressing risks to our analysis



Source: Team 4



#### Market Risks (MR)

MR1 | Sharp Increase in Unemployment Rate

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

MR3 | Delay in FGTS' installment payments

#### Regulatory Risks (RR)

RR1 | End of CVA program

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

RR3 | Difficulty in establishing a good relationship with local governments

#### **Operational Risks (OR)**

OR1 | Significantly increase in building materials costs

OR2 | Off-site construction unviability

#### **Financial Risks (FR)**

**FR1** | Increase in cancellations, impacting Tenda's margins

**EXECUTION TO PERFECTION** 

OVERVIEW COMMODITY GAME

WEF

WE HAVE A WINNER

VALUATION

RISKS



# T TENDA

Q&A



# **Presentation Summary**



1.	Third largest homebuilder in Brazil	3	15.	Construction cycle and asset turnover returns	24
2.	New strategic plan	4	16.	Organic growth	25 & 26
3.	Historical launch of units and margins	5	17.	<u>Offsite</u>	27, 28 & 29
4.	Corporate Governance	6	18.	<u>Launched build-up</u>	30, 31 & 32
5.	ESG: Social and Environmental impact	7 & 8	19.	Estimated net revenues and gross margin	33
6.	Homebuilder's Market	9	20.	Sensitivity analysis of construction costs	34
7.	<u>Casa Verde e Amarela</u>	10	21.	Financial summary	35
8.	<u>FGTS</u>	11 & 12	22.	Estimated ROE and ROIC	36
9.	Covid-19 sector performance	13	23.	Percentage of completion: POC	37
10.	Main players	14	24.	Multiple Analysis	38
11.	Study case: geographic location	16 & 17	25.	Discounted Free Cash Flow to Equity	39 & 40
12.	Commodity game explained	18	26.	Scenarios comparison	41
13.	Investment Summary	19	27.	Monte Carlo analysis	42
14.	Operational data comparison vs. Peers	20, 21, 22 &23	28.	Risks analysis	43
		20, 21, 22			

# **Appendix Summary**



1.	Main Assumptions	47	15. Main Comparables Descriptions	66
2.	Launches Assumptions	48	16. Regional Competition	67
3.	Revenue Buildup	49 & 50	17. MCMV turns into CVA	68
4.	Income Statement	51	18. <u>FGTS Risks</u>	69
5.	Balance Sheet	52	19. Covid-19 and the Digital Transformation	70
			20. <u>ESG – Social and Environmental Impact</u>	71
6.	<u>Cash Flow</u>	53	21. More details on offsite	72
7.	Working Capital	54 & 55	22. Porter's five forces analysis	73
8.	Free Cash Flow	56	23. <u>SWOT analysis</u>	74
9.	Discount Rate Breakdown	57	24. Shareholder's structure	75
10.	DCF & Indebtedness & Cost of Debt	58	25. <u>Committees</u>	76
11.	ROE vs P/BV analysis	59	26. Governance Scorecard	77, 78 & 79
12.	Construction Costs analysis	60 & 61	27. <u>Main International players</u>	80
13.	Study Case: Geographic Location	62 & 63	28. <u>Different scenarios assumptions</u>	81,82,83 & 84
14.	Channel Checks: Consumers' Journey	64 & 65	29. Construction costs sensitivity analysis	85

# **Appendix 1: Main Assumptions**



Tenda's construction curve assumptions	1Q	2Q	3Q	4Q	5Q	6Q	<b>7</b> Q	8Q	9Q	10Q	11Q	12Q	13Q	14Q	15Q	160
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%

# **Appendix 2: Launches Assumptions**



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 CVA program elasticity to GDP	-16,4%	-2,9%	1,8%	1,6%	1,5%	1,8%	1,8%	1,8%	1,8%	1,8%	1,8%	1,8%
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 Regular		-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%
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%

# **Appendix 3: Revenue Buildup**



Launches																		
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 Number of launched units		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%
(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**



Source: Team 4:

In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Gross revenues	1.747	2.005	2.229	2.508	3.174	3.430	3.657	3.892	4.152	4.340	4.474	4.601	4.731
% Growth YoY		14,8%	11,2%	12,5%	26,6%	8,0%	6,6%	6,4%	6,7%	4,5%	3,1%	2,8%	2,8%
Deductions	(65)	(55)	(129)	(125)	(159)	(171)	(183)	(195)	(208)	(217)	(224)	(230)	(237)
% Gross Revenues	-3,7%	-2,8%	-5,8%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%	-5,0%
Net Revenues	1.681	1.950	2.100	2.382	3.016	3.258	3.474	3.697	3.945	4.123	4.250	4.371	4.495
% Growth YoY		16,0%	7,7%	13,4%	26,6%	8,0%	6,6%	6,4%	6,7%	4,5%	3,1%	2,8%	2,8%
Costs of Goods Sold (COGS)	(1.095)	(1.302)	(1.441)	(1.623)	(2.055)	(2.220)	(2.367)	(2.519)	(2.688)	(2.809)	(2.896)	(2.978)	(3.063
Gross Profit	586	648	659	759	961	1.038	1.107	1.178	1.257	1.314	1.354	1.393	1.432
% Gross Margin	34,8%	33,2%	31,4%	31,9%	31,9%	31,9%	31,9%	31,9%	31,9%	31,9%	31,9%	31,9%	31,9%
Selling Expenses	(145)	(163)	(191)	(237)	(249)	(266)	(283)	(302)	(320)	(332)	(342)	(351)	(361
General and Administrative Expenses	(124)	(117)	(144)	(147)	(178)	(206)	(222)	(236)	(252)	(266)	(277)	(285)	(293
Other Operating Revenue/Expenses	(81)	(57)	(68)	(76)	(95)	(103)	(110)	(117)	(125)	(130)	(134)	(138)	(142
EBITDA	236	311	255	300	438	463	492	523	561	585	602	618	636
% EBITDA Margin	14,0%	16,0%	12,2%	12,6%	14,5%	14,2%	14,2%	14,1%	14,2%	14,2%	14,2%	14,1%	14,1%
Adjusted EBITDA	272	381	299	406	546	593	632	673	718	750	773	795	818
% Adj. EBITDA Margin	16,2%	19,5%	14,3%	17,0%	18,1%	18,2%	18,2%	18,2%	18,2%	18,2%	18,2%	18,2%	18,2%
Depreciation and Amortization	(16)	(20)	(21)	(22)	(25)	(28)	(31)	(34)	(37)	(40)	(43)	(46)	(48)
EBIT	219	291	234	278	413	435	461	488	523	545	558	572	587
% EBIT Margin	13,0%	14,9%	11,2%	11,6%	13,7%	13,3%	13,3%	13,2%	13,3%	13,2%	13,1%	13,1%	13,1%
Financial Result	9	9	(21)	(18)	5	15	20	26	32	39	48	57	66
Financial Income	43	61	36	39	61	71	77	83	89	96	104	113	122
Financial Expenses	(34)	(52)	(57)	(56)	(56)	(56)	(56)	(56)	(56)	(56)	(56)	(56)	(56
EBT	228	300	213	260	418	450	481	515	555	584	606	629	653
% EBT Margin	13,6%	15,4%	10,2%	10,9%	13,9%	13,8%	13,9%	13,9%	14,1%	14,2%	14,3%	14,4%	14,5%
Incomes Taxes and Contributions	(28)	(36)	(34)	(30)	(49)	(53)	(57)	(61)	(66)	(69)	(72)	(75)	(78
Deferred income tax and social contribution	(2)	(4)	(5)	(5)	(8)	(8)	(9)	(9)	(10)	(11)	(11)	(12)	(12
Current Income Tax and Social Contribution	(25)	(31)	(29)	(26)	(42)	(46)	(49)	(52)	(56)	(59)	(62)	(64)	(66
Minority Shareholders	(1)	(1)	1	1	1	1	1	1	1	1	1	1	1
Effective Tax Rate	11,6%	11,7%	16,1%	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	180	229	368	397	424	454	490	515	534	554	57!
Result from Discontinued Operations	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	(
Net Income	200	264	180	229	368	397	424	454	490	515	534	554	575
% Net Margin	11,9%	13,5%	8,5%	9,6%	12,2%	12,2%	12,2%	12,3%	12,4%	12,5%	12,6%	12,7%	12,8%
Earnings per Share	2,04	2,62	1,83	2,33	3,75	4,03	4,32	4,62	4,98	5,24	5,43	5,64	5,85

# **Appendix 5: Balance Sheet**



Source: Team 4<sup>t</sup>

In BRL millions	2018A	<b>2019A</b>	2020E	<b>2021E</b>	<b>2022E</b>	2023E	2024E	2025E	<b>2026E</b>	<b>2027</b> E	2028E	<b>2029E</b>	2030E
Current Assets	1.788	2.506	3.141	3.541	3.921	4.207	4.507	4.832	5.164	5.500	5.843	6.198	6.567
Cash and cash equivalents	856	1.071	1.514	1.752	2.201	2.362	2.543	2.735	2.940	3.195	3.470	3.757	4.056
Receivables from clients	318	407	635	811	765	818	870	928	985	1.021	1.051	1.080	1.111
Properties for sale	533	937	880	840	815	876	934	999	1.058	1.096	1.129	1.162	1.195
Other accounts receivable	44	74	89	114	107	115	122	130	138	143	147	151	156
Land for sale	37	18	23	24	32	35	37	40	42	45	46	47	49
Non-Current Assets	833	972	1.139	1.186	1.204	1.301	1.391	1.489	1.584	1.652	1.708	1.764	1.819
Receivables from clients LT	158	219	228	291	275	294	312	333	353	366	377	388	399
Properties for sale LT	516	537	691	660	640	689	734	785	832	861	887	913	939
Others	55	72	69	73	96	105	112	119	127	133	138	142	146
Intangible, Property and Equipment	65	102	105	114	129	144	159	173	188	202	215	227	239
Investments	39	43	46	49	64	70	74	79	84	89	92	94	97
Total Assets	2.621	3.479	4.280	4.727	5.124	5.507	5.898	6.322	6.748	7.152	7.551	7.961	8.386
Current Liabilities	454	579	1.069	1.159	1.258	1.317	1.370	1.426	1.479	1.520	1.551	1.580	1.610
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	288	362	373	398	424	453	475	490	504	519	533
Material and service suppliers	21	39	60	63	83	91	97	103	110	116	120	123	127
Taxes and contributions	27	30	41	44	58	63	67	71	76	80	83	85	88
Others	137	155	164	174	229	249	266	283	302	318	328	338	347
Non-current liabilities	964	1.548	1.726	1.936	1.998	2.080	2.160	2.250	2.324	2.375	2.420	2.465	2.511
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	1.004	1.034	1.104	1.174	1.255	1.317	1.360	1.398	1.438	1.478
Deferred taxes	8	12	15	16	21	23	24	26	28	29	30	31	32
Provision for contingencies	33	29	31	33	43	47	50	53	57	60	62	64	65
Other creditors	-	-	-	-	-	-	-	-	-	-	-	-	-
Others LT	29	49	49	52	68	75	80	85	90	95	98	101	104
Shareholders' Equity	1.204	1.352	1.485	1.633	1.868	2.110	2.368	2.645	2.945	3.257	3.580	3.916	4.265
Shareholders' Equity	1.198	1.351	1.484	1.632	1.867	2.109	2.368	2.644	2.944	3.256	3.580	3.915	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	4.280	4.727	5.124	5.507	5.898	6.322	6.748	7.152	7.551	7.961	8.386

# **Appendix 6: Cash Flow**



In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Net Income	200	264	180	229	368	397	424	454	490	515	534	554	575
D&A	16	20	21	22	25	28	31	34	37	40	43	46	48
Change in working capital	18	(62)	74	355	111	(4)	(0)	1	(11)	(3)	(0)	(1)	(1)
Receivables	(67)	(179)	(253)	(264)	69	(80)	(78)	(86)	(85)	(55)	(44)	(45)	(46)
Inventories	(88)	(406)	(102)	71	36	(113)	(106)	(119)	(108)	(70)	(59)	(60)	(62)
Payables	173	344	176	284	75	109	106	120	97	67	59	60	61
Operational Cash Flow	235	222	275	606	505	421	455	489	516	553	577	599	623
Capex	(18)	(57)	(24)	(32)	(40)	(43)	(46)	(49)	(52)	(55)	(56)	(58)	(60)
Cash flow from investments	(18)	(57)	(24)	(32)	(40)	(43)	(46)	(49)	(52)	(55)	(56)	(58)	(60)
Debt addition (decrease)	272	328	477	0	0	0	0	0	0	0	0	0	0
Capital increase/dividend	(160)	(116)	(46)	(81)	(133)	(155)	(165)	(177)	(190)	(202)	(211)	(219)	(227)
Others (net non-operating assets)	29	16	15	8	49	18	15	15	17	14	9	8	8
Cash flow from Financing	141	229	446	(73)	(84)	(137)	(151)	(162)	(173)	(189)	(201)	(210)	(218)
Δ Cash Flow	358	394	697	502	380	241	259	278	290	309	320	331	345
ВоР	2.662	3.732	5.167	6.281	7.749	9.029	9.693	10.434	11.210	12.113	13.165	14.282	15.446
EoP	3.020	3.947	5.611	6.519	8.198	9.190	9.874	10.627	11.415	12.367	13.440	14.568	15.746

# **Appendix 7: Working Capital**



In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	<b>2026E</b>	2027E	2028E	<b>2029E</b>	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

# **Appendix 7: Working Capital**



In DDI millions	20104	20104	20205	20215	20225	20225	20245	20255	20265	20275	20205	20205	20205
In BRL millions	2018A	2019A	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
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
EBIT	219	291	234	278	413	435	461	488	523	545	558	572	587
Taxes	(26)	(34)	(34)	(31)	(50)	(52)	(55)	(59)	(63)	(65)	(67)	(69)	(70)
Depreciation	16	20	21	22	25	28	31	34	37	40	43	46	48
Working Capital	18	(241)	(179)	91	181	(84)	(78)	(85)	(96)	(58)	(44)	(45)	(47)
Gross Cash Flow	229	36	42	360	568	327	359	380	401	462	490	504	519
Capex	(18)	(57)	(24)	(32)	(40)	(43)	(46)	(49)	(52)	(55)	(56)	(58)	(60)
Free Cash Flow to firm	211	(21)	18	328	528	284	313	331	349	408	434	446	459
Change in Debt	272	328	477	(0)	0	0	0	0	0	0	0	0	0
Financial Result	9	9	(21)	(18)	5	15	20	26	32	39	48	57	66
Free Cash Flow to Equity	491	316	474	310	533	299	333	357	381	447	482	503	525

# **Appendix 9: Discount Rate Breakdown**



																				cc. ream
Discount Rate		3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E F	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	1,19	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2
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		1,9%	1,9%	2,0%	2,2%	2,3%	2,4%	2,6%	2,7%	2,9%	2,8%	12,5%	12,5%	13,4%	14,0%	13,9%	14,5%	14,8%	14,7%	14,7%
Discount Rate		0,0	1,9%	4,0%	6,3%	8,8%	11,4%	14,4%	17,5%	20,9%	24,3%	39,8%	57,3%	78,4%	103,3%	131,6%	165,3%	204,5%	249,2%	249,2%
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		(35,5)	29,1	33,8	85,1	69,6	102,8	108,6	109,0	102,0	78,5	212,6	210,7	199,0	186,7	192,2	180,9	164,5	149,8	1.458,6
Debt/Total Capital		33%	32%	30%	29%	29%	28%	28%	28%	27%	26%	24%	23%	21%	20%	19%	18%	17%	16%	16%
Equity/Total Capital		67%	68%	70%	71%	71%	72%	72%	72%	73%	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		-12%	-12%	-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%	2,0%	2,0%	2,2%	2,3%	2,4%	2,3%	10,4%	10,6%	11,4%	12,0%	12,1%	12,7%	12,9%	13,0%	13,0%
	2020E		2021E		2022E	2	023E	202	24E	2025	E	2026E		2027E		2028E	20	)29E	20	30E
Annualized WACC	6,4%		8,0%		9,8%	1	0,2%	10,	3%	11,19	%	11,7%		11,8%		12,4%	12	2,7%	12	,7%

# **Appendix 10: DCF & Indebtedness & Cost of Debt**



FCFE	
Equity Value	3.577
% perp.	43,8%
Shares Outstanding	98.289
Market Cap	2.925.081
Market Cap PO	2.925.081 R\$ 36,39

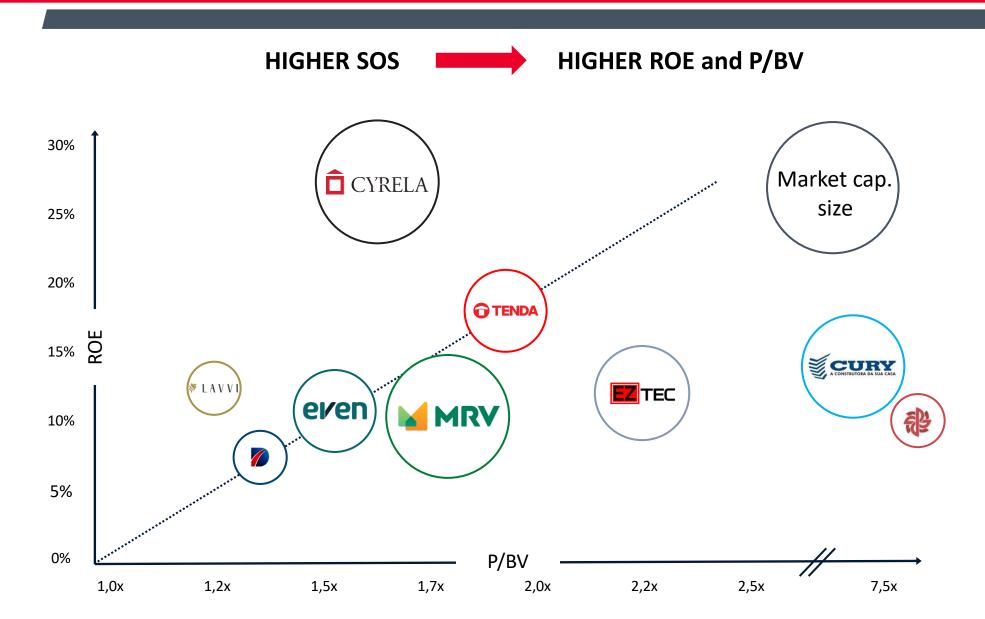
Type of Operation	Due date	Yield (year)	Value	Financial Expenses	% total
SFH	01/07/2020 - 03/2024	8,30%	178.546	14.819	13%
Bank Loans	mar/24	4,83%	352.800	17.040	26%
CRI Tenda	jan/21	2,80%	314.800	8.814	23%
Debenture Tenda 14	set/23	3,65%	152.200	5.555	11%
Debenture Tenda 15	mar/24	3,30%	151.300	4.993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

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%

<b>Debt Amortization Table</b>	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

# Appendix 11: ROE vs P/BV analysis





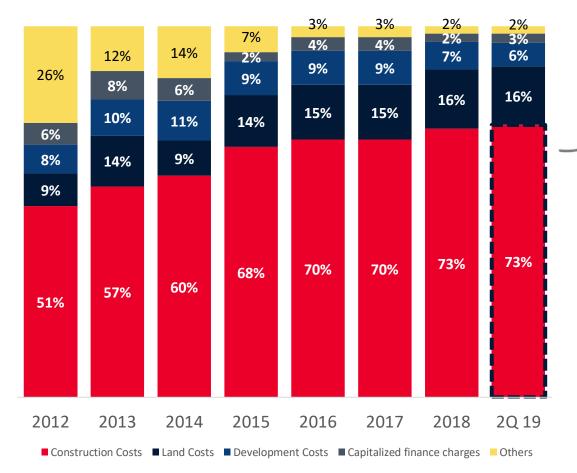
### **Appendix 12: Construction Costs Analysis**



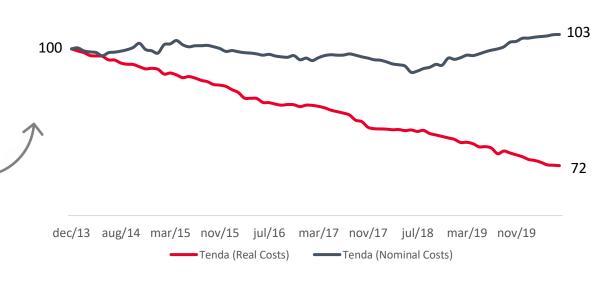
Source: company report, Team 45

#### Tenda's Cost Composition

#### Tenda's Cost composition



#### **Construction Cost Evolution**





Even though Tenda had reduced its construction cost in real terms on the last few years, we see that is one of the main risk of our analysis

Construction costs inflation simulation



### **Appendix 12: Construction Costs Analysis**

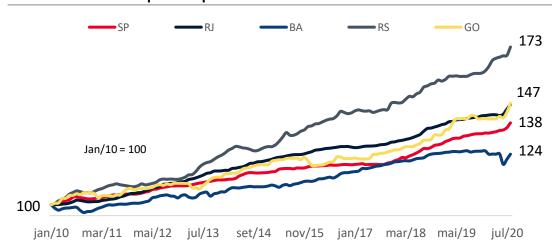


Source: company report

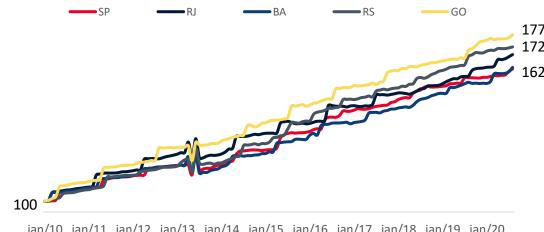
#### Local analyze of the construction cost market



#### Material cost per sqm



#### Avg. Price per sqm



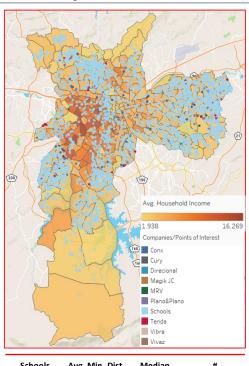
jan/10 jan/11 jan/12 jan/13 jan/14 jan/15 jan/16 jan/17 jan/18 jan/19 jan/20

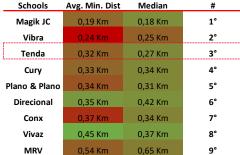
#### Source: Team 45

# Appendix 13: Study case: geographic location

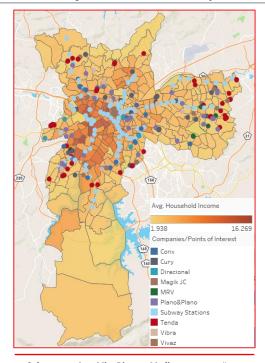


#### Projects x School



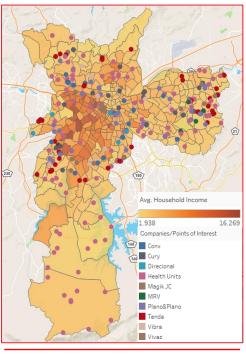


#### Projects x Subways



	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°
ı	Tenda	2,28 Km	2,24 Km	9°

#### Projects x Hospitals

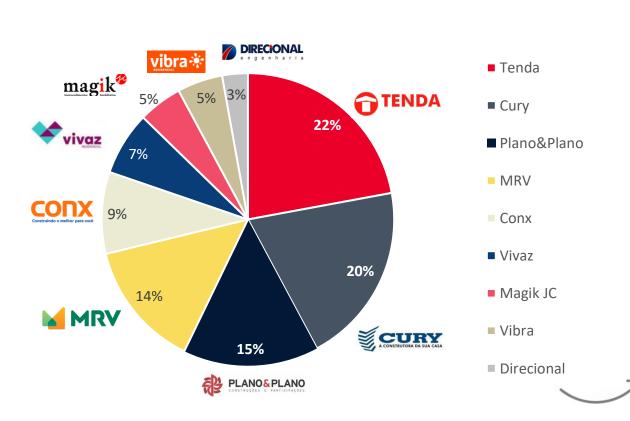


Hospitals	Avg. Min. Dist	Median	#
MRV	0,89 Km	0,92 Km	1°
Magik JC	1,33 Km	1,30 Km	2°
Tenda	1,81 Km	1,98 Km	3°
Plano & Plano	1,89 Km	1,79 Km	4°
Direcional	1,89 Km	1,98 Km	5°
Conx	1,95 Km	1,63 Km	6°
Cury	1,97 Km	1,94 Km	7°
Vibra	2,26 Km	2,20 Km	8°
Vivaz	2,32 Km	2,02 Km	9°

#### Source: Team 45

# Appendix 13: Study case: geographic location

Sample's weight by company visited



#### Study case - Final Results

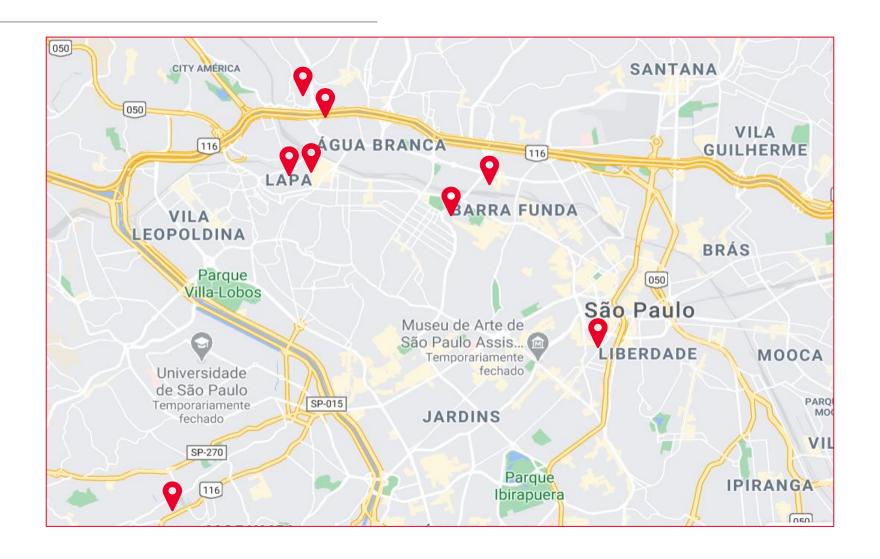
Location Index	Avg. Min. Dist	Median	#
Magik JC	3,32	2,74	1°
Vibra	8,12	7,72	2°
MRV	10,04	7,09	3°
Conx	10,16	6,30	4°
Direcional	10,26	10,84	5°
Cury	10,37	10,22	6°
Tenda	10,65	9,39	7°
Plano & Plano	10,68	9,11	8°
Vivaz	13,01	9,14	9°

### **Appendix 14: Channel checks: consumers' journey**



Source: Team 45

#### Stand's Location



# Appendix 14: Channel checks: consumers' journey



Source: Team 45

#### **Case Study Summary**

Company	<b>TENDA</b>	EURY A CONSTRUTORA DA SUA CASA	PLANO & PLANO	<b>₩</b> MRV	vivaz	magik	<u>vib</u> ra <b></b> ∗
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

### **Appendix 15: Main Comparables Description**



Source: companies IR websites, Team 45



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 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.

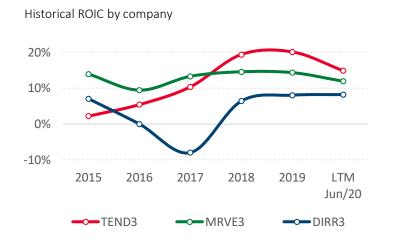


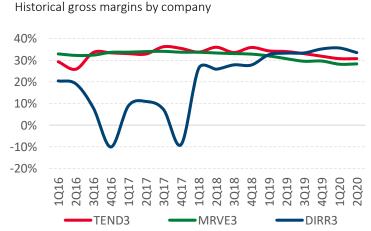
Cury is one of the largest low-income residential developer in Brazil. Cury was a Cyrela's company until its IPO in 3Q20, cashing BRL 170 mn in the offering. In 2019, Cury launched ~1.2k units, totaling a PSV of BRL 923 mn.

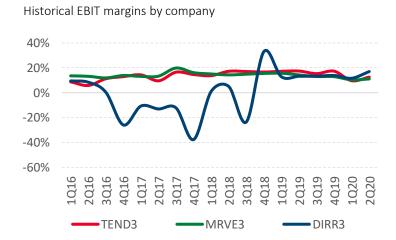


Plano & Plano launched ~7k units in 2019, totaling a PSV of BRL 1,229 mn. The company concluded its IPO in 3Q20, cashing BRL 39 mn in the offering. Plano e Plano operates in São Paulo metropolitan area, servicing the low-income segment.

#### Operational data comparison

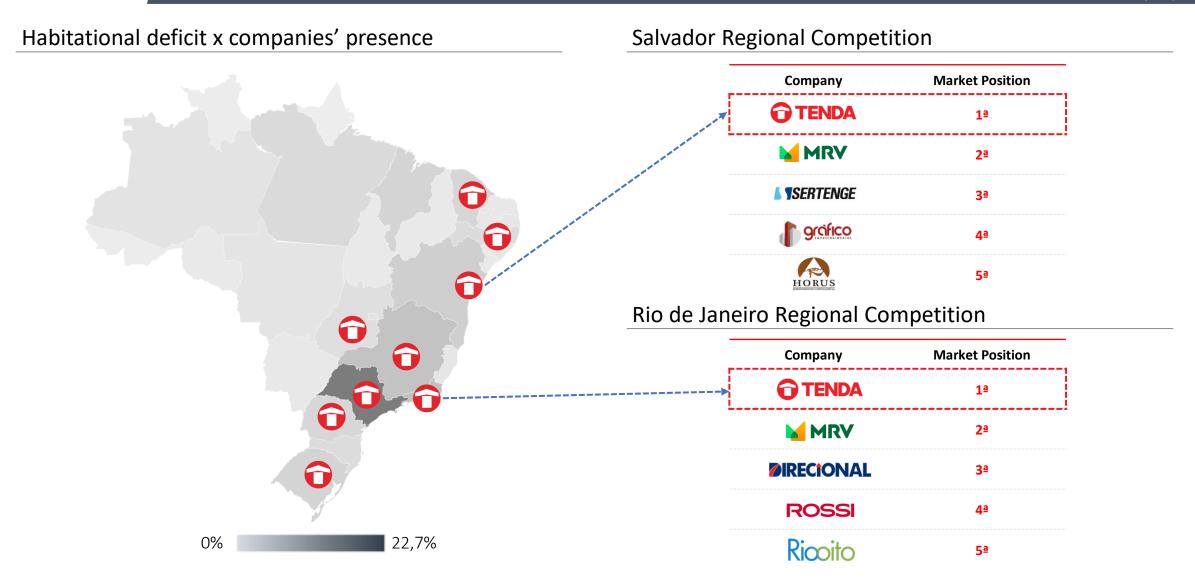








Source: Abrainc/FGV, Companies' IR



### **Appendix 17: MCMV turns into CVA**



Source: FGTS, CVA, Team 45





#### Which were the changes in the program?

- ✓ Brackets division (3 from 4 previously)
- ✓ Sligthly lower rates

Program should support housing market in the medium term

#### What is the same?

✓ Government subsidy

#### Casa Verde e Amarela program summary

Bracket	Income Range	Interest Rate 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%		

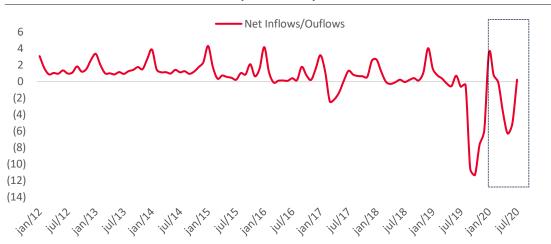
#### Minha Casa, Minha Vida program summary

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 BRL 7.0k - 9.0k	TR + 8.16% TR + 9.16%	None

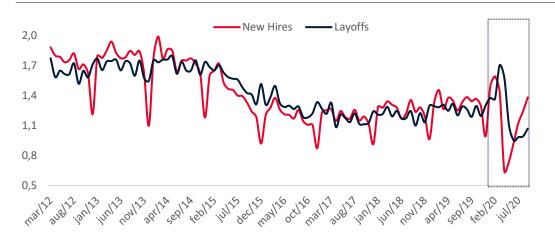
### **Appendix 18: FGTS Risks**



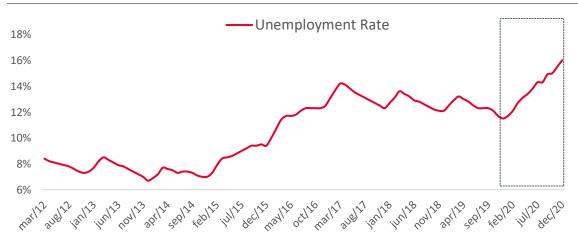
#### FGTS Inflows/Outflows (BRL bn)



#### Evolution of New Hires and Layoffs (mm)



#### Unemployment Rate (%)



#### Evolution of job Creation Balance ('000)



### **Appendix 19: Covid-19 and the Digital Transformation**

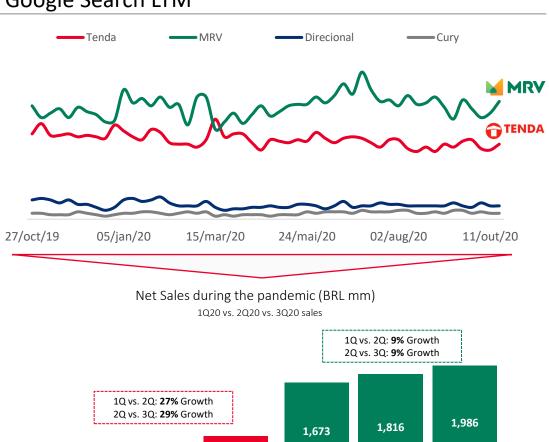


Source: companies IR, Google Trends, Team 45

#### Habitational deficit x companies' presence

Company	Virtual Tour	3D plan	Virtual Signature	Арр
<b>TENDA</b>				
<b>CURY</b> A CONSTRUIORA DA SUA CASA	×	×		×
PLANO & PLANO		×	<b>*</b>	
<b>₩</b> MRV			<b>*</b>	
vivaz		*	<b>*</b>	
magik*		×	<b>*</b>	<b>*</b>
vibra 🔆		×		

#### Google Search LTM



742

MRV

576

Tenda

439

### **Appendix 20: ESG – Social and Environmental Impact**



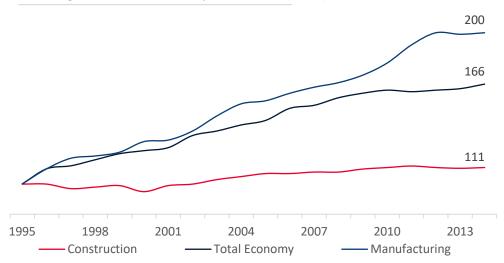
Category	Impact	Source
	SOCIAL	
Workers safety	Construction sector has the second most work-related accidents in Brazil (over 5.5% of all work accidents in Brazil in 2019) and is the second in work-related casualties (with 11.76 casualties for each 100 registered jobs, double the average rate).	National Association of Occupational Medicine
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.	Proteste Institute and National Sanitation Information System (SNIS)
	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	
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

### **Appendix 21: More details on offsite**



Source: McKinsey, BCG, Buildoffsite, Team 45

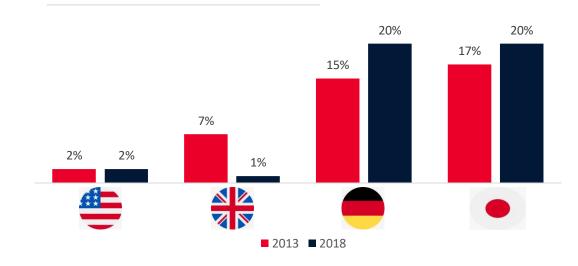
#### Real gross value added per worker (USD)



#### *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			

#### New single-family homes built offsite (%)



#### Stages to get a construction project approved 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 technical institutions	Environment approval by environmental institutions	Utilities companies' declaration
Needs approval by local governments?	<b>&amp;</b>	<b>W</b>	<b>&amp;</b>	<b>W</b>	<b>W</b>

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

## **Appendix 22: Porter's five forces analysis**



			Source: Company IR, Team 4.
Number of	Force	Criteria	Rationale
Competitors		Number of Competitors	There are over 52.000 construction companies in Brazil.
Diversity of		Diversity of Competitors	In addition to major homebuilders, the market encompasses local construction companies that operate with small scale.
Fixed Costs Competitors	Rivalry in the industry	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.
Industry ——— Quality		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.
Growth Differences		Fixed Costs	Low, since small local companies can work entirely on demand.
Capital		Capital	Caixa is the source of capital for almost every CVA project, and has limited power since they operate over government approved guidelines.
labor	Power of Suppliers	Land	Land has unique characteristics that may give power to its owners. Besides, there is a natural limitation of available land in desired spots.
2 days - Cana		Materials	There is a wide range of providers of construction materials. In the low income segment, there is no major differentiation aside from price.
Materials		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.
Number of		Number of Customers	Considering the habitational deficit in Brazil, the number of potential customers is high and is improving each year.
Customers Switching Buyer's	Daniel la Daniel	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.
Costs , ability to substitute	Bargaining Power of buyers	Price Sensitivity	Price is the major aspect in the low income segment. Affordability is, then, a main driver of demand.
Buyer's Price	,	Buyer's information availability	Buyers can easily access new developments at the homebuilders websites.
availability Sensitivity		Switching costs	Once the sale is made, buyers do not have any ability to switch between suppliers.
Expertise		Expertise	House Development is a low complexity activity, which explains the high number of small and local homebuilders in the country.
Access to distribution Economies of	Threat of New Entrants	Economies of Scale	Significant in metropolitan regions, where the amount and concentration of developments allows the negotiation of special terms with suppliers.
channels	Entrants	Brand Identity	Large advertised, solid brands provide more confidence in the purchases that represents major commitments to the buyer.
Brand		Access to distribution channels	Labor subcontracting and materials procurement are local activities available even for a natural person.
# 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.
Relative Price Buyer Propensity to	Threat of	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.
Perfomance Substitute	substitutes	Perceived level of differentiation	The ownership of a new developed home is much more attractive to buyers than any substitute.
Perceived		Relative Price Performance	CVA allows buyers to pay for the loan amount very similar to what would be paid to rent a home.

### **Appendix 23: SWOT analysis**



S

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

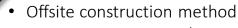
• Absence of a Sustainability Report (ESG)

• Limited adressable market in the current

operations (only 13 metropolitan área)



- Reduction of FGTS's financing capacity
- Fully exposure to CVA program
- Regulatory framework changes
- High unemployment rate



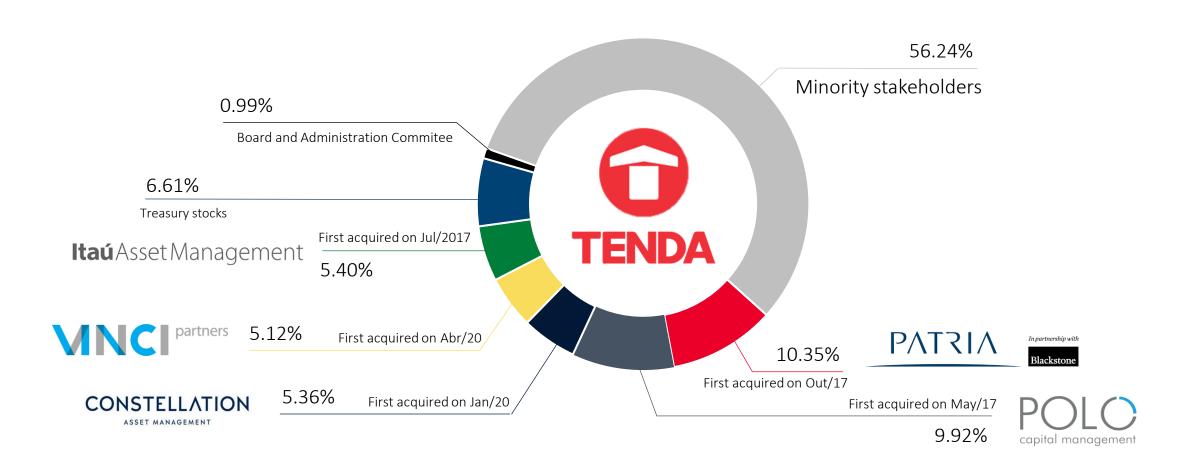
- Entry in new metropolitan areas
- Comparables focusing on mid-high income
- Consumer experience



### **Appendix 24: Shareholder's structure**



Source: Bloomberg, Team 45



#### Source: company IR

# **Appendix 25: Committees**

#### **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

#### **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.

#### **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. Consultant - Bain&Co
CFO/Head of RI	Renan Sanches	2018	Finances Investor Relations	Economics - Mackenzie University	Manager - Gafisa S.A.
Operational Director	Fabricio Arrivabene	2015	Commercial	Production Engineering – Federal University of São Carlos	Regional Director (RJ) - Tenda Sales Director - Gafisa S.A
Operational Director	Luiz Martini	2019	Marketing B.I. I.T.	Mechanical Engineering- University of São Paulo	Retail Director- Omelete Group Marketing Global Manager - Natura S.A.
Operational Director	Sidney Ostrowski	2015	Operations	Civil Engineering- Mackenzie University	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	Business Director - Fit Residential Business Manager - Gafisa S.A.
Operational Director	Alexandre Grzegorzewski	2015	Incorporation Business (Brazil)	Civil Engineering – University of São Paulo	Regional Director (Rio de Janeiro - Gafisa S.A
Operational Director	Rodrigo Hissa	2015	Regionals Bahia, Pernambuco and Ceará	Civil Engineering- University of Fortaleza	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	Incorporation Manager- Gafisa S.A
Operational Director	Vinicius Faraj	2018	Operations (Human Resources)	Civil Engineering - USP	Manager - Gafisa S.A.

### **Appendix 26: Governance Scorecard**



Source: company IR, Team 45

#### **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 Direct	ctors	
Independence	Determine whether the majority of a company's board is composed of independent board members	4	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	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

## **Appendix 26: Governance Scorecard**



Source: company IR, Team 45

Criteria	Description	Rating	Company Policies
	Fiscal Cou	ncil	
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 Mana	agement	
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

# **Appendix 26: Governance Scorecard**



Source: company IR, Team 45

			Source: company IR,
Criteria	Description	Rating	Company Policies
	Committe	es	
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 Comittee	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 Comittee	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 I	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 27: Main international players**



Source: Bloomberg, Team 45

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 Bullater	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
<b>Meritage</b> Homes	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
<mark>Taylor</mark> 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 sixbedroom detached houses		22,763	23%	13K	12%	0.9x	8.8x

0,20% 0,10%

0,05%

Bull

Base

Bear



													Source: T
Launches		2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	<b>202</b> 8E	<b>2029</b> E	2030
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	312.76
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
Elasticity to GDP	0,6		_,_,_	_,_,	_,_,	2,271	_,_,	_,_,	_,_,	<b>-,-</b> ,-	_,_,	_,_,	_,-
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
GTS lesser funding impact over launches (units)	0%		•	·			·	·	•		·		
ull	0%												
Base	0%												
Bear	-30%												
enda's launched units		17.894	19.737	21.430	23.137	24.589	25.874	27.198	28.562	29.669	30.806	31.668	32.5
Growth %		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		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		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)		144,5	150,0	150,0	150,0	150,0	150,0	154,5	154,5	154,5	154,5	154,5	154
Offsite launches			150,0	150,0	150,0	150,0	150,0	154,5	154,5	154,5	<del>154,5</del>	154,5	154
			150,0	150,0	150,0	150,0	1500	15/5	15/5	15/5	15/5	15/5	15
Base Number of launched units (year) Bear				0	0	0 98	207	326		593	739	887	1.0
Bear / / / / / / / / / / / / / / / / / / /						0,4%	0,8%	1,2%	1,6%	2,0%	2,4%	2,8%	3,2



																					Sou	rce: Team
Launches							2019	202	20E	2021E	20221	E 20	23E	2024E	2025	E 20	)26E	2027E	2028	3E 2	2029E	2030E
Offsite launches																						
Number of launched units (year) % of total launches								0	C	)	0	98 0,4%		.07 8%	326 1,2%	45 1,6		593 2,0%	739 2,4%		887 2,8%	1.042 3,2%
Increase in % of total Launches (quarte	er)		0,10%																			
Bull Base Bear			0,20% 0,10% 0,05%																			
COGS		3Q20	4Q20		2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2024E	2025E	2026E	2027E	2028E	2029E	2030E
% 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%



																					Sou	rce: Team
Launches							2019	202	20E	2021E	20221	E 20	23E	2024E	2025	E 20	)26E	2027E	2028	3E 2	2029E	2030E
Offsite launches																						
Number of launched units (year) % of total launches								0	C	)	0	98 0,4%		.07 8%	326 1,2%	45 1,6		593 2,0%	739 2,4%		887 2,8%	1.042 3,2%
Increase in % of total Launches (quarte	er)		0,10%																			
Bull Base Bear			0,20% 0,10% 0,05%																			
COGS		3Q20	4Q20		2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2024E	2025E	2026E	2027E	2028E	2029E	2030E
% 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%



																					Sour	ce: Team 4
COGS		3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22	4Q22	1Q23	2Q23	3Q23	4Q23	2024E	2025E	2026E	2027E	2028E	2029E	2030E
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%
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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%

### **Appendix 29: Construction Costs Sensitivity Analysis**



#### Construction Costs Sensitivity Analysis

Assumptions				
Unit Economics Assumptions Avg. Price per unit	150.000			
VAT Taxes (%)	1,9%			
Provisions for Cancellations (%)	1,0%			
Provisions for Doubtful Accounts (%)	0,2%			
Construction Costs (% of rev)	52,0%			
Land Costs (% of rev)	11,0%			
Others (% of rev)	5,8%			
Sensitivity Assumptions	Current	Base	Bear	Bull
Avg. Price Variation	0,0%	2,0%	0,0%	3,0%
Construction Costs Inflation	0,0%	8,5%	12,0%	5,0%
Land Costs Inflation	0,0%	2,0%	4,0%	2,0%

Unit Economics - 2021 Projection	Current Scenario	Base Case	Bear Case	Bull Case
Gross Revenues	150.000	153.000	150.000	154.500
Deductions	(4.650)	(4.743)	(4.650)	(4.790)
% of Gross Revenues	-3,1%	-3,1%	-3,1%	-3,1%
VAT Taxes	(2.850)	(2.907)	(2.850)	(2.936)
Provisions for Cancellations	(1.500)	(1.530)	(1.500)	(1.545)
Provisions for Doubtful Accounts	(300)	(306)	(300)	(309)
Net Revenues	145.350	148.257	145.350	149.711
COGS	(100.001)	(106.914)	(109.710)	(104.353)
% of Net Revenues	-69%	-72%	-75%	-70%
Constructions Costs	(75.582)	(82.006)	(84.652)	(79.361)
Land Costs	(15.989)	(16.308)	(16.628)	(16.308)
Other Costs*	(8.430)	(8.599)	(8.430)	(8.683)
Gross Profit	45.349	41.343	35.640	45.358
Gross margin	31,2%	27,9%	24,5%	30,3%

<sup>\*</sup> Includes incorporation costs, capitalized financial costs, maintenance and unit costs included in provisions account