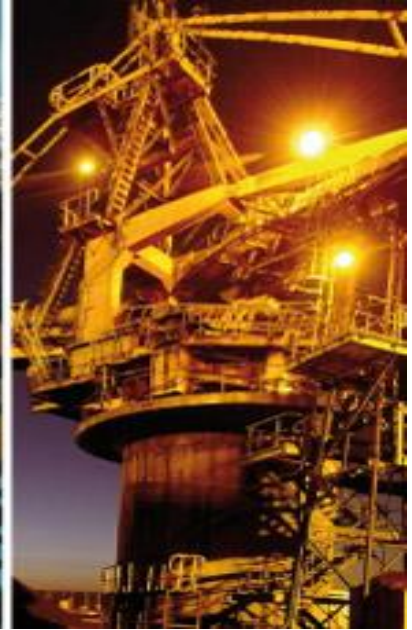




***EMPRESAS COPEC***



Seattle, April 2017

Adolfo Ibáñez University - Chile

# Recommendation - BUY

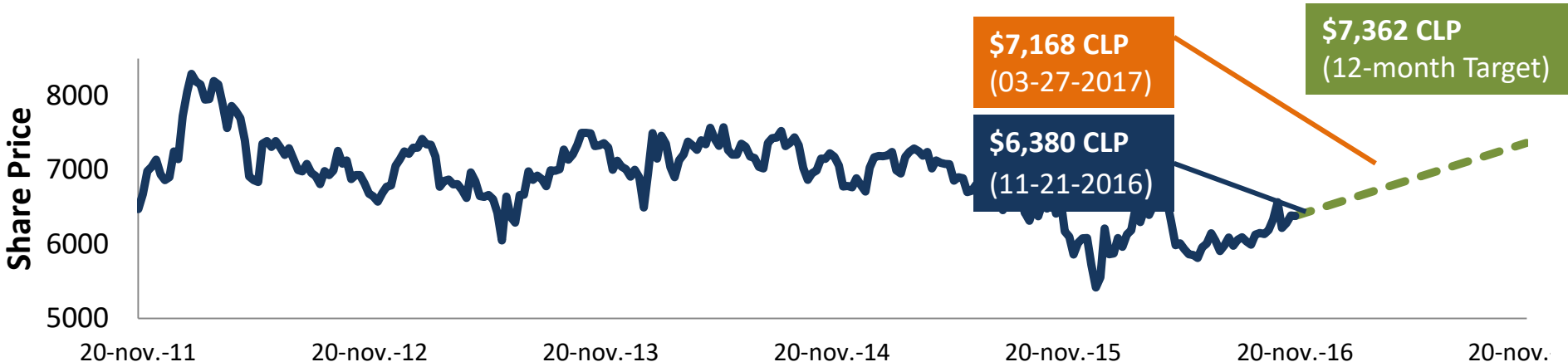


EMPRESAS COPEC

Market Data	
Market Cap	12.44 billions
EBITDA (2015)	US\$ 1,989 MM
Avg Daily Vol	US\$ 7 MM
EV/EBITDA	7.34x
<b>Current Price</b>	<b>CLP 6,380</b>
<b>Target Price</b>	<b>CLP 7,362</b>
Div. Yield	18.90%
Upside potential	17.30%

- Copec has a sustainable competitive advantage
- An Intensive investment strategy
- Strong financial position that would allow the Company to face times of turmoil
- Stable cash generation from its fuel business

COPEC:CI

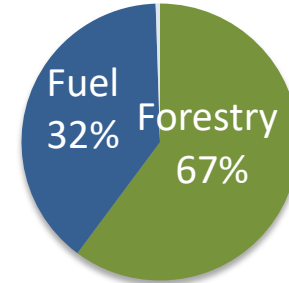


# Company Overview – Main Features

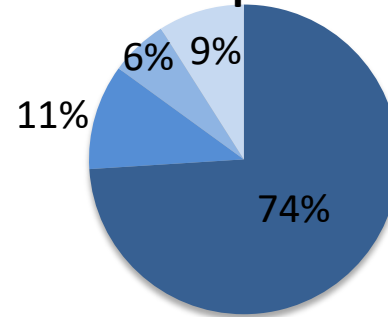
- Copec is a diversified holding, second largest Chilean company in terms of Market Cap in Chile
- More than 80 years of history
- Controlled by the Angelini family (74%)
- With strong presence in Forestry & Fuel Industries



## EBITDA Composition



## Ownership Structure



■ Angelini group ■ Matte group ■ Pension funds ■ Others

# Company Overview – Forestry (Arauco)



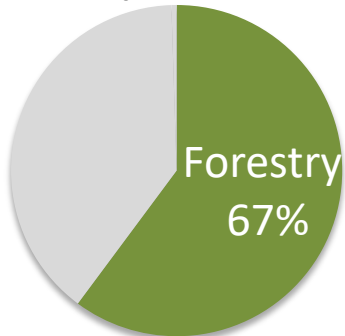
**1st** producer of Sawn timber in Latin America

**2nd** largest market pulp producer in the world

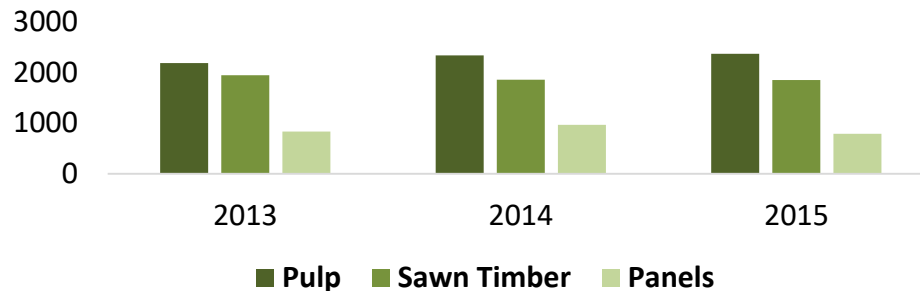
**2nd** largest panel producer in the world



**EBITDA (US\$ 1,333MM)**



**Forestry Sales per Product (MM US\$)**



Company overview

Industry & Competitors

Financial Analysis

Valuation

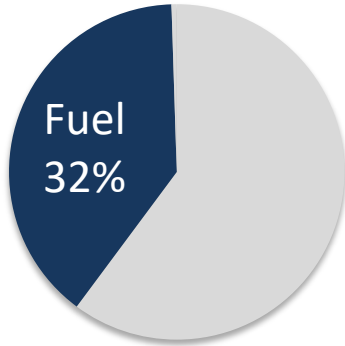
Risk Analysis

Conclusion

# Company Overview – Fuel (Copec & Others)



EBITDA (US\$ 637MM)



60% Market Share in Chile (Fuel)

536 MM US\$ acquisition of MAPCO

Over 1,000 MM US\$ in CAPEX full year 2016

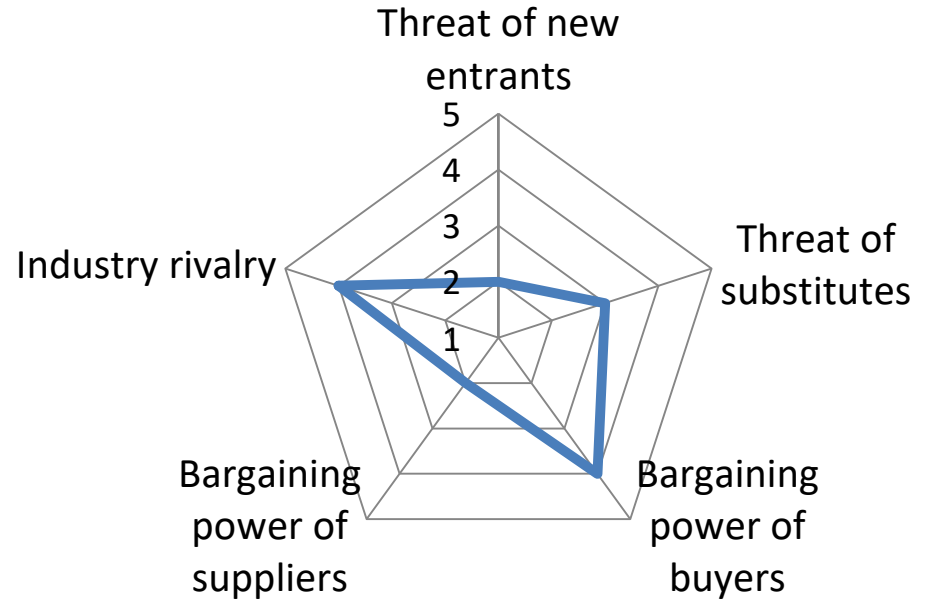


# SWOT Analysis by industry sector

## Porter's Five Forces

Industries: FORESTRY – FUEL

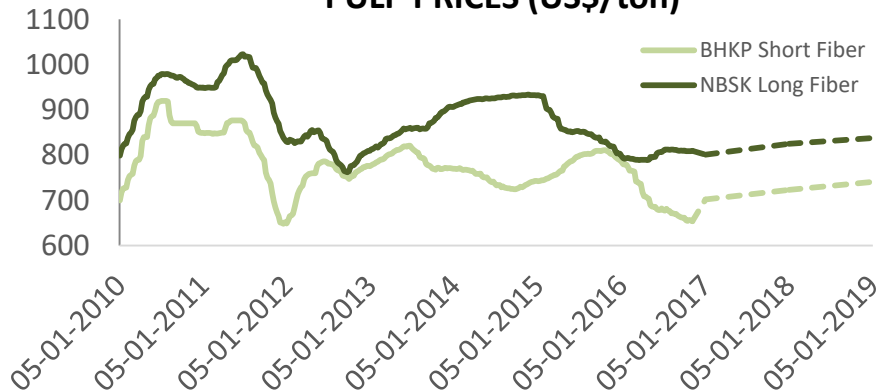
- Industry rivalry **HIGH** - MODERATE
- Bargaining power of buyers **HIGH** - LOW
- Threat of substitutes **MODERATE** - LOW
- Bargaining power of suppliers **VERY LOW**-HIGH
- Threat of new entrants **LOW** – LOW



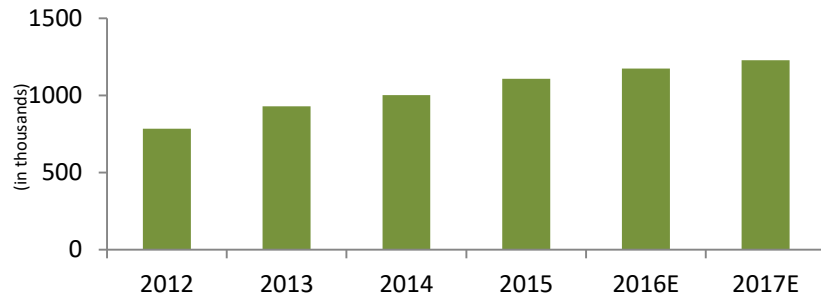
# Industry Overview – Demand drivers

- Diversified portfolio of Clients
- Potential upside in Asia (61% of Arauco's pulp sales), low per capita consumption compared to other markets
- Panel and sawmill sales based on housing starts (US)
- Future pulp prices are expected to grow

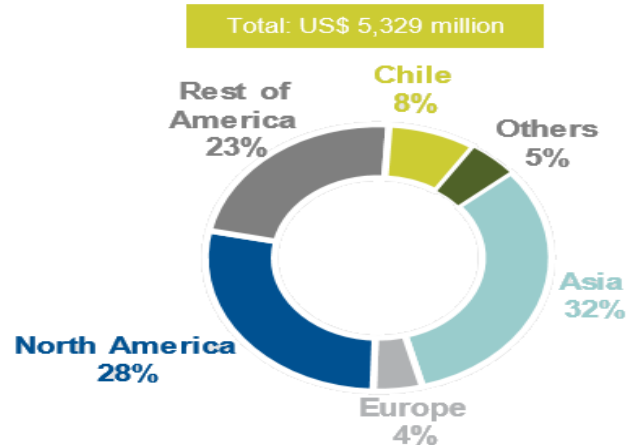
**PULP PRICES (US\$/ton)**



**UNITED STATES HOUSING STARTS**



**CONSOLIDATED SALES BY REGION**



Company overview

Industry & Competitors

Financial Analysis




Valuation


Risk Analysis

Conclusion

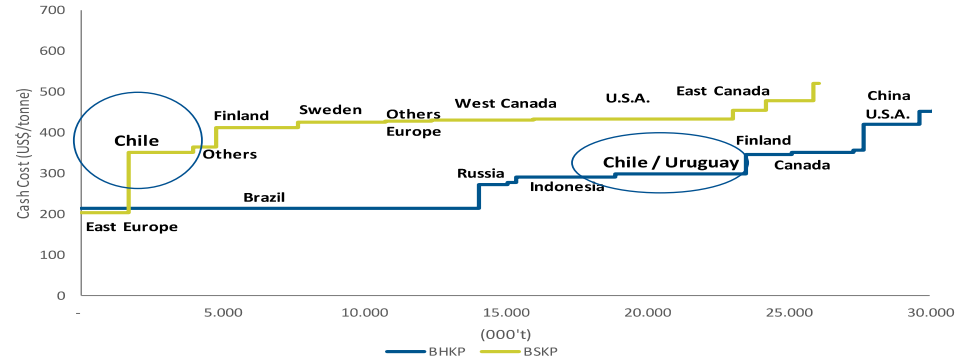
# Industry Overview – Competitive Advantages

## Trees Growth rate

Specie	Avg. Hardwood growth rate		Country
Eucalyptus	43	 ARAUCO	Brazil
E. Nitens	43	 ARAUCO	Chile
Acacia Magnium	23		Laos, Vietnam, Camboya and Australia
E.Globulus	20	 ARAUCO	Chile
E.Globulus Iberian	11		Australia and Tasmania

Specie	Avg. Softwood growth rate		Country
Radiata Pine	19	 ARAUCO	Chile
	11		USA
	5		Canada
	4		Scandinavia
	2		Russia

Units in (m<sup>3</sup>ssc/ha/year)



- Strategic Forest-to-Mill-to-Port distance
- Energy inputs hedged
- Best softwood and hardwood growth rate



# Industry Overview – Fuel Advantages

- **Service Stations**

42.1% service stations market share

- **Convenience Stores**

Largest convenience store network in Chile

- **Lubricants**

52.2% market share

- **Industrial Channel**

56% of share in aeronautical market

More than 3,500 industrial clients

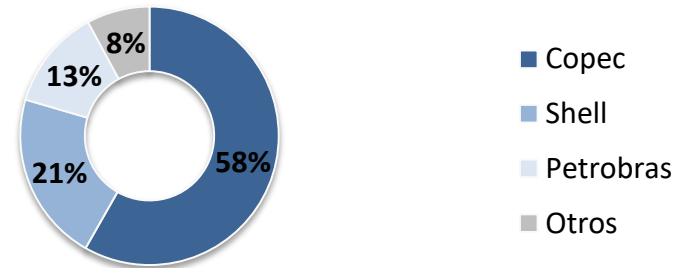
## Preference of service stations in Chilean highways

2014 market poll



## Liquid Fuels - Market Share

As of September 2016



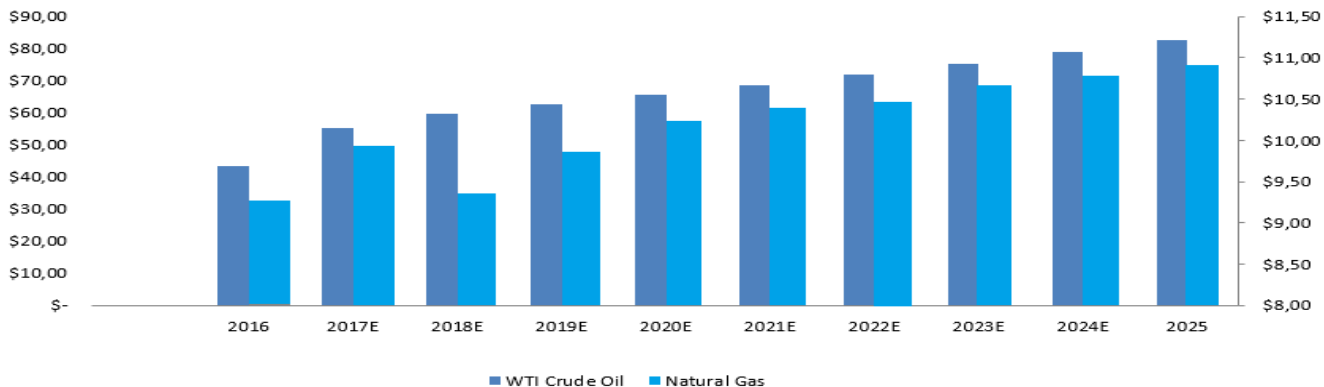
# Industry Overview – Forecasts

- Oil demand is expected to grow over 1.53% per year in **developing countries**
- OPEC recently agree to cut down **oil supply**

## World primary Energy demand growth (2014-2040)

Oil	0.6%
Gas	2.1%

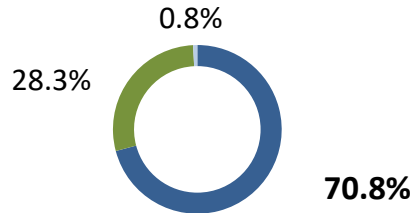
## Forecast Prices



# Financial Analysis – Cash Generation

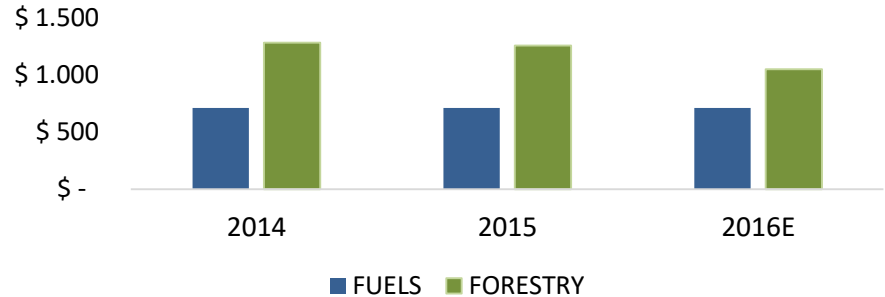
- Strong, steady cash generation from Fuels & Distribution
- Financial backup for times of turmoil

## Consolidated Sales



■ FUELS ■ FORESTRY ■ OTHERS

## EBITDA Generation (MM US\$)



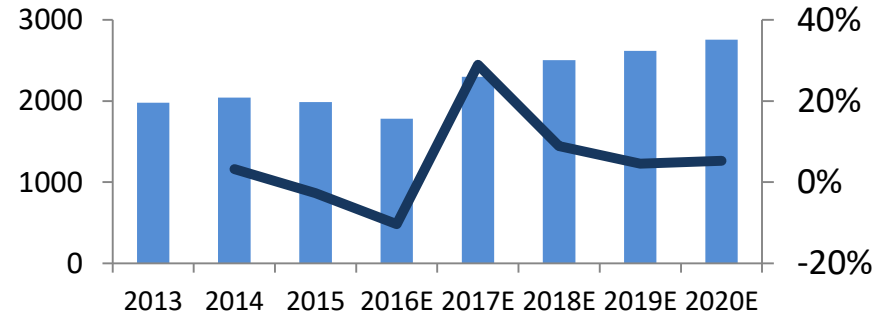
## EBITDA Fuels as a % of Forestry EBITDA

2014	2015	2016E
55.3%	56.5%	67.8%

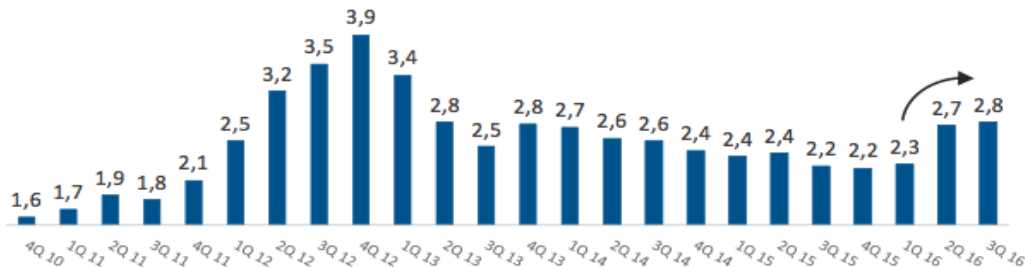
# Financial Analysis – EBITDA generation

- From 2017 onwards, the recent acquisitions will improve EBITDA generation
- Year 2016 record CAPEX of \$2,021 mm
- Net Financial Debt/EBITDA ratio surpassed Company target of 2.5x

EBITDA & EBITDA MARGIN GROWTH (RHS)



FINANCIAL NET DEBT/EBITDA

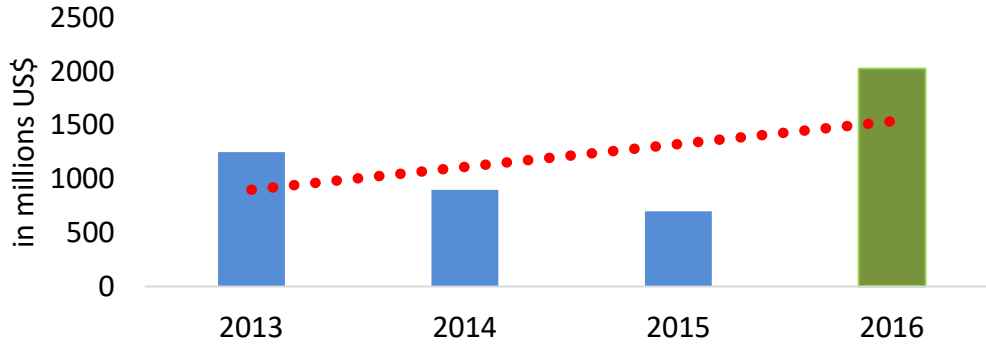


Selected ratios

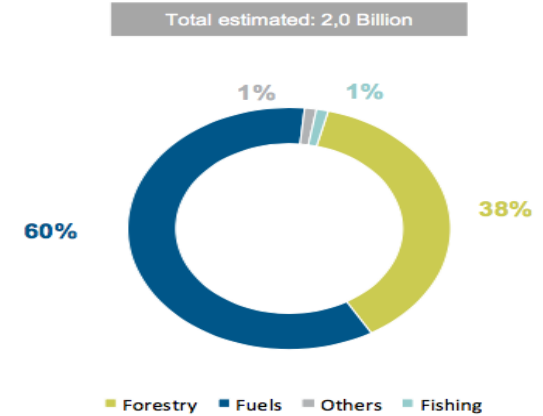
	2013	2014	2015
EBITDA mg.	7.6%	9.8%	13.3%
EBITDA/Int exp	6.0x	7.8x	7.7x
CFO/Total Liabilities	14.5x	12.3x	15.0x

# Financial Analysis – New Investments

## CAPEX in US\$ million



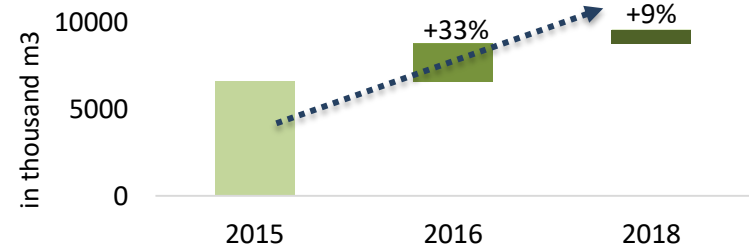
## 2016 CAPEX DISTRIBUTION



## RECENT INVESTMENTS

FORESTRY	TAFISA	US\$ 153 MM
	GRAYLING	US\$ 400 MM
FUELS	MAPCO	US\$ 535 MM
	EXXON-MOBIL	US\$ 747 MM

## Wooden panels Capacity increase



Company overview

Industry & Competitors

Financial Analysis

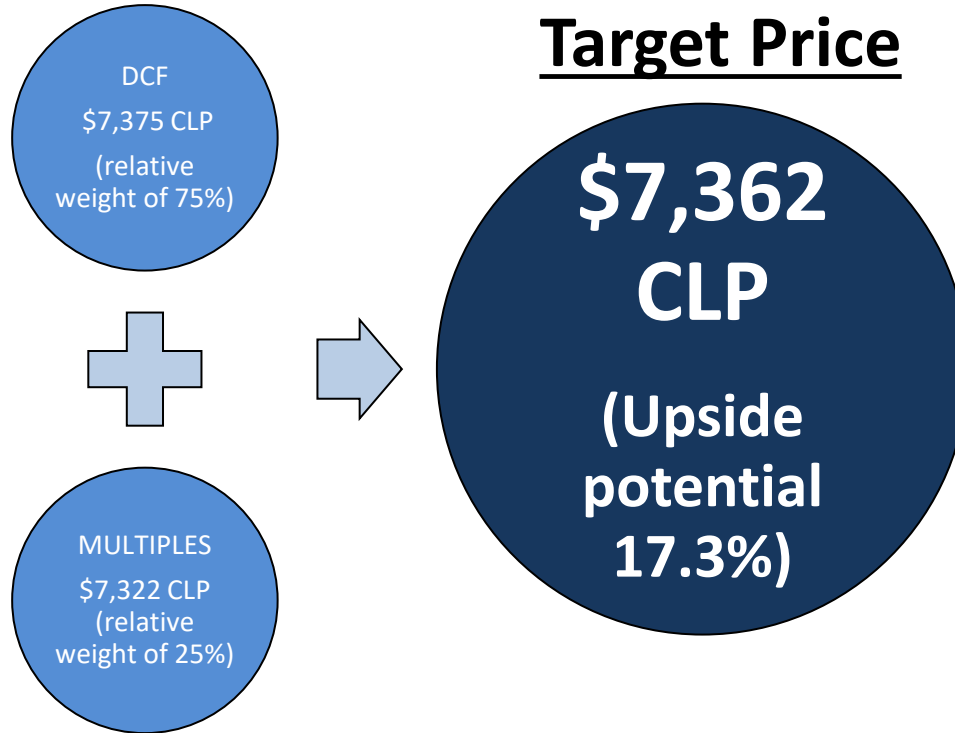
Valuation

Risk Analysis

Conclusion

# Valuation - Methodology

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Company overview

Industry &  
Competitors

Financial Analysis

Valuation

Risk Analysis

Conclusion

# Valuation – Income Approach - DCF

## Key Valuation Assumptions

WACC FORESTRY	8.9%
WACC FUEL	7.8%
Ke Forestry	11.4%
Ke Fuel	10.7%
Beta Forestry	1.40
Beta Fuel	0.90
D/E	39%
Corporate Debt Cost	4.7%
Perpetual growth Forestry	2.9%
Perpetual growth Fuel	1.9%

- WACC rates for each business segment in US\$
- Cost of equity calculated using modified CAPM and unlevered betas from Damodaran
- Cost of debt reflect the current situation Copec bonds
- Target capital structure considered and corporate tax rate of Chile
- Perpetual growth based on GDP growth expectations and industry forecasts
- Discount rate includes the different countries risk exposures

EBITDA GROWTH	2016E	2017E	2018E	2019E	2020E
Empresas Copec	-10%	29%	9%	5%	5%
Forestry	-16%	31%	8%	1%	3%
Fuel	0%	27%	11%	9%	9%

Company overview

Industry &  
Competitors

Financial Analysis

Valuation

Risk Analysis

Conclusion

# DCF Valuation – Sensitivity Analysis

## Equity Value (DCF)

(\$ CLP)

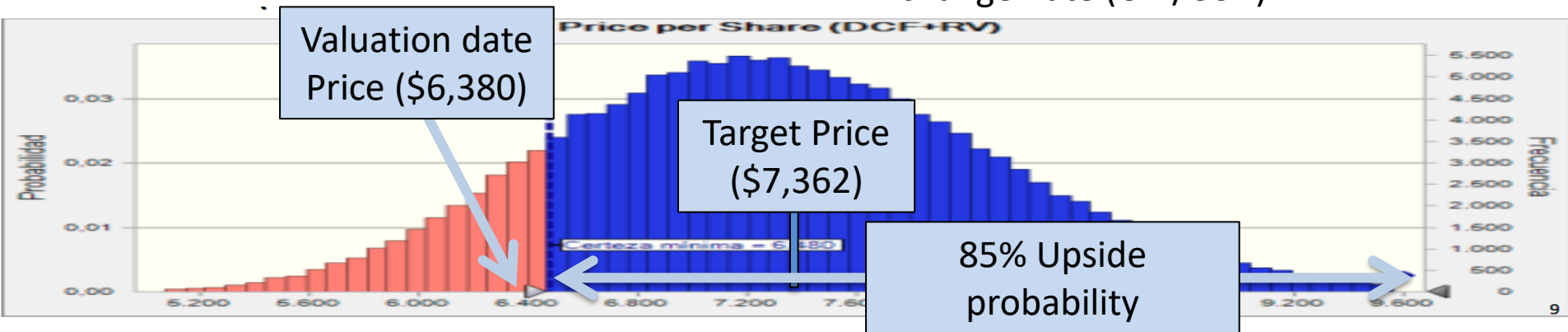
Share Price

Calculated with Perpetuity (G)

2.0%      2.5%      3.0%

8,445	9,323	10,395
7,542	8,261	9,124
6,776	<b>7,375</b>	8,082
6,120	6,624	7,212
5,551	5,980	6,476

- WACC Rate
- Perpetual growth rate
- Sales growth
- Margin expansion/contraction
- Exchange Rate (CLP/USD)



Company overview

Industry & Competitors

Financial Analysis

Valuation

Risk Analysis

Conclusion



# Market Approach Valuation – EV/EBITDA Multiple

EV/EBITDA	SECTOR	WEIGHT AS % OF EBITDA
9.5x	Forestry	67%
10.4X	Fuel	33%
<b>9.8X</b>	<b>Empresas Copec</b>	<b>100%</b>

\*MULTIPLES WERE CALCULATED USING INTERNATIONAL PEERS WITH SIMILAR SIZE AND TYPE OF OPERATIONS

## FORESTRY PEERS:



Weyerhaeuser



**SUZANO**  
PAPEL E CELULOSE

## FUEL PEERS:



**CALTEX**  
Caltex Australia



**PETRONAS**

Company overview

Industry &  
Competitors

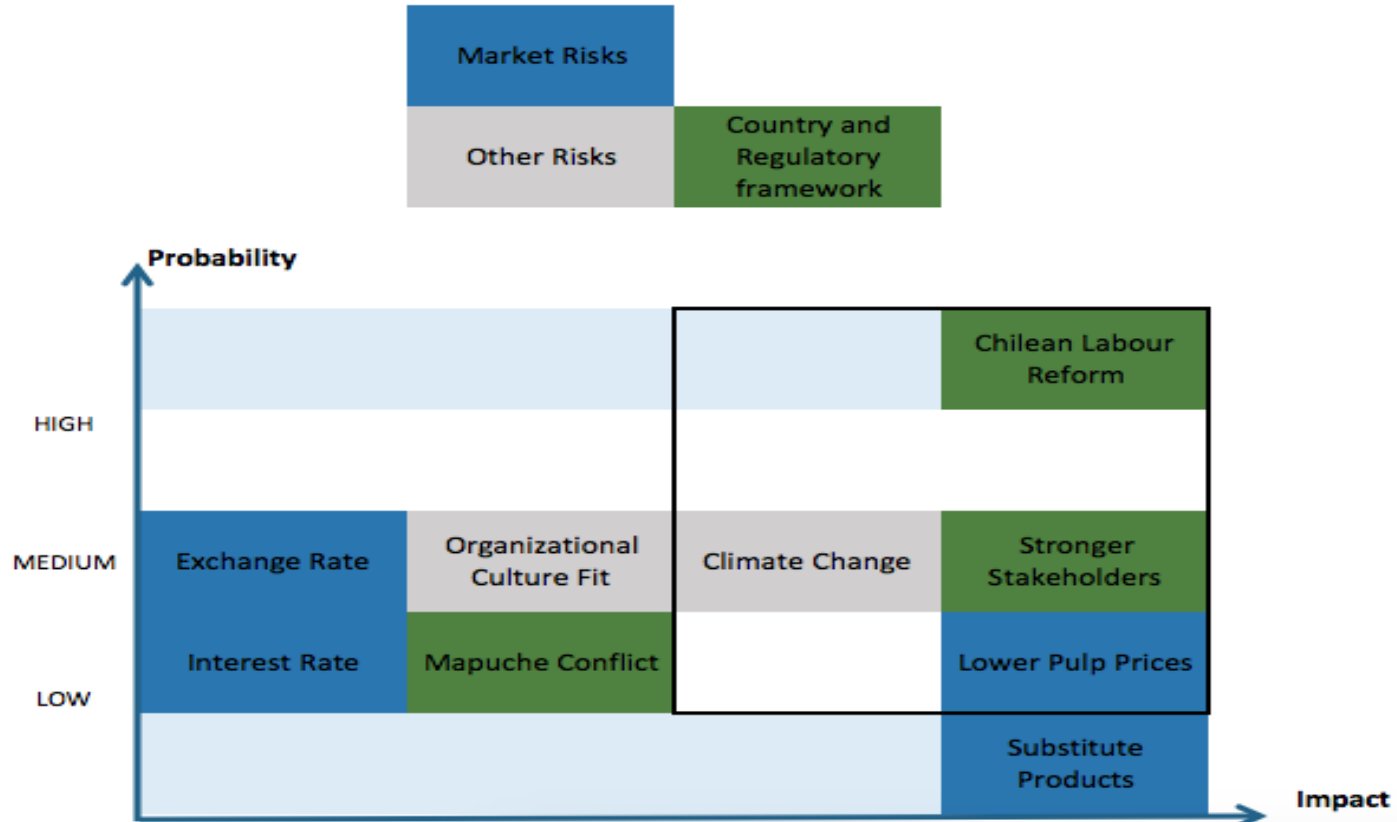
Financial Analysis

Valuation

Risk Analysis

Conclusion

# Investment Risks



Company overview

Industry & Competitors

Financial Analysis

Valuation

Risk Analysis

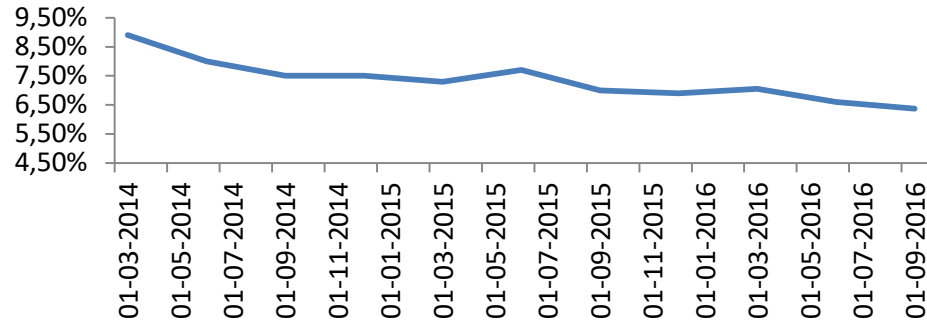
Conclusion

# Investment Risks – Market & Others

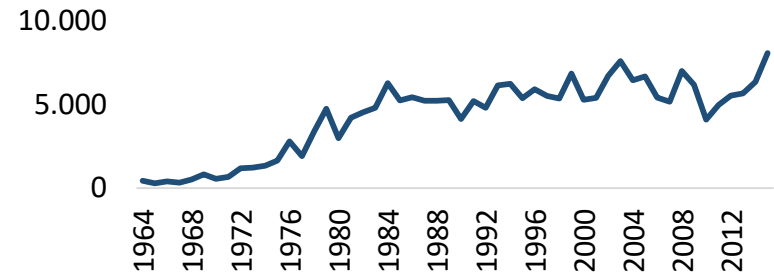
- Lower than expected consumption in China could decrease international pulp prices
- Climate change may lead to a stricter framework



## China consumption % variation YoY



## Forest fires per season

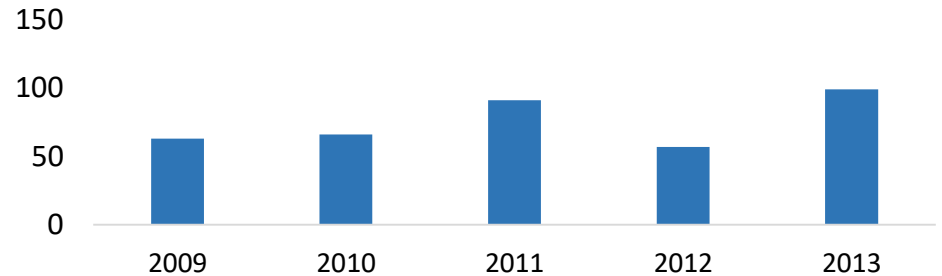


# Investment Risks – Framework & Regulatory

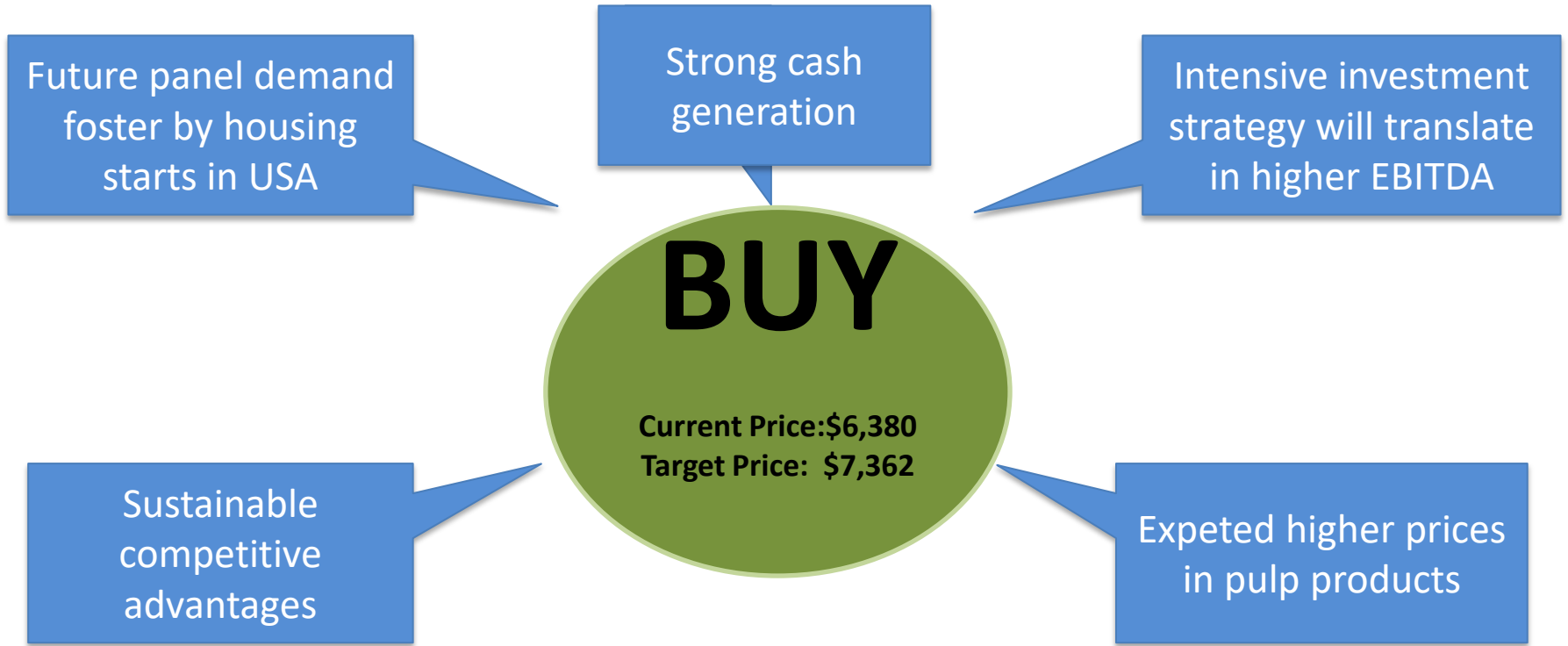
- Stronger Stakeholders: Empowerment of communities may detain projects
- Chilean labor reform will significantly increase the bargaining power of workers



Number of manifestations per year in Santiago



# Conclusion – BUY Recommendation



Company overview

Industry & Competitors

Financial Analysis

Valuation

Risk Analysis

Conclusion

**Thanks for your attention!**

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**CFA Institute Research Challenge**  
**Seattle, USA**  
**Adolfo Ibáñez University – Chile**

---

**Roberto Bravo**

**Ricardo Lewysohn**

**Nicolás Libuy**

**Brian Thornton**

**Joaquín Villalobos**



# Exhibit Index

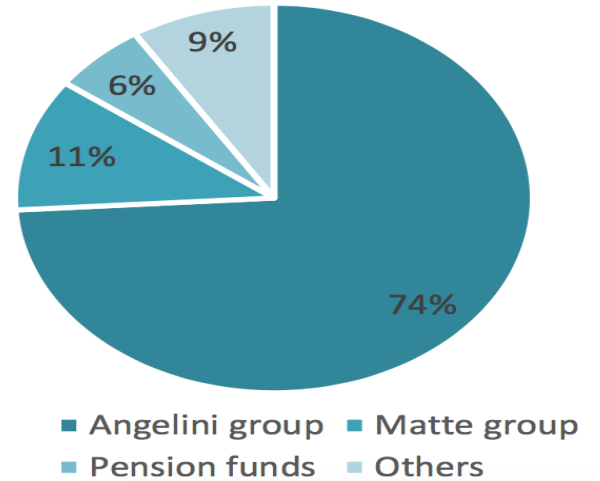
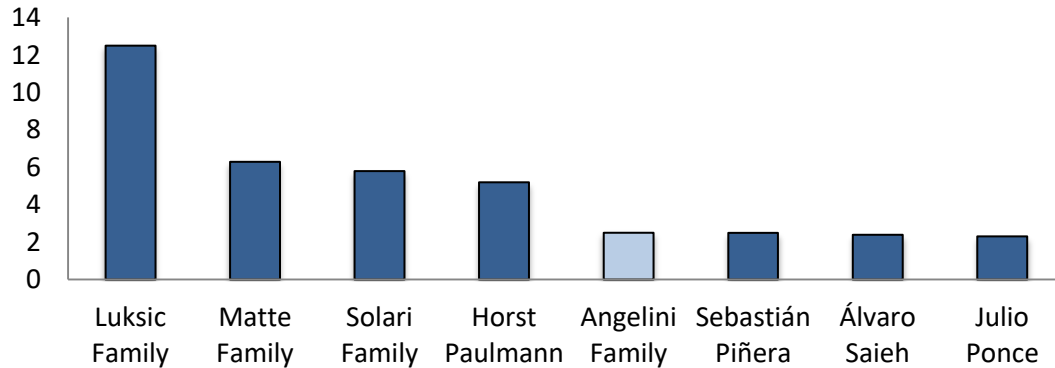
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- Corporate Governance [Exhibit 1](#)
- Industry Overview, Forestry [Exhibit 2](#)
- Industry Overview, Fuel [Exhibit 3](#)
- Arauco's Pulp Cash Cost [Exhibit 4](#)
- Competitive Position Forestry [Exhibit 5](#)
- Breakdown of Forestry Sales [Exhibit 6](#)
- Cash Cost & Transportation [Exhibit 7](#)
- New Forestry Projects [Exhibit 8](#)
- EBITDA Margins [Exhibit 9](#)
- Energy Production [Exhibit 10](#)
- WACC [Exhibit 11](#)
- FCF Forestry [Exhibit 12](#)
- FCF Fuel [Exhibit 13](#)
- FCF Fishing & Others [Exhibit 14](#)
- Valuation Summary [Exhibit 15](#)
- Multiples Valuation [Exhibit 16](#)
- History [Exhibit 17](#)
- Market Leaders [Exhibit 18](#)
- Arauco Participation [Exhibit 19](#)
- Arauco Sales [Exhibit 20](#)
- Forestry distances [Exhibit 21](#)
- Investments [Exhibit 22](#)
- Risks [Exhibit 23-24](#)
- Buy Recommendation [Exhibit 25](#)

# Exhibit 1 - Corporate Governance

- Roberto Angelini's new leadership
- Lack of independence in the Board

**Wealthiest chilean families (US\$ bn)**

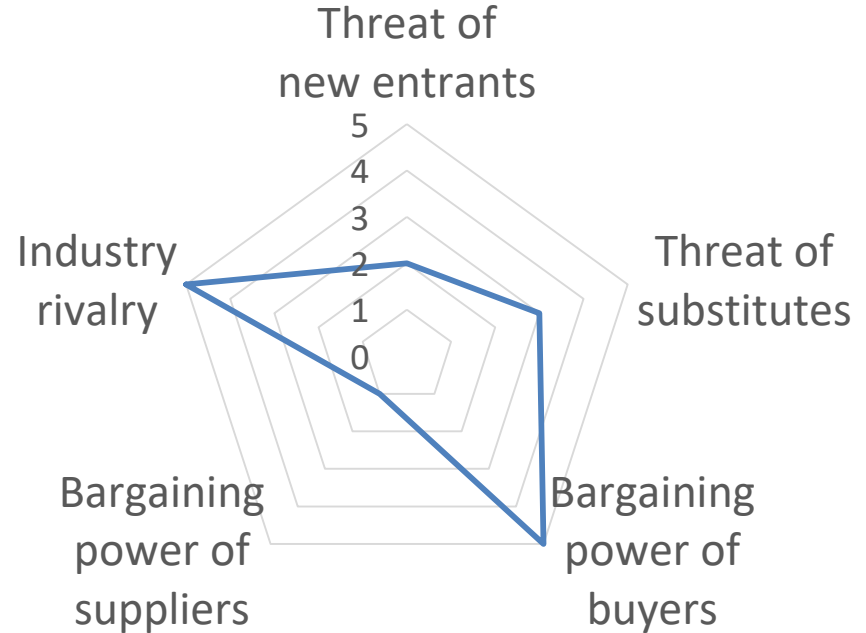




# Exhibit 2 – Industry Overview, Forestry

## Porter's Five Forces

- Threat of new entrants - **LOW**
- Threat of substitutes - **MODERATE**
- Bargaining power of buyers - **HIGH**
- Bargaining power of suppliers - **VERY LOW**
- Industry rivalry - **VERY HIGH**

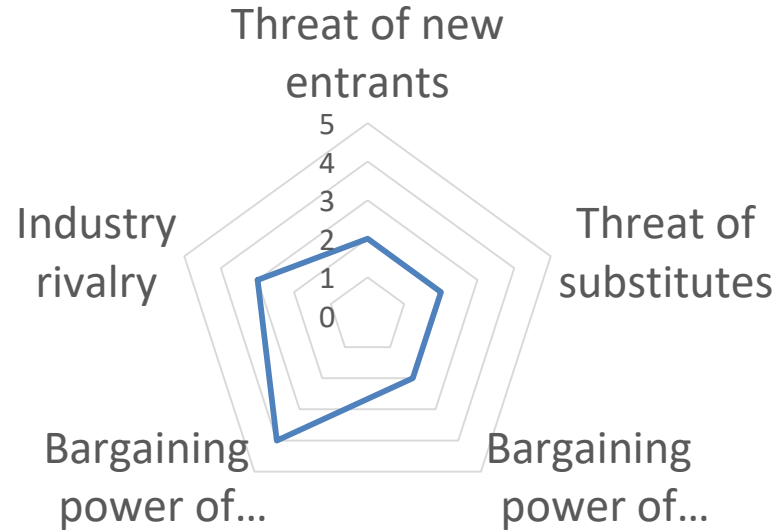


# Exhibit 3 – Industry Overview, Fuel

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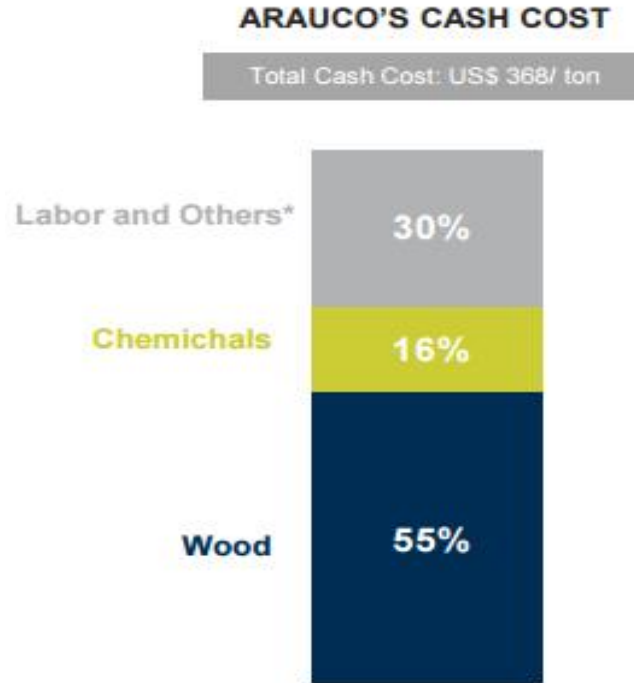
## Porter's Five Forces

- Threat of new entrants - **LOW**
- Threat of substitutes - **LOW**
- Bargaining power of buyers - **LOW**
- Bargaining power of suppliers - **HIGH**
- Industry rivalry - **MODERATE**



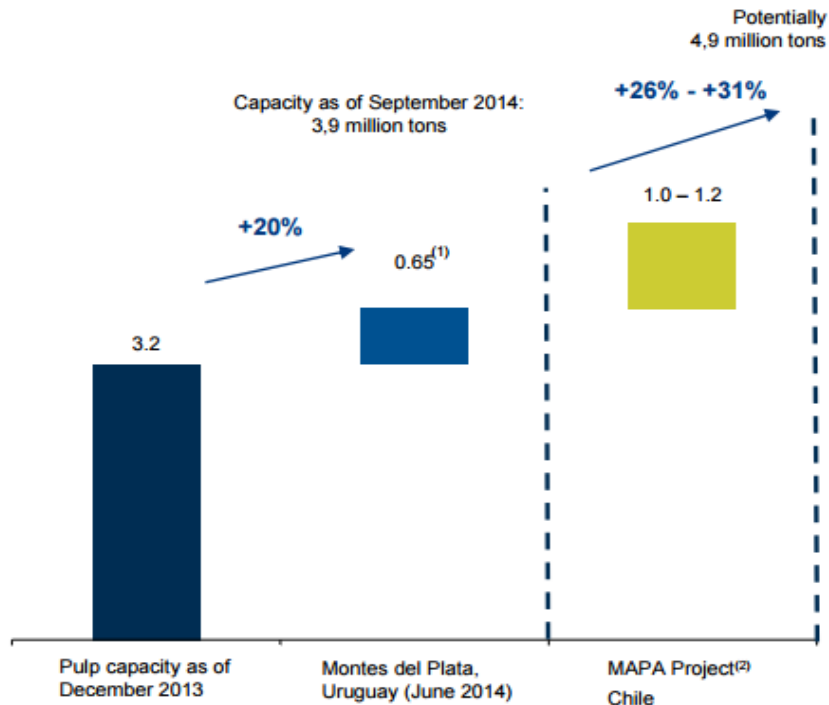
# Exhibit 4 – Arauco's Pulp Cash Cost

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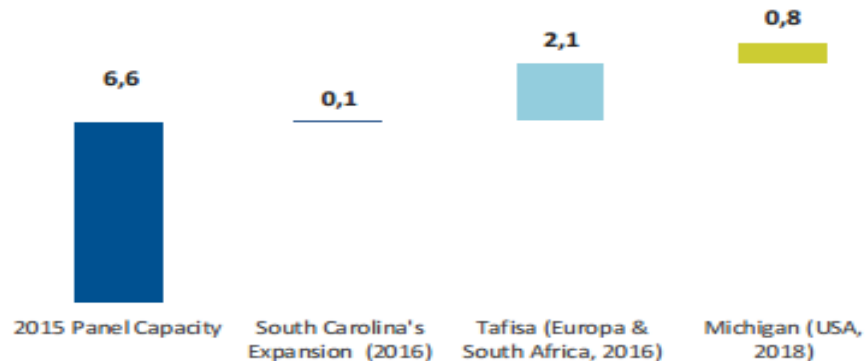


# Exhibit 5 – Competitive Position Forestry

## Expansions in Pulp (million tons)



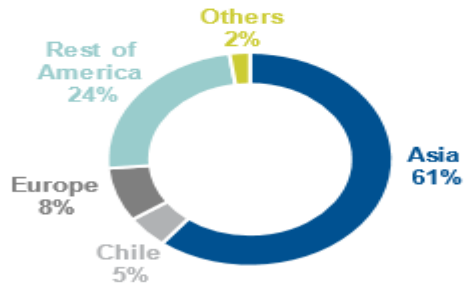
## Panel Capacity Increases (million m3)



# Exhibit 6 – Breakdown of Forestry Sales

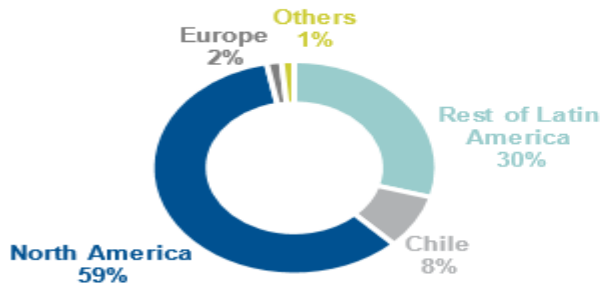
## PULP SALES

(US\$ 2,334 million)



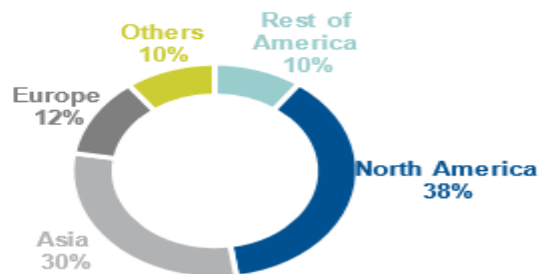
## PANELS SALES

(US\$ 1,851 million)

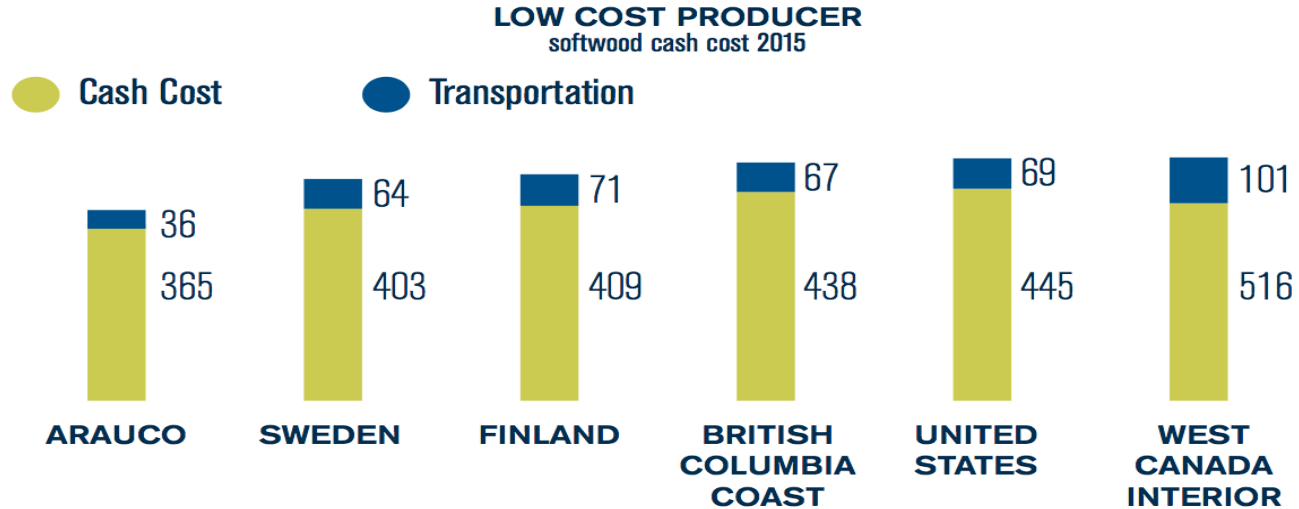


## SAWN TIMBER SALES

(US\$ 962 million)



# Exhibit 7 – Cash Cost & Transportation



# Exhibit 8 – New Forestry Projects

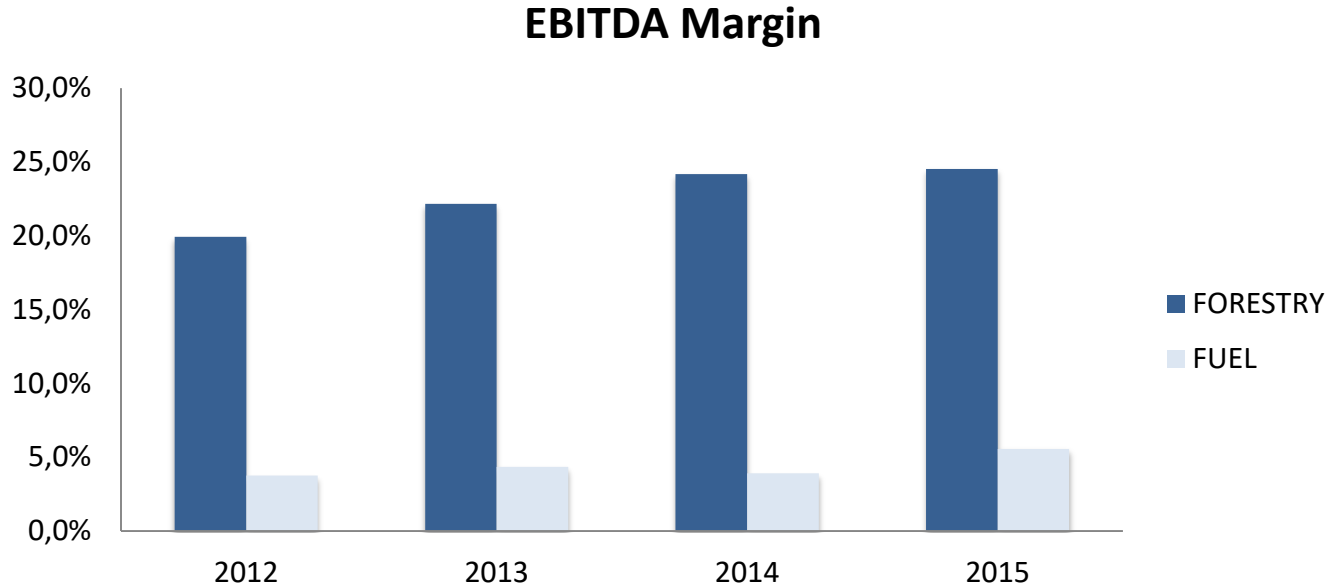
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<b>Projects</b>				
<b><u>2016</u></b>	<b><u>Location</u></b>	<b><u>Cap (tons)</u></b>	<b><u>Grade</u></b>	<b><u>Date</u></b>
Klabin	Brazil	1,500,000	Short/long fibre	1Q16
Svetlogorsky	Belarus	250,000	Long fibre	1Q16
Sodra	Varo/Sweden	275,000	Long fibre	3Q16
APP-OKI	Indonesia	1,800,000	Short fibre	3Q16
Total		3,825,000		
<b><u>2017</u></b>				
Fibria	Brazil	1,950,000	Short fibre	4Q17
Total		1,950,000		

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# Exhibit 9 – EBITDA Margins

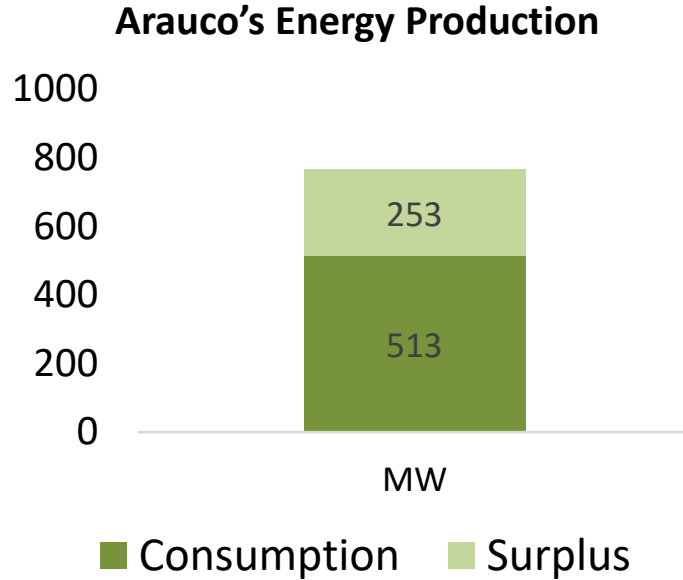
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# Exhibit 10 – Energy Production

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# Exhibit 11 - WACC

## WACC FORESTRY

Country	% OF EBITDA	D/D+E	E/D+E	Kd	Ke	T-Bill 10Y	CDS	Unlevered Beta	Levered Beta	TAX	PRM	WACC
CHILE	58%	28%	72%	4.7%	10.9%	2.28%	1.42%	0.9	1.1	25%	6.5%	8.8%
USA	9%	28%	72%	4.7%	14.3%	2.28%	5.10%	0.9	1.1	35%	6.5%	11.1%
BRAZIL	8%	28%	72%	4.7%	10.9%	2.28%	1.50%	0.9	1.1	25%	6.5%	8.8%
ARGENTINA	9%	28%	72%	4.7%	13.1%	2.28%	3.83%	0.9	1.1	34%	6.5%	10.3%
URUGUAY	16%	28%	72%	4.7%	9.1%	2.28%	0.00%	0.9	1.1	40%	6.5%	7.3%
					11.09%				1.1			

WACC FORESTRY

8.90%

## WACC FUEL

Country	% OF EBITDA	D/D+E	E/D+E	Kd	Ke	T-Bill 10Y	CDS	Unlevered Beta	Levered Beta	TAX	PRM	WACC
CHILE	54%	28%	72%	4.7%	9.5%	2.28%	1.42%	0.7	0.89	25%	6.5%	7.1%
COLOMBIA	37%	28%	72%	4.7%	13.1%	2.28%	4.88%	0.7	0.91	24%	6.5%	8.5%
OTHERS	9%	28%	72%	4.7%	11.8%	2.28%	3.75%	0.7	0.89	25%	6.5%	9.70%
					11.03%				0.90			

WACC FUEL

7.84%

## WACC FISHING & OTHERS

Country	% OF EBITDA	D/D+E	E/D+E	Kd	Ke	T-Bill 10Y	CDS	Unlevered Beta	Levered Beta	TAX	PRM	WACC
CHILE	100%	28%	72%	4.7%	11.8%	2.28%	1.86%	0.91	1.18	25%	6.5%	9.5%

WACC F. & OTHERS

9.5%



# Exhibit 13 – FCF Fuel

FCFF Fuel	g	1.90%								
(M US\$)	wacc	7.84%			1	2	3	4	3.05%	
		2013	2014	2015	2016E	2017E	2018E	2019E	2020E	Terminal Value
EBITDA FUEL		822,976	712,333	713,734	715,070	908,693	1,006,445	1,101,460	1,195,516	
D & A FUEL		207,755	188,402	171,303	182,489	241,608	261,036	288,811	312,303	
EBIT		615,221	523,931	542,431	532,581	667,085	745,410	812,649	883,213	
TAX	20%		21%	22.50%	24%	25%	27%	27%	27%	
EBIT*(1-TAX)		492,177	413,905	420,384	404,761	500,314	544,149	593,234	644,745	
D & A		207,755	188,402	171,303	182,489	241,608	261,036	288,811	312,303	
CAPEX FUEL		356,441	319,076	317,716	1,216,200	489,679	503,267	523,838	538,451	
WK FUEL					9,336	21,201	17,116	11,340	11,708	
Free Cash Flow					(638,286)	231,041	284,802	346,867	406,890	6,613,566
Metrogas Value		793,233	7,505,498							

# Exhibit 14 – FCF Fishing & Others

FCFF Fishing & Oth g		2.50%								3.00%	
wacc		8.6%									
(M US\$)	2013	2014	2015	2016E	2017E	2018E	2019E	2020E	Terminal Value		
EBITDA Fishing & O	16,801	42,966	13,083	13,475	13,880	14,296	14,725	15,167			
D & A F & O	35,720	32,994	25,862	26,731	28,067	29,471	30,944	32,491			
EBIT	(19,009)	9,972	(13,962)	(9,208)	2,240	15,482	16,991	18,883			
TAX	20%	21%	22.50%	24%	25%	27%	27%	27%			
EBIT*(1-TAX)	(15,207)	7,878	(10,821)	(6,998)	1,680	11,302	12,404	13,785			
D & A	35,720	32,994	25,862	26,731	28,067	29,471	30,944	32,491			
CAPEX F & O	57,012	15,892	12,990	19,718	20,863	21,986	23,232	24,415			
WK F & O				(21,453)	6,030	3,351	(3,642)	1,781			
Free Cash Flow				21,468	2,855	15,436	23,758	20,080	341,301		

Value 330,952

# Exhibit 15 – Valuation Summary

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FORESTRY	11,193,581
FUEL	7,505,498
FISHING & OTHERS	330,952
<b>SOTP</b>	<b>19,030,031</b>
NET DEBT	4,880,000
Equity	14,150,031
Shares outstanding	1,299,853,848
CLP/USD\$	678
Price per Share (DCF US\$)	11
<b>PPS CLP</b>	<b>7,375</b>

# Exhibit 16 – Multiples Valuation

	Enterprise	EV (billions)	EV/TTM EBITDA	EV COPEC (MM USD)	Equity copec (MM USD)	Share price (CLP)
FORESTRY	Fibria	8.08	6.07	12,073	7,193	3,749.2
	Suzano	7.1	5.9	11,735	6,855	3,573.0
	Shandong Chenming paper	8.34				
	Hokuetsu kishu paper	2.21	7.38	14,679	9,799	5,107.3
	Weyerhaeuser	30.53	18.57	36,936	32,056	16,707.8
	CMPC	8620	9.25	18,398	13,518	7,045.9
	Mean	1446	9.48	18,856	13,976	7,284.3
FUEL	Caltex Australia	6.19	8.6	17,105	12,225	6,372
	Petronas Dagangan BHD	4.91	16.67	33,157	28,277	14,738.13
	Qatar Fuel QSC	2.37	5.89	11,715	6,835	3,562.60
	Mean	4.49	10.39	20,659	15,779	8,224
<b>EMPRESAS COPEC</b>	<b>EV/EBITDA</b>		<b>9.78</b>	<b>19,456.84</b>	<b>14,048.84</b>	<b>\$ 7,322 CLP</b>

EBITDA	1,989
EV	19,457
Net Debt	4,880
Minority Interest	528
Equity in MM USD	14,049
<b>Share price in CLP</b>	<b>7,322</b>

# Exhibit 17 – History

81 YEARS OF HISTORY



1934

INCORPORATION



1970-1980

DIVERSIFICATION



1986-2000

INVESTMENTS AND GROWTH

- Alto Paraná
- Arauco II
- Licancel
- Metrogas



2003

CORPORATE RESTRUCTURING

- Creation of Empresas Copec



2013-2015

NEW BUSINESSES

- Montes del Plata pulp mill in Uruguay started operations
- Consolidation of the panel business
- Terpel completes its restructuring process
- EC sold its stake in Guacolda



1950-1960

EXPANSION IN FUELS

- Abastible
- Sonacol

1986

ENTRY OF ANGELINI GROUP

- Financial restructuring
- Strategic development plan

2000-2005

CONSOLIDATION AND STRATEGIC FOCUS

- Angelini assumes control of the Company
- Divestiture of shares in non-core businesses
- Focus in fuels, forestry and fishing.



2005-2012

EC, A WORLD SCALE PLAYER

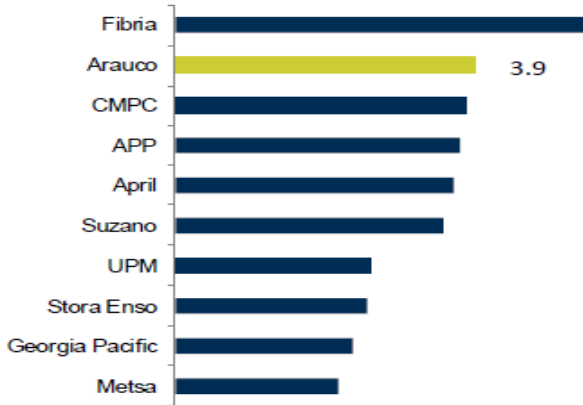
- Arauco becomes the second main producer of market pulp in the world and 3rd main Panel producer
- Empresas Copec expands to Colombia in liquid fuels and LPG



# Exhibit 18 – Market Leaders

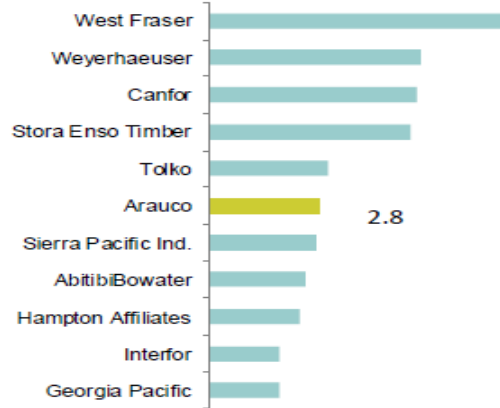
## Pulp

Million tons



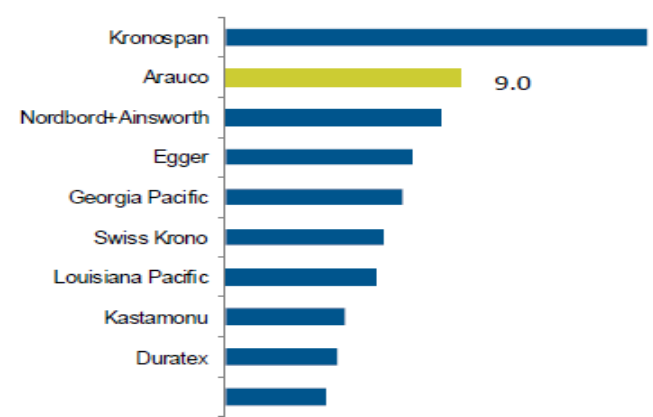
## Sawn Timber

Million m<sup>3</sup>



## Wooden Panels

Million m<sup>3</sup>

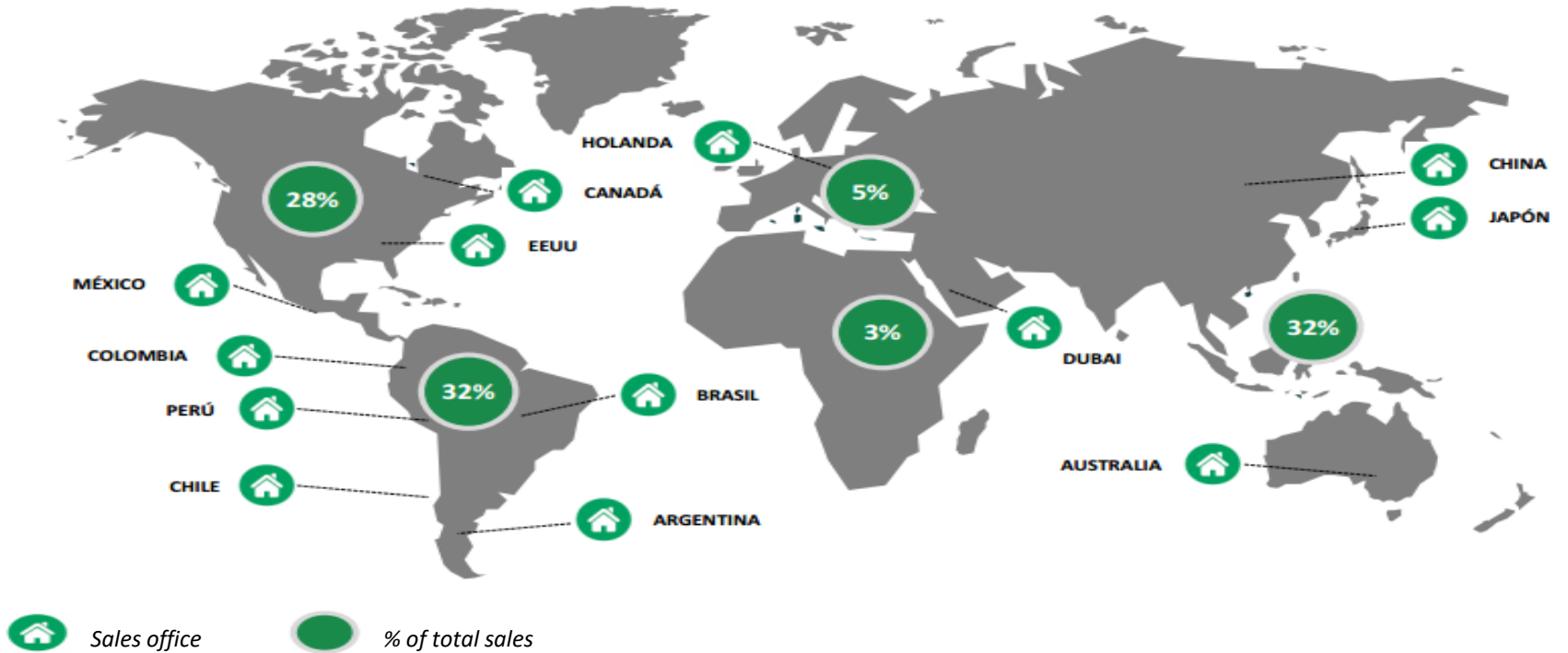


# Exhibit 19 – Arauco participation



	FORESTRY	PULP	SAWNTIMBER	PANELS	ENERGY
Chile	719,347 hectares	5 mills 2.88 million tons.	8 sawmills 2.6 million m <sup>3</sup>	5 facilities Plywood: 710 Th m <sup>3</sup> MDF: 515 Th m <sup>3</sup> Hardboard: 60 Thm <sup>3</sup> MDP: 300 Thm <sup>3</sup>	10 plants 606 MW Surplus: 209 MW
Argentina	132,289 hectares	1 mill 350 Th. tons	1 sawmill 318,000 m <sup>3</sup>	2 facilities MDF: 300 Th m <sup>3</sup> PB : 260 Th m <sup>3</sup>	2 plants 78 MW Surplus: 8 MW
Uruguay	72,172 hectares	1 mill *650 Th. tons			1 plant 82 MW Surplus: 36 MW
Brasil	100,296 hectares			2 facilities MDF: 1,255 Th. m <sup>3</sup> PB: 310 Th. m <sup>3</sup>	
U.S.A Canada				8 facilities MDF: 1.5 mill. m <sup>3</sup> PB: 1.42 mill. m <sup>3</sup>	
	1,024,104 hectares (69% pine 29% eucalyptus)	7 mills 3.88 million tons	9 sawmills 2.95 million m <sup>3</sup>	17 facilities 6.60 million m <sup>3</sup>	13 plants 766 MW Surplus: 253 MW

# Exhibit 20 – Arauco Sales



# Exhibit 21 – Forest to Mill to Port Distance



# Exhibit 22 – Investments

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Acquisition of the 100% of MAPCO shares. The price paid was **US\$535 million**.



Investment of **US\$ 747 million** to produce and distribute Mobil lubricants.



Purchase of 50% of **Tafisa** in **US\$153 million** through a joint venture with **Sonae Industria**.

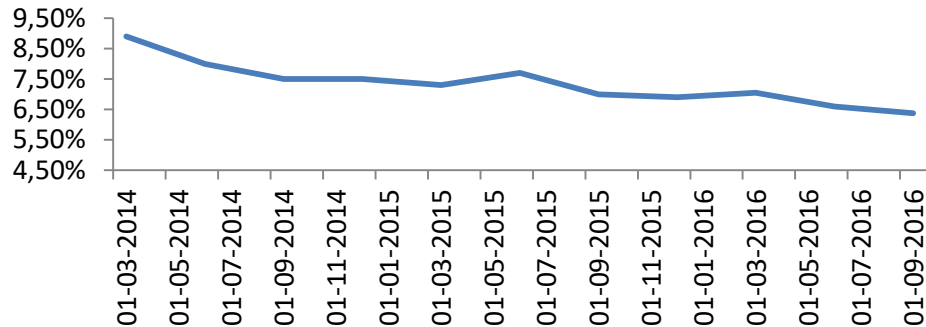


**MDP Grayling** project approved with an investment of **US\$400 million**.

# Exhibit 23 – Risks

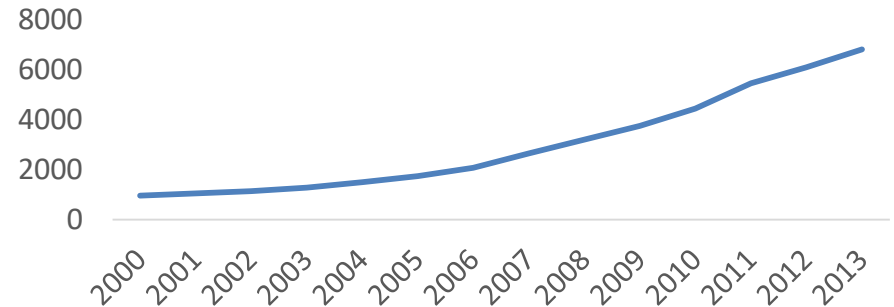
China is the country with the greatest impact on the pulp market and its prices. If the Asian giant's economy fails to keep the demand growth for pulp, this would imply a decrease of the international prices.

**China consumption % variation YoY**



Although China's consumption has slowed down, their demand for pulp is increasing 14% per year and the international pulp price is reaching the marginal cost of some producers.

**China's GDP per capita (USD)**



# Exhibit 24 – Risks

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- Chilean Labour Reform
- Extension of the coverage of collective bargaining
- Prohibition of the replacement of striking workers as a collective exercise right

A floor of the benefits to be negotiated between employers and employees and recognition of the effective strike



# Exhibit 25 – Buy Recommendation

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Cost of Equity	%	Weight
Ke Forestry	11.43%	67%
Ke Fuel	10.66%	33%
<b>Ke Empresas Copec</b>	<b>11.17%</b>	<b>100%</b>

<b>Upside potencial</b>	<b>17.30%</b>
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Upside potencial > Cost of Equity  
=> **Buy Recommendation**