
A SUMMARY OF EBRD'S NEW RUSSIAN FOREST POLICY DIALOGUE STUDY

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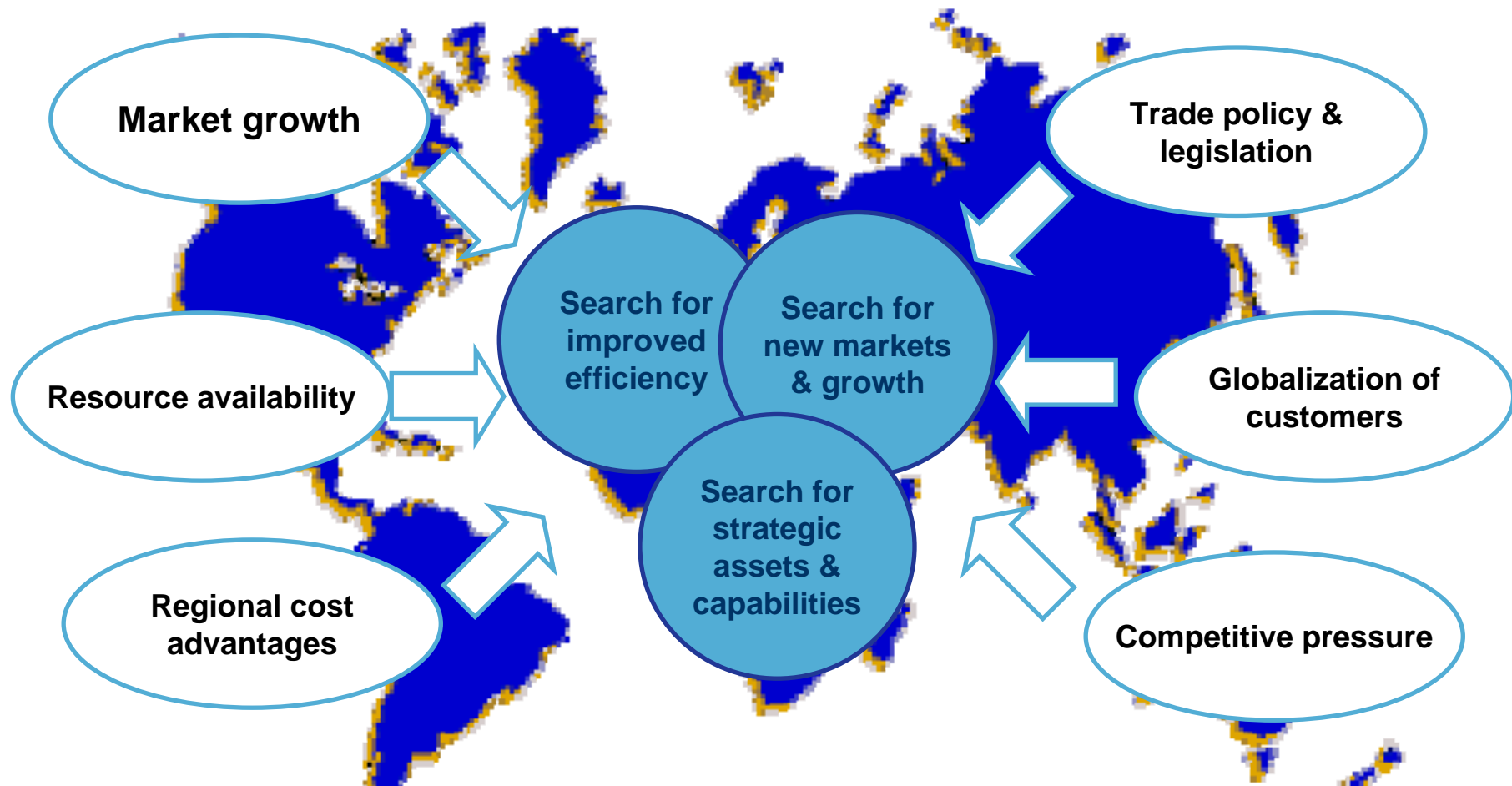


European Bank
for Reconstruction and Development



FOCUS OF THE EBRD STUDY

- The pulp and paper industry is becoming more global and consolidated. Trade of pulp and paper between regions increased significantly in the past decade.
- Russia represents only 3.5% of the global forest product business.
- Russia is home to the world's largest forest (800 million hectares with 2/3 covered by softwood).



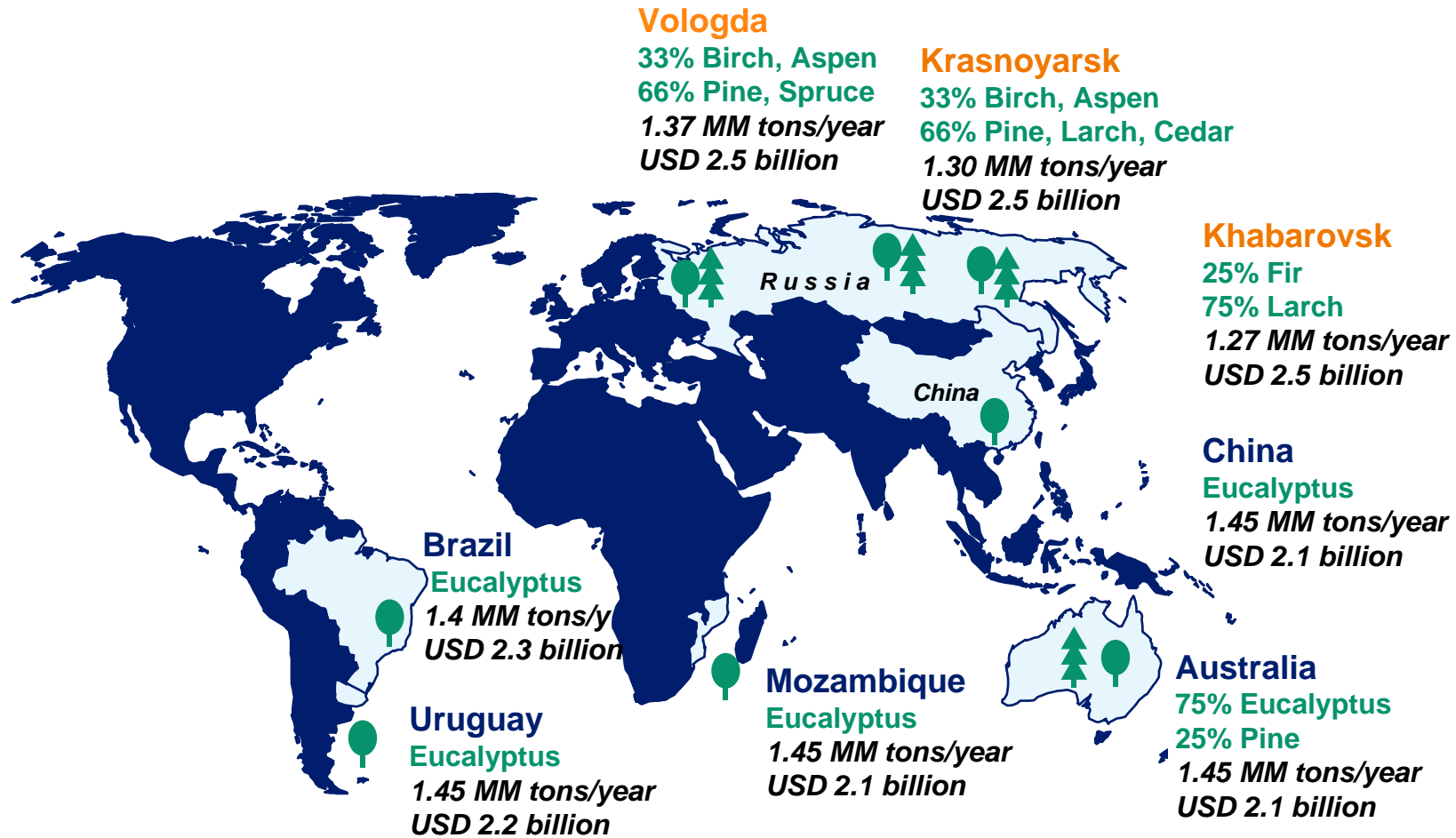
FOCUS OF THE EBRD STUDY

- 10 greenfield pulp mills built on planet Earth in the last decade.
- Russia's youngest greenfield pulp mill is more than 30 years old.
- 3 Russian regions were analysed as options for the next greenfield pulp mill, which will comply with best standards for sustainable forestry management.



FOCUS OF THE EBRD STUDY

- The 3 Russian regions were benchmarked against 5 countries competing for industry investors, who are planning their next greenfield pulp mill.

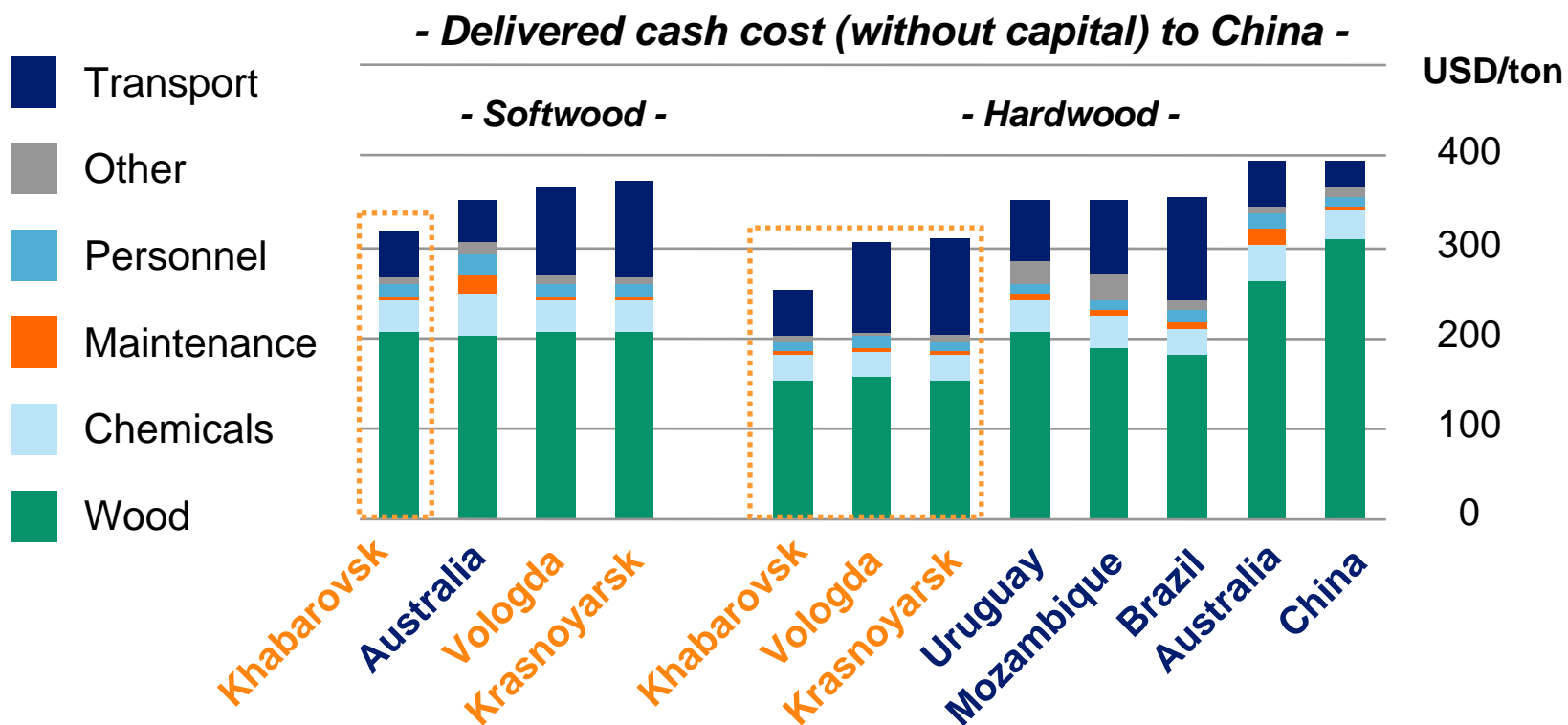


A GREENFIELD PULP MILL HAS MANY BENEFITS FOR RUSSIA... IF OWNED AND OPERATED BY A GOOD INDUSTRY PLAYER.

- A new pulp mill will **improve self-sufficiency in chemical pulp** and support the growth of the Russian domestic paper, tissue and board industry, which is already challenged by tightening availability and high prices of recovered fibre.
- A new pulp mill improves **employment and welfare in local forest communities**.
- A new pulp mill generates **economic growth and tax revenues**.
- A new pulp mill has a positive **knock on effect to other industries** such as the production of solid wood products and packaging for the domestic and export markets.
- Working with **respected industry players** gives comfort to the Russian authorities that a new mill will comply with **high standards** of financial transparency, social responsibility and sustainable forestry management.

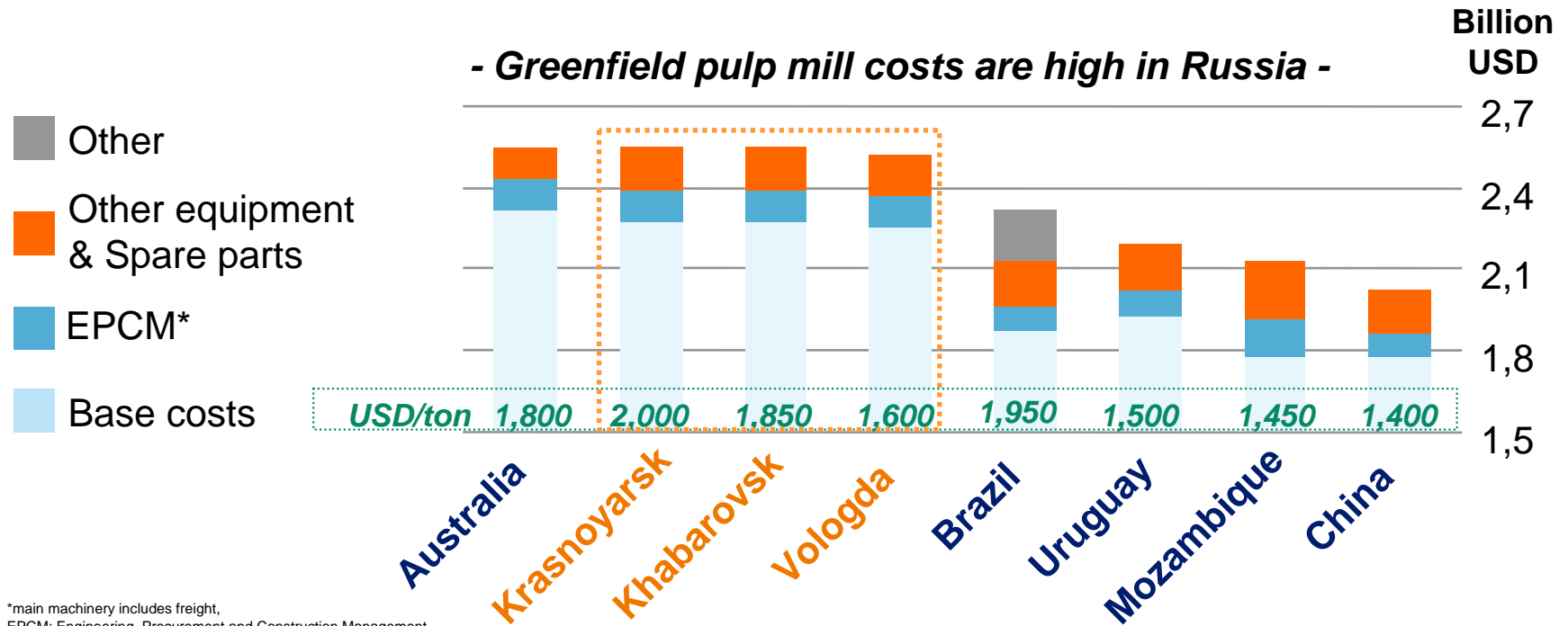
RUSSIAN PULP HAS VERY COMPETITIVE CASH COST...

- Russia is cost competitive for exporting pulp to Asia, especially China. The pulp is, however, sold at a discount due the impact of larch and a variety of hardwood species.
- Wood accounts for about 60% of delivered cash costs among the selected projects. Transport and other production costs account for less than 20% of delivered cash costs.



... BUT THE RUSSIAN GREENFIELD IS A DISADVANTAGE

- Greenfield pulp mill construction cost is driven by (i) size, (ii) fibre mix, (iii) infrastructure, and (iv) non-refundable taxes and duties.
- Hardwood pulping has higher yield than that of softwood resulting in higher output on similar assets. The capability of producing both grades increases the investment.
- Due to regional cost factors and forest structures, the need to produce both hardwood and softwood makes the Russian pulp mill expensive. Swing mills are estimated to reach production of 1.3 million t/a, whereas hardwood mills would reach 1.5 million tons/year



“GREEN GOLD”? ...A GREENFIELD PULPMILL YIELDS 10% ROI

USD, million	Vologda	Krasnoyarsk	Khabarovsk	Australia	Brazil	China	Mozambique	Uruguay
Investment	2,700	2,700	2,700	2,700	2,500	2,200	2,300	2,300
Output 1,000 t/a	1,375	1,300	1,275	1,450	1,450	1,450	1,450	1,450
Gross revenue	910	890	840	900	920	920	920	920
Cash costs	(440)	(450)	(380)	(480)	(500)	(570)	(500)	(490)
Depreciation	(140)	(140)	(140)	(140)	(130)	(120)	(120)	(120)
EBIT	290	270	290	190	250	210	260	270
ROI %	11 %	10 %	11 %	7 %	10 %	9 %	11 %	12 %
Equity ratio %	50 %	50 %	50 %	50 %	50 %	50 %	50 %	50 %
Interest rate %	5.3 %	5.3 %	5.3 %	4.4 %	5.3 %	4.8 %	6.2 %	5.7 %
Interest payment	70	70	70	60	70	50	70	70
Taxes	40	40	40	40	60	40	40	0
Net income	180	160	180	90	120	120	150	200
ROE, %	13 %	12 %	13 %	7 %	10 %	11 %	13 %	17 %

- The return on investment (ROI) is 7 - 12 %.
- The return on equity (ROE) is between 7% – 17%
- Vologda and Khabarovsk show a better potential for returns than Brazil and China - assuming loan interests at market rates. However, BNDES in Brazil and CIC in China offer subsidised loans to greenfield investors.
- The highest returns are found in Uruguay, which is host to the majority of greenfield mills built in the past decade – partly due to attractive tax incentives.
- Pulp mills need 50% equity to survive the market cycle.

“GREEN GOLD”? ... THE PULP PRICE VOLATILITY HAS A HUGE IMPACT ON A GREENFIELD MILL’S ABILITY TO SERVICE DEBT.

50% of investment must be equity financed								
USD, million	Vologda	Krasnoyarsk	Khabarovsk	Australia	Brazil	China	Mozambique	Uruguay
EBITDA	300	295	320	200	230	175	235	245
Debt service	205	205	205	195	190	160	185	185
Taxes	20	15	20	0	10	0	10	0
Repair capex	25	25	25	25	25	20	25	25
Free cash	50	50	70	(20)	5	(10)	15	40
ROE	5 %	5 %	6 %	(0 %)	2 %	0 %	3 %	5 %

- NBSK sold for 600-650 USD/t and the BEKP 500-550 USD/t in China during industry cycle downturns.
- If loans have 12 year loan tenors, then substantial cash flow is needed for debt service due to high investment costs.
- At 50% equity ratio and market based financing, Australian and Chinese greenfields will have negative cash flows during industry cycle downturns.

WHO ARE THE POTENTIAL INVESTORS WITH THE MONEY AND STRATEGIC INTEREST?

	<i>- Integrated Paper Companies -</i>	<i>- Market Pulp Producers -</i>
<i>Investment rationale</i>	<ul style="list-style-type: none">• Reduce cost structure of raw material supply• Improve raw material self sufficiency	<ul style="list-style-type: none">• Capitalise on demand growth for fibre in Asia
<i>Existing production assets</i>	<ul style="list-style-type: none">• Focus on wood free papers, liner boards and carton boards• About 10 million tons of paper and board capacity• Among top 5 within the industry• Present in North America, Europe, Asia	<ul style="list-style-type: none">• Focus on market pulp (bleached softwood and hardwood pulps)• About 4 million tons of market pulp production capacity• Among top 5 within the industry• Present in North America, Europe, Asia
<i>Balance sheet</i>	<ul style="list-style-type: none">• 20 billion USD in size with debt to equity ratio of about 0.80• Capacity to mobilise 6 billion USD of new debt to facilitate growth in pulp and paper production	<ul style="list-style-type: none">• 9 billion USD in size with debt to equity ratio of 0.66• Capacity to mobilise 3.6 billion USD of new debt to facilitate growth in market pulp production

STRATEGIC INVESTORS SAY RUSSIA HAS GOOD POTENTIAL, BUT HIGH RISKS WITH LITTLE INCENTIVES

“Russia has good potential for viable investments on greenfield pulp mills”

“But project implementation and operating risks in Russia make a high barrier”

“And other regions in the world use effective incentive packages to attract investors”

	Vologda	Krasnoyarsk	Khabarovsk	Australia	Brazil	China	Mozambique	Uruguay
rating ++/+/0/-/--								
Profitability (net income)	+	+	+	-	0	0	+	+
Investment cost	-	-	-	-	0	+	+	0
ROE, over economic cycle	+	+	+	-	0	0	+	++
ROE, bottom of economic cycle	+	+	+	-	0	0	+	+
Attractiveness unadjusted for risks	+	+	+	-	0	0	+	++
Construction cost risks (infrastructure, roads)	-	--	--	0	+	+	--	+
Operating environment uncertainties	-	--	--	+	+	+	--	+
Access to skilled workforce	0	-	-	+	+	0	--	+
Secured ownership of critical resources	0	0	0	+	+	-	0	+
Raw material cost risks	-	--	--	+	0	-	-	+
General cost inflation pressure	-	-	-	+	-	-	0	0
Project implementation and operating risks	-	--	--	+	+	0	--	+
National financing programmes	0	0	0	0	+	+	0	0
Attractive tax/duty framework	0	0	0	0	-	-	+	++
State financing for infrastructure investments	-	-	-	0	+	+	-	+
Financial incentives to attract investments	0	0	0	0	+	+	0	+
General assessment on attractiveness	0	-	-	0	+	+	-	+

POOR INFRASTRUCTURE AND DIFFICULT NATURAL CONDITIONS LEAD TO MAJOR WOOD AVAILABILITY RISK IN RUSSIA

	Vologda	Krasnoyarsk	Khabarovsk	Australia	Brazil	China	Mozambique	Uruguay	
Slowly growing natural forests with high species variation require large forest area and long transport	Pulpwood								
	Species variation	Medium	High	High	In Control	In Control	In Control	In Control	
	Annual growth, m³sub/ha	3.5	1.5	1.0	25	35	17	25 est.	28
Difficult climate and poor infrastructure lead to wood availability risk and require large road networks to be built in Russia	Forest area (1,000 ha)	2 900	7 600	10 000	210	160	320	220	200
	Transport; Aver. distance	300 km	450 km	550 km	125 km	100 km	300 km domestic	150 km	300 km
	Climatic condition	Hard	Severe	Hard	Adeq.	Good	Good	Adeq.	Good
	Wood supply issues	Major infra development need, large wood inventories needed			Draught	Competition for land	Other land uses	Low skilled labour	Land area for forests
	Availability risks	Access to forests restricted by poor infrastructure			Forest Fires	Social pressure	Import price	Un-known	Minimal

INVESTMENT CONDITIONS ARE UNFAVOURABLE IN RUSSIA

The chemical pulp industry is established in areas with a generally favourable operating environment. Russia suffers from poor administrative framework and worse than average competitiveness

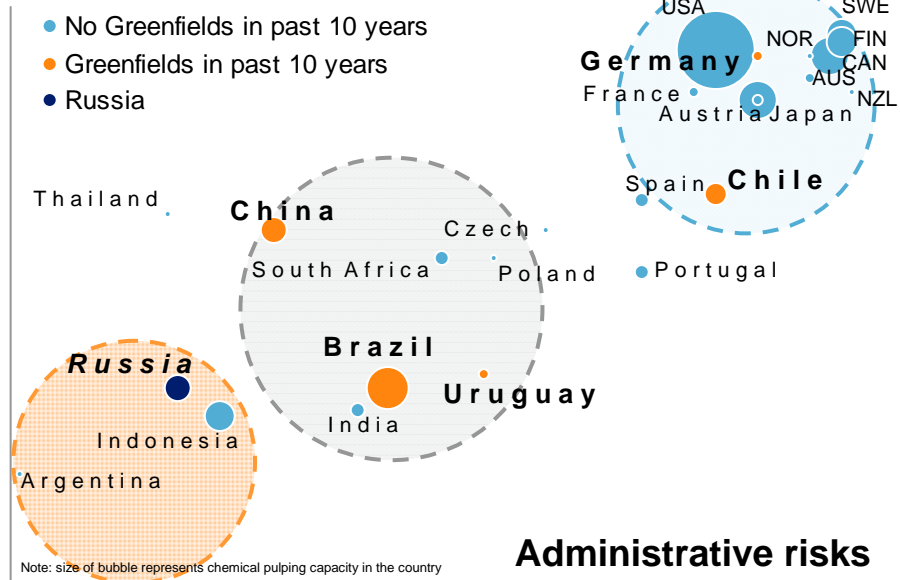
**High global competitiveness¹⁾
AA or higher sovereign rating²⁾
High rank in Ease of Doing Business³⁾**

**Medium global competitiveness¹⁾
BBB or higher sovereign rating²⁾
Middle rank in Ease of Doing Business³⁾**

**Low global competitiveness¹⁾
Non-investment grade sovereign rating²⁾
Low end rank in Ease of Doing Business³⁾**

1) Score in WEF Global Competitiveness
2) S&P long term sovereign government bond ratings
3) Ranking in World Bank Ease of Doing Business
4) AON political risk
5) Transparency International Corruption Perception Index (CPI)
Sources: Transparency International, World Bank, AON, Standard & Poors, World Economic Forum, Pöyry Analysis

Economic environment risks



HIGH	MEDIUM	LOW
High/medium political risk⁴⁾ High corruption⁵⁾ (CPI rating < 3.5)	Medium/low political risk⁴⁾ Medium corruption⁵⁾ (CPI rating < 7)	Low political risk⁴⁾ Low corruption⁵⁾ (CPI rating > 7)

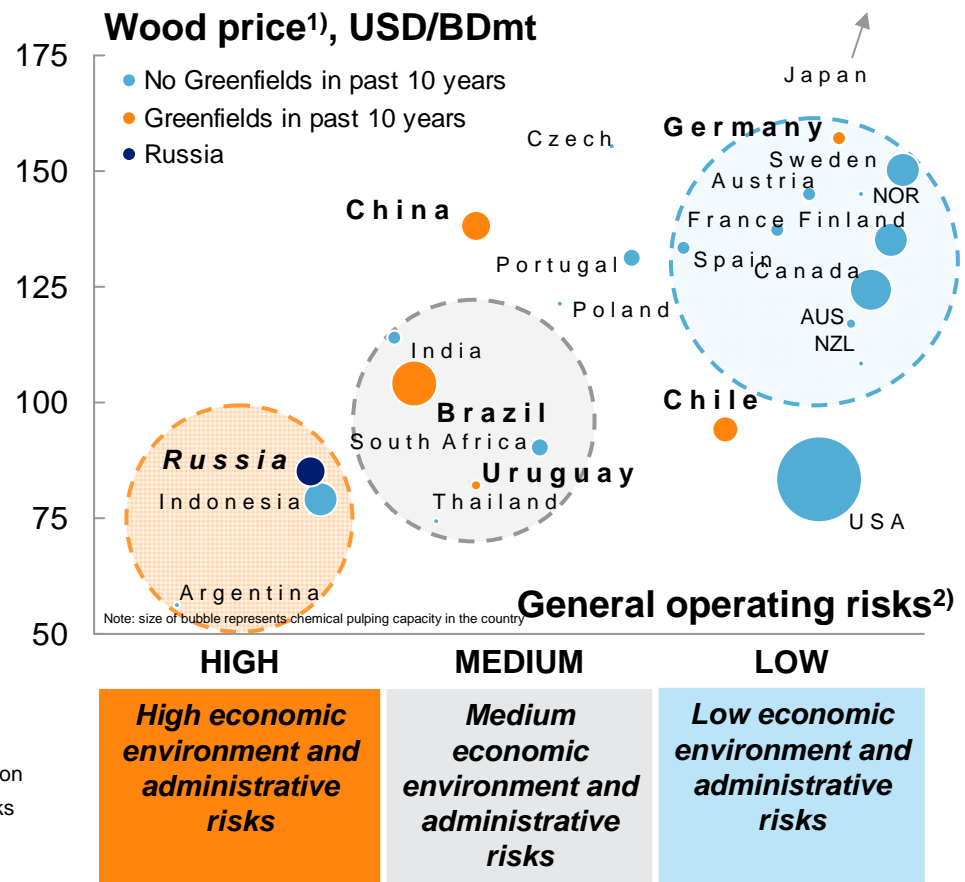
LOW WOOD PRICES DO NOT COMPENSATE FOR WEAK GENERAL OPERATING ENVIRONMENT

The chemical pulp industry is established in areas with favourable general operating environment and expands in regions with low cost of raw material (Brazil, Chile, Uruguay)

Skilled high cost labour
Established industrial/forest infrastructure
Largely based on managed forests

Skilled medium cost labour
Developing industrial/forest infrastructure
Largely based on plantations

Medium skilled low/medium cost labour
Poor industrial/forest infrastructure
Largely based on natural forests



1) Pöyry database numbers, average for softwood and hardwood for the region

2) Average position in terms of administrative and economic environment risks from the previous slide

Sources: Transparency International, World Bank, AON, Standard & Poors, World Economic Forum, Pöyry Analysis

REFORM ACTION PLAN TO CONVINCE AN INDUSTRIAL PLAYER TO INVEST IN A GREENFIELD PULP MILL IN RUSSIA

- **Improved financial viability:**

- Allow the use of modern and tested *international forest management practises*
- *Priority Investor Status* to cover the entire wood supply zone
- Federal, regional and/or third party *funds for infrastructure* outside the mill fence

- **Reduced implementation risks:**

- *Adequate amount of forest leases* are reserved within logical wood supply zone
- *Priority access to expiring leases* in the wood supply zone
- *Special Project Zone* which allows adapting international standards and norms that reach the same or better performance in terms of health, safety and environment
- *An efficient one-stop-shop (one entity)* for the filing of all applications and the processing of all permits and licences needed for the project.

- **Improved investment incentives:**

- *Competitive financing mechanism and tax schemes* will be developed to match the conditions at competing investment destinations (countries).