

Building Materials

Brent and USD/INR – A double whammy!

After a brief lull, Brent crude oil prices have resumed rising (USD 76 per barrel; +43% YoY/+12% FYTD). This, further aggravated by INR depreciation against the USD (72.4; +14% YoY/+11% FYTD), is likely to lead to a rise in fuel cost for ceramics companies and raw material (RM)/chemical costs for the wood panel industry. Ceteris paribus, a 10% rise in crude prices and the USD/INR exchange rate (YoY) each could hypothetically lead to 7 - 61% drop in PBT (FY18 basis) for companies in our coverage universe, though extent of impact could vary depending on competitive intensity, time lag, hedges and so on. While our estimates broadly reflect these cost pressures (assuming pass on to some extent with a lag), we are particularly concerned about tile and MDF companies due to high competitive intensity (given the recent drop in realisations).

While the near term remain painful for building material companies due to sluggish demand/rising costs, we believe medium to long-term prospects would improve on the back of a) recovery in demand and b) a tighter regulatory environment (GST, e-Way bill, etc.), which would force unorganised players to fall in line. This note provides a sensitivity analysis for each company to: gas prices, Brent crude/chemical prices and the USD/INR exchange rate (imports/exports/forex loans).

- **Relevance of USD/INR and crude oil prices for building material companies:** Brent crude has risen 12% FYTD (6% in the past 1 month) while the INR depreciated 11% FYTD (5% in the past 1 month). The Brent crude price change has directly impacted RLNG prices (function of 3-month moving average), especially relevant for tile companies such as Kajaria and Somany, located outside Gujarat (the Morbi ceramic industry is primarily dependent on Gujarat Gas). Chemical costs, on the other hand, are relevant for wood panel companies (20-25% of RM consumed) and are directly/indirectly influenced by changes in crude oil prices (imported/trade at parity to import prices). The USD/INR exchange rate too has directly impacted these gas/chemicals costs.
- **Tile companies are significantly exposed to Brent crude prices and currency fluctuations:** Power and fuel costs (largely gas) account for 19-22% of revenues for tile companies (2-3% for Cera). The ceramics industry in Morbi largely depends on Gujarat Gas (a mix of various sources) while tiles plants outside Gujarat largely depend on RLNG/Ras Gas, imported from the Middle East. While Gujarat Gas decides its own price, to be charged to the ceramic industry in Gujarat, RLNG prices are a function of the 3-month rolling average of Brent crude (since Jan'16). More than 70% of capacity lies outside Gujarat for Kajaria (38% for Somany). As shown in Exhibit 7, a 10% jump in Brent crude and the USD/INR rate each has almost a 29% and 61% impact on PBT for Kajaria and Somany, respectively. There is minimal impact on Cera (c.7%) on account of a) product mix (sanitaryware requires lesser quantum), b) APM gas supplies (40% of requirement) and c) a significant level of outsourcing.
- **How it affects wood panel companies:** Most chemicals used by Ply/MDF/laminate companies (phenol, methanol, melamine, etc.) are derivatives of crude oil and hence are sensitive to crude oil and exchange rate fluctuations (chemicals sourced locally could also be priced at import parity). As shown in Exhibit 5, a 10% jump in Brent crude and 10% in the USD/INR exchange rate has almost a 37%/40%/20% impact on PBT for Greenply, Century Ply and Greenlam, respectively. Greenlam has substantial exports (in fact, net exporter) and hence tends to benefit from the USD/INR depreciation, although the company is likely to see impact on margins for its domestic business due to the rise in the cost of chemicals.
- **Recommendation:** While our/street estimates factor in raw material price inflation, we do point out that there is a downside risk to our earnings estimates, particularly for tile and MDF companies, given competitive intensity. We maintain BUY on Somany Ceramics and Greenlam Industries and HOLD on Kajaria Ceramics, Cera Sanitaryware, Greenply Industries and Century Plyboards.



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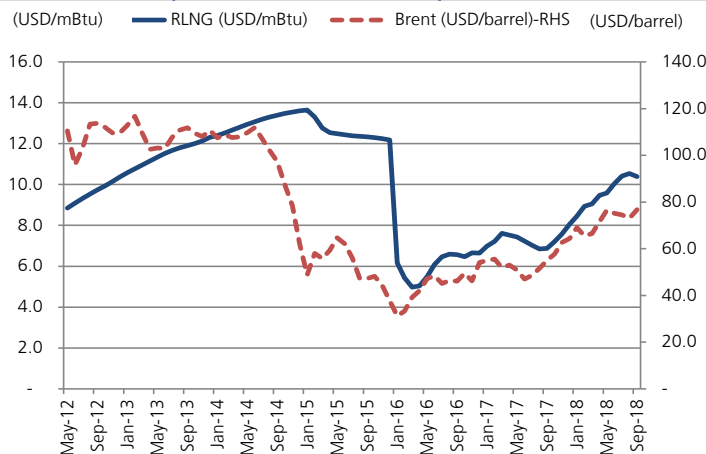
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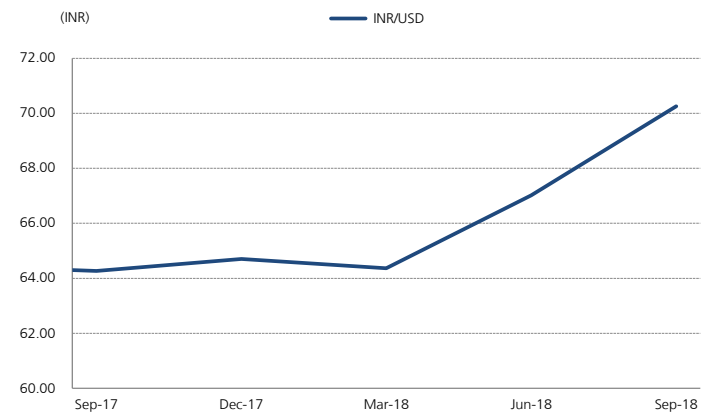
Key Charts

Exhibit 1. Brent up 43% YoY while RLNG up 51% in USD terms



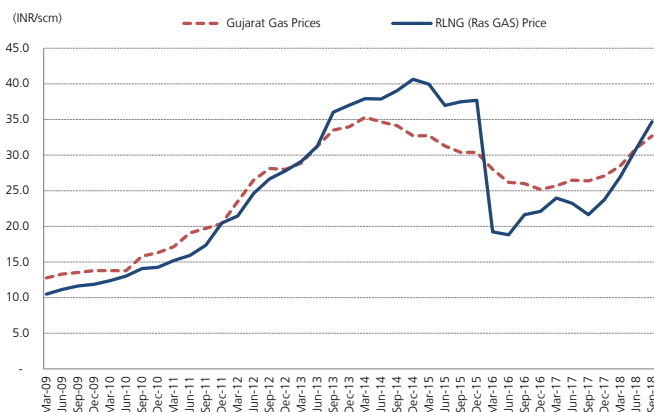
Source: Company, JM Financial; RLNG price is excluding transportation cost and taxes

Exhibit 2. USD has appreciated by 11% against the INR (FYTD)



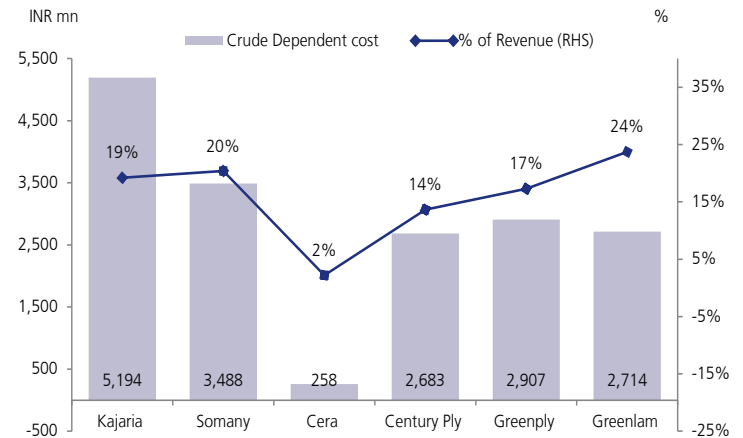
Source: Company, JM Financial

Exhibit 3. Gujarat gas price up 24% YoY while RLNG up 60%



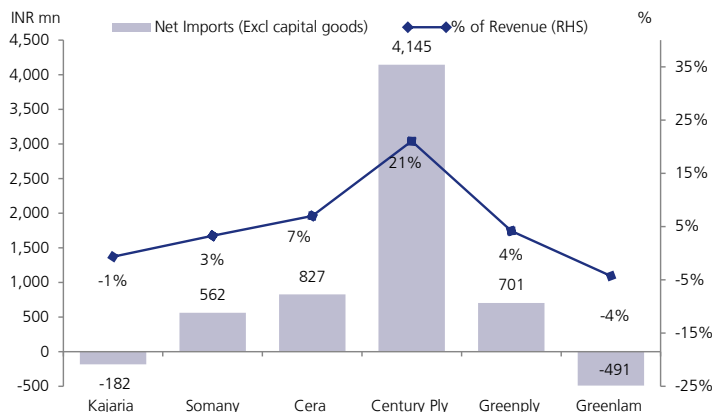
Source: Company, JM Financial; RLNG price is excluding transportation cost and taxes

Exhibit 4. Crude Dependent Cost (% of Revenue)



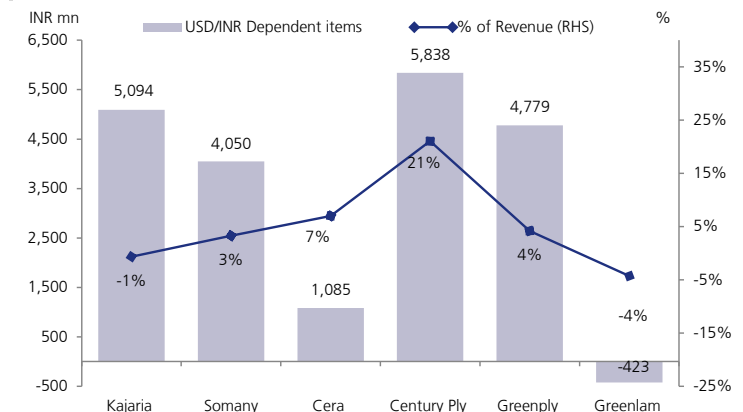
Source: Company, JM Financial

Exhibit 5. Net Imports (% of Revenues)



Source: Company, JM Financial; RLNG price is excluding transportation cost and taxes

Exhibit 6. USD/INR Dependent Items* (% of Revenue)



Source: Company, JM Financial; * include RM cost (including chemicals), fuel cost and Foreign currency loans

Summary Sheet

Exhibit 7. Century Ply and Somany would be impacted most significantly

INR mn, unless otherwise specified	Kajaria	Somany	Cera	Century Ply	Greenply	Greenlam
Brent Dependent Items	5,194	3,488	258	2,683	2,907	2,714
Power and Fuel cost	5,194	3,488	258	638	696	321
Chemicals	0	0	0	2,046	2,210	2,393
USD/INR dependent items	5,094	4,050	1,085	5,838	4,779	-423
Imports (RM + Traded Goods)	301	1,083	960	5,048	1,010	3,013
Exports	-483	-521	-133	-903	-308	-3,504
Forex Exposure to loans	82	0	0	1,182	3,526	68
Gas cost for tiles	5,194	3,488	258	511	553	0
Escalation Assumption						
Brent	10%	10%	10%	10%	10%	10%
USD/INR	10%	10%	10%	10%	10%	10%
Impact of escalation (INR mn)						
Brent	519	349	26	205	221	239
USD/INR	509	405	83	584	478	-49
Total	1,029	754	108	788	699	190
Financials (FY18)						
Revenue	27,067	17,127	11,821	19,672	16,804	11,447
EBITDA	4,564	1,859	1,708	3,021	2,397	1,489
PBT	3,546	1,228	1,544	1,950	1,892	965
Impact						
% of Revenue	3.8%	4.4%	1.1%	4.0%	4.2%	1.7%
% of EBITDA	23%	41%	6%	26%	29%	13%
% of PBT	29%	61%	7%	40%	37%	20%

Source: Company, JM Financial

Exhibit 8. Financial Summary

INR mn, unless otherwise specified	FY14	FY15	FY16	FY17	FY18	FY19E	FY20E	FY16-18	FY18-20E
Revenue									
Kajaria	18,295	21,775	24,085	25,456	27,067	29,440	33,959	6%	12%
Somany	12,630	15,431	17,116	16,048	17,127	18,883	21,517	0%	12%
Cera	6,637	8,217	9,172	10,115	11,821	13,646	15,910	14%	16%
Century Ply	12,840	15,648	16,357	17,825	19,672	22,575	24,773	10%	12%
Greenply	13,900	15,606	16,457	16,631	16,804	20,060	23,990	1%	19%
Greenlam	7,580	9,256	10,297	10,758	11,447	13,126	14,877	5%	14%
Gross Profit									
Kajaria	10,523	13,535	15,671	16,302	16,885	18,513	21,157	4%	12%
Somany	5,124	6,046	6,968	10,239	10,058	11,273	12,803	20%	13%
Cera	3,582	4,374	4,765	5,304	6,188	7,151	8,401	14%	17%
Century Ply	5,247	7,138	7,925	8,644	9,443	11,062	12,015	9%	13%
Greenply	5,605	6,515	7,252	7,834	7,963	9,127	10,796	5%	16%
Greenlam	3,011	3,982	4,924	5,091	5,464	6,196	7,067	5%	14%
Gross margins									
Kajaria	57.3%	61.9%	64.9%	63.9%	62.3%	62.9%	62.3%	-260 bps	0 bps
Somany	40.6%	39.2%	40.7%	63.8%	58.7%	59.7%	59.5%	1800 bps	80 bps
Cera	54.0%	53.2%	51.9%	52.4%	52.3%	52.4%	52.8%	40 bps	50 bps
Century Ply	40.9%	45.6%	48.4%	48.5%	48.0%	49.0%	48.5%	-40 bps	50 bps
Greenply	40.4%	41.9%	44.1%	47.1%	47.4%	45.5%	45.0%	330 bps	-240 bps
Greenlam	39.7%	43.0%	47.8%	47.3%	47.7%	47.2%	47.5%	-10 bps	-20 bps
Power and Fuel Cost									
Kajaria	3,717	4,854	4,805	4,480	5,194	6,475	7,133	4%	17%
Somany	1,654	2,034	2,039	3,209	3,488	4,105	4,469	31%	13%
Cera	314	342	313	156	258	322	348	-9%	16%
Century Ply	270	311	301	374	638	NA	NA	46%	NA
Greenply	890	658	659	683	696	NA	NA	3%	NA
Greenlam	NA	263	271	267	321	NA	NA	9%	NA
Power and Fuel Cost (% of Revenue)									
Kajaria	20.3%	22.3%	19.9%	17.6%	19.2%	22.0%	21.0%	-80 bps	180 bps
Somany	13.1%	13.2%	11.9%	20.0%	20.4%	21.7%	20.8%	850 bps	40 bps
Cera	4.7%	4.2%	3.4%	1.5%	2.2%	2.4%	2.2%	-120 bps	0 bps
Century Ply	2.1%	2.0%	1.8%	2.1%	3.2%	NA	NA	140 bps	NA
Greenply	6.4%	4.2%	4.0%	4.1%	4.1%	NA	NA	10 bps	NA
Greenlam	NA	2.8%	2.6%	2.5%	2.8%	NA	NA	20 bps	NA
EBITDA									
Kajaria	2,818	3,524	4,575	4,963	4,564	4,458	5,426	0%	9%
Somany	815	1,075	1,429	2,337	1,859	1,913	2,362	14%	13%
Cera	949	1,175	1,413	1,710	1,708	1,944	2,403	10%	19%
Century Ply	1,650	2,498	2,835	2,920	3,021	3,528	3,952	3%	14%
Greenply	1,733	2,043	2,409	2,532	2,397	2,735	3,401	0%	19%
Greenlam	818	940	1,294	1,383	1,489	1,734	2,088	7%	18%
EBITDA margins									
Kajaria	15.3%	16.1%	19.0%	19.5%	16.8%	15.1%	16.0%	-210 bps	-90 bps
Somany	6.5%	7.0%	8.3%	14.6%	10.9%	10.1%	11.0%	250 bps	10 bps
Cera	14.3%	14.3%	15.4%	16.9%	14.4%	14.2%	15.1%	-100 bps	70 bps
Century Ply	12.8%	16.0%	17.3%	16.4%	15.4%	15.6%	16.0%	-200 bps	60 bps
Greenply	12.5%	13.1%	14.6%	15.2%	14.3%	13.6%	14.2%	-40 bps	-10 bps
Greenlam	10.8%	10.2%	12.6%	12.9%	13.0%	13.2%	14.0%	40 bps	100 bps
Adj. PAT									
Kajaria	1,242	1,796	2,313	2,528	2,345	2,195	2,840	1%	10%
Somany	46	32	-191	-726	474	400	400	NM	-8%
Cera	519	677	835	1,041	1,003	1,173	1,446	10%	20%
Century Ply	833	1,389	1,851	1,777	1,518	1,927	2,268	-9%	22%
Greenply	773	1,077	1,301	1,351	1,357	1,135	1,468	2%	4%
Greenlam	325	207	393	497	646	856	1,084	28%	30%

Source: Company, JM Financial

Exhibit 9. Comparison Sheet

Company	Reco	M/Cap	CMP	TP	Upside	Target	CAGR (FY18-20E)		
		(INR bn)	(INR/sh)	(INR/sh)		P/E (x)	Revenue	EBITDA	EPS
Kajaria	HOLD	69	432	540	25%	30.0	12%	9%	10%
Somany	BUY	18	439	740	69%	28.0	12%	13%	24%
Cera	HOLD	35	2,653	3,110	17%	28.0	16%	19%	20%
Centuryply	HOLD	44	196	260	33%	25.0	12%	14%	22%
Greenply	HOLD	24	194	230	19%	20.0	19%	19%	4%
Greenlam	BUY	25	1,050	1,380	31%	28.0	14%	23%	36%

Company	PE (x)			PBV (x)			EV/EBITDA (x)		
	FY18	FY19E	FY20E	FY18	FY19E	FY20E	FY18	FY19E	FY20E
Kajaria	29.3	31.3	24.2	5.1	4.6	4.1	15.2	15.4	12.7
Somany	25.3	23.1	16.6	3.2	2.9	2.6	12.8	12.1	9.8
Cera	34.4	29.4	23.9	5.7	4.9	4.2	20.2	17.8	14.3
Centuryply	28.7	22.6	19.2	5.2	4.3	3.6	16.1	14.0	12.2
Greenply	17.5	21.0	16.2	2.6	2.3	2.1	12.5	11.1	8.3
Greenlam	39.2	27.8	21.3	7.1	5.7	4.5	18.6	15.0	11.7

Company	EBITDA %			RoE (%)			RoCE (%)		
	FY18	FY19E	FY20E	FY18	FY19E	FY20E	FY18	FY19E	FY20E
Kajaria	16.8%	15.1%	16.0%	18.6%	15.4%	17.8%	15.9%	14.4%	17.0%
Somany	10.9%	10.1%	11.0%	13.3%	13.2%	16.5%	9.5%	9.3%	11.3%
Cera	14.4%	14.2%	15.1%	17.8%	18.0%	19.0%	17.5%	17.6%	18.8%
Centuryply	15.4%	15.6%	16.0%	19.6%	20.9%	20.6%	13.3%	15.8%	16.1%
Greenply	14.3%	13.6%	14.2%	15.9%	11.7%	13.5%	10.3%	8.9%	10.5%
Greenlam	13.0%	13.9%	15.0%	19.7%	22.8%	23.7%	12.7%	16.1%	18.5%

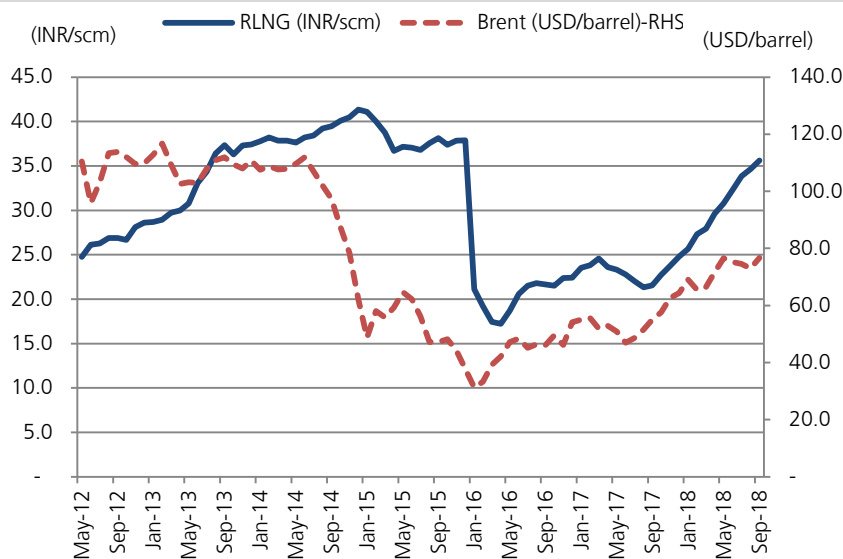
Company	Net-debt/Equity (x)			FCFE (INR bn)			RoIC (%)		
	FY18	FY19E	FY20E	FY18	FY19E	FY20E	FY18	FY19E	FY20E
Kajaria	0.1	0.0	0.0	0.8	0.6	0.8	16.2%	14.8%	17.2%
Somany	0.9	0.7	0.6	-0.2	0.6	-0.3	9.6%	9.3%	11.6%
Cera	0.0	0.0	0.0	0.1	0.1	0.6	22.3%	21.8%	23.3%
Centuryply	0.6	0.6	0.4	-0.1	-0.1	0.9	14.3%	16.7%	17.0%
Greenply	0.7	0.6	0.4	0.2	0.3	1.9	11.1%	9.3%	11.8%
Greenlam	0.7	0.4	0.2	0.1	0.1	0.4	12.7%	16.3%	19.4%

Source: Company, JM Financial

Ceramics Industry - Crude oil price and USD/INR rate are a double whammy

- Power and fuel costs (mainly gas) account for 25-30% of production costs in tiles. There are two main sources of gas: a) Domestic (ONGC - largely for CNG and residential) - ONGC sells to GAIL and GAIL then sells to companies and b) Imports, which can be spot/contracted and typically come from the Middle East, Europe or Ras Gas (Qatar).
- Morbi's ceramic players largely depend on gas supplies from Gujarat Gas. Gujarat Gas procures from a range of sources, including domestic, BG(now Shell), Qatar as well as spot imported gas (RLNG). It basically aggregates and supplies to various industrial units (including the ceramic industry and domestic customers) and charges a mark-up for supply assurance. However, given the diverse source of procurement, it is difficult to estimate the exact trend in gas costs/prices for Gujarat Gas.
- On the other hand, plants outside Gujarat largely depend on RLNG, typically procured from Qatar (specifically Ras Gas). Gas pipeline can be through from GSPL, GAIL or Gujarat Gas. Prior to 2016, Ras Gas was contracted at USD 12-13 per mBtu (contract for 25 years from 2004-28, first five years fixed price after which prices would be linked to 5 year average JCC Price). However, this was renegotiated to USD 6-7 per mBtu and is based on the crude price linked formula (average of the past 3 months on a rolling basis).

Exhibit 10. RLNG and Brent follow a similar trend

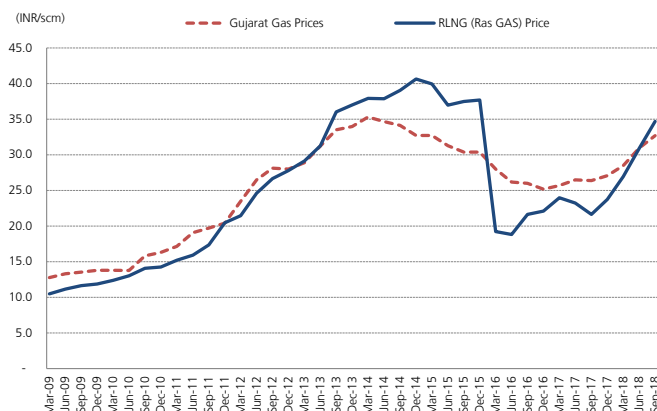


Source: Company, JM Financial

- Historically, Gujarat gas and RLNG gas prices have moved in line, but RLNG became much more expensive during the period (2014-15). However, post the renegotiation with Qatar Gas in Jan'16, RLNG prices became far lower than Gujarat Gas' (benefitting the plants outside Gujarat more). However, in recent months, we see a reversal, where RLNG is moving back up sharply and rising faster than Gujarat Gas' prices. Hence, the higher margin by companies such as Kajaria and Somany that have plants outside Gujarat is a thing of the past. These volumes are not easily substituted by outsourcing from Gujarat plants as freight costs would consequently increase. The key monitorable is the company's ability to pass on rate hikes (for production in plants outside Gujarat) as the demand scenario remains sluggish and the industry continues to grapple with oversupply.
- Kajaria reported weighted average fuel costs of INR 32/scm in 1QFY19 (INR 32/sqm in case of Somany; INR 37/scm for outside Gujarat plants). Assuming the current Brent crude rate (USD 76 per barrel; USD/INR of 72.5), the RLNG price could be c.INR 36/scm (c.INR 40/scm including taxes, transport and other incidental charges). In that case, Kajaria and

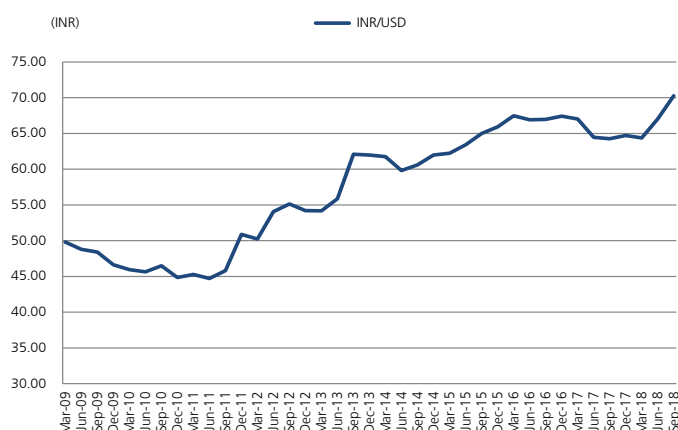
Somany's fuel costs (in INR/sqm of tile) can rise 13% YoY/11% YoY in FY19 (weighted average for Gujarat and non-Gujarat), broadly in line with our estimates.

Exhibit 11. Gujarat Gas and RLNG (Ras Gas) move in line



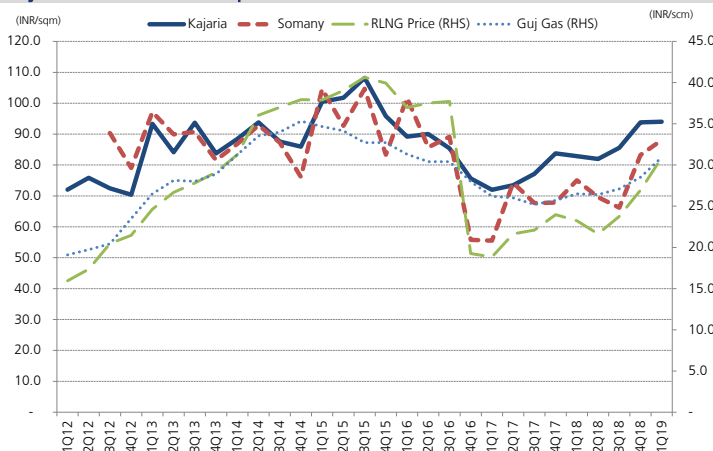
Source: Company, JM Financial; RLNG price is excluding transportation cost and taxes

Exhibit 12. INR/USD has risen 14% YoY



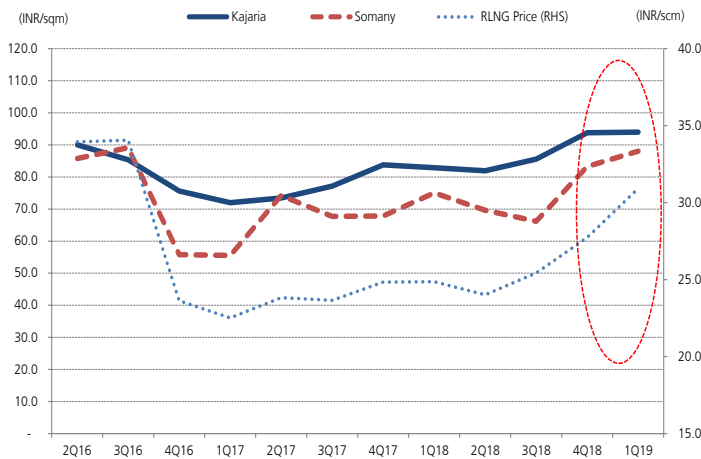
Source: Company, JM Financial

Exhibit 13. Historically, Kajaria/Somany gas costs broadly follow Gujarat Gas and RLNG prices



Source: Company, JM Financial; RLNG price is excluding transportation cost and taxes

Exhibit 14. Signs of worry as prices trend upwards recently



Source: Company, JM Financial; RLNG price is excluding transportation cost and taxes

Kajaria Ceramics: Substantial impact on financials

- About 70% of Kajaria's total capacity (c. 60% of production volumes) is located outside Gujarat, which is largely dependent on Ras Gas. Ras Gas broadly follows brent crude prices. Our analysis of past quarters suggests that a change in Kajaria's average gas cost (QoQ) is fairly similar to the weighted average gas price change (40%/60% weight for Gujarat/non-Gujarat prices).
- While Power and Fuel costs (P&F) constitute 19-23% of reported revenue (including outsourced tiles/sanitaryware), they constitutes 25-29% of realisations for tiles. Historically, companies appear to have managed to pass on cost escalations, although this was when the industry and company's volume growth was robust.
- We estimate that the RLNG price in Aug'18 rose 60% YoY, led by higher brent (+39% YoY) and currency fluctuations (+14% YoY). Assuming a 10% escalation in fuel costs and USD/INR each, PBT can see an impact of 29% (22% of EBITDA) assuming no increase in realisations.
- Assuming that current brent crude prices and the USD/INR exchange rate remain constant for the remainder of FY19, we estimate Kajaria's fuel costs to increase to INR 100/sqm (per unit of tile), up 30% YoY (July-Mar'19). We note that most of this is already built in our estimates.
- Kajaria's foreign currency-related exposure (imports/exports/loans) is <2%.

Exhibit 15. Financial Snapshot

INR mn, unless otherwise specified	FY15	FY16	FY17	FY18
Total Revenue	21,775	24,085	25,456	27,067
Tiles Revenue (Own + JV)	17,596	20,840	21,701	21,840
Outsourced tiles revenue	4,179	2,503	2,584	3,842
Sanitaryware and bathware	0	742	1,171	1,386
Raw Material costs	8,334	8,464	9,194	10,221
EBITDA	3,524	4,575	4,963	4,564
EBITDA margin (%)	16.2%	19.0%	19.5%	16.9%
PBT	2,761	3,608	3,963	3,546
PBT margin (%)	12.7%	15.0%	15.6%	13.1%
Adj. PAT	1,796	2,313	2,528	2,345
P&F Cost	4,854	4,805	4,480	5,194
% of Total Revenue	22.3%	19.9%	17.6%	19.2%
% of Tiles Revenue	27.6%	23.1%	20.6%	23.8%
Production Volume (mn sqm)	47.8	56.8	59.5	58.6
P&F cost (INR/sqm)	101.5	84.6	75.2	88.6
Realisation (INR/sqm)	372.4	363.5	358.5	356.9
P&F cost as % of realisation	27.2%	23.3%	21.0%	24.8%
Impact analysis (FY18 basis)				
Driver		Brent	USD/INR	Total
Exposure particulars		P&F cost	P&F cost and net imports	
Exposure amount		5,194	5,094	
Escalation Assumption		10%	10%	
Escalation Impact		519	509	1,029
as % of Revenue		1.9%	1.9%	3.8%
as % of EBITDA		11.4%	11.2%	22.5%
as % of PBT		14.6%	14.4%	29.0%
as % of PAT		22.2%	21.7%	43.9%

Source: Company, JM Financial

Exhibit 16. Our estimates broadly factored in higher fuel cost

	Units	FY18	FY19 - JMFe	FY19 Case I - Avg basis	FY19 Case II - Spot basis
Production vol	mn sqm	60	67		
Fuel cost	INR mn	5,194	6,475	6,756	6,824
	INR/sqm	86	97	101	102
Fuel cost (YoY) on INR/sqm	%		13%	18%	19%
Fuel cost vs JMFe	INR mn			281	349
PBT	INR mn	3,546	3,438	3,157	3,090
Impact on FY19 JMFe	%			-8%	-10%
Sales	INR mn	27,106	29,440		
Gross Profit (before Fuel cost)	INR mn	16,885	18,513		
Incremental gross profit	INR mn		1,628		

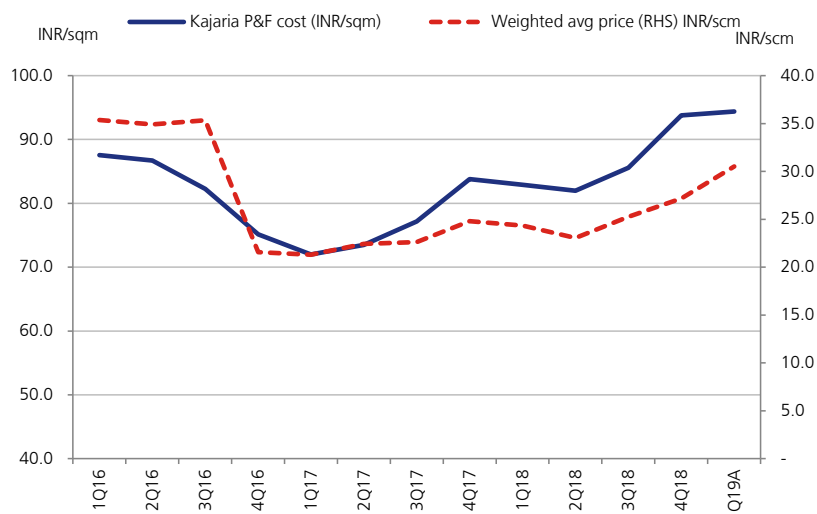
Source: Company, JM Financial

Exhibit 17. Historical trend in power and fuel cost and weighted average gas price - Kajaria

INR mn	Unit	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19A
Kajaria Production vol (own+JV)	msm	14.9	15.0	13.1	15.5	15.3	14.6	14.1	16.2	16.3
Power and Fuel cost	INR mn	1,073	1,099	1,009	1,300	1,266	1,198	1,209	1,521	1,540
% of revenue	%	18.1%	17.5%	16.6%	18.0%	20.1%	17.9%	18.3%	20.3%	23.4%
% of tiles revenue	%	18.8%	18.2%	17.5%	19.1%	20.9%	18.8%	19.3%	21.7%	24.9%
P&F Cost (per production unit)	INR/sqm	72.0	73.5	77.1	83.8	82.9	82.0	85.6	93.8	94.4
QoQ	%	-4%	2%	5%	9%	-1%	-1%	4%	10%	1%
YoY		-18%	-15%	-6%	11%	15%	12%	11%	12%	14%
Weighted avg price	INR/scm	21.3	22.4	22.7	24.8	24.3	22.9	25.2	27.1	30.5
QoQ	%	-3%	5%	1%	9%	-2%	-6%	10%	8%	13%
YoY		-41%	-36%	-36%	15%	14%	2%	11%	9%	25%
Outside gujarat proportion	%	60%	60%	60%	60%	60%	60%	60%	60%	60%
Ceramic Industry pricing		25.0	23.5	23.5	26.0	26.0	24.9	27.4	27.4	30.0
QoQ	%	-7%	-6%	0%	11%	0%	-4%	10%	0%	9%
Ras Gas	INR/scm	18.8	21.6	22.1	24.0	23.2	21.6	23.8	27.0	30.9
QoQ	%	-2%	15%	1%	9%	-3%	-7%	10%	13%	15%

Source: Company, JM Financial

Exhibit 18. P&F cost typically followed weighted average price



Source: Company, JM Financial

Exhibit 19. Kajaria Plant Locations

mn sqm, unless otherwise specified	State	Own/JV	Product	FY16	FY17	FY18
Morbi	Gujarat	JV Soriso	Ceramics	4.6	3.7	3.7
Morbi	Gujarat	JV Jaxx	PVT	10.2	10.2	10.2
Morbi	Gujarat	JV Cosa	PVT	5.7	5.7	5.7
Morbi	Gujarat	JV Taurus	PVT	5.0	5.0	-
Vijayawada	AP	JV Vennar	Ceramics	2.3	2.9	2.9
Gailpur	Rajasthan	Own	Ceramics	18.5	18.9	22.9
Gailpur	Rajasthan	Own	PVT	-	-	-
Malutana, Thana Gazi	Rajasthan	Own	PVT	6.5	6.5	6.5
Gailpur	Rajasthan	Own	GVT	6.0	7.7	8.1
Sikandrabad	UP	Own	Ceramics	3.5	-	-
Sikandrabad	UP	Own	PVT	-	-	-
Sikandrabad	UP	Own	GVT	6.3	8.4	8.4
Total capacity				68.6	69.0	68.4
Gujarat				25.5	24.6	19.6
Outside Gujarat				43.1	44.4	48.8
Outside Gujarat as %of total				63%	64%	71%
Total Production				58.2	58.4	60.4
Gujarat				18.4	16.0	16.2
Outside Gujarat				39.8	42.4	44.2
Outside Gujarat as %of total				68%	73%	73%
Total Sales volume				64.4	67.8	72.0
Gujarat				29.4	27.5	29.3
Outside Gujarat*				35.0	40.3	42.7
Outside Gujarat as %of total volumes				54%	59%	59%

Source: Company, JM Financial

Note*: Assuming 100% capacity utilisation at Vennar (AP)

Somany Ceramics: Significant impact on financials

- About c.30% of Somany Ceramics' capacity and production lies outside Gujarat and consequently depends on Ras Gas.
- Fuel costs account for 19-20% of revenues and hence higher fuel cost can have a significant impact on earnings, especially given the negative operating leverage in case of Somany. We estimate that a 10% escalation in fuel costs (including brent crude) and USD/INR fluctuations each can lead to a 61% impact on PBT (c.440bps), assuming no increase in realisations.
- Historically, it appears tiles companies – including Somany – have been able to pass on such cost increases. However, that was when the industry and company's volume growth was robust. Given the intense competition and weak competition, pass through of such costs is extremely difficult.
- We note that our estimates broadly factor in higher fuel costs (+130bps YoY in FY19). Assuming that current brent crude prices and the USD/INR exchange rate remain constant for the remainder of FY19, we estimate Kajaria's fuel costs to increase to INR 99 per sqm, up 30% YoY. However, we note that most of this is already built in our estimates.

Exhibit 20. Financial Snapshot

INR mn, unless otherwise specified	FY15	FY16	FY17	FY18
Total Revenue	15,431	17,116	16,048	17,127
Tiles Revenue (Own + JV + Outsourcing)	15,170	16,781	15,459	14,793
Sanitaryware and bathware (Gross)	793	1,120	1,200	1,520
Raw Material costs	9,385	10,149	5,809	7,069
EBITDA	1,075	1,429	2,337	1,859
EBITDA Margin (%)	7%	8%	15%	11%
PBT	681	1,012	1,806	1,228
PBT Margin (%)	4%	6%	11%	7%
Adj. PAT	463	678	1,008	734
 Power and Fuel Costs	 2,034	 2,039	 3,209	 3,488
% of Total Revenue	13.2%	11.9%	20.0%	20.4%
% of Tiles Revenue	13.4%	12.2%	20.8%	23.6%
 Production Volume (mn sqm)	 33.2	 38.5	 43.8	 39.9
P&F cost (INR/sqm)	61.4	52.9	73.3	87.4
Realisation (INR/sqm)	458	436	353	371
P&F cost as % of realisation	13%	12%	21%	24%

Impact analysis (FY18 basis)

Driver	Brent	USD/INR	Total
Exposure particulars	P&F cost	P&F cost and net imports	
Exposure amount	3,488	4,050	
Escalation Assumption	10%	10%	
Escalation Impact	349	405	754
as % of Revenue	2.0%	2.4%	4.4%
as % of EBITDA	18.8%	21.8%	40.6%
as % of PBT	28.4%	33.0%	61.4%
as % of PAT	47.5%	55.2%	102.7%

Source: Company, JM Financial

Exhibit 21. Our estimates have largely factored in higher fuel cost

	Units	FY18	FY19 - JMFe	FY19 Case I - Avg basis	FY19 Case II - Spot basis
Sales	INR mn	16,653	18,483		
Gross Profit (before Fuel cost)	INR mn	6,491	7,300		
Prodn vol	mn sqm	20.3	22.9	22.9	22.9
Fuel cost	INR mn	1,640	2,005	2,101	2,107
	INR/sqm	80.7	87.4	91.6	91.8
YoY	%		8%	14%	14%
Fuel cost vs JMFe	INR mn			97	102
PBT	INR mn	1,055	1,140	1,043	1,037
Impact on JMFe	%			-8%	-9%
Sales	INR mn	16,653	18,483		
Gross Profit (before Fuel cost)	INR mn	6,491	7,300		
Incremental gross profit	INR mn		809		

Source: Company, JM Financial

Exhibit 22. 38% of capacity located outside Gujarat

Mn sqm, unless specified otherwise	State	Own/JV	Product	FY16	FY17	FY18
Kassar	Haryana	Own	Ceramic	10.7	10.7	10.7
Kassar	Haryana	Own	PVT	6.5	6.5	9.0
Kadi	Gujarat	Own	Ceramic	8.4	8.4	6.7
Morbi	Gujarat	JV-Amora	Ceramic	4.6	4.6	4.6
Morbi	Gujarat	JV-Vicon	Ceramic	2.1	2.1	2.1
Morbi	Gujarat	JV-Vintage	PVT	3.0	3.0	4.8
Morbi	Gujarat	JV-Commandar	PVT	4.8	4.8	4.8
Morbi	Gujarat	JV-Vicon	PVT	1.8	1.8	1.8
Morbi	Gujarat	JV-Acer	PVT	5.1	5.1	3.3
Morbi	Gujarat	JV-Somany Fine	PVT	4.3	4.3	4.3
Total				51.3	51.3	52.0
Gujarat				34.1	34.1	32.4
Outside Gujarat				17.1	17.1	19.6
Outside Gujarat as % of total				33%	33%	38%
Production Volumes				46.1	44.3	44.3
Gujarat				29.4	28.9	28.2
Outside Gujarat				16.6	15.4	16.1
Outside Gujarat as % of total				36%	35%	36%
Sales volume				46.4	49.7	49.5
Gujarat				21.9	28.4	23.8
Outside Gujarat				24.4	21.4	25.7
Outside Gujarat as % of total				53%	43%	52%

Source: Company, JM Financial

Exhibit 23. Historical trend in power and fuel cost and weighted average gas price - Somany

F/E March end		1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19
Production vol (own)	msm	5.0	5.3	4.9	6.7	4.2	4.7	4.9	6.5	5.3
Somany Fuel cost	INR mn	330	365	368	380	370	310	420	540	470
% of revenue	%	9%	9%	10%	7%	12%	7%	11%	10%	13%
% of tiles revenue	%	9%	10%	10%	8%	13%	8%	12%	12%	15%
P&F Cost (per production unit)	INR/sqm	66.4	68.4	74.7	56.8	87.5	65.4	86.6	83.1	88.0
QoQ	%	19%	3%	9%	-24%	54%	-25%	32%	-4%	6%
YoY		-35%	-20%	-16%	2%	32%	-4%	16%	46%	1%
Weighted avg price	INR/scm	23.2	23.0	23.1	25.4	25.2	24.0	26.3	27.3	30.2
QoQ	%	-6%	-1%	0%	10%	-1%	-5%	10%	4%	11%
YoY		-31%	-27%	-29%	3%	9%	4%	14%	7%	20%
Outside Gujarat proportion	%	30%	30%	30%	30%	30%	30%	30%	30%	30%
Ceramic Industry pricing	INR/scm	25.0	23.5	23.5	26.0	26.0	24.9	27.4	27.4	30.0
QoQ	%	-7%	-6%	0%	11%	0%	-4%	10%	0%	9%
YoY		-21%	-19%	-22%	-4%	4%	6%	17%	5%	15%
Ras Gas	INR/scm	18.8	21.7	22.0	24.0	23.3	21.9	23.8	27.1	30.9
QoQ	%	-2%	15%	1%	9%	-3%	-6%	9%	14%	14%
YoY		-49%	-42%	-42%	25%	23%	1%	8%	13%	33%

Source: Company, JM Financial

Cera: No meaningful impact

- Power and fuel costs are not material for Cera (2.2% of FY18 total revenue; c.8% of own sanitaryware manufacturing revenue) owing to: a) the nature of the process (sanitaryware manufacturing process requires relatively less gas vs. tiles; no gas consumption in faucet manufacturing), b) supplies of domestic gas under APM (40% of its requirement) and c) captive consumption from wind power. As a result, 10% escalation in power and fuel costs would have a less-than 2% impact on Cera's PBT (basis FY18).
- Even if we include Anjani Tiles (51% subsidiary of Cera for tiles; 5% of total revenues), power and fuel costs, Cera would face the slight impact of higher fuel costs (plant located in Andhra Pradesh and hence higher fuel costs than Morbi). It is difficult to estimate the impact of fuel costs on Anjani Tiles at the moment given lack of history.
- Cera imports sanitaryware (premium end; 17% of Sanitaryware revenues) and exports tiles. As shown in Exhibit 24, Cera had net forex exposure of INR 1.08bn in FY18. Hypothetically, a 10% escalation would result in c.7% impact on PBT (FY18 basis).
- Assuming a 10% escalation in power and fuel costs as well as a 10% escalation in the USD/INR exchange rate, we estimate a 9% impact on Cera's PBT (FY18).

Exhibit 24. Cera Financial Snapshot

INR mn, unless otherwise specified	FY15	FY16	FY17	FY18
Total Revenue	8,217	9,172	10,115	11,821
Sanitaryware	5,423	5,689	6,115	6,596
Faucetware	1,561	2,092	2,144	2,602
Tiles	986	1,257	1,637	2,352
Wellness	247	259	218	271
Raw Material costs	3,843	4,407	4,811	5,633
Domestic sourced	3,013	3,225	4,088	4,673
Imports	830	1,182	723	960
% of total RM cost	22%	27%	15%	17%
% of revenue	10%	13%	7%	8%
Power and Fuel Costs	342	313	156	258
% of Sanitaryware revenue	6%	5%	3%	4%
EBITDA	1,175	1,413	1,710	1,708
EBITDA margin	14.3%	15.4%	16.9%	14.4%
PBT	1,009	1,295	1,586	1,544
Adj. PAT	677	835	1,041	1,003
Total Imports	830	1,182	723	960
Exports	64	80	96	133
Net Imports/(exports)	766	1,102	627	827

Impact analysis (FY18 basis)

	Brent	USD/INR	Total
Exposure particulars	P&F cost	Net imports	
Exposure amount	258	1,085	
Escalation Assumption	10%	10%	
Escalation Impact	26	108	134
as % of Revenue	0.2%	0.9%	1.1%
as % of EBITDA	1.5%	6.4%	7.9%
as % of PBT	1.7%	7.0%	8.7%
as % of PAT	2.6%	10.8%	13.4%

Source: Company, JM Financial

Century Ply: Massive exposure, but partially offset by the recent hedging announcement

- RM costs accounted for c.33.8% of Century Ply's FY18 revenue (including timber logs, veneer, chemicals, paper and particle board). Of this, chemicals constituted c.20%, as per management. Chemicals include phenol, methanol and melamine. Usually, costs trend in line with crude oil prices (being crude derivative), although the quantum would vary depending on suppliers and the demand-supply scenario for each product.
- Century Ply typically imports timber (for face veneer-sold domestically), face veneer and chemicals. As a result, imports constitute c.45% of RM (including traded goods in FY18) and almost 26% of revenues. However, the company now point out that import of timber will reduce significantly in FY19 as it has almost stopped face veneer sales.
- Power and fuel costs are not material in case of Century Plyboards (2.1% of revenue; power costs largely insignificant/no gas consumption). A 10% escalation in power and fuel costs could have a 1% impact on PBT.
- As of 31Mar'18, Century Ply also had forex loans of INR 3.65bn (68% of loans). Coupled with trade receivable/payables, its total exposure amounted to c.INR 4.16bn. Given the substantial impact (a 10% escalation in the USD/INR rate can lead to a INR 0.4bn, almost 21% of PBT),
- Century Ply had reinstated its liabilities at INR 68.58 per USD. Moreover, Century Ply further hedged almost USD 17mn, as per its 6Sep'18 announcement, (particularly working capital and term loans). As a result, USD/INR fluctuations may not directly have a material impact on its Balance Sheet, although we do point out that costs related to such hedging will be accounted for in 2QFY19.
- We also note that while the balance sheet is hedged, the cost of material still goes up on account of higher USD/INR, passing on this cost will depend on market scenario.

Exhibit 25. Century Ply Financial Snapshot

INR mn, unless otherwise specified	FY15	FY16	FY17	FY18
Total Revenue	15,648	16,357	17,825	19,672
Raw Material costs	8,510	8,432	9,181	10,230
Chemicals (c.20% as per management)				2,046
Others				8,184
Power and Fuel Costs	311	301	374	638
% of revenue	2%	2%	2%	3%
EBITDA	2,498	2,835	2,920	3,021
EBITDA margin	16.0%	17.3%	16.4%	15.4%
PBT	1,654	2,176	2,236	1,950
Adj. PAT	1,389	1,851	1,777	1,518
Total Imports (excluding capital goods)	4,653	4,914	5,472	5,048
% of RM Cost	54.7%	58.3%	59.6%	49.4%
% of revenue	29.7%	30.0%	30.7%	25.7%
Exports	660	949	846	903
Net Imports/(exports)	3,993	3,965	4,626	4,145
% of revenue	26%	24%	26%	21%

Impact analysis (FY18 basis)

Driver	Brent	USD/INR	Total
Exposure particulars	Chemicals	Net imports +Chemicals (25% of total chemicals*)	
Exposure amount	2,046	5,838	
Escalation Assumption	10%	10%	
Escalation Impact	205	584	788
as % of Revenue	1.0%	3.0%	4.0%
as % of EBITDA	6.8%	19.3%	26.1%
as % of PBT	10.5%	29.9%	40.4%
as % of PAT	13.5%	38.5%	51.9%

Source: Company, JM Financial

Note*: Assuming 25% of chemicals sourced domestically though priced on import parity basis

Exhibit 26. Raw Materials

INR mn	FY15	FY16	FY17	FY18
Timber Logs	2,658	2,325	1,179	1,593
Veneer	1,943	1,766	2,216	2,333
Chemicals	1,211	994	1,122	1,430
Paper	1,001	1,081	1,250	1,335
Particle Board	206	172	188	262
Waste Wood	-	-	54	417
Total RM Consumption	7,019	6,338	6,010	7,369
Imports of RM	3,745	3,662	2,868	3,209
% of Total	53%	58%	48%	44%

Source: Company, JM Financial

Exhibit 27. Century- Historical unhedged exposure

INR mn	FY15	FY16	FY17	FY18
Total Imports	4,653	4,914	5,472	5,048
Raw Materials	3,745	3,662	2,868	3,209
Store & Spares	5	6	268	300
Traded Goods	785	851	1,055	1,303
Other	118	395	1,280	236
Capital Goods	44	333	1,212	135
Hedged (outstanding on 31st March)	601	318	493	-348
Foreign currency exposure/derivative hedged	300	159	246	-174
Foreign Currency Term Loans	300	159	47	0
Buyer's Credit	0	0	199	0
Trade Receivables	0	0	0	174
Unhedged outstanding (outstanding on 31st March)	1,856	1,863	2,537	3,809
Foreign Currency Term Loans	559	610	931	1,182
Buyer's Credit	1,538	1,819	2,134	2,437
Trade Payables (Net)	198	219	365	533
Trade Receivables	148	235	199	8
Trade Advances	292	551	693	335

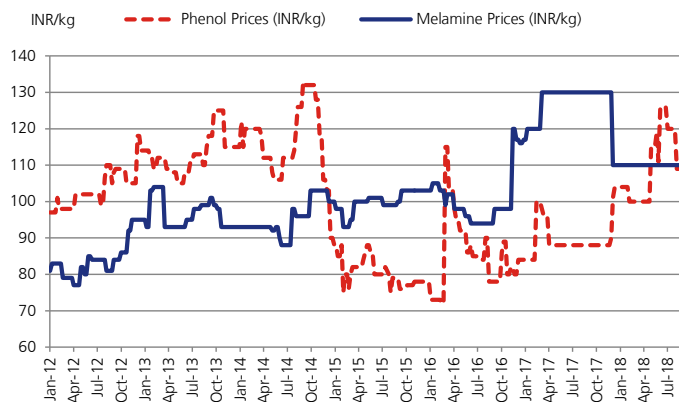
Source: Company, JM Financial

Exhibit 28. Century hedged most of the balance sheet exposure

Particulars	USD mn	EUR mn
On Account of ECB repayable on long term basis	17.44	-
On Account of Working Capital repayable on short term basis (Net of receivables)	7.80	2.73
Total	25.24	2.73
Less: Hedged		
On Date 20.8.18 @ 69.70 per USD level	11.96	-
On Date 05.9.18 @ 71.78 per USD level	5.00	-
Total	16.96	-
Balance Unhedged*	8.28	2.73

Source: Company, JM Financial

Note*: Matched with annual export of c.INR 1bn (c. USD 14m), a natural hedge for such unhedged amount

Exhibit 29. Long Term Chemical Prices

Source: Chemical Weekly, JM Financial

Exhibit 30. Short Term Chemical Prices

Source: Chemical Weekly, JM Financial

Greenply: Substantial impact due to un-hedged term loans (for new MDF plant in South India)

- Power and fuel costs account for c.4.1% of revenue, but we believe these could largely constitute power costs (insignificant gas consumption). A 10% escalation in power and fuel costs could lead to a 4% impact on PBT.
- Chemicals constitute c.24% of RM costs (sourced domestically and imported), as per management (20% in case of Ply and 35% in case of MDF). Chemicals include phenol, methanol and melamine. Usually, costs trend in line with crude oil prices (being crude derivative), although the quantum varies depending on suppliers and the demand-supply scenario for each product. A 5% increase in chemical costs would lead to a 6% impact on PBT (FY18 basis), assuming no increase in end-product realisations.
- Greenply imports c.10% of its RM (chemicals and veneers) but this has consistently reduced over the past few years. Apart from this, Greenply has un-hedged exposure of INR 4.32bn in the form of Foreign Currency Term Loans (INR 3.52bn), Buyers' Credit (INR 0.25bn) and Trade Payables (INR 0.37bn). We estimate that a 5% escalation in the USD/INR exchange rate can have a c.13% impact on PBT (FY18), ceteris paribus.

Exhibit 31. Greenply Financial Snapshot

INR mn, unless otherwise specified	FY15	FY16	FY17	FY18
Total Revenue	15,606	16,457	16,631	16,804
Raw Material costs	9,091	9,205	8,797	8,841
Domestic sourced	7,063	7,421	7,389	7,922
Imported Raw Material	2,028	1,784	1,409	919
imports as % of total RM cost	22%	19%	16%	10%
Power and Fuel Costs	658	659	683	696
% of revenue	4.2%	4.0%	4.1%	4.1%
EBITDA	2,043	2,409	2,532	2,397
EBITDA margin	13.1%	14.6%	15.2%	14.3%
PBT	1,224	1,712	1,909	1,892
Adj. PAT	1,077	1,301	1,351	1,357
Total Imports (excl capital goods)	2,314	2,004	1,577	1,010
% of RM cost	25.4%	21.8%	17.9%	11.4%
% of Revenue	14.8%	12.2%	9.5%	6.0%
Exports	29	31	167	308
Net Imports/(exports)	2,285	1,973	1,410	701
% of revenue	14.6%	12.0%	8.5%	4.2%

Impact analysis (FY18 basis)

Driver	Brent	USDINR	Total
Exposure particulars	Net imports Chemicals + Chemicals* + Forex loan		
Exposure Amount	2,210	4,779	
Escalation Assumption	10%	10%	
Escalation Impact	221	478	699
as % of Revenue	1.3%	2.8%	4.2%
as % of EBITDA	9.2%	19.9%	29.2%
as % of PBT	11.7%	25.3%	36.9%
as % of PAT	16.3%	35.2%	51.5%

Source: Company, JM Financial

Note*: Assuming 25% of chemicals sourced domestically though priced on import parity basis

Exhibit 32. Raw Materials Breakdown

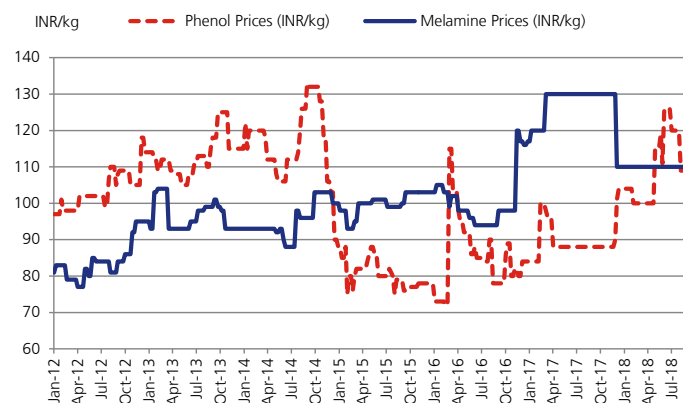
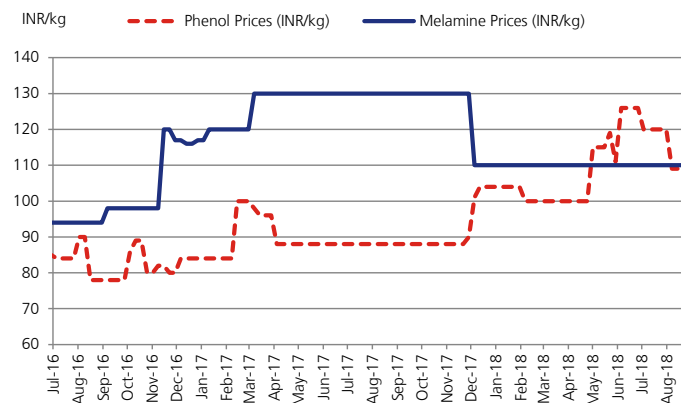
Particulars	FY15	FY16	FY17
Paper	116	131	129
Timber	3,531	3,361	2,872
Veneer	1,542	1,554	1,813
Chemicals	1,495	1,465	1,545
Plywood, Particle Board and MDF	522	458	504
Laminates and Doorskin	62	46	32
Total Raw Materials	7,268	7,015	6,895
Imported raw material	2,437	2,277	1,746
% of total RM cost	33.5%	32.5%	25.3%

Source: Company, JM Financial
Note: FY18 Not Available

Exhibit 33. Foreign Currency Exposure

Particulars	FY15	FY16	FY17	FY18
Total Imports	2,486	2,072	2,782	2,811
Capital Goods	172	67	1205	1,801
Raw Materials	2028	1784	1409	919
Store & Spares	51	101	156	56
Traded Goods	235	119	12	35
Unhedged Exposure				
Foreign Currency Term Loans	649	475	2,137	3,526
Buyer's Credit	0	0	0	250
Trade Receivables	6	6	38	86
Trade Payables (Net)	96	32	32	368
Trade Advances	37	150	0	0
Loan to subsidiaries	0	99	112	86
Total	787	762	2,319	4,315
Hedged				
Foreign Currency Term Loans				
Buyer's Credit	941	443	261	276
Trade Payables	122	25	0	0
Total	1,062	468	261	276

Source: JM Financial, Company

Exhibit 34. Long Term Chemical Prices**Exhibit 35. Short Term Chemical Prices**

Greenlam: Exports help offset brent crude price and USD/INR impact

- RM costs constitute 53% of Greenlam's revenue. Of this, 50% are for paper and 40% for chemicals (phenol, methanol, melamine, etc). Almost 49% of the RM is imported (mainly chemicals and niche craft papers). Typically, the company buys 3 months in advance and hence the impact of the recent rally in crude prices may come with a lag.
- Prices of chemicals (imported and sourced domestically) are largely derived from crude oil and hence tend to move broadly in line with global crude prices. Additionally, domestic prices too move based on import price parity. A 5% escalation in the cost of chemicals would result in c.19% impact on PBT (FY17 basis).
- However, given that the laminates industry is largely organised and dominated by the top 3-4 companies (Merino, Greenlam, Century and Stylam), cost escalations tend to get passed on, according to the company. It raised prices in Jan'18 and hence plans no price hike immediately.
- We estimate that a 5% escalation in crude price and the USD/INR exchange rate each can result in a 14.7% impact on PBT (FY18 basis), assuming no escalation in end product realisations.

Exhibit 36. Financial Snapshot

INR mn, unless otherwise specified	FY15	FY16	FY17	FY18
Total Revenue	9,256	10,297	10,758	11,447
Raw Material costs	5,274	5,374	5,667	5,983
Domestic sourced	3,381	3,208	2,907	3,071
Imported Raw Material	1,893	2,166	2,760	2,912
% of RM Cost	35.9%	40.3%	48.7%	48.7%
% of revenue	20.4%	21.0%	25.7%	25.4%
Power and Fuel Costs	263	271	267	321
% of revenue	2.8%	2.6%	2.5%	2.8%
 EBITDA	 940	 1,294	 1,383	 1,489
EBITDA margin	10.2%	12.6%	12.9%	13.0%
PBT	323	650	757	965
PAT	207	393	497	646
 Net Imports/(Exports)				
Imports	2,198	2,334	2,868	3,013
Exports	3,022	3,255	3,307	3,504
Net Exposure	-824	-921	-440	-491

Impact analysis (FY18 basis)

Driver	Brent	USDINR	Total
Exposure particulars	Chemicals	Net imports +Chemicals	
Exposure Amount	2,393	-423	
Escalation Assumption	10%	10%	
Escalation Impact	239	-42	197
as % of Revenue	2.1%	-0.4%	1.7%
as % of EBITDA	16.1%	-2.8%	13.2%
as % of PBT	24.8%	-4.4%	20.4%
as % of PAT	37.0%	-6.5%	30.5%

Source: Company, JM Financial

Exhibit 37. Foreign Currency Exposure

INR mn	FY15	FY16	FY17	FY18
Imports				
Capital Goods	240	77	27	25
Raw Materials	1893	2166	2760	2,912
Store & Spares	22	20	8	17
Traded Goods	0	3	15	0
Other	43	68	58	59
Total Imports	2,198	2,334	2,868	3,013
Total Imports (excl capital goods)	1,958	2,258	2,840	2,988
% of RM cost	37%	42%	50%	50%
Unhedged Foreign Currency			1,370	1,230
Foreign Currency Term Loans			135	68
Trade Payables			337	283
Advance to Vendors			69	68
Trade Receivables			826	810
Advance for Customers			2	-

Source: Company, JM Financial

APPENDIX I

JM Financial Institutional Securities Limited

(formerly known as JM Financial Securities Limited)

Corporate Identity Number: U67100MH2017PLC296081

Member of BSE Ltd., National Stock Exchange of India Ltd. and Metropolitan Stock Exchange of India Ltd.

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Rating	Meaning
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Hold	Price expected to move in the range of 10% downside to 15% upside from the current market price.
Sell	Price expected to move downwards by more than 10%

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