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TISSUE

SUPPLY AND DEMAND

North American Forecast

MAY 2016

FOREWORD

This report was prepared by Numera Analytics. It presents a summary of our short term forecast for North American tissue demand and consumption. More detailed analysis is available from our Custom Research group.

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EXECUTIVE SUMMARY

North American tissue demand ended 2015 with a gain of just #%, following a weaker-than-expected second half when growth slowed to only #%. We anticipated a stronger result given the destocking that hurt demand in 2014 and which should have flattered the year-over-year comparisons in 2015. Still, we estimate that growth in actual consumption, once you strip out the effects of changes in mill and supply chain inventories, did strengthen last year, helped in particular by the ongoing recovery in the Away-from-Home segment.

In terms of per capita demand, it grew #% in 2015, to # kg. That compares to a pre-recession peak of # kg posted in 2005.

For domestic suppliers, the benefits of the #% increase in demand last year were partially offset by a further rise in imports (+## ###), mainly of converted products. For that reason, domestic production rose only #%. That was roughly in line with the #% increase in capacity. Consequently, the average operating rate in North America held steady at #%.

North American Tissue Balance 000s of tonnes

	Actual			Forecast				
	2013	2014	2015	2016	2017	2018	2019	2020
Tissue Production	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
<i>Plus</i> Rolls Imports	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
<i>Less</i> Rolls Exports	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
<i>Equals</i> Rolls Demand	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
<i>Plus</i> Converted Imports	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
<i>Less</i> Converted Exports	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
<i>Equals</i> Total Demand	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
Population (millions)	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
Rolls Demand per Capita	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
Total Demand per Capita	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
Tissue Capacity ⁽¹⁾	#	#	#	#	#	#	#	#
	##%	##%	##%	##%	##%	##%	##%	##%
Operating Rate ⁽¹⁾	##%	##%	##%	##%	##%	-	-	-

(1) Capacity for 2018 onward is understated as only projects classified as definite are included in the estimates, therefore, operating rates for these years would be overstated.

For 2016, our consumption forecast is largely unchanged at #%, but we have slightly upgraded growth in demand, to +#%. Meanwhile, capacity is set to grow #%, the fastest pace since 2001. It implies a drop of about 1 point in the average operating rate, from #% to #%. Capacity is expected to continue to outpace demand in 2017, resulting in a further drop in the balance (to #%).

For the full 5 years of the short-term forecast, tissue demand is projected to grow at an average rate of #% per year. Roughly #% will come from population growth; the rest from an improving economy driving a recovery in per capita demand of #% per year. By 2020, per capita demand is projected to reach # kg, close to the pre-recession peak.

THE NORTH AMERICAN CONSUMER

U.S. Consumer spending

We expect consumer spending to remain the main engine of growth for the US economy over the forecast period, rising at an average rate of 2.8% per year between now and 2020. Our prognosis rests on three main premises: A strong labour market, low real interest rates despite a gradual normalization of monetary policy, and a continuation of low energy prices. Of these, we view full employment and rising compensation as more important factors for the demand prospects of consumer goods.

Average hourly wages in the private sector grew 2.6% year-over-year in Q4/2015, the highest quarterly increase in the entire post-recession period. Higher nominal wages are a consequence of stronger labour demand. As the number of job openings rises, the probability of finding employment increases. Based on our calculations, the likelihood that the average unemployed worker fills a vacant position from one month to the next currently stands at 31%. While still lower than its pre-recession average (~35%), the job finding probability is about 12 points higher than it was at its trough in late 2009. As vacancies continue to be filled and the economy approaches full employment, growth in nominal wages will accelerate.

Persistent increases in compensation have the additional benefit of increasing labour force participation. If earnings rise high enough, then aggregate labour supply should expand as previously discouraged workers return to the labour force. Whether or not these workers become gainfully employed, however, will partly depend on how long they have remained outside of the labour force. Encouragingly, 2/3 of the 0.9% decline in the US unemployment rate in 2015 was accounted for by a decline in long-term unemployment, down 28% from 2014. This suggests that the effects of stigma and skill depletion on job creation are starting to diminish.

Although we expect demand-deficient unemployment to completely disappear over the next two years, non-farm payrolls will grow at a weaker rate than in the recent past, thereby constraining growth in total labour income. The main reason for this is a persistently low participation rate as baby boomers retire and younger cohorts exhibit a more limited attachment to the labour market. Over the long run, slower growth in labour participation is problematic for private consumption as it restrains potential output and therefore personal income.

Macroeconomic policy will be less supportive of household spending than it has been in the last few years. The Federal Reserve is expected to gradually increase short-term interest rates. In its March outlook, the FOMC anticipated that – in the absence of adverse exogenous shocks – the federal funds rate will reach 3.0% by 2018. Nominal interest rates will rise in response to stronger output growth and