Tyres sector investment analysis

Contents

Tyres sector overview and main players

As part of my research of an industrial sector for potential bargains, I like to search through academic articles. This helps me to understand or identify current trends and thinking which might impact on my valuations. So, one thing I noticed when I started looking at the global tyre market was the sheer volume of business students, often from Indian colleges, who publish dissertations on tyre manufacturers. These dissertations usually outline the firm's business models and predicting future growth, with the odd mathematical formula thrown in for good measure.

I am grateful to those students. Not because the dissertations were any good (many aren't) or because the formulas were useful (most weren't) but because the very fact they have written them tells me a number of things: It tells me, the tyre industry is at its core very easy to understand, otherwise why choose it as a subject to explain; It's processes are simple, which means there are low barriers to entry; and there are numerous examples of firms to write about, which means it is hard to achieve a competitive advantage with lots of firms in existence.

But does that bear fruit in reality?

If you look globally, there are around 160-180 tyre manufacturers. Between 2012 and 2016, production volume of tyres increased with a compounded annual growth rate (CAGR) of 3.5 percent. So, you might be right to conclude that the market is in general characterized by a high level of competition. I think it probably is for the majority.

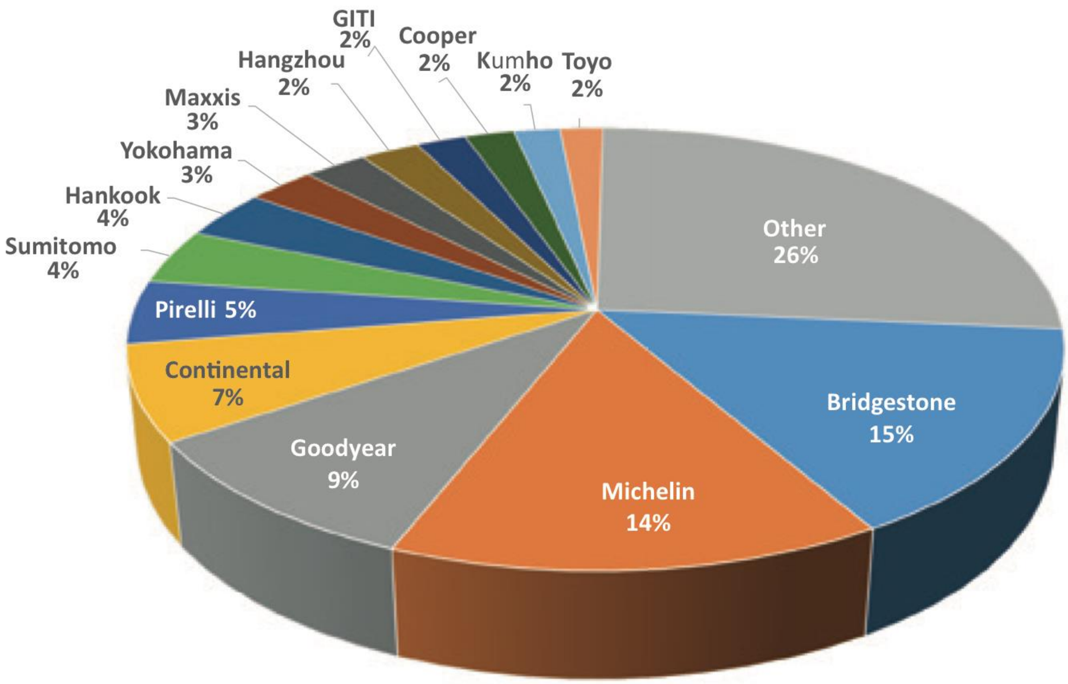
However, the Tier 1 group of tyre firms, made up of those with a better price positioning, a wider product offering and regional product lines may have an advantage. After all, many of these companies have been in existence for almost as long as the tyre itself. In this report I consider Tier 1 firms to be:

- Michelin
- Bridgestone
- Goodyear
- Continental

And slightly separate (I will explain)

- Pirelli and
- Nokian Renkaat

Other contenders exist to having Tier 1 status, but these are the big players. These firms cover about 50% of the whole industry.



Source: UK Tyre Industry Report (slightly dated, 2014, but overall not much has changed since)

From a value investing perspective, competition is lower in this Tier 1 segment, since entry barriers are stronger. Further, I would suggest taking Pirelli and Nokian and separating these even further. Treat these as their own pairing for comparison purposes. They are even more shifted towards the premium end of the market. Pirelli producing tyres for performance vehicles and Nokian producing premium winter tyres. We can consider Nokian as a direct competitor to Pirelli because of a number of factors:

It is a European company, with a good market share in the Eurozone.

Nokian products have premium quality, higher price and performance.

Nokian has the possibility to apply premium prices, like Pirelli, and

As a result, it has the highest EBIT margin (+10%) among its peers

It can be argued historically margins are higher, for both compared to the others. For example, they both have a historic EBIT margin around 17 percent, compared to around 13 percent. However, Pirelli is also different from Nokian, since the latter is concentrated on winter tyres and is not 100% consumer-focused. That said, Pirelli will not quite match Nokian, where operating margins have doubled over the past 15 years. Net profit has risen tenfold in that time. It is much smaller than Pirelli and its particular niche, winter tyres for demanding conditions, is more defensive, perhaps.

Either way, I think it is a possibility worth considering. If not, Pirelli will still be valued well alongside its main peers. For example, Continental is not dissimilar to Pirelli, despite also selling auto parts, it’s tyre division has a focus on premium products and a healthy operating margin.

However, although I am not a great fan of using enterprise value as a metric (I'm old fashioned) analysts state that Continental’s enterprise value is 6.7 times EBITDA, Pirelli’s multiple is closer to 8. This, they argue, implies Continentals tyre division hides under a discount caused by the larger firms business areas.

But it is important to consider that, even among these top players, not everything is ‘sweetness and light”. Continental had two profit warnings in 2018, with operating margins to expected to deteriorate further in 2019. Michelin had one profits warning. As a result, Michelin suffered its worst stock market fall in eight years. The company cut forecasts and warned of declining demand for tyres in western Europe and China in part because of new EU emission standards. Michelin’s shares are down 19.5 percent over the past year but up around 16 percent in 2019. Nokian just recently issued a lowered guidance too.

Continental, which also trade auto parts, has predicted that the global car market would not “experience any material improvement in the next five years”. It has announced €2.5bn of impairments on acquisitions, due to “unprecedented disruption” due, it claims, to its customers abandoning the combustion engine for EV, “rendering portions of intellectual property and physical capital incrementally obsolete” (as an analyst, I also say, however, look out for firms grouping bad news together, they’re getting it out the way).

In addition, to these market driven problem, many analysts argue that Continentals announcement of an IPO for its Power-train Division, highlights weak management. Whilst at Pirelli, analysts further expect value may drop in the following years, due to the debt restructuring process - 200 million bonds issued to repay an old debt with a higher cost and the consolidation of its operating activities.

But, for our research purposes, it is also possible to identify two different channels within the tyre industry: O.E. (Original Equipment) and Replacement tyres. In the first, buyers are commonly really large, for example, established auto companies with whom the large predominantly Tier 1 tyre makers form partnerships and the latter, replacement firms working with smaller tyre dealers. These latter tyre manufacturers consequently have weaker bargaining power and tighter margins.

Finally, it is important to mention the Chinese and wider Asian influence in both the high and low end of the sector. The introduction of cheaper products is currently eroding market share of the low-cost players and perhaps as we might see from our research also some of the bigger firms.

The Tier one firms are obviously aware of these developments and similar to businesses in other sectors are creating exposure through acquisitions and joint ventures. For example, Michelin has bought an 88 percent control of Sarana Tbk. producer and marketer of the Achilles and Corsa brands in Indonesia, paying around USD$439 million. This will be Michelin's seventh tyre plant in Asia/Pacific with a production capacity of more than 180,000 metric tons, or 11 million passenger tyres and 250,000 truck tyres.

Similarly, Pirelli has bought a 49 percent stake China's Jining Shenzhou Tyre Co., the new name for Hixih's tire manufacturing entity in Yanzhou. Pirelli paid roughly USD$75 million with the right to increase the stake to 70 percent between 2021 and 2025. Analysts believe the investment will give Pirelli the necessary production flexibility in the high-value tyre segment in Asia.

Continental have recently announced closure of plants in Germany and a shift in production to Thailand.

On the other hand, both Cooper Tyres and Toyo are improving production in Serbia to gain greater access to Eastern Europe!

Competitive Advantage

So, the market is characterised by a high level of competitiveness where only a few players own most of the market share, in particular Bridgestone, Michelin, Continental and Goodyear, with Pirelli and Nokian the leaders of the premium end market.

For these firms to have developed a competitive advantage, it cannot just be through economies of scale alone, otherwise others could throw cash at the problem and emerge the winner. Something else is going on. I would suggest, they have a competitive advantage achieved through a strategy concentrated around being positioned in the more technologically advanced segments of the tyre sector, which show stronger growth rate and profitability. To do this they have been investing in both cost efficiency and R&D.

The reasons for doing so are as follows:

Car Parc has increased considerably in the last few years and forecasts predict this trend will continue, in particular for prestige and premium cars. The high value market is also oriented towards motorbikes, a sector growing at a rate similar to cars.

Some premium and prestige car manufacturers are introducing a higher number of models which fit different types of tyres; this is an industry driver that increases both licencing, patents etc. and specialties for tyre manufacturers. For example, the move within car design towards bigger rims (for both mechanical and aesthetic reasons) and the technological evolution of vehicles (i.e. electric or Internet-connected cars) enables Tier 1 manufacturers to differentiate their products for the high value market and therefore increase their sales (and margins).

Those key drivers move together because the range of cars is increasing and a category which is getting more popular every year is the SUV. SUVs are more often equipped with High Value tyres, and their market penetration is increasing. It is estimated that SUVs are going to reach 33% of the whole car parc worldwide by 2020. Moreover, such cars tend to be equipped with bigger tyres, again, for both mechanical and aesthetic reasons.

Finally, we must mention Autonomous, electric, connected and shared cars are expected to have an increased penetration in the following years. In particular, electric and autonomous cars will need a very specific tyre that would allow the interconnection and integration with trip- computer and data collection.

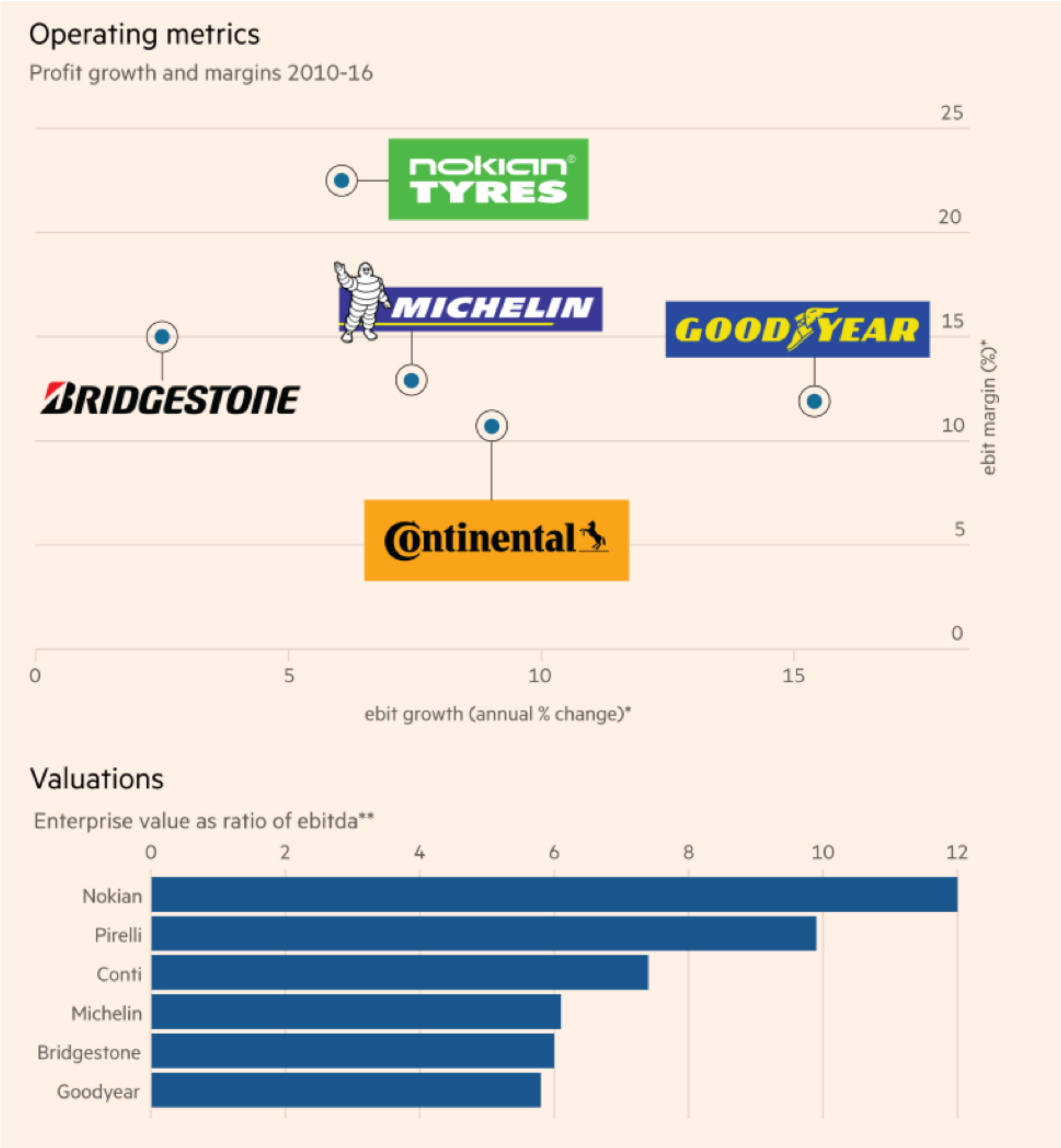
Tier 1 firms are already making moves into these markets. For example Nokian, have recently marketed a new tyre, Intuitu, containing sensors connected to a downloadable app. giving data to help fleet maintenance.

Analysts consider the recent average historic High Value market volume CAGR has been around 11.58 percent.

Main drivers in the high value Tier 1 tyre markets:

Source: Pirelli

Profit Comparison

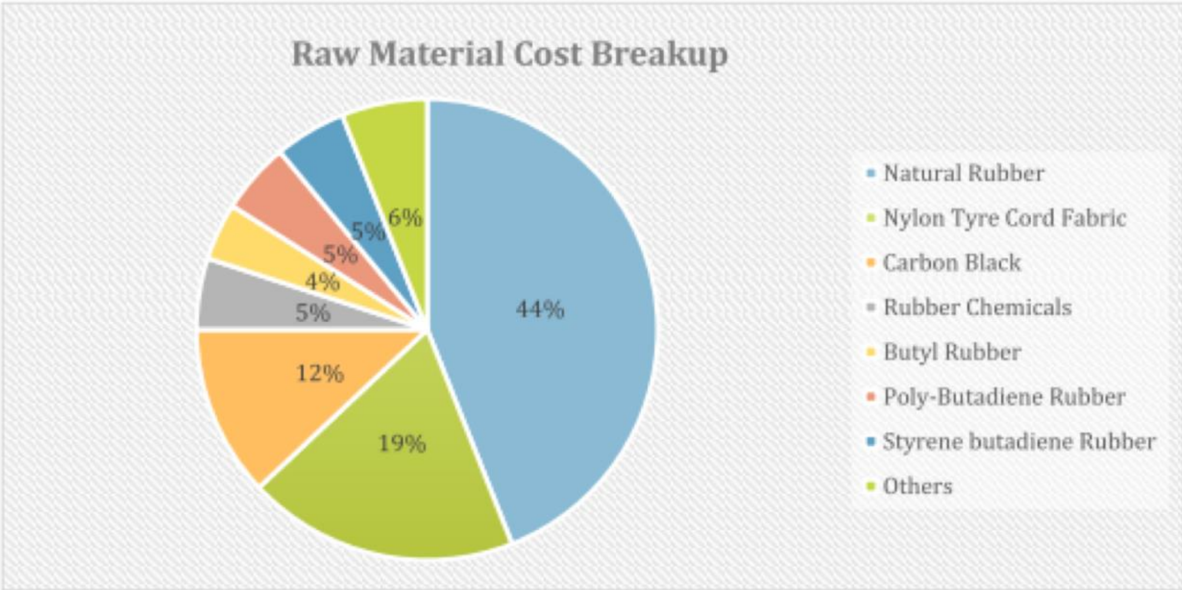


Source: FT

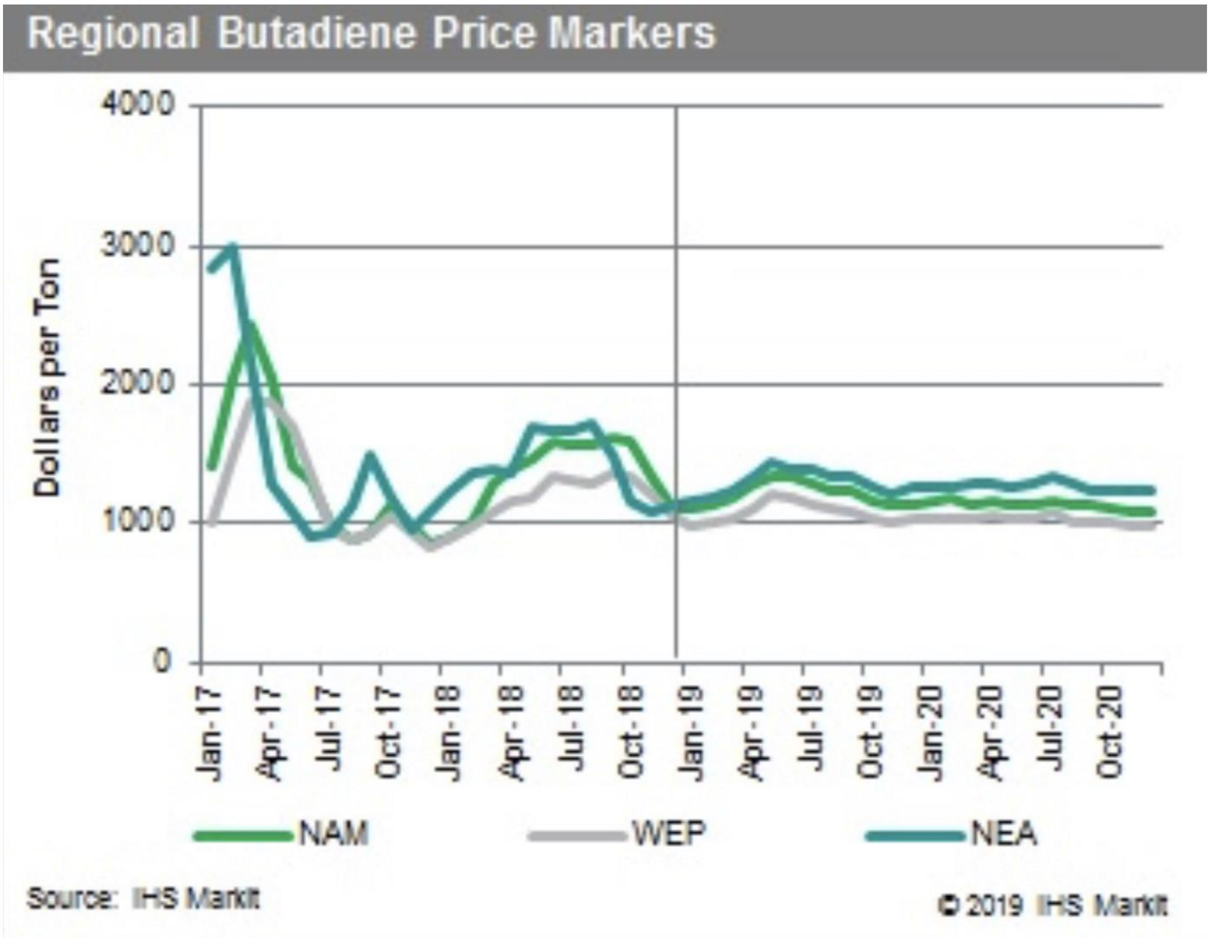
What are some of the main costs to consider?

Raw Materials

Raw material costs often form the largest expense in the tyre industry, accounting, in some cases, for about 65-70 percent of the total. The main raw materials used to manufacture tyres are natural rubber, poly butadiene rubber (PBR), styrene butadiene rubber (SBR), carbon black, silica, nylon tyre cord fabric and steel.



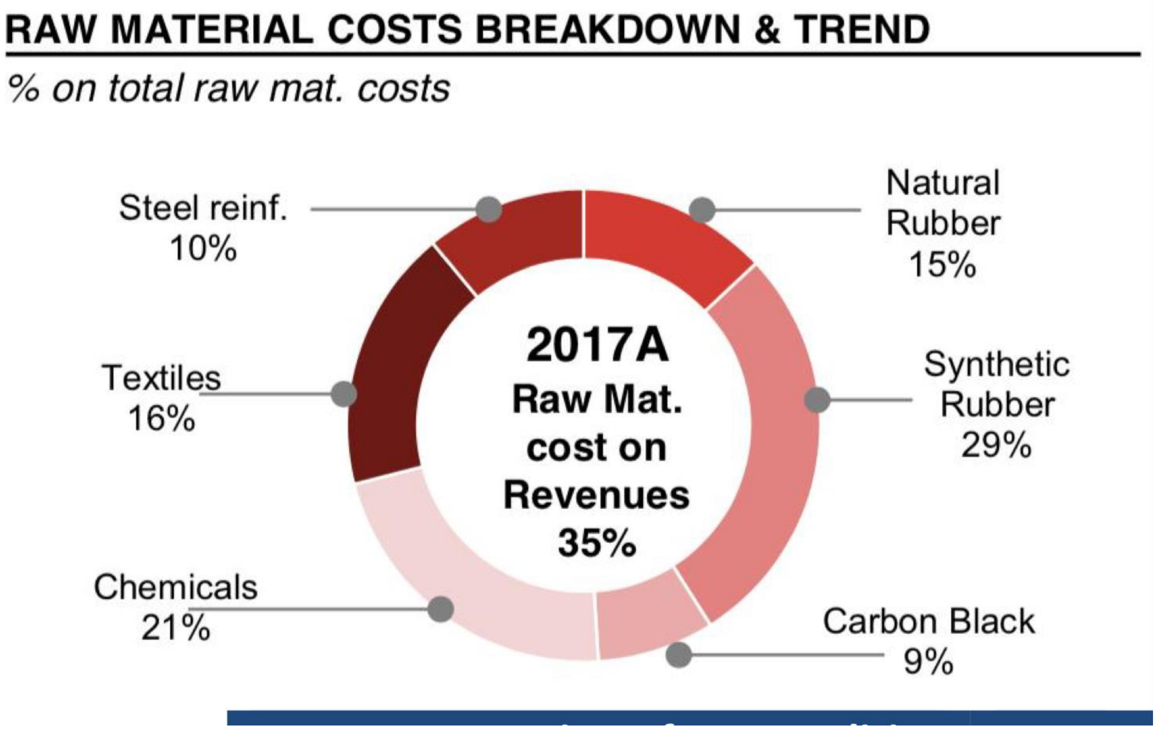
Source: Indian Tyre Industry Report 2019, typical tyre



Average quotation of commodities	2014	2015	2016	2017	2018E	2019E	2020E
Natural rubber ($/ton)	1,711	1,369	1,378	1,912	2,200	2,500	2,800
Butadene (EUR/ton)	944	656	644	1,547	1,800	2,000	2,100
Brent Oil ($/barrel)	99.5	53.6	45	58	61.46	64.51	67.16

Source: March 2018 Company Presentation (pp. 120-177)

Source: Pirelli (2016 was the time to invest in Butadene – hahahahahha)



Source: Pirelli

In addition, depending on the type, it takes between 15 and 38 litres of oil to manufacture a tyre (start to finish, lower for the actual pressing of the tyre). With 158 litres of oil in a barrel, that's roughly 4 to 10 tyres per barrel of oil. Obviously, as a result, commodity prices affect costs and margins in a big way.

By way of illustration, Brent Crude is currently USD$60 a barrel. When it was at USD$80 a barrel in 2018, and subsequently other raw materials also cost more, most manufacturers raised common tyre prices by between 1 and 3 percent, with an increase in the price of commercial truck and passenger vehicles tyres of up to 6 percent. And, not all costs can be passed on to customers.

Continental, who issued two profit warnings in 2018, has stated increased material costs added an additional €50 mil to expenses.. And, for Pirelli, raw material costs were about 1.859 mln euros, equivalent to 34.75 percent of sales in 2017.

Interestingly, according to its IPO prospectus, it takes Pirelli around 6 months of inventory to recoup price rises without affecting margins. Another reason Tier 1 firms have a competitive advantage, they are able to maintain premium pricing for their products, in other words people are prepared to pay more for their tyres even when prices go up.

But, looking in the opposite direct, natural rubber prices dropped from USD$5,000 back in 2011 to just USD$1,000 a tonne last year, following an additional 3 million tonnes of rubber being produced over the previous 5 years.

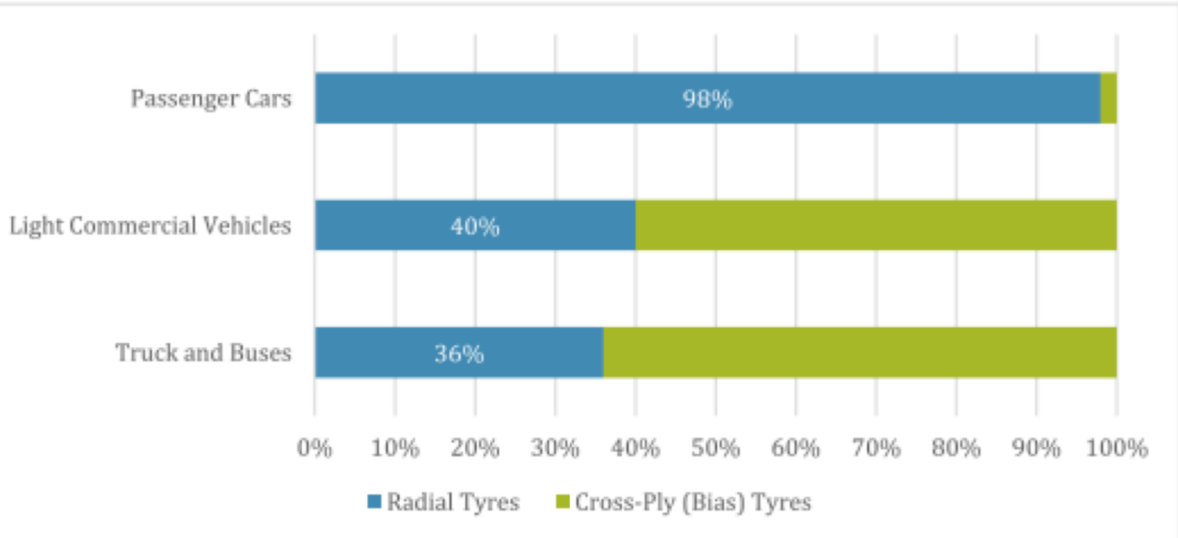
R&D (the not so technical bit)

Whilst moving production out to emerging markets, most Tier 1 firms are keeping R&D in house and local, partially due access to qualified staff but also to keep proprietary developments confidential. Sharing technological developments with potential future competitors is not ideal. Also, if this is where your competitive advantage comes from, it makes sense to guard it.

With increasing focus within commercial fleet management for corporate average fuel efficiency (CAFE) to curb levels of pollution and meet emissions targets, tyre companies have immense pressure to develop products which have minimal friction and offers higher fuel efficiency.

Latest trends in the industry include the development of more radials. Radial tyres consume an average of 8-10 percent less fuel over other tyres. So potential savings across commercial vehicle fleets would be substantial, bearing in mind, whilst 98 percent of passenger car tyres are currently radials, only 35 percent of truck and bus tyres are, along with only 40 percent of light commercial vehicles tyres.

Radial Tyres Market Breakdown



Source: Indian Tyre Industry Report 2019

Other developments aimed for by the main players are, finer tolerances in the manufacturing process, low rolling resistance and focus on better traction and on road performance which again increases fuel efficiency.

The companies are stepping up the manufacturing facilities with technologies that improve heat development in tyres with effort towards less usage of carbon black, which in turn contributes in lowering emissions.

Other major trends in the development of the manufacturing of tyres include greater usage of 'silica' which helps in the manufacturing process and improves tyre performance by lowering the rolling resistance as well as improving cut and chip resistance.

Conclusion on tyre sector overview

Personally, I think it is safe to say the main general problems for the tyre industry, going forward are;

- Higher raw materials costs, with perhaps volatility in forex and commodity prices;
- Lower than expected European Premium car parc growth, due to possible recession (a car industry recession is already there);
- Other Tier 1 competitors entering the High Value segment aggressively; and
- Geopolitical risks (such as tariffs) reducing demand over a longer term than expected.

I do, however, feel that the main Tier 1 players are well positioned to weather the storm. It's a sector worth exploring further and I would suggest concentrating on the top end of the market rather than lower down, cheaper companies. Nokian, Pirelli and Continental might be worth looking at.

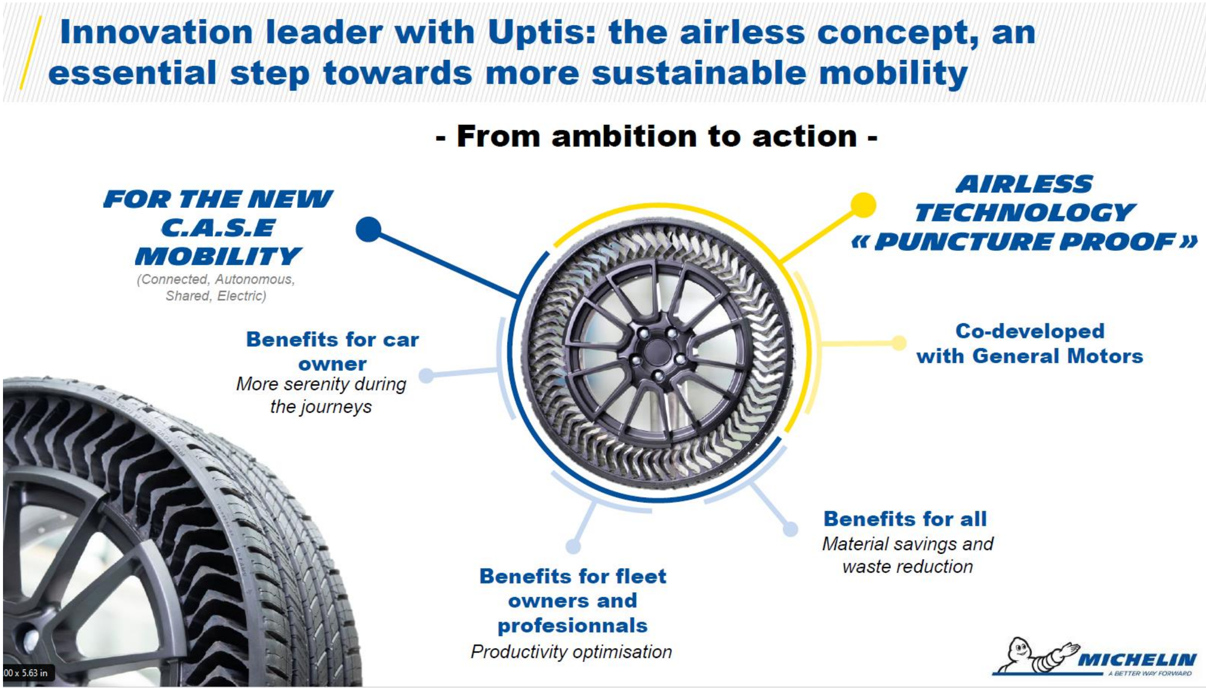
Stock by stock quick story analysis

Bridgestone

275 billion on a 3 trillion market cap.

Michelin – we are there with Bridgestone on valuation.

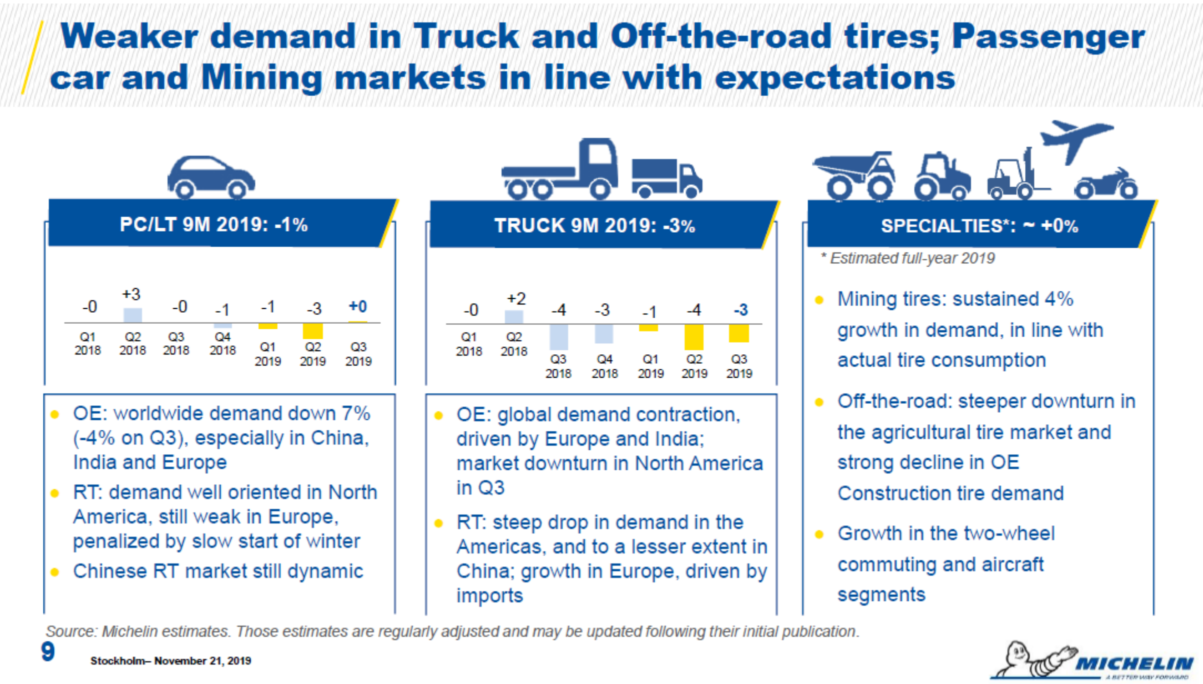
On competitiveness, do you really think about this when it comes to buying tyres?



Source: [Michelin Investor Presentation]().

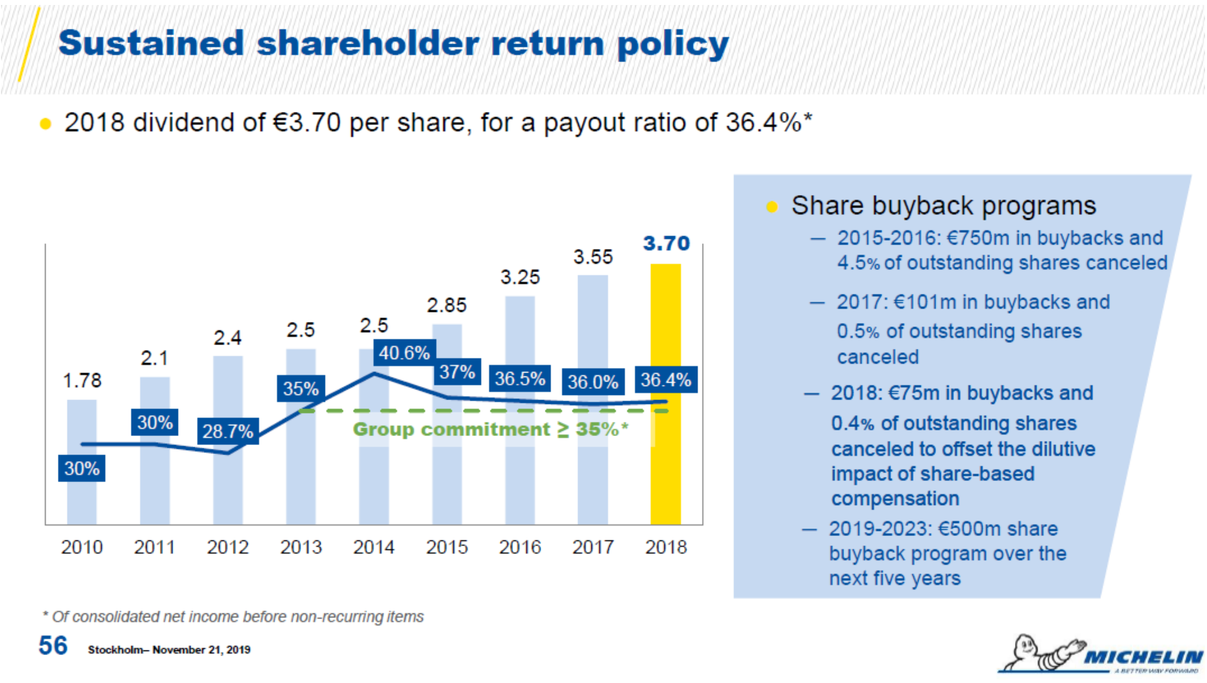
Acquisitions are pushing things higher.

When thinking about what is the market for the sector, here you go:



Slow growth, boring market, Peter Lynch style.

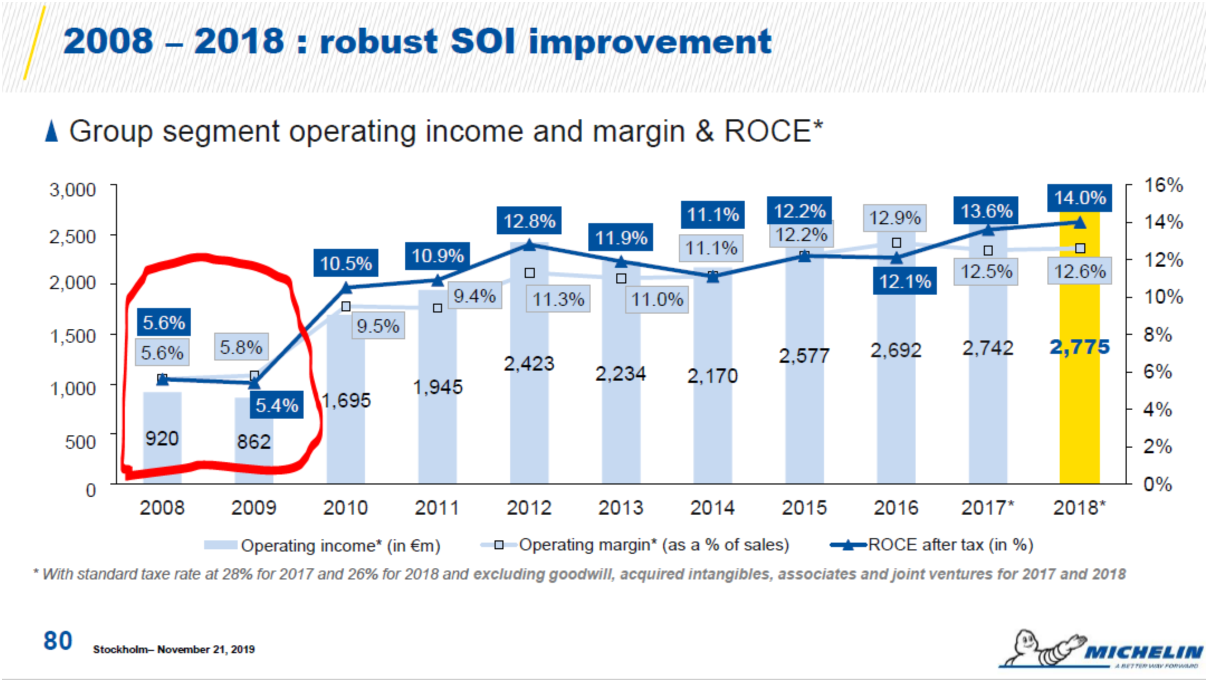
Pay-outs to shareholders are always important.



100 million buybacks, dividend payout 35%.

Actually very little compared to the 20 billion market cap.

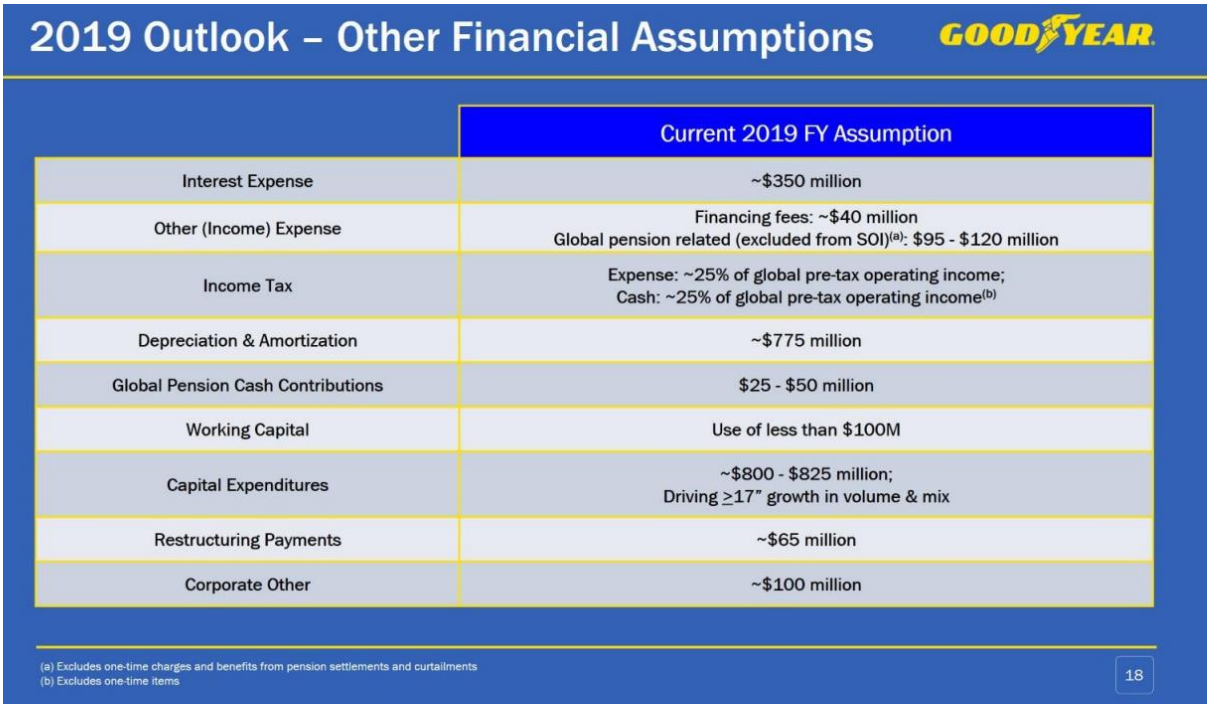
However, things have been good for a while now. When those get bad, things get interesting.



So, despite the ups and downs, the stock goes up. 4 times in 30 years. That leads to a 5% return, add a dividend of 3 to 5% and that is your returns from the leaders of the industry.

Goodyear

A typical American company always highly leveraged. So leveraged that on 700 million in operating cash flow, they have to pay 350 million in interest, 150 million in other things and then they still invest a lot in capex.



2019 Outlook – Other Financial Assumptions

GOODYEAR

	Current 2019 FY Assumption
Interest Expense	~$350 million
Other (Income) Expense	Financing fees: ~$40 million Global pension related (excluded from SOI)[(a)]: $95 - $120 million
Income Tax	Expense: ~25% of global pre-tax operating income; Cash: ~25% of global pre-tax operating income[(b)]
Depreciation & Amortization	~$775 million
Global Pension Cash Contributions	$25 - $50 million
Working Capital	Use of less than $100M
Capital Expenditures	~$800 - $825 million; Driving ≥17" growth in volume & mix
Restructuring Payments	~$65 million
Corporate Other	~$100 million

(a) Excludes one-time charges and benefits from pension settlements and curtailments
(b) Excludes one-time items

18

Consequently, the management makes money on stock options when there are leveraged stock price spikes across the cycles. However, long-term returns are dismal.

Typical Wall Street behaviour, but this is also what shareholders want, the stock price to go up next quarters😊))) no capital return since 1983 while interest rates went from 15% to 0% - that is what I call shareholder value DESTRUCTION!

Continental

They did create value in the past.

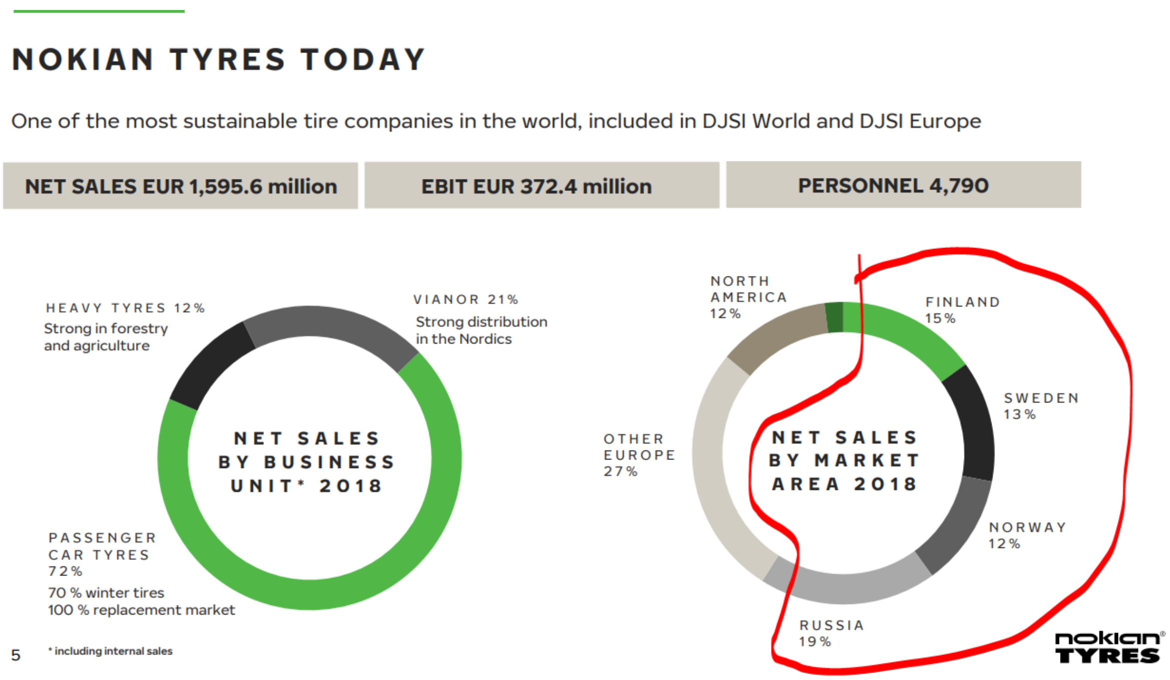
Pirelli

Same as above, nothing special from a story perspective. Numbers look good but it is more of a turnaround.

Nokian

Nokian is what my car guy wanted me to put on my car – I went for continental, he said 20% better than nokian but 30% more expensive.

However, highest dividend and lots of room for scale. This is just a 4 country company.



Source: Nokian

They target 5% yearly growth going forward. If they continue to pay dividends of 6% and grow at 5%, that is a 11% return over the long-term excluding stock price appreciation in the short run.

Low debt, thus can weather cycles. They have lowered guidance as others did. https://www.nokiantyres.com/company/news-article/nokian-tyres-plc-lowers-its-guidance-for-2019-2/

This could be one to analyse deeper – the growth, the scale, the business model that seems profitable. Numerically it also comes out as leader given the others have a bit too much debt. Let's see if I'll put Nokian on the watch list.

hang	Ticker	Market Cap Billions - ALL figures in USD, unless stated	Revenue (millions - rounded)	Shares Outstanding - Diluted (millions)	EBIT - mil unless stated	EBITDA-million	Net Income (million s)	Gross Margin %	Cost of Capital%	cas cor ion cyc
	Stage 2. Valuation with EPV added	Owners earnings	1705.86	1937.81	-63.18	2920	640.66	146.81		
		EPV (10% return)	17058.6	19378.1	-631.8	29200	6406.6	1468.1		
		Net Asset Value	19733	21242	5385	13998	2663	8305		
		Intrinsic value (Net Asset+EPV)	36791.6	40620.1	4753.2	43198	9069.6	9773.1		
		Franchise Value	-2,674.40	-1,863.90	-6,016.80	15,202.00	3,743.60	-6,836.90		
		Franchise Value %	-7.27%	-4.59%	-126.58%	35.19%	41.28%	-69.96%		
		Market CAP	30,400	21,600	3,800	27,000	6,100	4,000		
		Intrinsic Value (Net Assets + EPV)	36,792	40,620	4,753	43,198	9,069	9,773		
		Price to new 2nd stag	0.83	0.53	0.80	0.63	0.67	0.41		
		new value after 2nd stage	36,792	40,620	4,753	43,198	9,069	9,773		
		Shares outstanding	1458	893	234	2000	206	277		
	STAGE 3 add in future cash flow portion	New Value Price per share	25.23	45.49	20.31	21.60	44.02	35.28		
		NPV to DCF for 10% return	15.81	32.39	6.91	105.25	1.66	11.39		
		New intrinsic value (Assets+EPV+DCF)	41.04	77.88	27.22	126.85	45.68	46.67		
		current share price	41.25	121.26	16.4	134	28	24.5		
		Margin of Safety to current share price in dollars	-0.21	-43.38	10.82	-7.15	17.68	22.17		
		Margin of safety % between current price and intrinsic	-0.50%	-55.71%	39.75%	-5.64%	38.71%	47.51%		

Now I need a break from thinking about tyres and then calmly analyse Nokian next week😊!