

Subaru (7270 JP)

Niche Japanese automaker benefitting from a weak yen and easing of supply chains issues



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Summary

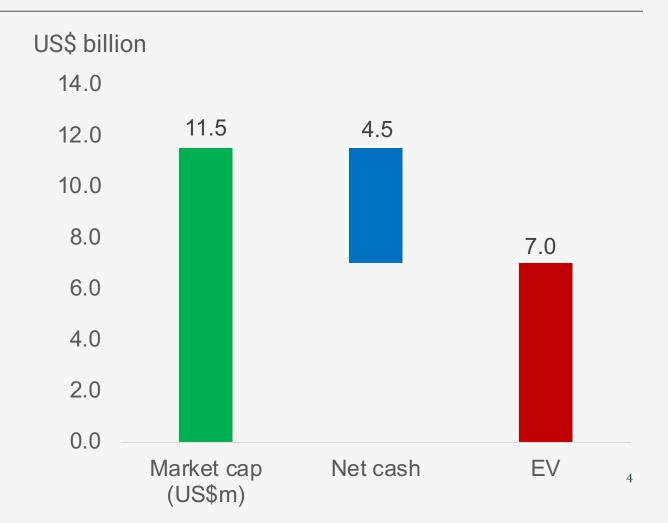


- 1. Subaru is a Japanese manufacturer of light SUVs and crossovers. It is unique in the way that 60% of its car volumes are produced within Japan and that almost 70% of revenues comes from the United States. Subaru's success in the US market has been spectacular.
- 2. Subaru has created a profitable niche for itself in the light SUV and crossover segment. Buyers appreciate Subaru's reliability, off-road performance, excellent viewing angles and fuel efficiency.
- 3. The two key factors for Subaru's profitability are:
 - 1. Plant utilisation: The key constraint to Subaru and US overall auto sales have been supply chain issues. Subaru's backlog has reached record levels and discounts are lower than they've been in years. The demand is there, they're just unable to produce vehicle rapidly enough. Chip shortages is the major issue, and those could continue for a bit longer.
 - 2. The US Dollar to Japanese Yen exchange rate: The weakening Japanese yen to 130 per US Dollar should be positive for Subaru's gross margins. Its Japanese plants have spare capacity of almost 200,000 vehicles, which can be exported to the rest of the world with high profitability.
- 4. Assuming JPY depreciation and a helps Subaru reach a 23% gross margin combined with a 1.1 million sales volume (97% utilisation) by 2025, Subaru would trade at 5.4x earnings, significantly lower than its ~10 median historical P/E.
- 5. The main risks are higher raw materials prices and Subaru losing market share. But Subaru's cars remain highly popular, and will sell well once supply issues ease and the weak Japanese yen improve their competitiveness.

Capitalisation



- Share price: JPY 1,945
- Shares outstanding: 769 million
- Market cap: US\$11.5 billion
- Net cash: US\$4.5 billion (with auto loan financing assets and liabilities netted out)
- Enterprise value: US\$7.0 billion



^{*} JPY = Japanese Yen. JPY/USD = 129.87

Business overview



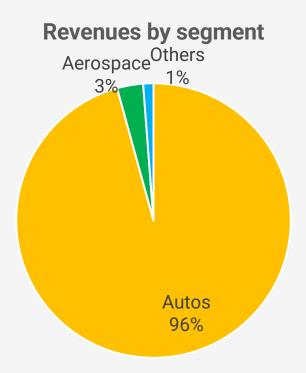
- Subaru is a Japanese auto maker that's become very successful in the United States. It also sells vehicles in Japan, Canada, Europe and China.
- "Subaru" is the Japanese name for a star cluster known as "Seven sisters", also representing the companies merged in 1953 to create the company as it exists today. One of the stars in the cluster is invisible, explaining why there's only six stars in the logotype.
- Its vehicles are mostly focused on the light SUV or crossover segments, and most of them come with all-wheel drive. In the eyes of consumers, the Subaru brand name has become synonymous with safety, fuel efficiency and excellent off-road performance.
- It's a small automaker with only 1 million units sold per year. However, it receives significant support from 20%-shareholder Toyota, by sharing components and vehicle platforms.
- The company has two production facilities: one in the Gunma prefecture in Japan and one in Indiana, United States.
- Subaru also has a small aerospace segment, which was one of Subaru's oldest business segments. But today, it represents a tiny portion of total revenues.

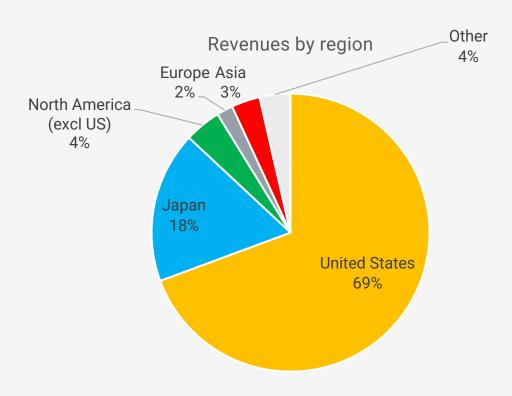




Subaru produces cars for the US and Japanese markets







Source: TIKR

Subaru's history



- 1915: Aircraft Research Laboratory started by an engineer called Chikuhei Nakajima
- 1932: The company was reorganized as Nakajima Aircraft Company, a major manufacturer of aircraft for Japan during World War 2
- 1945: At the of the war, the company was renamed Fuji Sangyo and in the following year, it launched its popular Fuji Rabbit motor scooter, which used spare aircraft from the war.
- 1950: Fuji Sangyo was divided into 12 smaller corporations due to the government's anti-zaibatsu legislation.
- 1953: A few of the smaller corporations from the original Fuji Sangyo company later decided to merge to create Fuji Heavy Industries, including a scooter manufacturer, a coachbuilder, an engine manufacturer, a chassis builder and a trading company.
- 1954: Subaru launched its first car, the "Subaru 1500" but failed to become a success due to supply chain issues and engine problems.
- 1965: The "Subaru 1000" was launched, introducing its now-famous boxer engine.
- 1968: Nissan acquired a 20.7% stake in Fuji Heavy Industries. It also entered the US market in this year.
- 1997: The now-popular Forester model was launched
- 1999: The Nissan stake was later sold to General Motors in 1999, and 40% of the stake was later sold to Toyota in 2005. Toyota later increased its stake to 16.5%.
- 2012: Subaru discontinues mini-vehicle production
- 2016: Subaru took over the second line at its Indian factory from Toyota, increasing its capacity
- 2017: The company changed name from Fuji Heavy Industries to Subaru.



Subaru 1500



Subaru 360

Subaru's current auto product portfolio



FORESTER

SUV

Unit sales: 266,000

Sales regions: Japan, North America, Russia, Europe, Australia,

China, and other

ASCENT

(Exclusively for North America)

SUV

Unit sales: 71,000

Sales region: North America



WRX

Sports / Sedan

Unit sales: 32,000

Sales regions: Japan, North America, Russia,

Australia, and other

SUBARU XV

(North America: CROSSTREK)

SUV

Unit sales: 186,000

Sales regions: Japan, North America, Russia, Europe, Australia,

China, and other

IMPREZA

Wagon · Sedan

Unit sales: 71,000

Sales regions: Japan, North America, Russia, Europe,

Australia, and other

LEVORG

Sports / Wagon

Unit sales: 14,000

Sales regions: Japan, Europe, Australia, and other

OUTBACK

SUV

Unit sales: 180,000

Sales regions: Japan, North America, Russia, Europe, Australia,

China, and other

LEGACY

Sedan

Unit sales: 32.000

Sales regions: Japan, North America, Russia, Europe, Australia,

China, and other





Sports / Coupe

Unit sales: 5,000

Sales regions: Japan, North America, Europe, Australia,

China, and other



Photo: North American model

Photo: North American model







Subaru has three main auto production facilities, one in Indiana, United States and two in Gunma in Tokyo, Japan

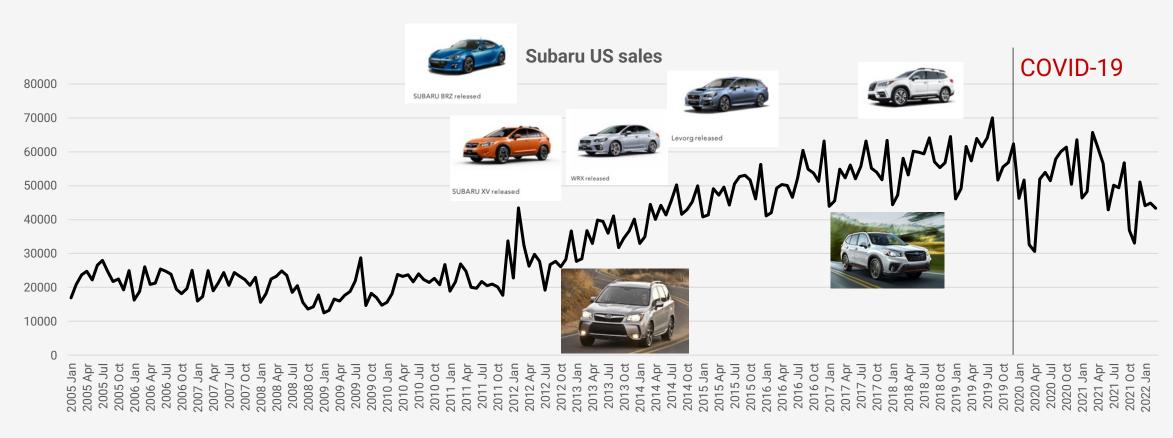




Source: Google Maps

US auto sales volumes were partly driven by new model releases, and partly driven by an expansion of Subaru's distribution network





Source: Carsalesbase.com

The aerospace segment is primarily focused on military applications but also as a Boeing supplier



- Subaru is a defense contractor, developing the UH-1J and UH-2 helicopters used by the Japan Ground Self-Defense Force. They are used for disaster relief and other purposes.
- It's a producer of the T-5 and T-7 planes that are used to train pilots in Japan's Ground Self-Defense Force.
- Subaru has also developed 15 models of unmanned aerial vehicles
- Among Subaru's commercial (non-defense) segment, it has co-operated with Boeing on joint development programs, including the center wing box for the Boeing 777, 787 and 777X and the integration of its main landing gear as well as the main landing gear doors, wing-to-body fairings and side-of-body sections. It has been working with Boeing since 1973.



Subaru's Fuji UH-1J military helicopter



Subaru's Fuji T-5 pilot training plane



A center wing box sold to Boeing

Subaru's management team





Subaru President and CEO Tomomi Nakamura

- Subaru's current president and CEO is Tomomi Nakamura, who took over from disgraced former CEO Yasayuki Yoshinaga, after a scandal where Subaru was found to have tampered with fuel economy and emissions data (as did Mitsubishi, Nissan and Suzuki).
- Nakamura has lengthy experience in sales for Subaru and led the US arm from 2014 until 2018 (its most successful period).
- Former CEO Yoshinaga was the person who oversaw Subaru's success years from 2011 to 2017 and also pushed through Subaru's withdrawal from the nonprofitable minicar and industrial machinery businesses.
- The current CFO is **Katsuyuki Mizuma**, who took over in April 2021.

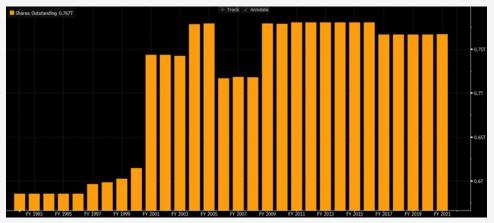
Capital allocation and corporate governance



- Subaru's acquisitions and divestures have been minor. They include the divestiture of a minority stake in RV maker Polaris in 2013 and the acquisition of automotive components business Ichitan.
- Modest share buybacks during 2020 has caused the share count to drop about 2% since 2016. I do not expect much or any future dilution.
- I haven't found anything particularly worrisome when it comes to Subaru's corporate governance.



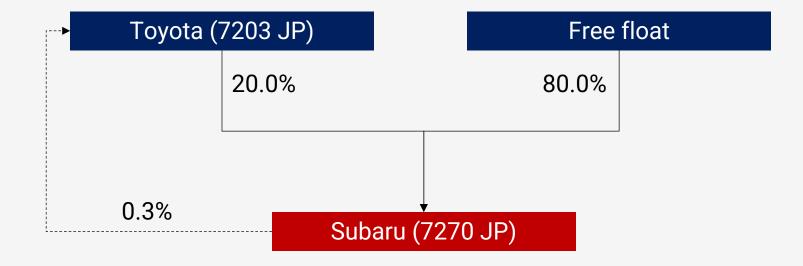
Source: Bloomberg



Source: Bloomberg







Subaru's competitive advantage is built on building out a niche and clever marketing



- Subaru's has found a niche by providing customers with the following value propositions, more or less taking over Volvo's prior niche that it held up until the early 2000s:
 - 1. High utility: visibility, cargo capacity and versatility.
 - 2. All- weather capabilities: thanks to the symmetrical all-wheel drive in every product, except jointly Toyota-produced BRZ.
 - 3. Putting safety first: Subaru Legacy received Top Pick+ and Subaru Impreza received a Top Pick score in their categories for IIHS 2022 safety rankings.
- Consumer Reports puts Subaru as the best overall brand for 2022, noting its particular strength in performance, safety and reliability
- Subaru's brand loyalty in the United States is off-the-charts, topping JD Power's US auto brand loyalty study in 2021 for the third year in a row
- Subaru's fuel economy is best-in-class, especially considering that most of its vehicles are truck SUVs

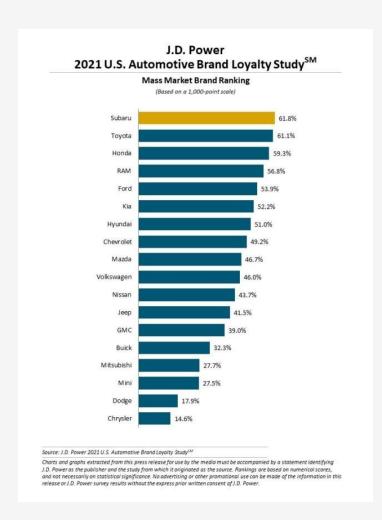
Consumer Reports puts Subaru as the best overall brand for 2022, ranked on performance, safety and reliability





Subaru is #1 on JD Power's US auto brand loyalty study

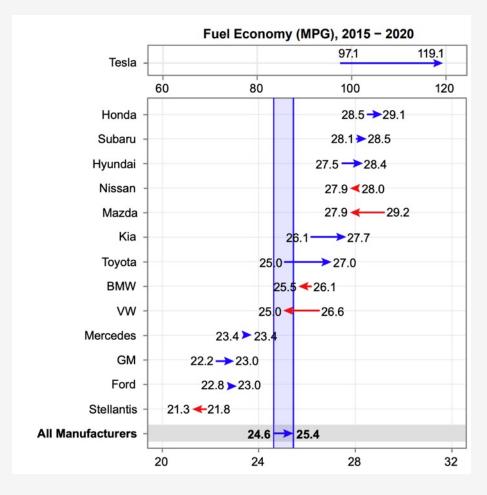




- Subaru's brand loyalty in the United States is off-the-charts, winning the JD Power's US auto brand royalty ranking for the third year in a row.
- JD Power offered the following explanations for the ranking:
 - "Customer loyalty is based on the percentage of vehicle owners who choose the same brand when trading in or purchasing their next vehicle."
 - "Vehicle owners remain vastly loyal to their specific brands, in part due to the effects of pandemic lockdowns"
 - "The study finds, in general, brand loyalty improved across the board and is also stronger for the highest-ranked brands compared with 2020."
 - "Subaru ranks highest among mass market brands and highest overall in the automotive industry for a third consecutive year with a loyalty rate of 61.8%"

Subaru's vehicles have excellent fuel economy – especially in their respective segments



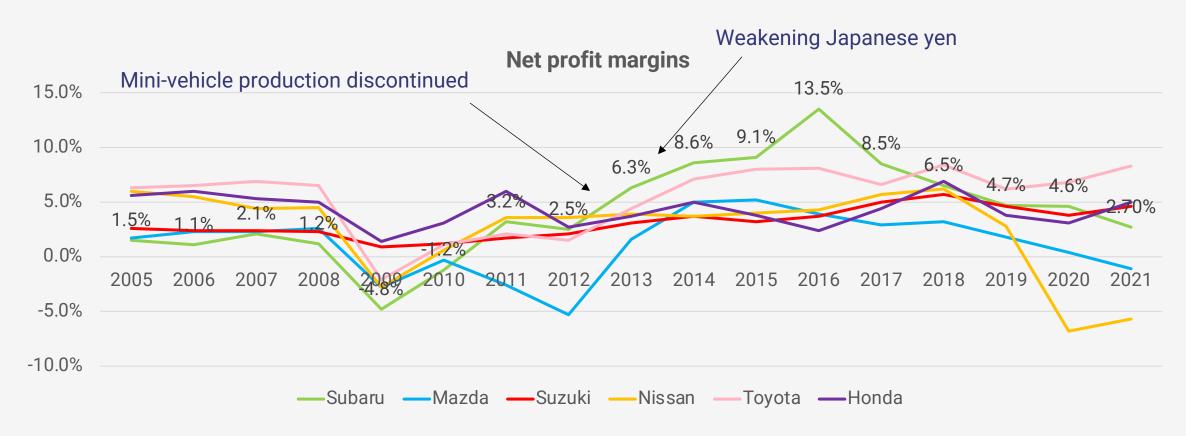


- Subaru has among the best "real world fuel economy" among any car manufacturer, ranked #2 overall according to US government agency EPA
- It also continued to improve over the past five years
- Subaru's 28.5 miles per gallon compares with Toyota's 27.0, Hyundai's 28.4, GM's 23.0 and BMW's 25.5.
- That performance is particularly impressive when you consider that most of Subaru's vehicles are truck SUVs (82% of the total), which tend to be heavier.

Source: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1013L10.pdf

Net margins for peers have been around 3-4%. Subaru's margins have been higher than those of its peers in times of weak JPY





Source: TIKR

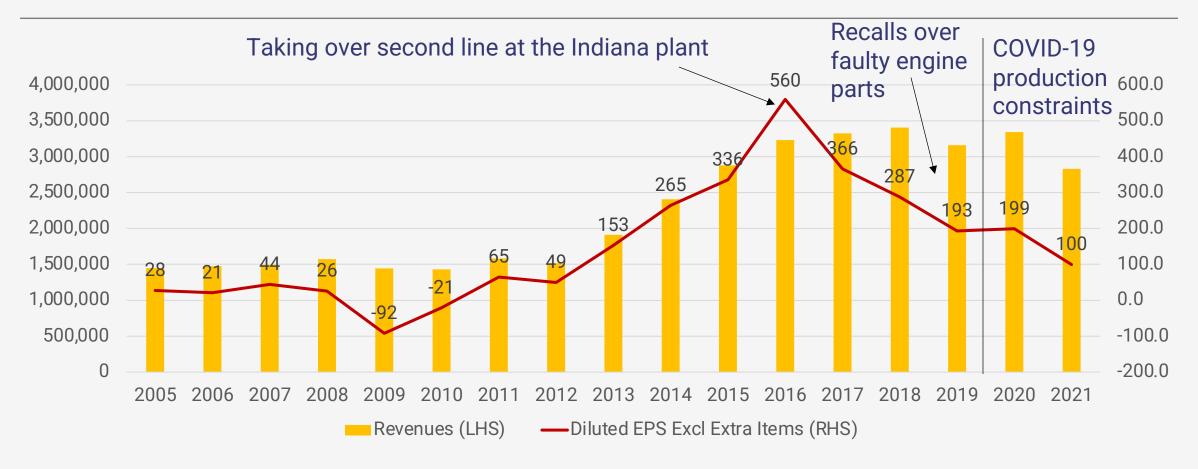
Subaru's share price rose when the Yen depreciated from 2012-2015, which coincided with the minicar divestiture and US success





Historical growth was strong between 2010 to 2018

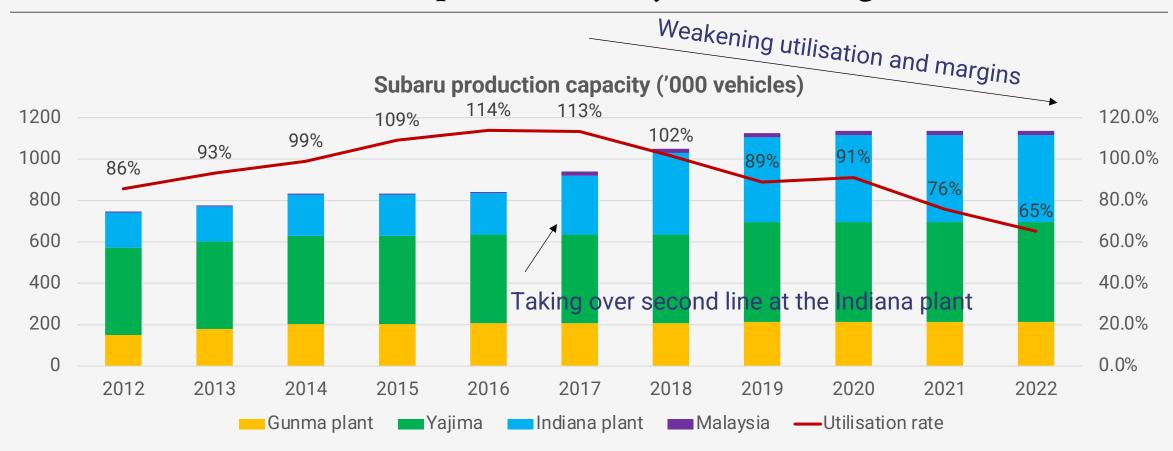




Source: TIKR

Subaru's weaker margins since 2016 is due to taking over the second line at the Indiana plant from Toyota, lowering utilisation



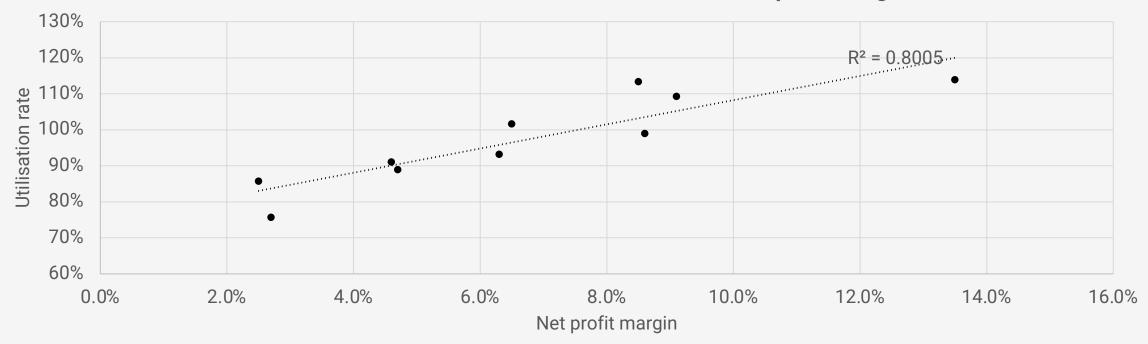


Source: TIKR

The plant utilisation rate might be the single most important factor for Subaru's net profit margin



Correlation between Subaru's utilisation rate and net profit margin



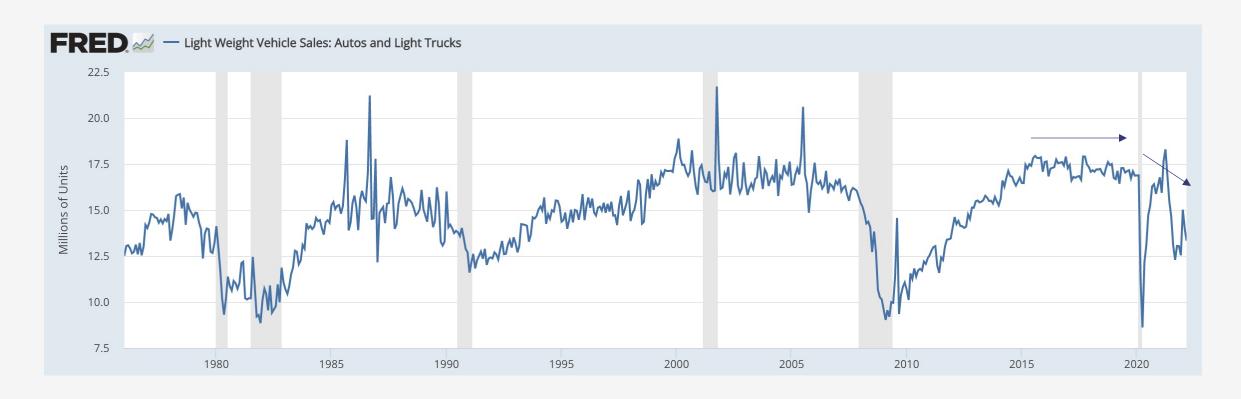
Long-term industry trends



- Weakness in the US auto cycle: US auto sales peaked right before the pandemic and has been weak since. The primary culprit are production constraints, specifically in terms of semiconductor chips for automotives.
- 2. Increased popularity of SUVs and crossovers: Since the late 1990s, the popularity of SUVs and crossovers has increased at the expense of sedans and station wagons. The driver of their increased popularity is the greater safety for drivers and passengers that they are perceived to offer. Buyers are also attracted to the better offroad capabilities of SUVs and the sometimes more aggressive look.
- 3. A move towards electric vehicles: While the value proposition of an electric vehicle vs an internal combustion engine vehicle is not always clear, some consumers appreciate the ease of charging overnight and the driving experience. EVs now represent roughly 2% of total US auto sales.
- **4. Higher US gasoline prices**: US gasoline prices have risen significantly since early 2021 due to higher crude oil prices.

US auto sales has been weak since 2019

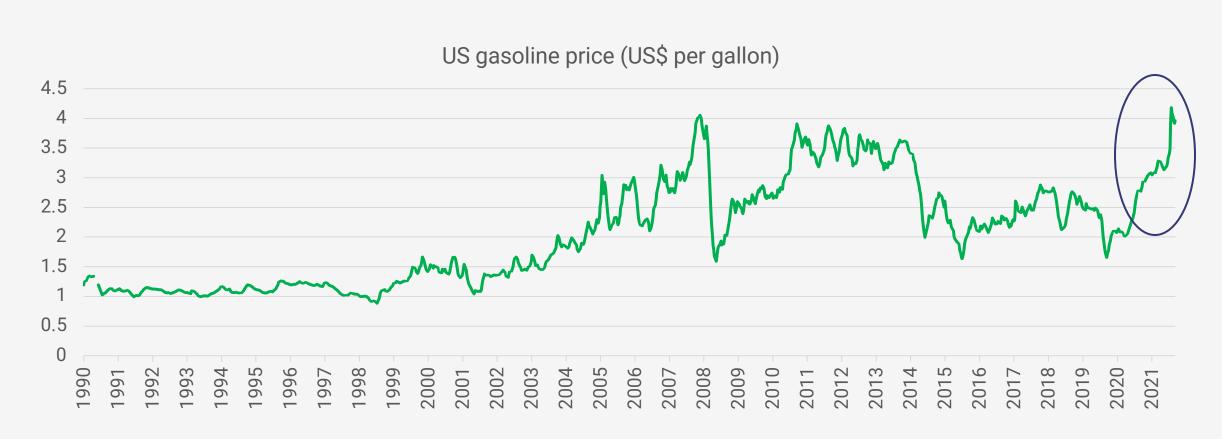




Source: FRED

US gasoline prices have almost doubled in the past two years





What will change for Subaru in the future?



- 1. A weaker Yen improves profitability and competitiveness: The Japanese Yen has depreciated significantly vs the US Dollar, roughly 12% in little over a month. This is going to improve Subaru's competitiveness and margins significantly. Expect gross profit margins to increase to 23-24% all else equal.
- 2. **Demand will continue to be strong**: Google search queries are flattish since 2019, and discounts are almost non-existent, suggesting strong demand.
- 3. **Production shortages**: Subaru's problem since early 2020 is NOT demand but rather supply. Semiconductor chip shortages has made it difficult for vehicles to reach the market.
- 4. Challenges from rising raw materials prices: Aluminium and steel prices have spiked recently, causing some margin pressure.
- 5. Model refresh schedule: Crosstrek will be refreshed in 2023, Outback in 2024 and Forester in 2025.
- 6. Subaru's first EV to be released in 2023: Subaru has historically been one of the few automakers globally without any EV products available for purchase. But it is now developing a dedicated battery electric vehicle platform for Toyota. Subaru's first all-electric car "Solterra" will be launched in 2023.
- 7. **Guidance**: Subaru is guiding for 740,000 vehicles sold in 2022, a roughly 14% drop in sales volumes. Longer-term, I believe we can expect a return to 1 million+ units sold per year.

The Japanese Yen has weakened against the US Dollar





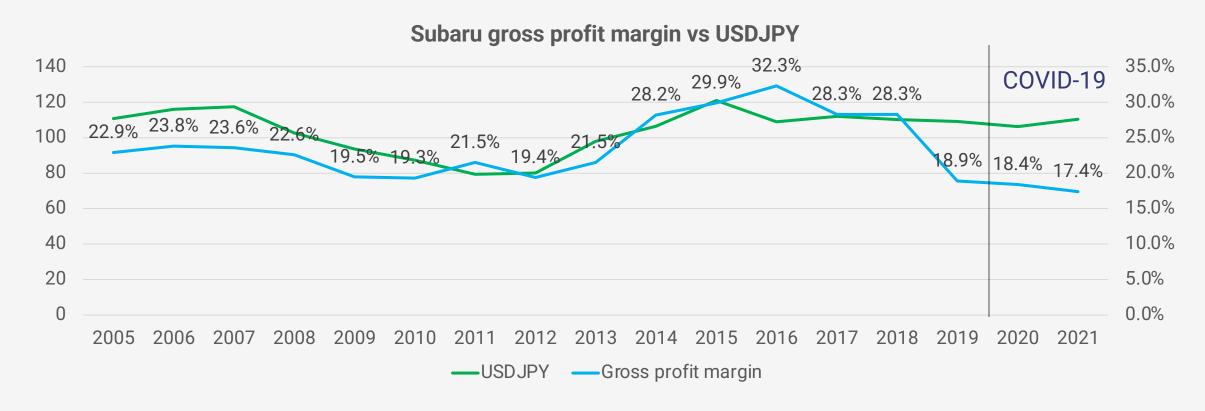
The Japanese Yen has also weakened against the South Korean won... making Japanese cars more competitive





There is correlation between the USDJPY exchange rate and Subaru's gross profit margin... and COVID-19 has also hurt

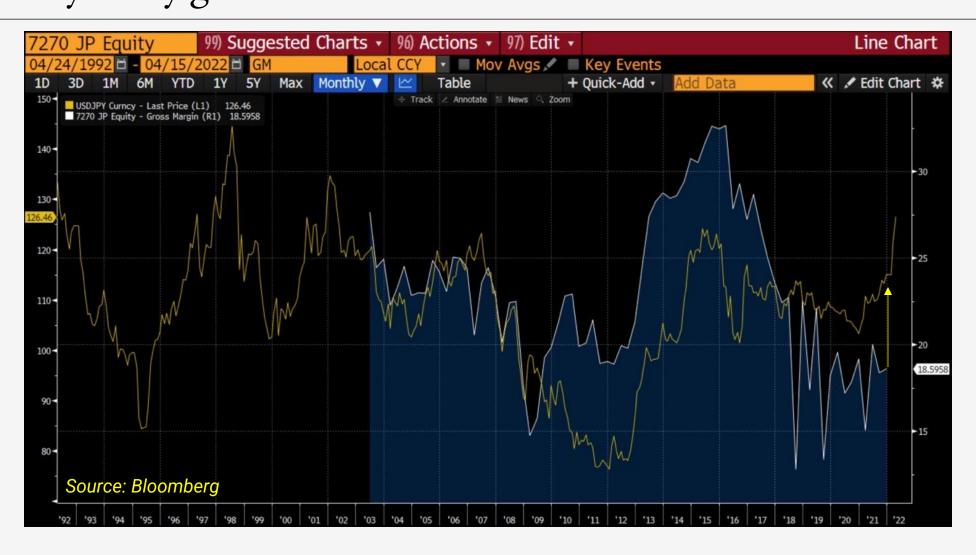




Source: TIKR

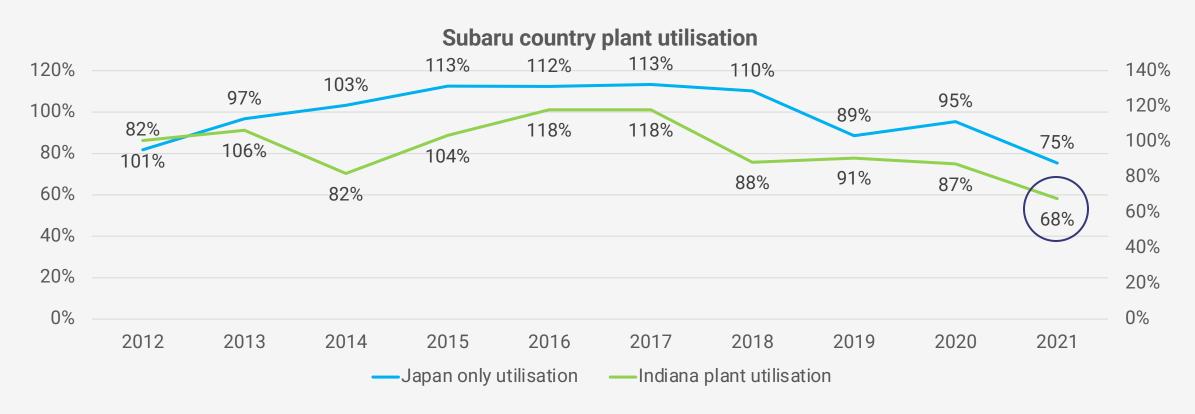
Subaru's gross profit margins will probably increase to around 23% - if history is any guide





US vs Japan plant utilisation: there is capacity to increase Japanese production for exports

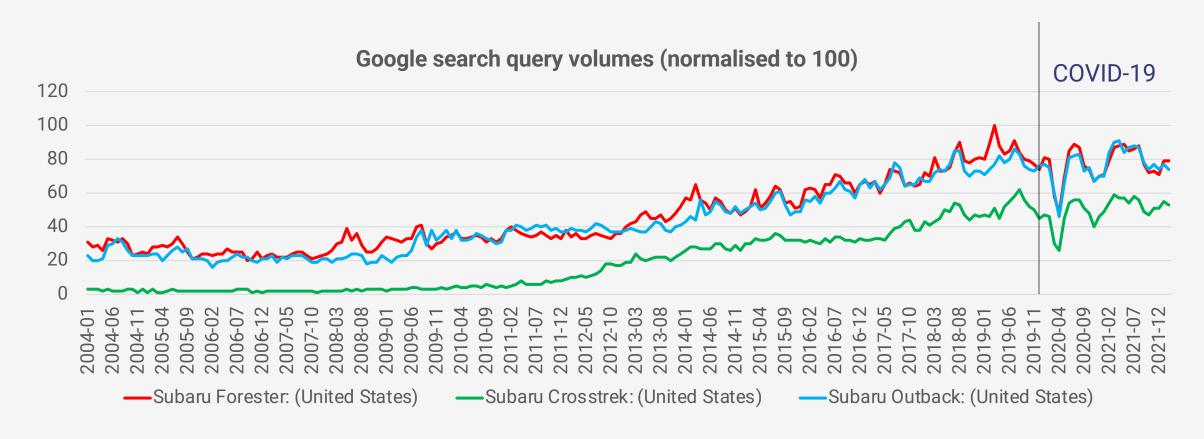




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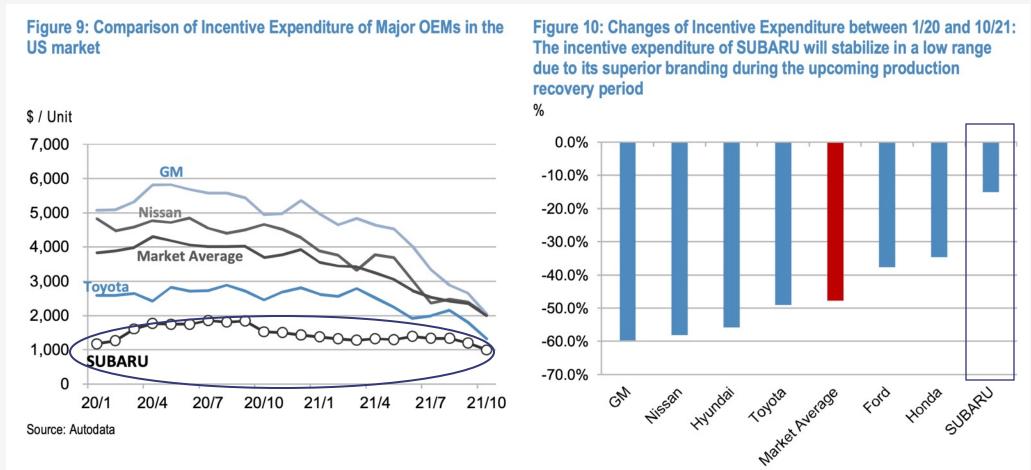
Google search queries for Subaru Forester, Crosstrek and Outback has stayed flat, suggesting stable demand from the 2019 level





Subaru has long had the lowest incentives in the industry – exhibiting brand strength – but they're now the lowest they've been in years



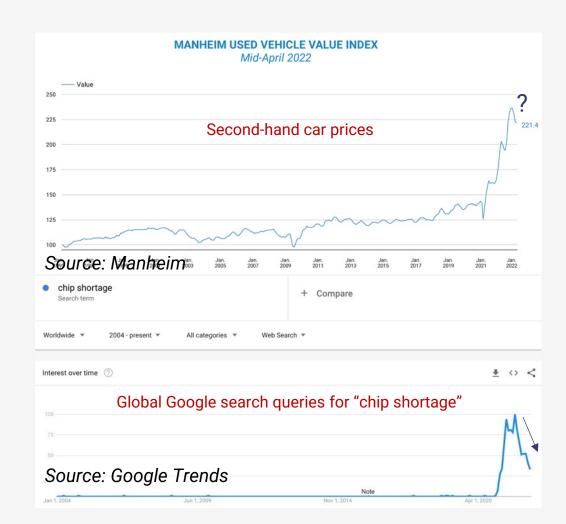


Source: JPMorgan, Autodata

US auto sales has been constrained by supply chain issues... some positive signs but China's lockdowns may prolong the recovery

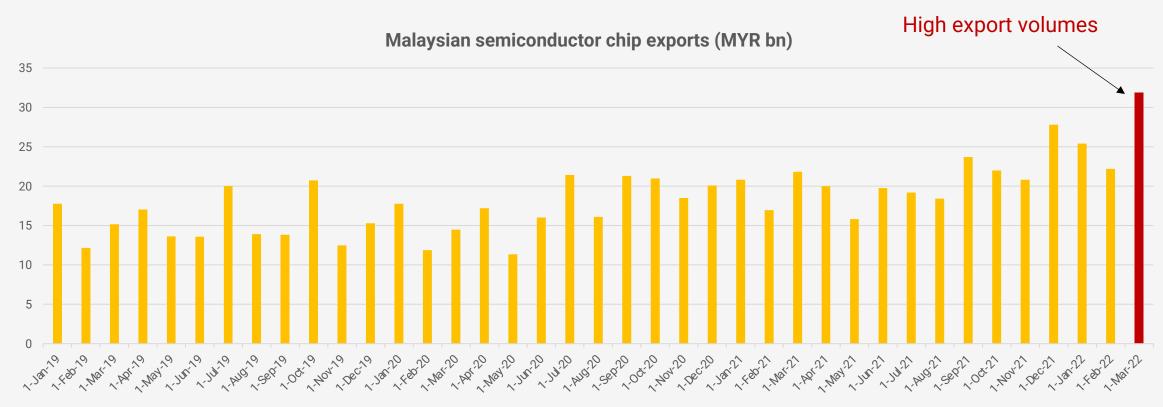


- US auto sales has dropped since 2020 for two reasons:
 - Social distancing measures and shutdowns of production facilities in early 2020
 - Chip shortages and Delta / Omicron related supply chain issues in Asia in 2021
- An excellent barometer of the supply chain issues the industry is currently facing is the Manheim Used Vehicle Value Index, which measures second-hand car prices. The index shot up from 130 before the pandemic to 230. It appears to be peaking right now.
- Will supply chain issues ease?
 - February 2022: "Subaru anticipates container shipping problems ending soon."
 - April 2022: Texas Instruments cut its revenue forecast by 10 percent for its second quarter, which ends in July, because multiple Chinese customers have not been able to receive orders due to lockdowns
 - Gartner April 2022: "Most semiconductor shortages eased in PCs and smartphones as production moved into the off season combined with increased semiconductor supply into the market. However, some semiconductor device types will continue to be in shortage in the automotive supply chain through late 2022."



High Malaysian chip exports suggest easing shortages of semiconductor chips





Source: METS Online (Malaysia External Trade Statistics)

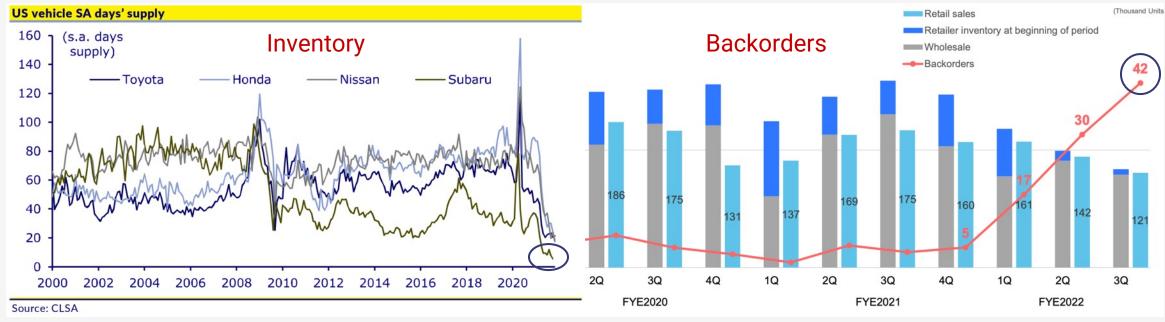
The number of new cars transported on trains in the United States remains far below the pre-pandemic level, suggesting weak supply





Subaru's US inventory levels have reached an all-time low. The problem is supply – not demand. Subaru has record backorders.

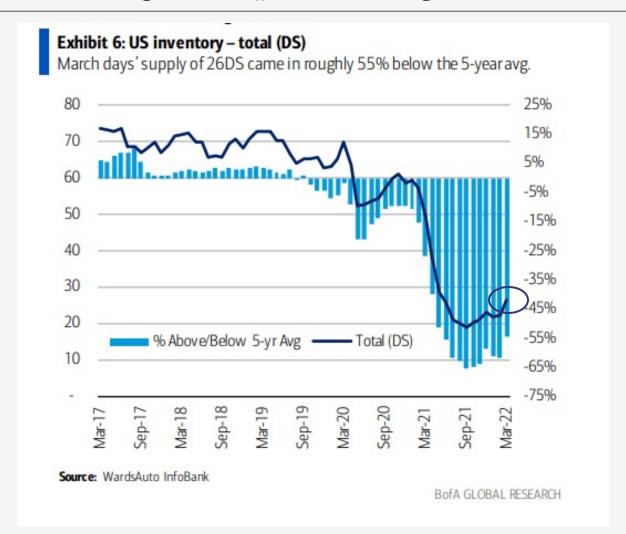




Source: CLSA Source: Subaru

Industry-wide inventory levels are showing signs of turning – a sign that supply is starting to respond to high demand for vehicles



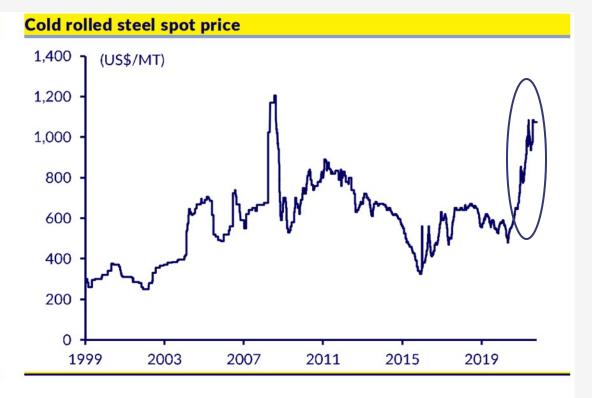


Source: Bank of America

Rising raw materials costs across aluminium, steel, copper and precious metals will lead to a certain P&L impact short-term.







Source: Refinitiv

Source: CLSA

Subaru's new model refreshes from 2022 will be the first since the Legacy / Outback refreshes in 2019



Subaru - US full model chan	ige schedule	
Model	Next change	% of US sales, FY3/21
BRZ	2021	0.4
Impreza	2022 (add PHEV 2023)	6.6
Solterra	2022	All-new
WRX	2022	3.5
Cross trek	2023	20.8
Legacy	2024	4.2
Outback	2024	25.3
Forester	2025	28.9
Ascent	2025	10.4
Source: Wards' Automotive and	CLSA	

Source: CLSA

The new Subaru Solterra electric vehicle, developed with Toyota looks the part, but offers low range and a bit expensive at US\$42k



- "Premium trims get 228 miles of range, while Limited and Touring models see a slight drop (222 miles) because of their bigger tires."
- "The new Solterra features 8.3 inches of ground clearance, the most of any electric SUV in the segment."
- "Regardless of size, both screens come with Toyota's latest infotainment system... is compatible with wireless Apple CarPlay and Android Auto"
- "Subaru and Toyota wanted to build an SUV that feels as normal or natural as possible, and the Solterra delivers on that effort."
- "Prices for the 2023 Subaru Solterra have not been announced, but we expect it will start around US\$42,000—not counting any state or federal tax credits"



Source: Motortrend

Subaru does not trade at a discount to peers... But note that Subaru's financing arm is small. It has a very strong balance sheet.



Global automakers (2023e)	Ticker	Country	Mkt cap (US\$m)	P/S	P/E	P/B	Div yield
Subaru	7270 JP	Japan	11,475	0.59x	10.1x	0.8x	3.5%
Mazda	7261 JP	Japan	4,487	0.16x	9.1x	0.5x	3.1%
Suzuki	7269 JP	Japan	14,663	0.47x	9.7x	1.0x	2.9%
Nissan	7201 JP	Japan	16,679	0.22x	6.9x	0.45x	3.5%
Toyota	7203 JP	Japan	278,165	1.04x	10.1x	1.1x	2.9%
Honda	7267 JP	Japan	47,343	0.38x	7.7x	0.6x	3.8%
General Motors	GM US	United States	56,367	0.35x	5.6x	0.7x	1.2%
Ford	F US	United States	59,679	0.38x	6.7x	1.03x	2.8%
Hyundai	005380 KS	South Korea	31,602	0.30x	6.7x	0.58x	2.9%
Kia	000270 KS	South Korea	26,755	0.41x	5.8x	0.78x	3.9%
Daimler	DTG GR	Germany	22,039	0.43x	7.6x	1.1x	5.1%
BMW	BMW GR	Germany	52,694	0.37x	5.2x	0.6x	6.5%
Volkswagen	VOW GR	Germany	95,263	0.32x	6.2x	0.64x	4.5%
Stellantis	STLA US	Netherlands	41,633	0.22x	2.8x	0.53x	10.0%
Average ex-Subaru			57,490	0.39x	6.9x	0.7x	4.1%
Median ex-Subaru			41,633	0.37x	6.7x	0.6x	3.5%

Source: Bloomberg

Subaru's has historically traded at 1.8x book and 10.6x P/E





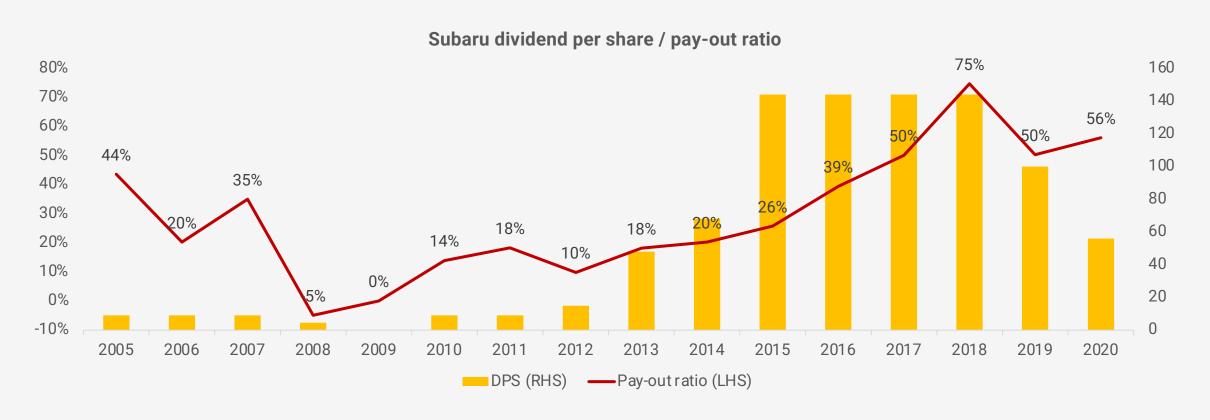
If the gross profit margin reaches 23% and net profit margin 7.7%, the P/E will be close to 5.2x, which can be compared to a historical level of 10x



Subaru (7270 JP)	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>
Revenue	3,233	3,161	3,344	2,830	2,915	3,352	3,453	3,557
Cost of sales	-2,443	-2,562	-2,729	-2,338	-2,332	-2,581	-2,659	-2,739
Gross profit	<u>790</u>	<u>599</u>	<u>616</u>	<u>493</u>	<u>583</u>	<u>771</u>	<u>794</u>	<u>818</u>
SG&A	-411	-403	-413	-395	-370	-426	-439	-452
Operating profit	<u>379</u>	<u>196</u>	<u>203</u>	<u>98</u>	<u>213</u>	<u>345</u>	<u>356</u>	<u>366</u>
Other income	-82	0	5	16	0	0	0	0
Pretax profit	<u>297</u>	<u>196</u>	<u>208</u>	<u>114</u>	<u>213</u>	<u>345</u>	<u>356</u>	<u>366</u>
Income tax	-76	-48	-55	-37	<u>-54</u>	<u>-88</u>	<u>-91</u>	<u>-93</u>
Net profit	<u>222</u>	<u>147</u>	<u>153</u>	<u>77</u>	<u>159</u>	<u>257</u>	<u> 265</u>	<u>273</u>
Minorities	-1	0	0	1	0	0	0	0
NPAT to controlling	<u>220</u>	<u>148</u>	<u>153</u>	<u>78</u>	<u>159</u>	<u>257</u>	<u>265</u>	<u>273</u>
EPS (JPY)	287	193	199	102	207	335	345	356
<u>P/E</u>	<u>6.7x</u>	<u>10.0x</u>	<u>9.7x</u>	<u>18.9x</u>	<u>9.3x</u>	<u>5.8x</u>	<u>5.6x</u>	<u>5.4x</u>
<u>EV/EBIT</u>	<u>1.6x</u>	<u>3.1x</u>	<u>3.0x</u>	<u>6.3x</u>	<u>2.9x</u>	<u>1.8x</u>	<u>1.7x</u>	<u>1.7x</u>
<u>Div yield</u>	<u>7.5%</u>	<u>5.2%</u>	<u>2.9%</u>	<u>2.9%</u>	<u>5.4%</u>	<u>8.7%</u>	<u>9.0%</u>	<u>9.2%</u>
GPM	24.4%	18.9%	18.4%	17.4%	20.0%	23.0%	23.0%	23.0%
ОРМ	11.7%	6.2%	6.1%	3.4%	7.3%	10.3%	10.3%	10.3%
NPM	6.9%	4.7%	4.6%	2.7%	5.4%	7.7%	7.7%	7.7%

Subaru has become increasingly generous with its dividend payouts, now closer to 50% of earnings





Potential downside risks



- **FX risk**: Subaru's sensitivity to currency exchange rates goes both ways. It benefits from a weakening of the Japanese yen and suffers from any appreciation. Right now, the yen is weak but any reversal would be problematic.
- Recalls: Subaru has had quality control issues in recent years. In 2017, Subaru admitted that unqualified workers had carried out final vehicle inspections. Also in 2017, Subaru recalled 410,000 vehicles over faulty engine parts. In 2019, 2.26 million vehicles were recalled over a brake lamp defect. While recalls are always concerning, they haven't affected buyer sentiment much – if at all.
- Management weakness? The data manipulation scandals notwithstanding, it seems that Yoshinaga was an excellent CEO, given what Subaru achieved under his tenure. Might some of Subaru's recent weakness be due to his absence?



Catalysts



- Further weakening of the Japanese Yen
- US auto supply chain bottlenecks easing
- The Solterra EV launch in 2023
- Crosstrek / Outback / Forester model refreshes in 2023-2025

