GRUNDFOS **MACHINING INDUSTRY**

ISSUE 3, 2011

THE GRUNDFOS INDUSTRY INDICATORS

EUROPE: **GOING UP**

UPDATE ON THE ECONOMIC SITUATION AND DEVELOPMENT IN SELECTED SECTORS

ABOUT GRUNDFOS INDUSTRY INDICATORS

This quarterly newsletter can give you a general idea of which way the wind is blowing in the machine tools industry. It is a special supplement to our subscribers of *Knowledge Link*, our new website for the machining industry.

Almost all the charts and graphs here are publicly available. They come from the three major machine tool associations – in Germany, Japan and the United States – as well as global surveys from market analysts.

We make the final two graphs ourselves, the Monthly Production Output by country and manufacturer. We build these up from available automotive production figures. Grundfos Machining Industry segment uses automotive production statistics, because that market is such a big part of the machine tools industry. Based on that, we try to estimate how the coming one- to three months will look.

Why do we want to share these statistics? Because we have a common interest in seeing where the market is going.

So please: read these statistics and comments as *indicators* alone

We welcome your other comments. Use the contact information on the final page.

Page 4 - 10 / Industry Indicators

COMMENTARY

GOING UP

WHY EUROPE'S DEBT CRISIS DOES NOT SEEM TO BE BOTHERING OUR INDUSTRIES

By Holger Fritzsche,
Regional Manager, Grundfos Machining Industry, Europe

The world suffered its first major economic crisis more than 80 years ago – the stock market crash, followed by the Great Depression. As the European Union struggles with its economy today in the midst of a new worldwide crisis, the effects are different.

In 1929, the governments were completely surprised at the downward turn of events. Governments did not have any influence on the economy. They had neither the money nor the influence after the First World War.

Today is different, of course, with globalisation and the way governments are influencing the economic world. I don't like to talk about politics so much. I'm oriented in sales and technical matters. But here is how I see it: governments don't have any money – Greece, Italy, other countries, too. But investments from companies just keep going up and up. So there is some money somewhere, you know?

GOOD FEELING AT EMO

The EMO machine tool trade exhibition in Hanover was nice this year. It was fun. Everyone had big smiles. I can remember other EMOs where people were quite depressed, where nothing was happening; there were no investments or talks about orders.

This year, I heard a lot of talk about delivery times. That's a nice sign. Order capacities are full. The German Machine Tool Association (VDMA) estimated that during EMO this year, agreements led to approximately 4.5 billion euro in orders.

Another topic I heard at EMO was efficiency. This will be driving the big markets of 2012: the change from low-price machines to high-tech, more innovative, better quality and much more efficient machines. We expect this especially in China and East Asia.

This shows we are on the right path. We were the first industrial pump producer to have frequency controlled drives on our motors. That was more than 10 years ago. It's a nice feeling to know that we have pushed for years in getting the most efficient pumps into the market – not just the biggest pumps.

NEW TYPE OF SUPPLY CHAIN

Another trend I see today is more interaction among suppliers, OEMs and end users. Again, this all goes back to efficiency and saving money.

In the past, a pump producer was just a pump producer and supplied customers with a product and did not care about what was happening in the complete systems. It was the same with other producers: motors, machine tools, others. A pump producer just gave a pump's duty point, flow rate and pressure and no one asked, "Is this efficient?"

Today, Grundfos interacts with other suppliers and its customers to come up with the most efficient solutions. This is innovation today.

We are also one step ahead in this case. Our Design Tool software helps machine tool producers configure their optimal coolant system, saving resources and energy.

The demand for something like the Design Tool also goes hand-in-hand with the activity around pump audits. In Germany, the government will subsidize up to 67% of the cost of a pump or energy audit – that's a really nice sign, when a government looks into resource efficiency.

WILLING TO CHANGE

We were asked by one big car producer to be part of a workshop on energy management. They asked us to check three high-pressure pumps on a transfer line. What we saw was quite common for these kinds of applications, where the coolant system components and pumps are sized much bigger than necessary.

We did not even need to get out our measuring tools. First, we simply looked at the system's tool plan, which showed a needed flow rate of 200 litres per minute (l/m). Then we looked at the fluid plan for the different nozzles and machine tools. This showed 272 l/m. Then we looked at the pump curve. The pumps were delivering 320 l/m – meaning the machine was using 120 litres too much coolant every minute – for the last ten years.

Perhaps the global financial crisis has forced people to be more sensitive regarding efficiency. But companies are now discovering they can save a lot of money by improving their efficiency. They are willing to change.

This would be the perfect place to suggest that perhaps the world's governments could learn something from this – but again, I'm not much of a political person. I just know we're on the right path in Grundfos.

Grundfos analyst:

Sceptical expectations do not affect car industry

As the most recent figures show, we see business expectations turning more and more sceptical.

The automotive sector is not yet affected – the four main car manufacturing countries have all come out of the seasonal summer low with increasing production numbers. The machine tool industry in Germany, Japan and the U.S. can naturally profit from this.

The German and the U.S. manufacturers are producing at almost full capacity (see commentary p. 3). Japan is also showing fine growth rates.

Altogether, the industry is optimistic for the outcome of 2011, despite stagnating economic growth in many other industry sectors.

Frank Baake
Senior Marketing Analyst

ZEW Indicator of Economic Sentiment (Germany)

ZEW - Financial Market Survey: Results October 2011

Economic expectations	improve		no change		get worse		balance	
Eurozone	7.5	(- 2.6)	33.8	(- 1.4)	58.7	(+ 4.0)	-51.2	(- 6.6)
Germany **(ZEW Indicator)**	8.2	(- 0.1)	35.3	(- 4.8)	56.5	(+ 4.9)	-48.3	(- 5.0)
USA	16.4	(- 3.8)	52.4	(+ 2.2)	31.2	(+ 1.6)	-14.8	(- 5.4)
Japan	24.6	(- 5.1)	55.1	(+ 6.5)	20.3	(- 1.4)	4.3	(- 3.7)
United Kingdom	7.7	(- 3.7)	57.8	(+ 1.8)	34.5	(+ 1.9)	-26.8	(- 5.6)
France	5.9	(- 1.7)	39.6	(- 1.9)	54.5	(+ 3.6)	-48.6	(- 5.3)
Italy	5.5	(- 3.2)	39.8	(- 1.9)	54.7	(+ 5.1)	-49.2	(- 8.3)

Sectors	improve		no change		get worse		balance	
Banks	5.1	(- 1.1)	10.9	(-10.7)	84.0	(+11.8)	-78.9	(-12.9)
Insurance companies	5.1	(- 0.8)	25.4	(- 6.9)	69.5	(+ 7.7)	-64.4	(- 8.5)
Automobile	13.6	(- 0.9)	53.6	(+ 7.1)	32.8	(- 6.2)	-19.2	(+ 5.3)
Chemicals / Pharmaceuticals	18.3	(+ 5.2)	59.1	(+ 0.9)	22.6	(- 6.1)	-4.3	(+11.3)
Steel	11.1	(- 0.4)	47.2	(- 2.0)	41.7	(+ 2.4)	-30.6	(- 2.8)
Electronics	12.0	(+ 0.4)	61.8	(+ 3.0)	26.2	(- 3.4)	-14.2	(+ 3.8)
Mechanical engineering	15.7	(+ 1.1)	51.5	(+ 1.9)	32.8	(- 3.0)	-17.1	(+ 4.1)
Retail / Consumer goods	14.8	(+ 2.8)	58.6	(- 4.7)	26.6	(+ 1.9)	-11.8	(+ 0.9)
Construction	12.4	(+ 1.7)	58.5	(+ 4.5)	29.1	(- 6.2)	-16.7	(+ 7.9)
Utilities	14.1	(+ 3.0)	48.5	(+ 5.4)	37.4	(- 8.4)	-23.3	(+11.4)
Services	16.7	(+ 2.1)	67.4	(- 1.0)	15.9	(- 1.1)	0.8	(+ 3.2)
Telecommunications	9.8	(+ 1.1)	70.1	(+ 2.9)	20.1	(- 4.0)	-10.3	(+ 5.1)
Information technology	20.6	(- 0.9)	61.5	(+ 1.3)	17.9	(- 0.4)	2.7	(- 0.5)

Note: 271 analysts participated in the October-survey which was conducted during the period 10/4-10/17/2011. Analysts were asked about their expectations for the next 6 months. Numbers displayed are percentages (month-over-month percentage point changes in parentheses). Balances refer to the difference between positive and negative assessments.

1

Economic Expectations for Key Countries and Industry Sectors

ZEW
Zentrum für Europäische Wirtschaftsforschung GmbH
Centre for European Economic Research

The Centre for European Economic Research (ZEW) writes, "The ZEW Indicator of Economic Sentiment for Germany has decreased by 5.0 points in October 2011. This is the eighth decline in a row. The indicator now stands at minus 48.3 points.

A lower value of the indicator was seen last in November 2008. Weak data concerning Germany's domestic economic activity have contributed to the indicator's decline. Due to the decrease of retail sales and new industrial orders, the financial market experts may see their fears come true that the current government debt crisis might cause German companies and consumers to postpone investments and consumption spending.

"Economic expectations for the euro zone have decreased by 6.6 points in October. The respective indicator now stands at minus 51.2 points."

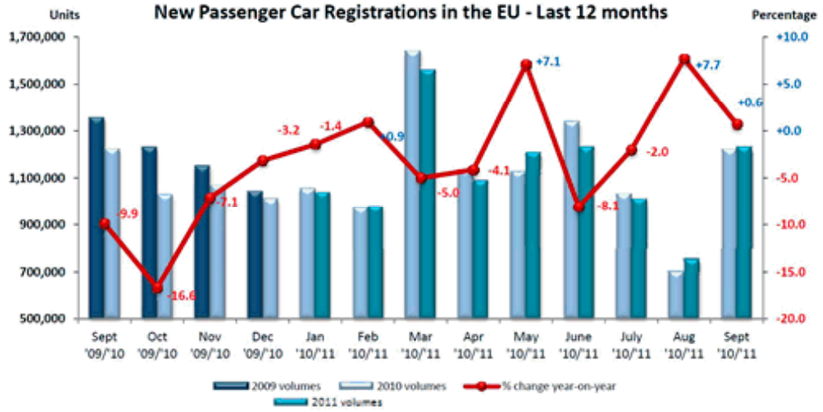
The ZEW Indicator of Economic Sentiment is ascertained monthly. Up to 350 financial experts take part in the survey. The indicator reflects the difference between the share of analysts that are optimistic and the share of analysts that are pessimistic for the expected economic development in Germany in six months. The survey also asks for the expectations for the Euro-zone, Japan, Great Britain and the U.S.A.

For more information, visit ZEW's website at *zew.de*.

2

New Passenger Car Registrations in Europe

ACEA
EUROPEAN AUTOMOBILE MANUFACTURERS' ASSOCIATION



The European Automobile Manufacturers Association writes:

"In September, demand for new passenger cars was slightly up in the EU (+0.6%), totalling 1,231,147 units. No calendar effect occurred as the month counted the same number of working days as in September 2010. Germany was the only major market to post growth (+8.1%) while the downturn ranged from 0.8% in the UK to 1.3% in Spain, 1.4% in France and 5.7% in Italy.

Over nine months, 10,121,423 new cars were registered in the region, or 1.1% less than in the same period a year ago. Looking at the largest countries, the UK (-5.0%), Italy (-11.3%) and Spain (-20.7%) all saw their markets contract, while France remained stable (+0.2%), and Germany posted a double-digit growth (+10.8%)."

For more information, see ACEA's website at *acea.be.*

3

Production of Motor Vehicles in Japan

JAMA
Japan Automobile Manufacturers Association

Japan's Motor Vehicle Statistics
TOTAL BY MONTH Current Year
[Unit: Number of vehicles]

Production

	Cars	*Change	Trucks	*Change	Buses	*Change	Total	*Change
YTD '11	3,594,518	-27.2%	574,266	-19.1%	51,575	-20.3%	4,220,359	-26.1%
Jan	609,598	-7.2%	87,830	-2.1%	8,679	17.2%	706,107	-6.3%
Feb	685,655	-6.4%	99,531	-0.5%	10,470	12.8%	795,656	-5.5%
Mar	348,474	-57.7%	50,781	-54.2%	4,682	-55.4%	403,937	-57.3%
Apr	249,772	-60.2%	40,348	-57.5%	1,924	-80.0%	292,044	-60.1%
May	410,971	-32.5%	74,840	-18.7%	3,948	-52.3%	489,759	-30.9%
Jun	620,717	-16.2%	111,329	0.2%	10,485	5.5%	742,531	-13.9%
Jul	669,331	-10.4%	109,607	-1.1%	11,387	17.8%	790,325	-8.9%

Note: August 2011 numbers were not available in above table format.

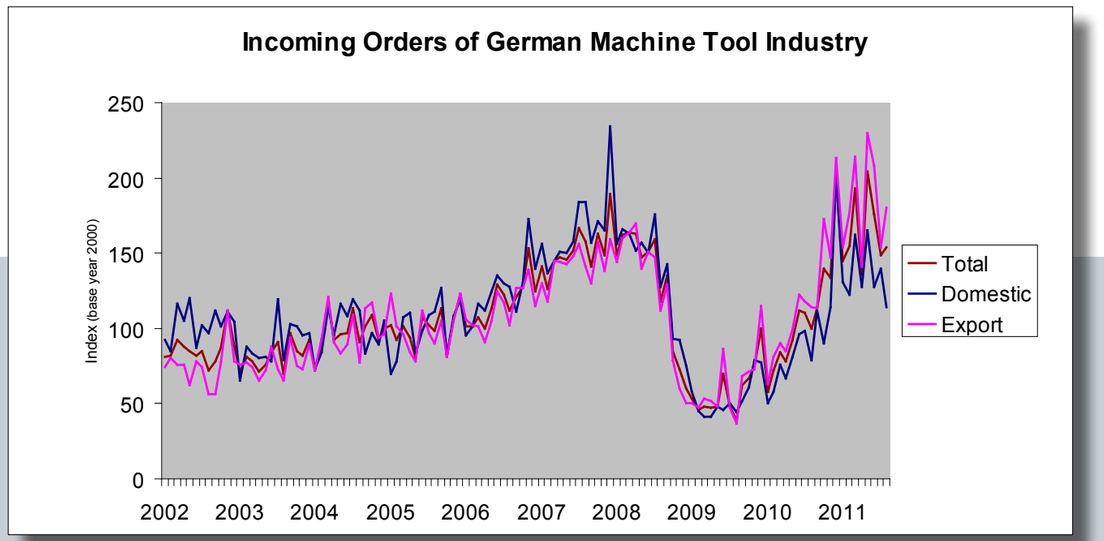
JAMA writes, "Production numbers show for all vehicles in August plus 1.8% compared to same month in 2010. But of course due to three months downtime after the hurricane and tsunami (March-May), the first eight months' result is still 23% behind last year."

For more information, see the Japan Automobile Manufacturers' Association (JAMA) website at *jama-english.jp*

4

Machine Tool Order Intake in Germany

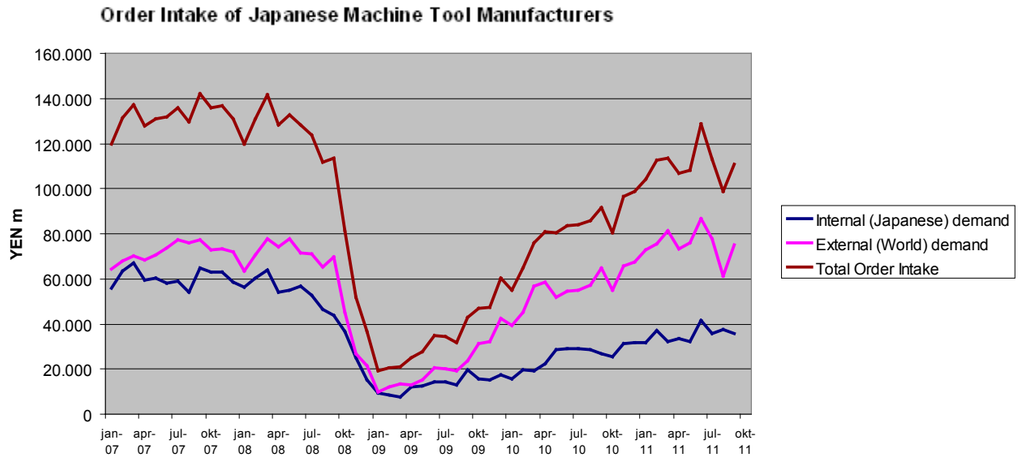
VDMA



For the German machine tool industry, the order intake in August was +54.3% compared to the same month in 2010. It also increased slightly compared to July, due to more export orders.

For more information, please visit the VDMA's website at *vdma.org.*

5 Machine Table Order Intake in Japan



According to the Japan Machine Tool Builders' Association (JMTBA), the order intake for the Japanese machine tool industry in September 2011 was +11.9%, compared to August. Thereby, the decline we observed in July and August turned around. Compared to September last year, the order intake is +20.3%, thanks to a recovered export demand, which had otherwise fallen so much last month.

For more information, please visit the JMTBA's website at *jmtba.or.jp*

6 Machine Tool Order Intake in U.S.A.

The Association for Manufacturing Technology (AMT) writes, "August U.S. manufacturing technology orders totalled $460.61 million according to AMT and AMTDA, the American Machine Tool Distributors' Association.

This total, as reported by companies participating in the USMTO program, was down 9.4% from July but up 88.5% when compared with the total of $244.35 million reported for August 2010. With a year-to-date total of $3,439.21 million, 2011 is up 101.0% compared with 2010."

The USMTO report, jointly compiled by the two trade associations representing the production and distribution of manufacturing technology, provides regional and national U.S. consumption data of domestic and imported machine tools and related equipment.

Analysis of manufacturing technology consumption provides a reliable leading economic indicator as manufacturing industries invest in capital metalworking equipment to increase capacity and improve productivity.

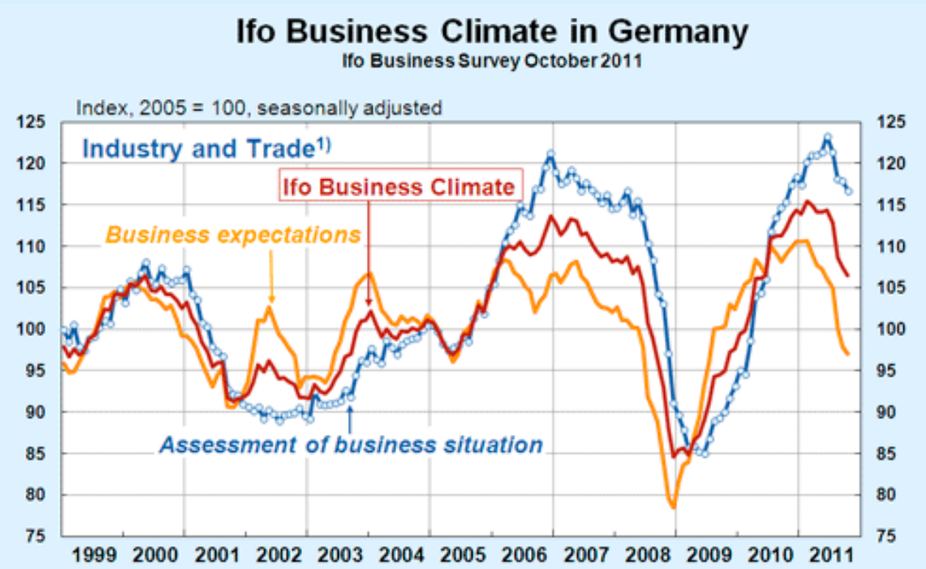
For more information, visit the website at *amtonline.org.*

USMTO **U.S. Manufacturing Technology Orders** August 2011

A joint statistical program of AMT and AMTDA

	Aug 11 (P)	Previous Month	% Change	Year Ago Month	% Change	YTD 11 (P)	YTD 10 (R)	% Change YTD
National								
Metal Cutting	417.75	403.57	3.5%	232.34	79.8%	3,067.42	1,594.49	92.4%
Metal Forming & Fabricating	42.86	104.69	-59.1%	12.01	256.9%	371.79	116.34	219.6%
Total	**460.61**	**508.27**	**-9.4%**	**244.35**	**88.5%**	**3,439.21**	**1,710.84**	**101.0%**

7 German Business Climate – Industry and Trade



Ifo Business Climate Germany:

"The Ifo Business Climate for industry and trade in Germany cooled further in October. Regarding business in the coming half year, the companies are more sceptical than before. Given the international turmoil, the German economy is still performing well."

The Ifo Business Climate Index is based on ca. 7,000 monthly survey responses of firms in manufacturing, construction, wholesaling and retailing. The firms are asked to give their assessments of the **current business situation** and their expectations for the next six months. They can characterise their situation as "good", "satisfactorily" or poor" and their business expectations for the next six months as "more favourable", "unchanged" or "more unfavourable".

The **balance value** of the current business situation is the difference of the percentages of the responses "good" and "poor"; the balance value of the expectations is the difference of the percentages of the responses "more favourable" and "more unfavourable". The **business climate** is a transformed mean of the balances of the business situation and the expectations. For calculating the **index values**, the transformed balances are all normalised to the average of the year 2000.

The CESifo Group, consisting of the Centre for Economic Studies (CES), the Ifo Institute for Economic Research and the CESifo GmbH (Munich Society for the Promotion of Economic Research) is a research group unique in Europe in the area of economic research. It combines the theoretically oriented economic research of the university with the empirical work of a leading Economic research institute and places this combination in an international environment.

For more information, visit the website at *cesifo-group.de.*

8

The Grundfos Global Automotive Indicators

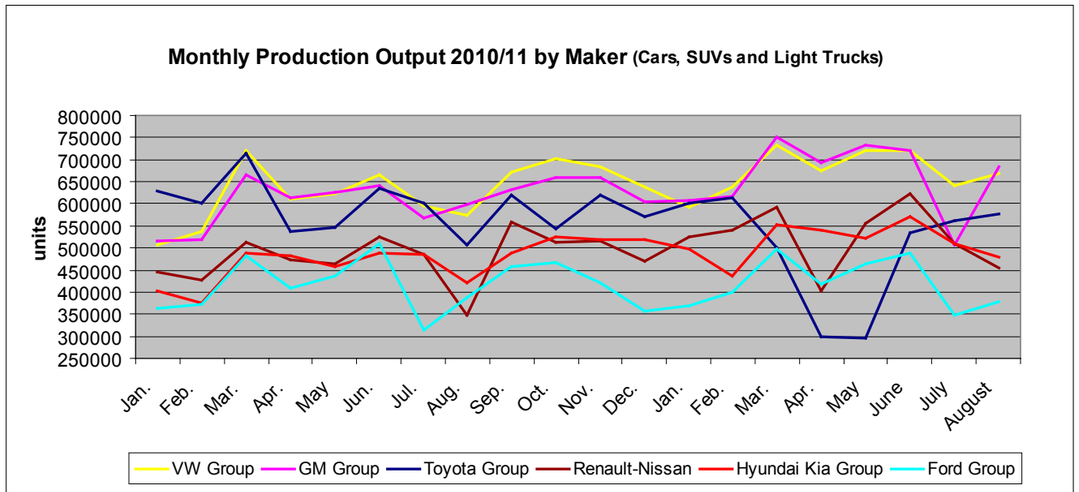
GM Group really raised production in August after the summer low point. It went especially well in the U.S. factories.

Hyundai lost ground, mainly due to reduced production (-25%) in Korea.

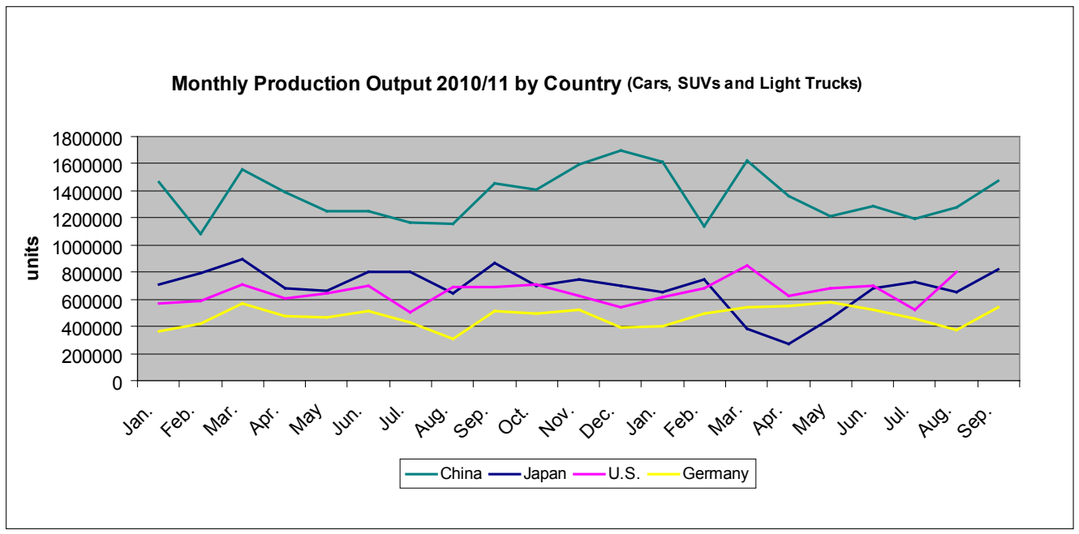
We also see a decrease for Renault-Nissan. But as said before, the development of numbers in the summer months July and August should not be overvalued.

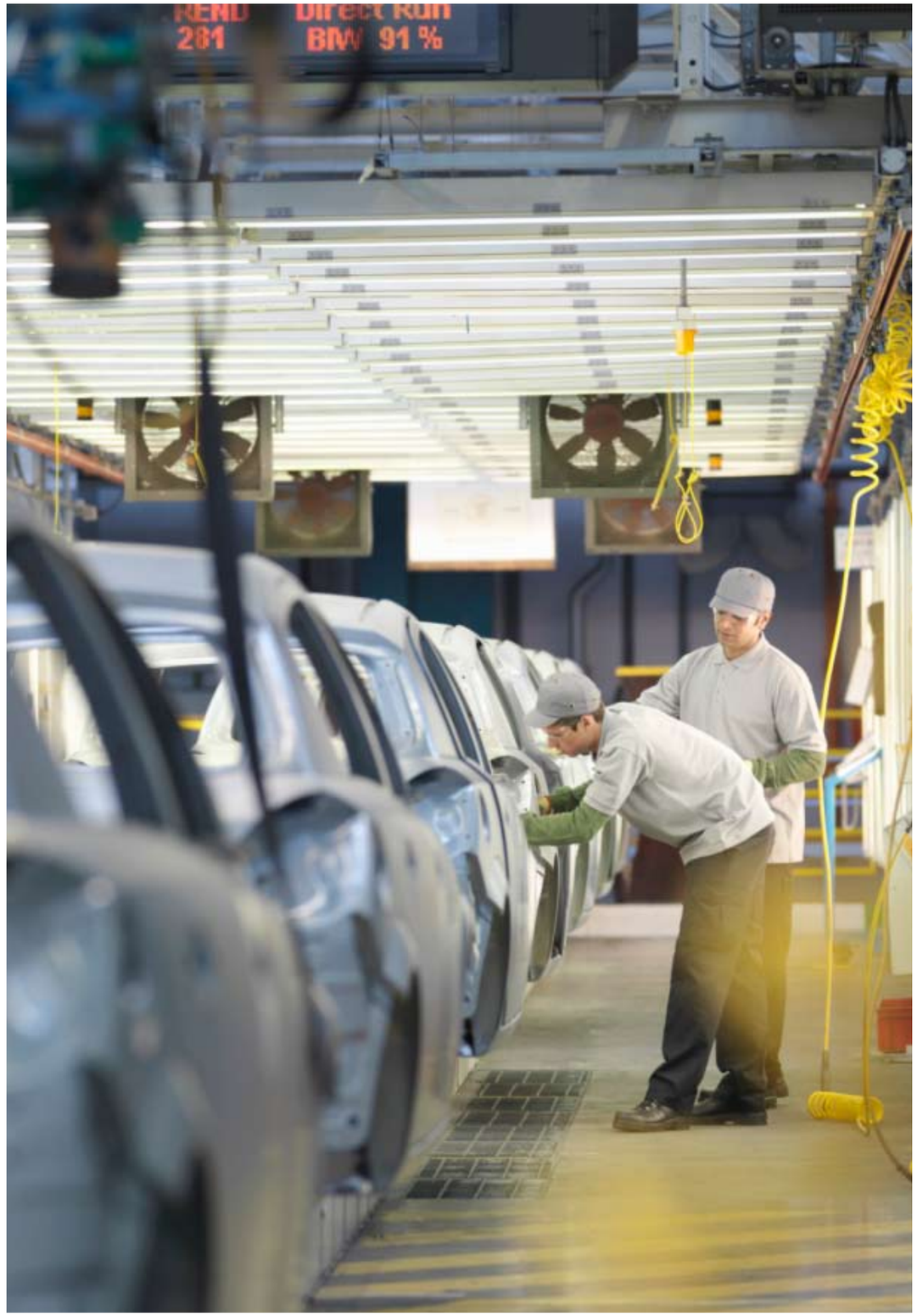
The increasing production numbers in September after the summer low (August for the U.S., due to lack of data) are showing the current optimism in this industry sector.

Data source: MarkLines Co. Ltd



Data source: MarkLines Co. Ltd





BE › THINK › INNOVATE ›

Being responsible is our foundation
Thinking ahead makes it possible
Innovation is the essence

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