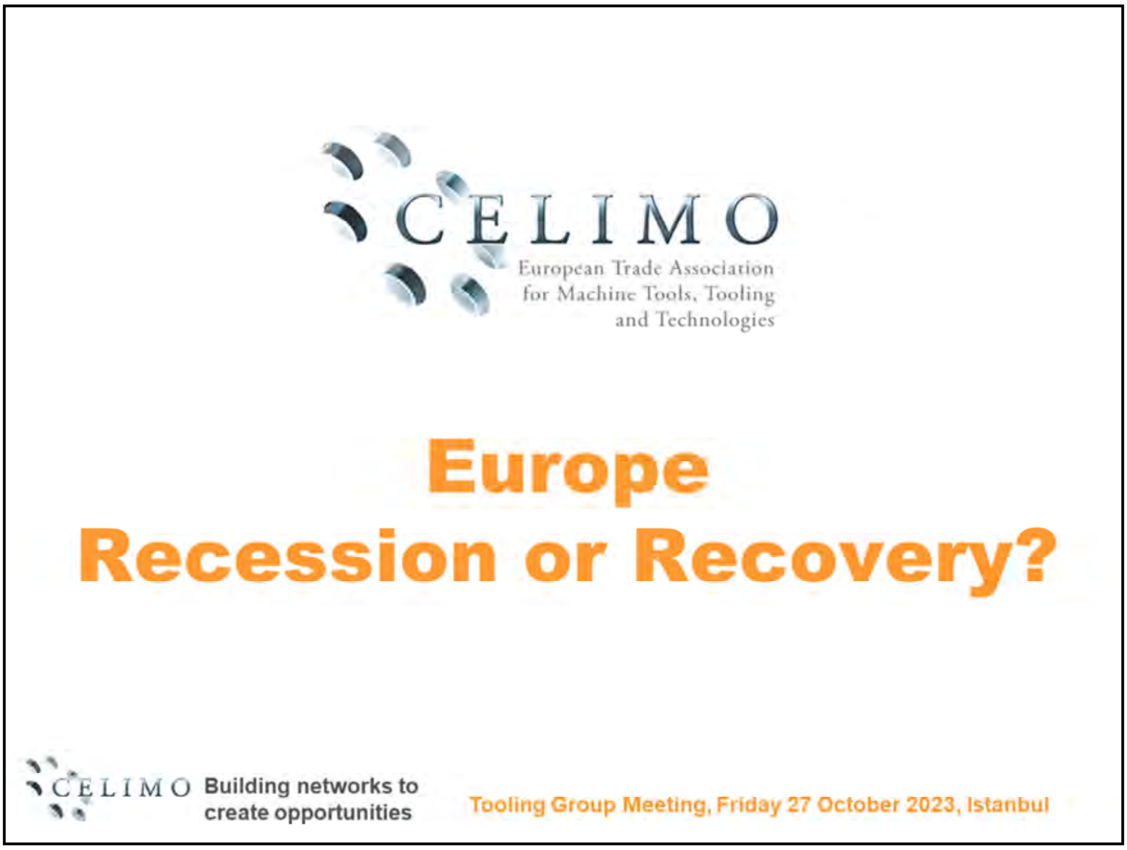


This document contains the economic presentation given by Geoff Noon (CELIMO Secretary) to the CELIMO Tooling Group Meeting, held on Friday 27th October 2023 in Istanbul.

In addition, the pdf version of this document incorporates the economic presentations given by delegates to the meeting.

All slides have had notes added to show the comments made in these presentations.

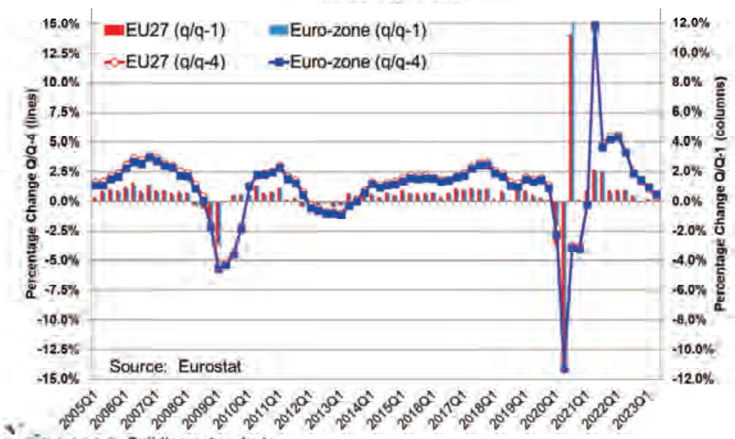
The European Economy

- Economic growth weak in 2023 and unlikely to get better soon
- Unemployment at a low point …
- … but is usually lower outside the Euro-zone
- Inflation is falling but remains relatively high
- Interest rates may have peaked
- Exchange rate changes mainly due to other currencies
- Government debt remains high, but the deficit situation has eased (mostly)

CELIMO Building networks to create opportunities Tooling Group Meeting, Friday 27 October 2023, Istanbul

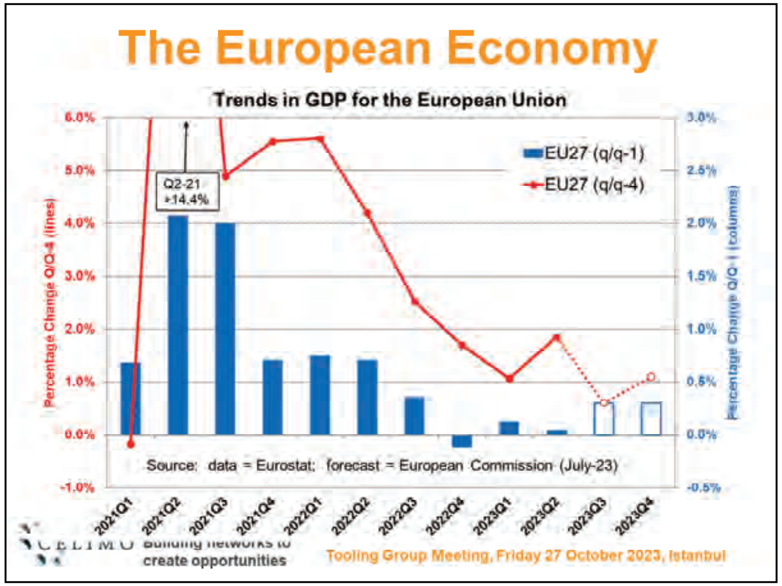
The European Economy

Trends in European GDP



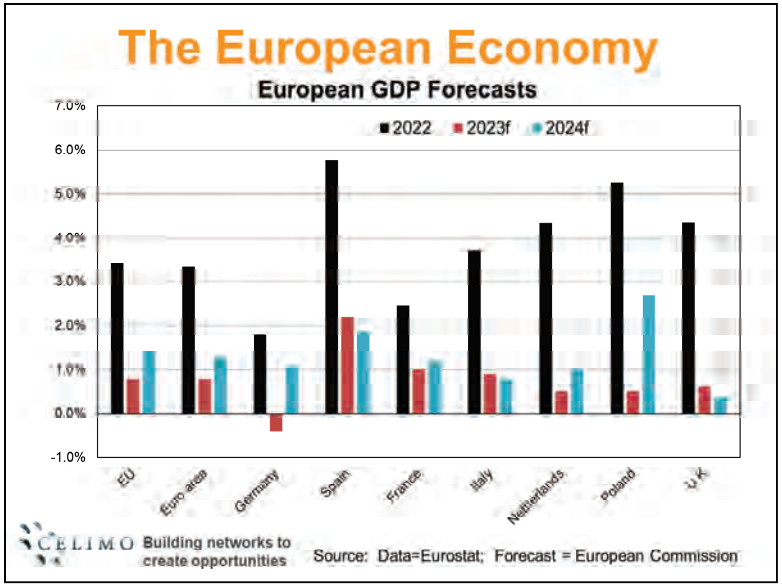
CELIMO Building networks to create opportunities Tooling Group Meeting, Friday 27 October 2023, Istanbul

The very large impact of the pandemic makes it difficult to see what is really happening, although it should be clear that there is very little growth in the European economy.



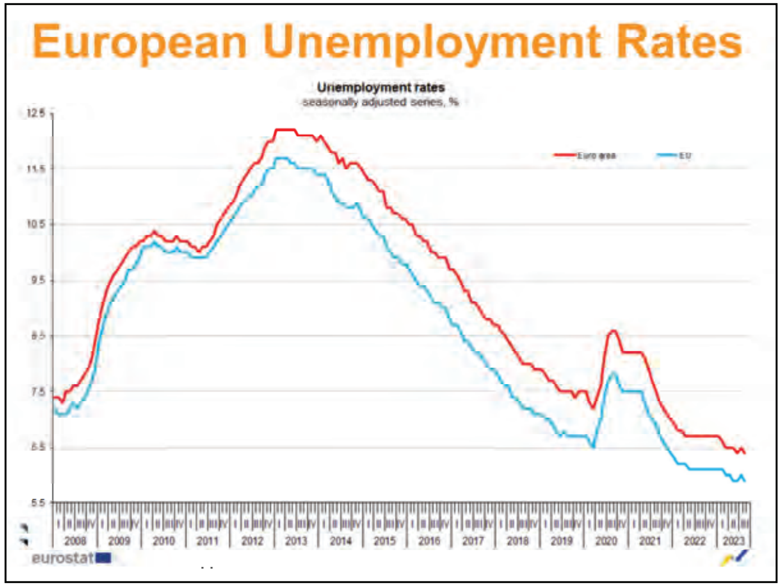
Although the 4th quarter of 2022 was negative, a recession was avoided by having a small positive at the start of 2023. However, the picture remains very weak up to the latest data point of Q2-2023.

The outlook in the European Commission's forecast published in September (but using data only up to Q2/August) suggests a small pick-up in growth in the second half of the year but this will still leave growth of less than +1% for 2023 as a whole and it is only expected to accelerate to +1½% in 2024.



The September forecast from the European Commission only covered a few large economies (note: the UK is taken from other sources).

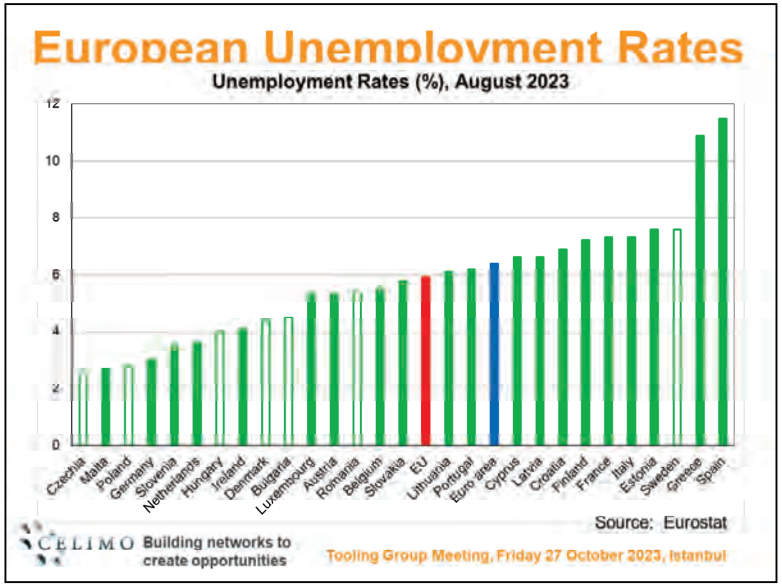
Spain has done better than the others thanks to its strong Tourism industry, a lower exposure to China and a lack of connections to the European gas network. However, the relative strength in 2023 means that slower growth is forecast for 2024 – this also applies to Italy and the UK – but the general trends is for slightly stronger growth next year but still at a relatively modest pace.



Compared to the levels reached after the global financial crisis (2009-10) and the euro crisis (2013), there was only a small rise in unemployment during the Covid-Pandemic. This was mainly due to the large-scale support put in place by most Governments.

Unemployment fell during 2021 and appeared to have stabilised in 2022, but we have seen another reduction during 2023 and is a long-term low level.

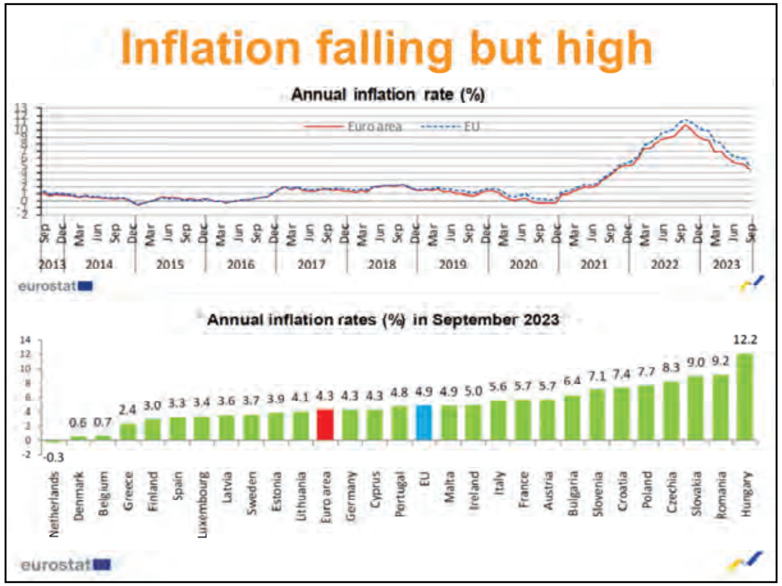
This tightness in the labour market only adds to the wage pressures that employers are already facing because of inflation.



The columns filled in white are the non-Euro members of the European Union; it is interesting to note that, with the exception of Sweden, they all lie below the EU average.

The latest figure for Switzerland is 3.9% (June), for Turkey it is 9.2% (August) and for the UK 4.3% (also June).

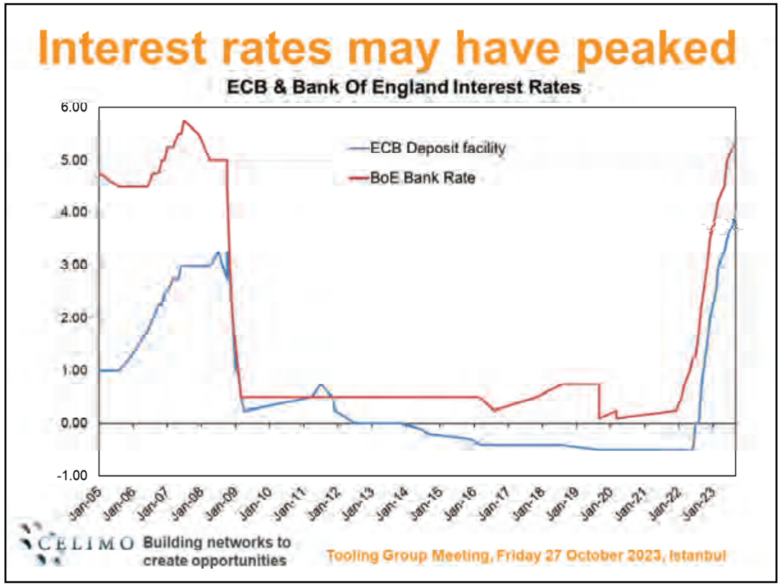
Note: In all these charts, EU covers all 27 members of the community, while the Euro-zone is the sub-set of 20 countries with a common currency.



Inflation (consumer prices) has been falling for a bout 12 months (to September 2023, the latest data point) but it remains relatively high by recent standards and is well above the +2% ECB target set for managing monetary policy (interest rates).

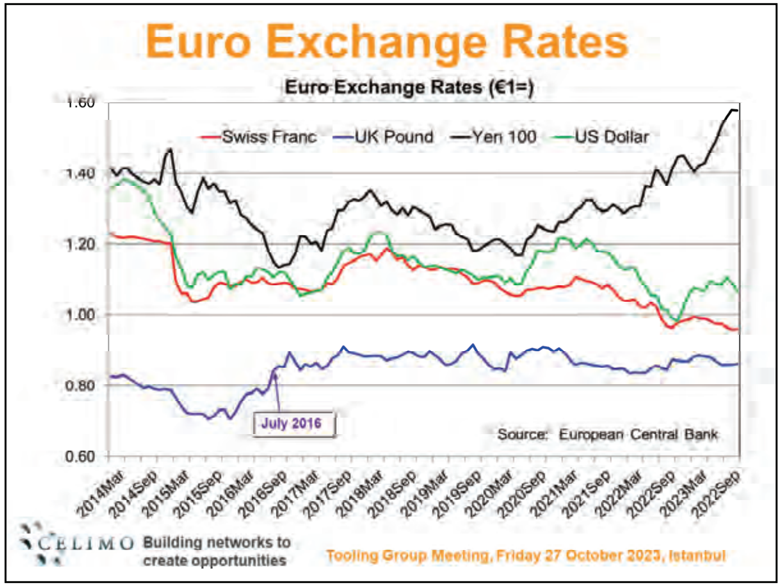
Here the EU rate is lower than for the Euro-zone, highlighting the traditional economic trade-off between inflation and unemployment, despite the unusual circumstances.

The inflation rate for individual countries is affected by specific circumstances and timing issues; the rate for the Netherlands is very low because of a sharp change in energy prices compared to September 2023.



The indications are that interest rates have peaked, with the ECB making no change at its meeting on 26th October. The next decision for the UK will be on 2nd November and for the US on 1st November.   For reference, the current US rate is 5¼% to 5½%.

The question for everyone is when they might start to fall? With inflation likely to be lower in the EU, the ECB looks best placed to start the downward trend around the middle of 2024. Subject to other economic concerns, the US is probably a quarter behind this date, with the Unlikely to see lower interest rates until the end of 2024.

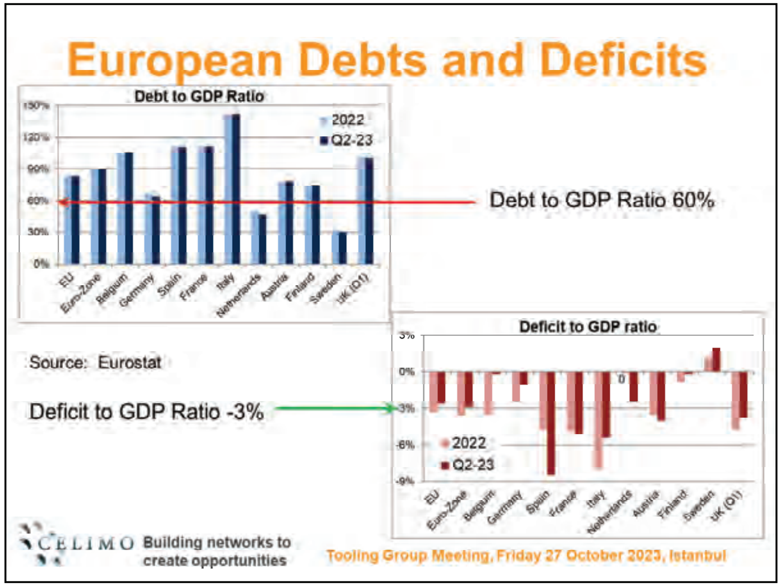


Because the Euro is moving in different directions against these currencies, the trends are driven by issues with the partner countries.

For example, the Yen is weakening because Japan did not raise interest rates (they had very little inflation). The UK£ changed after the Brexit vote but has been relatively stable since.

The US$ is still regarded as a safe haven currency, even against the Euro and the points of strengthening can be seen early in 2022 when Russia invaded Ukraine; this data only goes up to September and we can expect the October rate to show another round of strength following the conflict in Israel-Palestine.

Note: a rising line implies that the Euro has strengthened against the currency concerned.



Debt levels take a long time to reduce (although increases are often quite quick with a burst of spending such as during the pandemic), so we should not read too much into the changes between 2022 and Q2-2023.

What is more significant are the mixed trends regarding the government deficit. While most countries are reducing this, Spain and, to a lesser extent, the Netherlands stand out as having higher levels this year, although the latter is still less than =3% (and may be a function of the caretaker government).

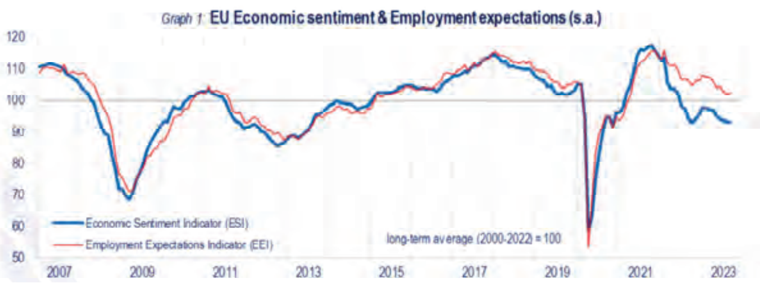
Note: according the Maastricht Treaty, Government debt was not supposed to exceed 60% of GDP, while the deficit on Government Spending was limited to -3%.

European Business Climate

- The European Commission's Economic Sentiment Indicator has been falling all year …
- … with industry confidence and business indicators weak
- Euro-zone and other European PMI's are firmly in negative territory
- Capacity Utilisation has gone below the long-run average
- The investment ratio is stable, but the profit share is falling

CELIMO Building networks to create opportunities Tooling Group Meeting, Friday 27 October 2023, Istanbul

European Business Climate

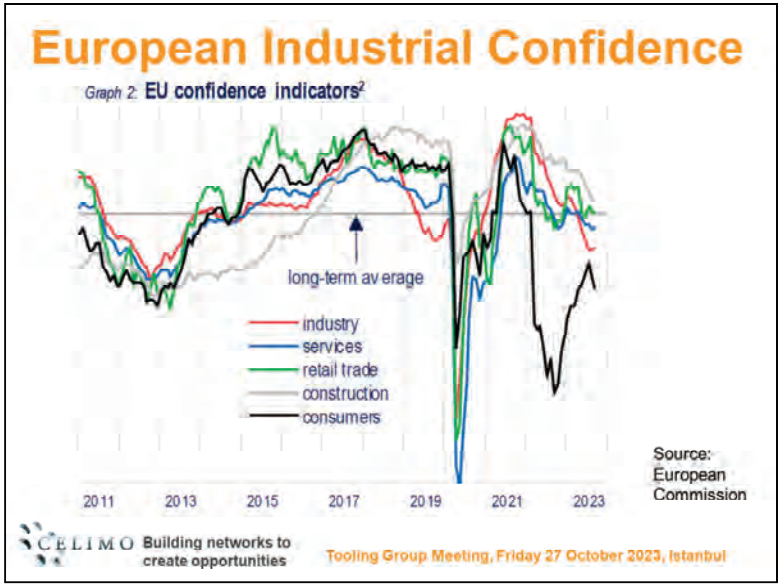


Source: European Commission

CELIMO Building networks to create opportunities Tooling Group Meeting, Friday 27 October 2023, Istanbul

The Economic Sentiment Index (ESI) from the European Commission (blue line on the chart) covers the whole economy and gives us a lead into focusing on the picture for manufacturing.

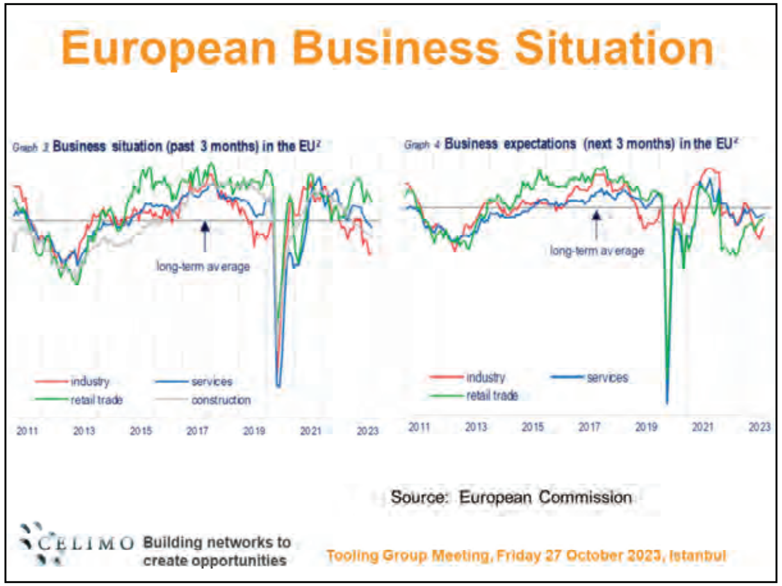
It is calculated using the long-run average as the base point (=100); for the whole economy, the ESI has been below 100 since the middle of 2022 but there have been subtle changes in how this is reached over the past few months.



Industry Confidence (red line) has been one of the weakest sectors since the Spring of 2023 with only consumer confidence (black line) below it. During 2021, industry had been leading the economy and even through 2022 it remained positive and behind only construction, despite falling consistently during the year.

Construction (grey line) has been at the top of the chart since early in 2022 and, on the latest reading, is the only sector above its' long-run average.

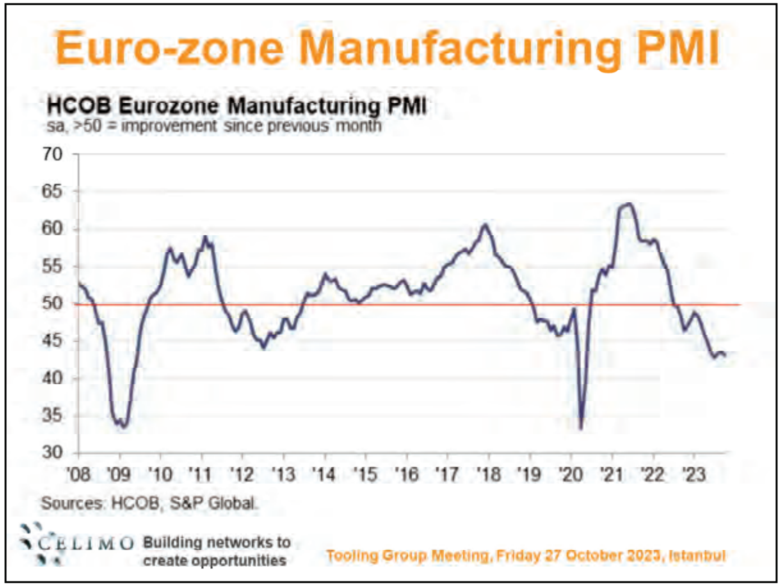
Note: the horizontal line marks the long-term average of the survey indicator for the euro-zone



Again, we note that industry has the weakest assessment of the current business situation (left-hand chart).

Looking forward to the next three months (right-hand chart), despite an up-tick in the latest reading (August 2023), it has the weakest outlook of the three sectors with this measure.

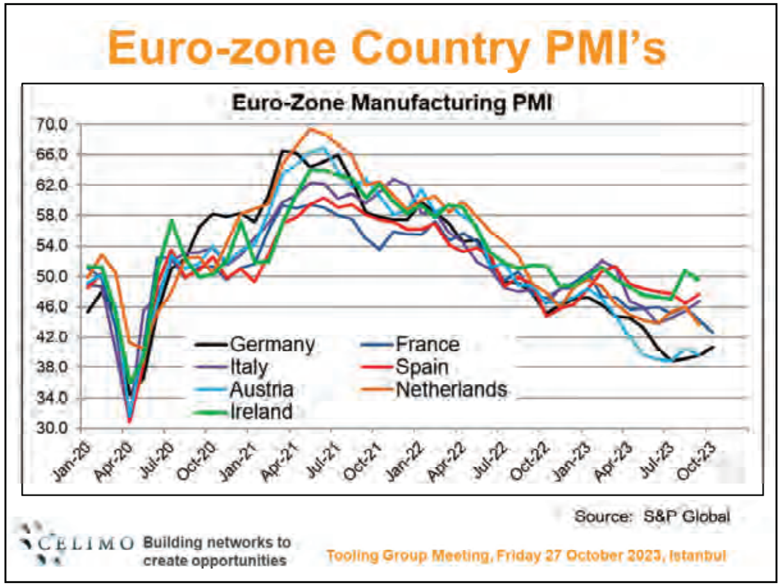
Note: the horizontal line marks the long-term average of the survey indicator for the euro-zone



The Purchasing Managers Index (PMI) for manufacturing in the Euro-zone has been below 50 since July 2022 - this indicates a contraction in activity in the sector.

With the exception of the pandemic months (April and May 2020), the Euro-zone manufacturing PMI is at its lowest levels since the global financial crisis.

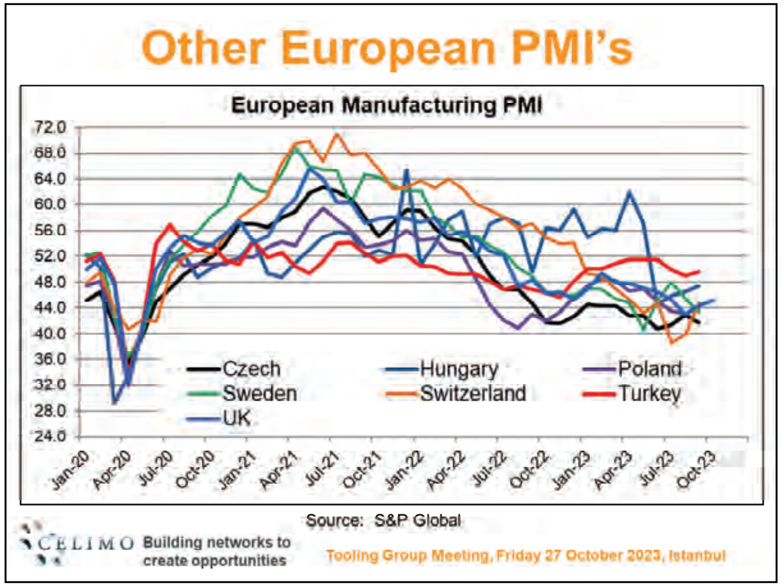
Note: The PMI is a weighted composite index based on new orders (30%), output (25%), employment (20%), suppliers delivery times (15%) and stocks of purchases (10%). They survey around 3000 firms in the manufacturing sector across 8 countries in the Euro-zone.



We see the general trend repeated in most of the Euro-zone countries covered by the PMI (note that Greece is not shown on the chart). In the latest figures, all of the 8 countries have a reading below the crucial 50 level.

However, the most notable trend is the exceptional weakness in Germany (and Austria, although that is a smaller country and manufacturing industry). This situation has been running for the past 12 months.

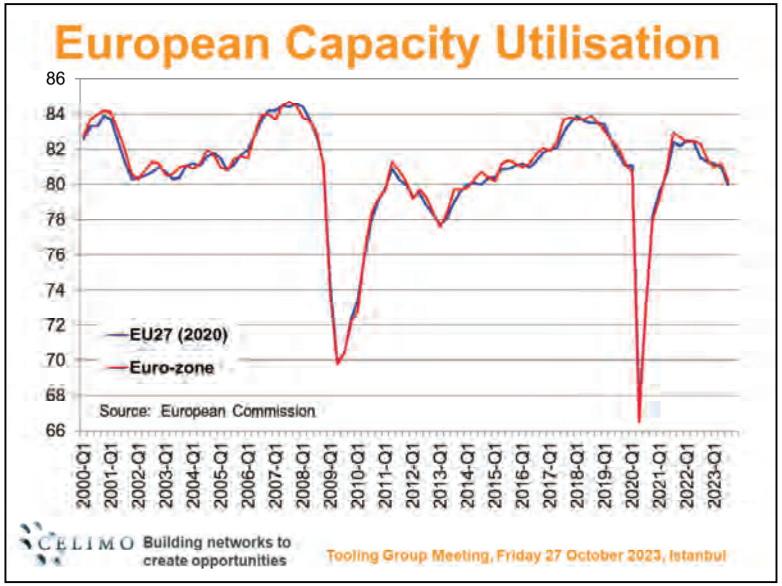
It appears from the latest data (the flash estimate for October) that France may be heading to join Germany and Austria in lagging significantly behind the other Euro-zone countries.



We see a similar effect in the other European countries. For some time, Hungary appeared to defy the general trend but this has now joined the other countries in running well below 50.

For some of these countries, including Czechia, Hungary, Poland and Switzerland which have close links, the weakness in Germany is the main driver for their low PMI levels.

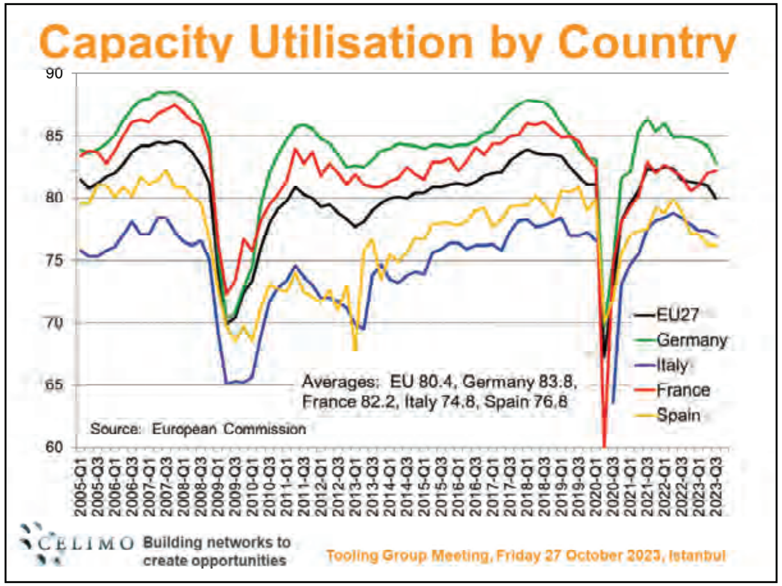
Turkey briefly has a manufacturing PMI above 50 earlier in 2023 but it has now dipped back below this level.



EU and Euro-zone capacity utilisation have been falling for the past 18-24 months (note that the latest reading is from July, with the next figures due out on Monday 30th October).

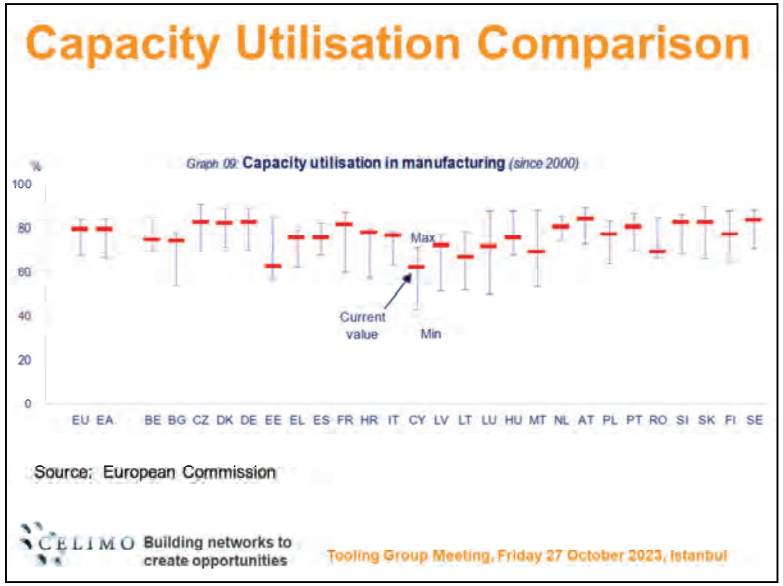
The significant point here is that the latest reading for both areas is below the long-run average (back to 2000) for the first time since the 1st quarter of 2021 or, if the pandemic is ignored, since the start of 2015.

Note: Data for Q3 refers to the surveys published in July, but which was data collected about the situation in the 2nd quarter - the time periods are, in effect, moved on 1 quarter.



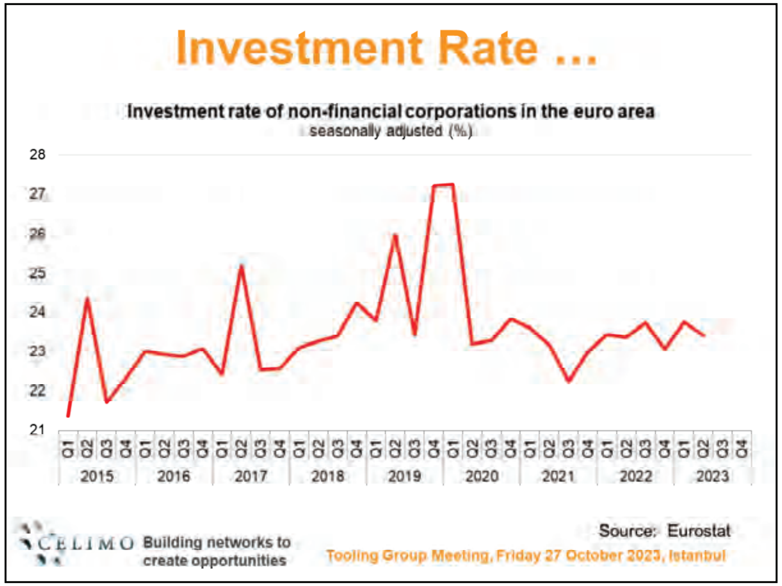
The latest trends suggest an easing of capacity utilisation in the key Euro-zone countries, although France has had a couple of good quarters this year (the latest data point is labelled as Q3-23 but, given the data collection periods, is really covering the 2nd quarter).

However, care is needed in comparing between countries as the “natural” level of capacity utilisation varies – this is shown by the average levels shown in text on the chart. In the latest figures, Italy is well above its long-run average, the EU is slightly higher, France is exactly on the trend and Spain and Germany are slightly below their respective trend levels.



Another way of looking at this is in this chart. Direct comparisons between countries are not valid, but this overview gives a useful indication of where countries are in the cycle. It shows the maximum, minimum (from 2000) and the current levels (Q2-23).

For example, while the absolute level in Bulgaria is lower than many other countries, they are near the top of the historical range for that country; on the other hand, Belgium, which has a slightly higher reading than Bulgaria is in the lower half of their range. Therefore, the assessment is that capacity utilisation is stronger in Bulgaria than in Belgium.

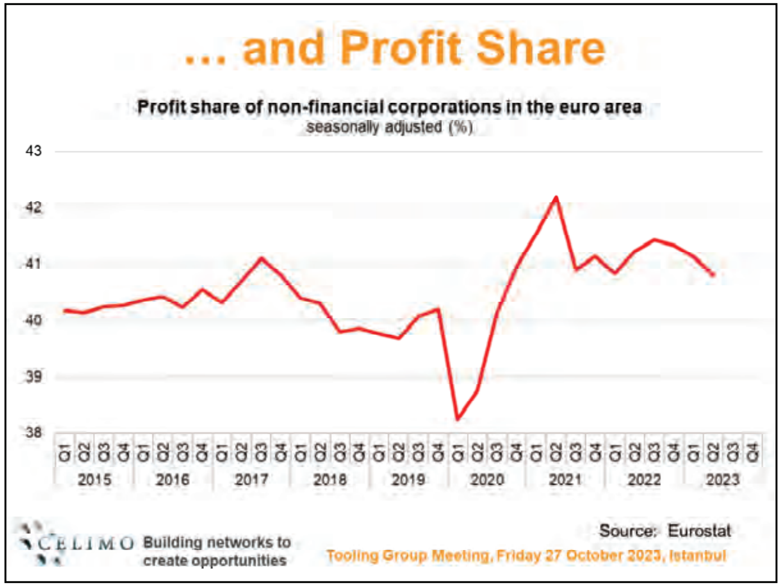


The business investment rate is defined as gross fixed capital formation divided by gross value added.

The rate in the Euro-zone decreased from 23.8% to 23.4% in the second quarter of 2023. The peaks in 2015Q2, 2017Q2, 2019Q2, 2019Q4 and 2020Q1 are related to large imports of intellectual property products reflecting globalisation effects.

The investment rate decreased because business gross fixed capital formation fell by 0.4%, while gross value added increased by 1.1%.

Note: Eurostat only publish this data for the Euro-zone and Q2-23 is the latest data point



The profit share is defined as gross operating surplus divided by gross value added.

In the second quarter of 2023, the profit share of businesses (non-financial corporations) decreased to 40.8% in the Euro-zone. This matches the rate seen in Q1-22 and, along with that period, is the lowest rate since Q3-20.

It is explained by the increase of business compensation of employees (wages and social contributions) plus taxes less subsidies on production by 1.6% being at a faster rate than gross value added (+1.1%).

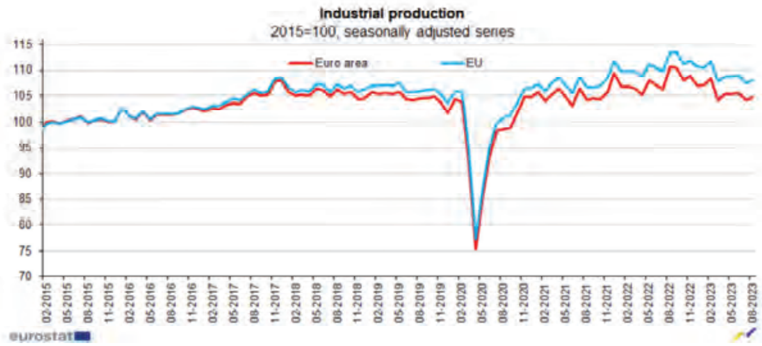
Note: Eurostat only publish this data for the Euro-zone and Q2-23 is the latest data point

European Industrial Output

- Total industrial production has fallen in 2023 …
- … but manufacturing has been growing, led by the Capital Goods industries (which includes most tooling purchasers)
- The Aerospace industry has recovered and still growing …
- … but supply chain disruption means that the Automotive industry is still below pre-pandemic levels …
- The Machinery and Metal Products industries also reached pre-pandemic levels but have dipped since
- **The US tooling market is still growing**

CELIMO Building networks to create opportunities   Tooling Group Meeting, Friday 27 October 2023, Istanbul

European Industrial Production

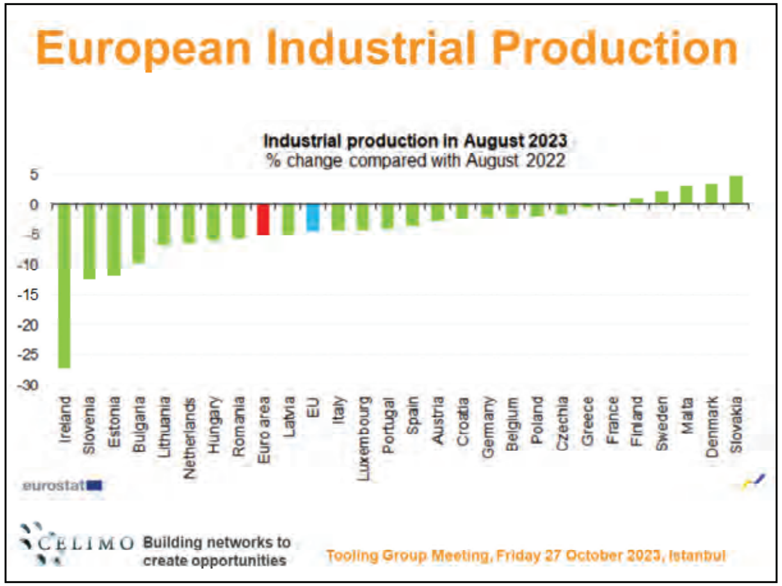


CELIMO Building networks to create opportunities   Tooling Group Meeting, Friday 27 October 2023, Istanbul

Industrial production (IP) recovered after the pandemic and the grew gradually through to the Autumn of 2022; since then, it has been on an equally steady downward trend, helped by sharp fall in March 2023.

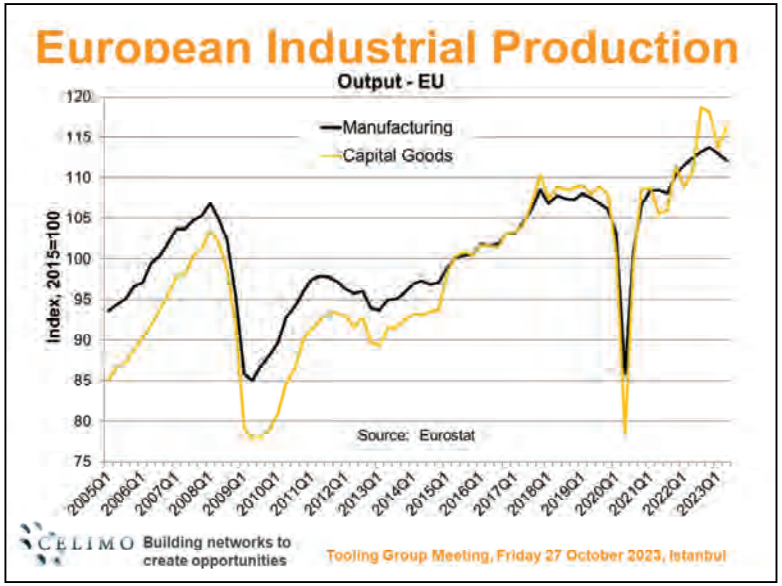
It is worth noting again, that the sharp swings in the pandemic make the real trend in recent months much harder to identify.

Note: Industrial Production covers manufacturing (this is the largest part), utilities (electricity, water, etc.) and extraction (mining, oil & gas, etc.).



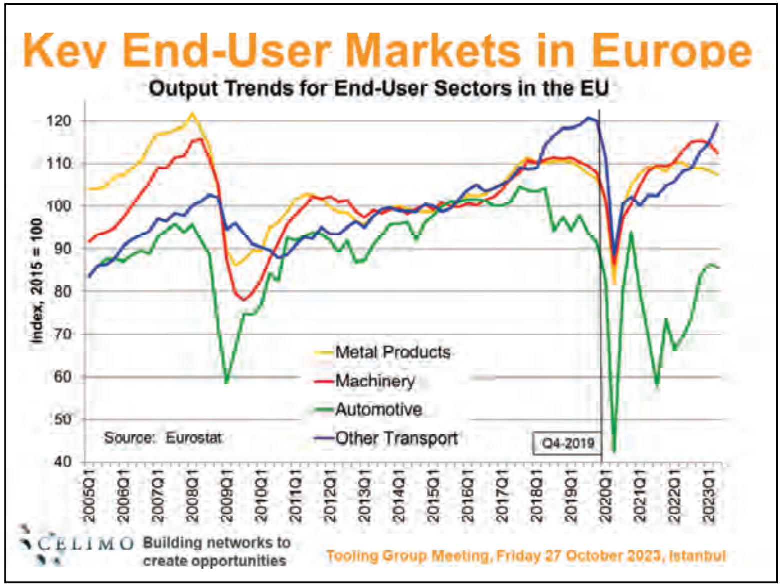
Single month comparisons such as this are always open to distortions but the general trend of output being below where it was a year earlier applies to most countries.

Care is needed in interpreting the data for Ireland; the presence of the headquarters of multi-national companies (for tax purposes) leads to distortions of the true picture.



Going back to our note about the make up of IP, we now start to look more closely at the manufacturing sector and the sub-set of industries that are classified as capital goods. This latter group is where most of the customers to tooling suppliers will be classified.

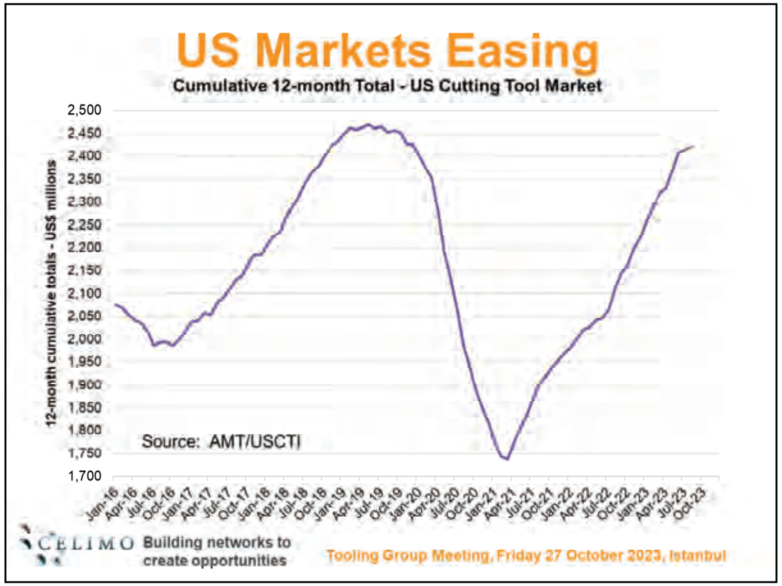
Until the last couple of months (the latest data point is for August) manufacturing output had been growing, driven by the capital goods industries. We are now seeing the trend turn for manufacturing, mainly in the intermediate goods category.



This chart is key to understanding this with growth in both the automotive and aerospace industries in the latest data; in both cases this is driven by order backlogs, although they are in different places.

Other Transport Equipment (OTE) at a European level is driven by the aerospace industry but for some countries (for example Finland and Turkey) shipbuilding is a significant part of this industry. Aerospace output is still rising as order backlogs for aircraft continue to increase.

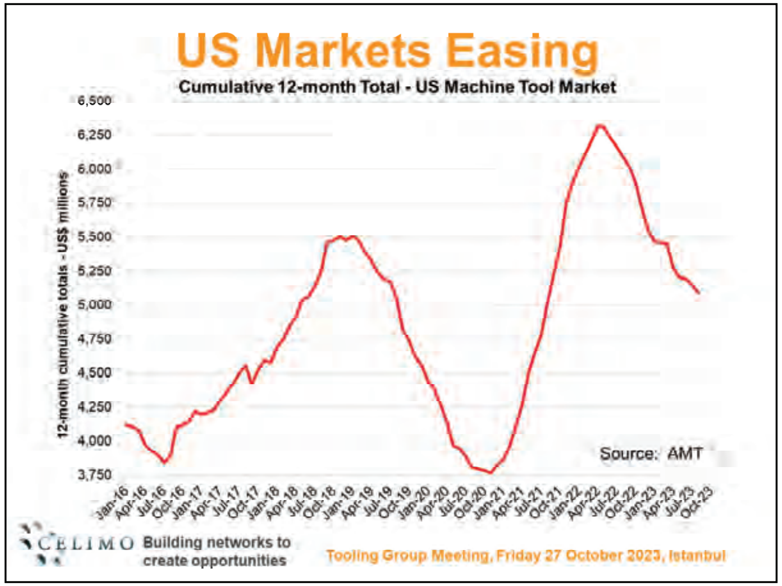
For the automotive industry, the post-pandemic recovery was interrupted by a shortage of electronic components; the resolution of this has led to a recovery in output but we are probably close to the point where weak demand will become the dominant driver for this industry.



Before we go on to look at the individual countries in Europe, a quick overview of the US market; our colleagues there have a survey that tracks business in the US market covering both domestic production and imports.

The chart shows the rolling 12-month total for the market and it is now very close to the pre-pandemic level following a lengthy recovery.

Although in the short-term there may be a negative effect from the auto-workers strike, even without this, there are tentative signs that the cycle may have peaked.



For machine tools, the cycle is in a different place with the post-pandemic boom having peaked in April 2022.

Despite falling quite sharply, the overall levels of the market for machinery remain reasonably healthy.

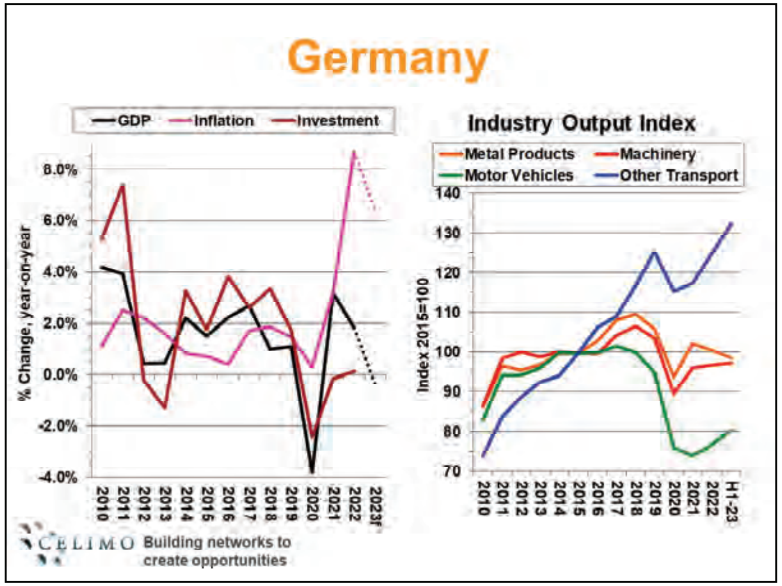
To answer the question that we posed in the title of this presentation, while we don't expect to see a recession in most of Europe (or for the region as a whole), growth is likely to remain at pretty low levels through most of 2024.

The manufacturing sector will, however, see a recession - indeed, it may already be in this situation.

Much will depend on the pace at which inflation falls over the next year, but Europe looks best placed to see interest rates fall ahead of the USA (and the UK).

The data for those countries which attended the meeting are shown first along with their presentations.

For the other CELIMO countries and then other important European countries, we only have the summary slide for reference.



The tables prepared by Mr Radermacher showed that the pace of the improvement in 2021 after the pandemic had eased in most categories, although notably not for clamping tools which were still growing strongly in 2022.

For 2023, the strongest growth had been in measuring tools & machines with all of the categories except power tools showing an increase in the first half of the year. The 3rd quarter (July to September) had been positive in all areas.

It was noted that the assessment of the current economic situation was very weak, with the outlook for the next 6 months even more negative.

FDM – Trend Survey 2009 - 2022

FDM - Trend Survey 2009 bis 2022

	2009	2010	2011	2012	2013	2014	2015
Hand tools	-18,8	14,6	12,9	1,9	1,7	3,5	7,0
Power tools	-11,6	13,7	14,5	4,6	0,0	8,1	6,0
Cutting tools (all cutting materials)	-30,7	24,1	16,0	9,0	1,5	1,7	1,6
Grinding tool, cut-off, roughing	-16,6	6,6	10,7	3,6	0,8	2,0	2,6
Clamping tools	-38,9	22,7	33,5	10,2	0,3	3,9	1,2
Measuring tools, measuring machines	-29,1	22,8	19,5	11,3	0,3	3,1	2,5
Workshop and storage (benches/cabinets)	-21,3	9,9	23,2	14,2	4,6	8,1	6,4
Work safety, auxiliary and operation materials	-14,9	14,0	9,9	10,5	4,2	2,6	7,5

	2016	2017	2018	2019	2020	2021	2022
Hand tools	3,1	0,8	8,4	2,6	-15,2	17,8	7,5
Power tools	9,9	3,9	11,2	6,5	-0,9	8,9	7,9
Cutting tools (all cutting materials)	1,8	1,1	7,8	-0,8	-19,8	14,1	6,2
Grinding tool, cut-off, roughing	1,0	1,1	11,5	8,3	-5,5	5,2	8,0
Clamping tools	2,1	1,6	6,4	3,1	-14,7	29,3	22,1
Measuring tools, measuring machines	5,2	-0,1	9,0	1,5	-16,8	19,4	0,9
Workshop and storage (benches/cabinets)	1,5	2,6	14,1	7,0	-16,8	28,6	8,7
Work safety, auxiliary and operation materials	4,4	3,1	12,4	6,3	9,6	6,5	6,7

2

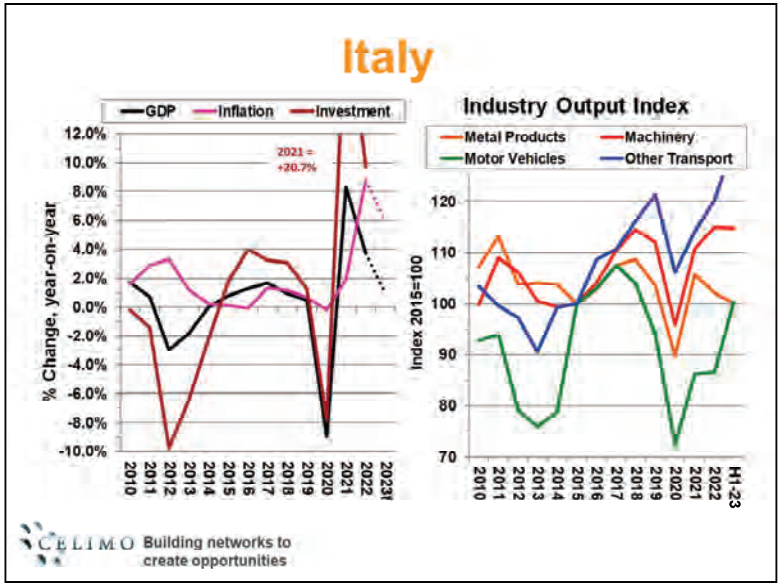
FDM - Trend Survey 2022 till 09/2023

	2022	2023	
	Jan-Dec	Jan-June	Jul-Sept
Hand tools	7,5	5,6	4,8
Power tools	7,9	-2,9	11
Cutting tools (all cutting materials)	6,2	8,6	7,1
Grinding tool, cut-off, roughing	8,0	4,1	12
Clamping tools	22,1	2,7	7,1
Measuring tools, measuring machines	0,9	13,9	20,5
Workshop and storage (benches/cabinets)	8,7	12,5	6
Work safety, auxiliary and operating materials	6,7	6,9	6,5

Current Economic Situation	
favorable	0%
satifying	13%
not satisfying	87%

Economic Expectations (6 months)	
higher	0%
constant	6%
lower	94%

3



The Italian economy is growing but at a weak pace. For the manufacturing sector, the ending of the tax incentives for investment are a part of the reason for this slowdown.

The sentiment for the next six months is negative but, despite this, the sector is still working at a high level by historical standards, although with some conflicting indicators.

The manufacturing PMI for Italy has been negative for the past six months (October is the latest reading) but the utilisation rate in the machinery industry in Italy is still at a high level.

Report for the Italian market
Tooling Group meeting
October 2023

ASCOMUT

P. Aloise, 25.10.2023

1

Topic

Economic situation

ASCOMUT

3

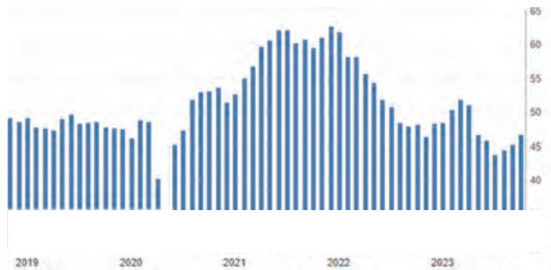
Economic situation

- Italian GDP is growing 0.8% this year
- Reduced investements in new machinery (end of tax credit)
- Sentiment of outlook negative
- But still working on a high level

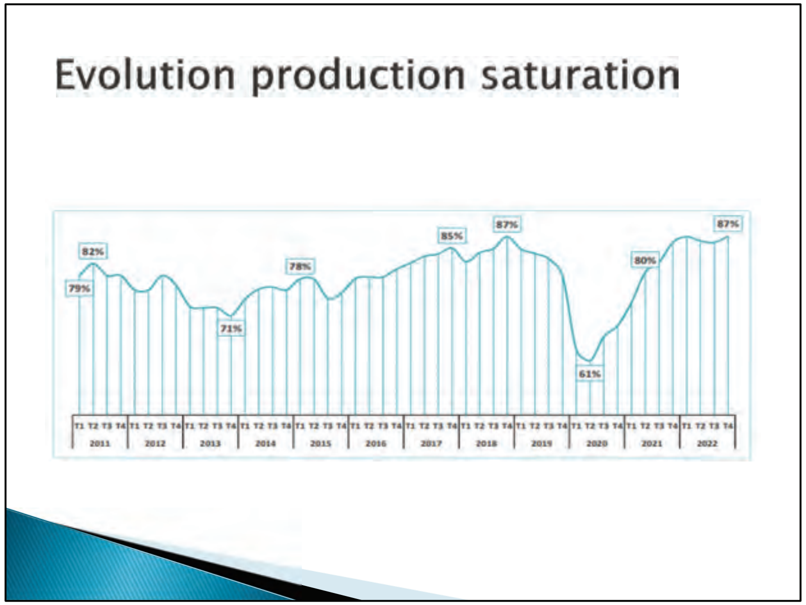
ASCOMUT

4

PMI Manufacturing Index Italy October 2023



5

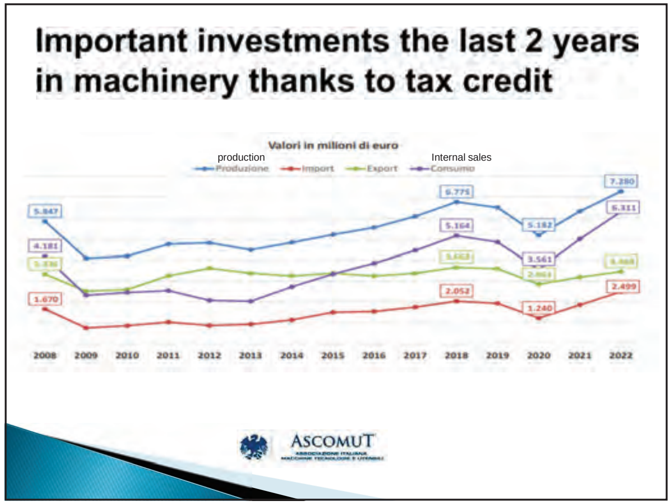


There has been a significant increase in machinery sales over the past two years thanks to incentives in the form of tax credits. This has driven both production and consumption higher.

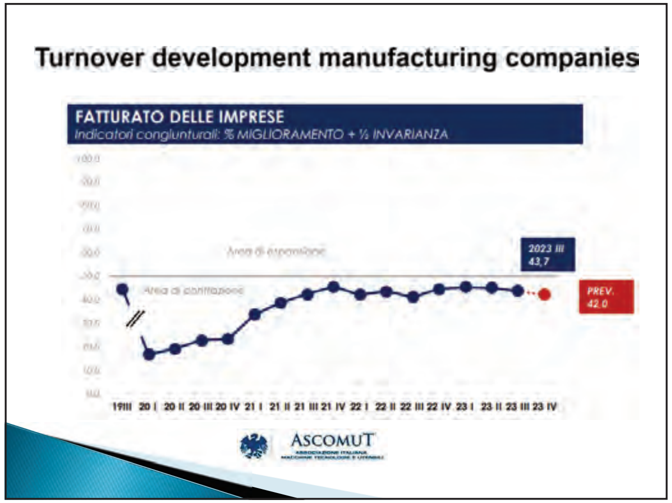
The sales turnover of manufacturing companies has been broadly stable but is not growing sharply.

The market for cutting tools grew by +7% in 2022 and reached a new record level. The market is only about half the size of that in Germany but is the 2nd largest in Europe.

Just under half of the market is made up of inserts, with solid carbide tooling accounting for almost one-quarter.



7



8

The Italian Tool market

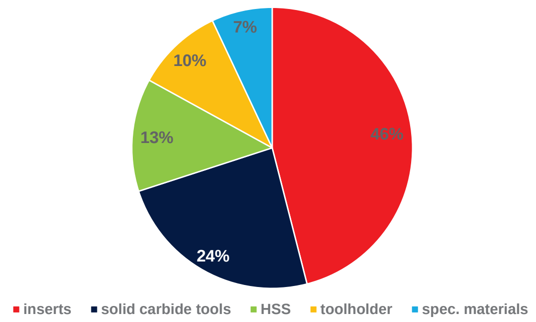
Source UCIMU

9

The Italian Tool market 2022

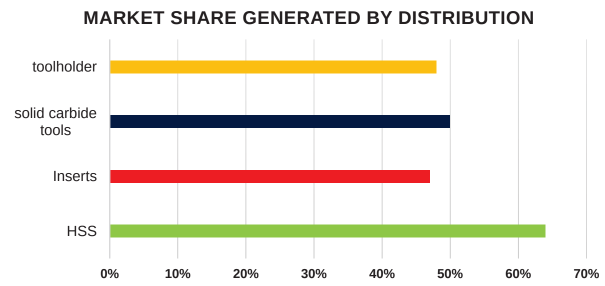
10

Value for each product group

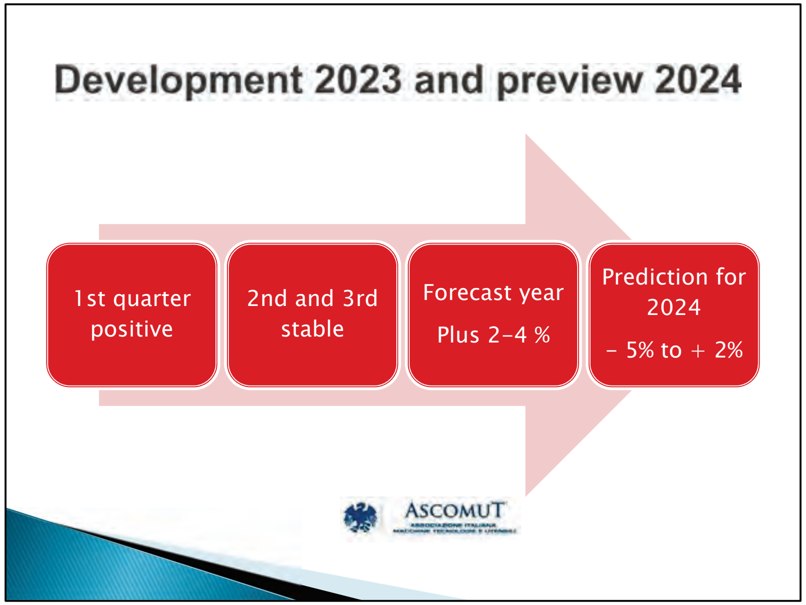


11

How important is distribution



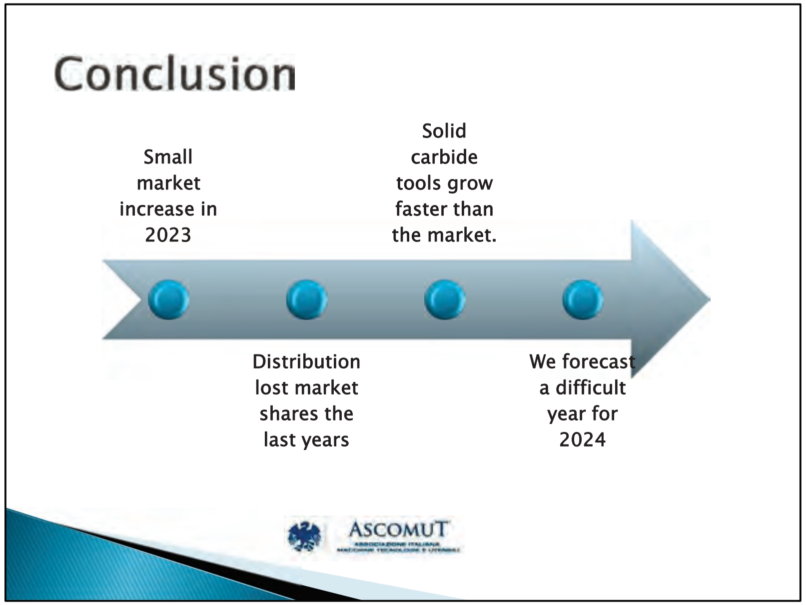
12



Over the past few years, the importance of distribution channels has fallen with the share of the market taken by direct sales increasing, especially for inserts and solid carbide tools.

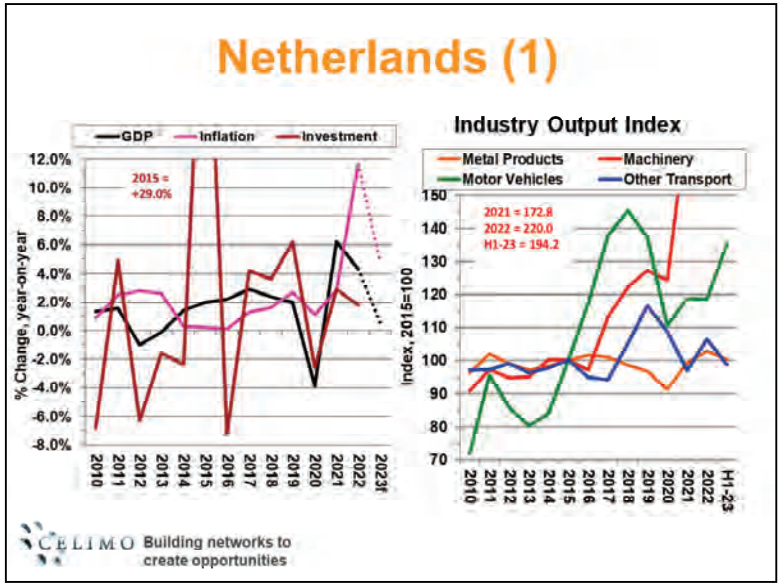
The Italian market is expected to see a small increase in 2023, mainly due to growth at the start of the year.

The outlook for 2024 is more uncertain, with a range of predictions due to a high level of uncertainty. The range is dependant on whether or not any incentives for the purchasing of new machinery are provided.



In conclusion, it was noted that:

- The market should show a small positive in 2023
- Even in the worst case scenario of a mall fall in demand in 2024, the overall level will still be high
- Uncertainty makes the market challenging
- Most of the growth has come from higher prices rather than an increase in volumes

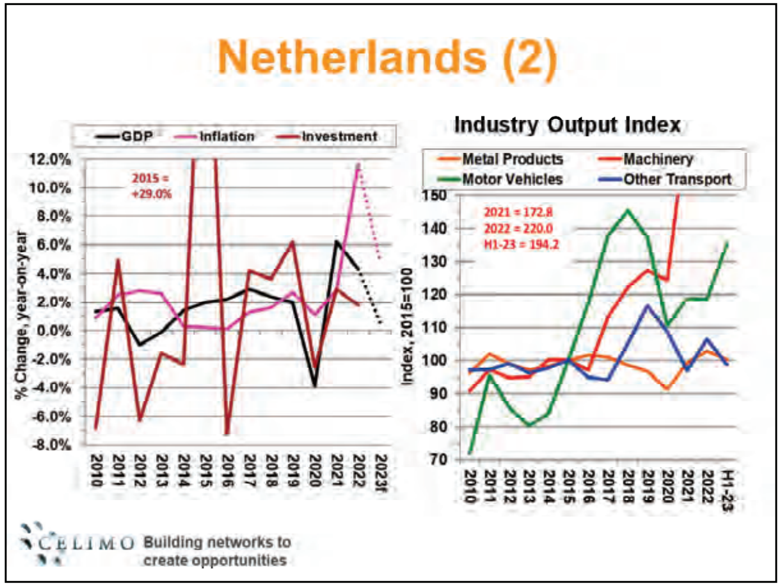


Last year (2022) was a very good year and this year started well but has been slower in the past couple of months, although the levels are still good.

The rise in interest rates is stopping people from investing and the weakness in Germany also has an impact on activity.

The growth in output of the machinery industry is driven by the manufacture of machines for the semi-conductor industry and while this is at a high level, it is not growing at the moment.

The aerospace industry is growing mainly though sub-contract activity.



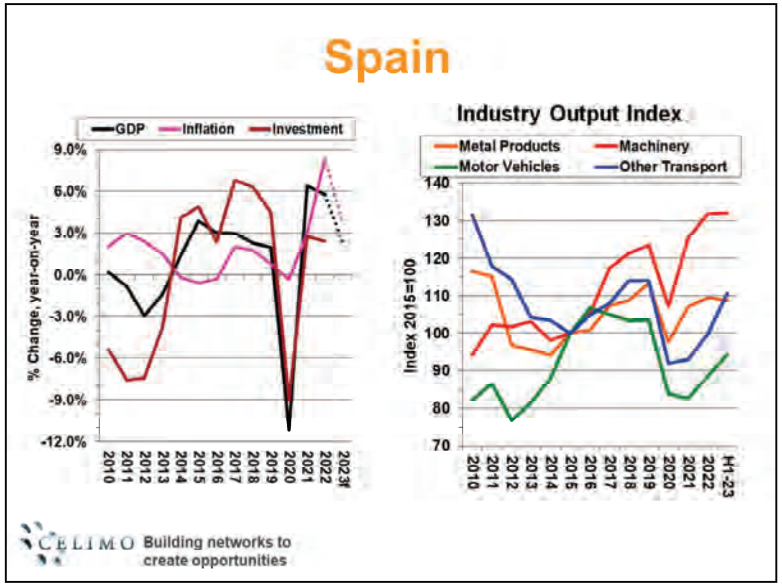
Demand for wind turbines is also strong with a very large wind farm in the North Sea being built.

Both Shell and Bosch are investing in the supply and applications for hydrogen as a means of storing energy.

Demand for tooling is falling but this is from a high level so activity is not too bad. However, contact with a dealer in scrap metal who handles chips from metal cutting processes suggests that activity is down by about 30% recently.

The lowering of interest rates will be key to triggering a turnround in investment.

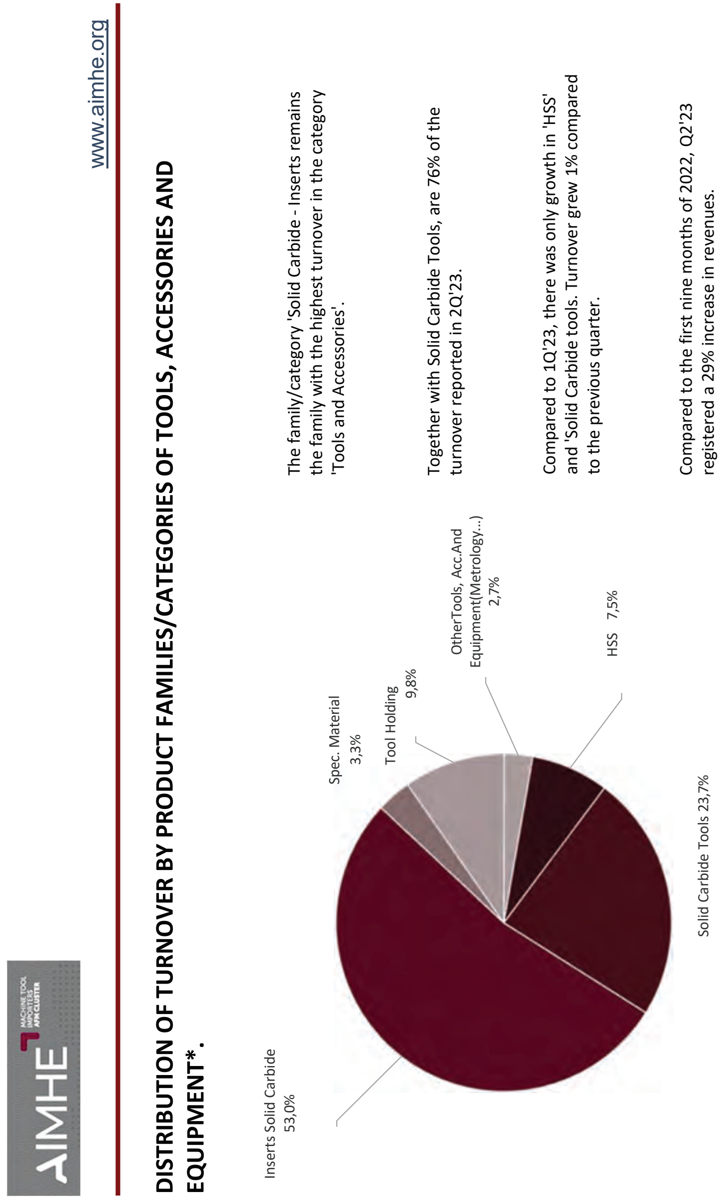
CELIMO Tooling Group Meeting
Friday 27th October 2023, Istanbul



Looking at the survey data for the 2nd quarter of 2023, the trends are similar to those in Italy. Inserts account for over half of the market with solid carbide tooling taking a further 24%. However, this hides a trend in which the solid tools are taking over from inserts.

It was also noted that High Speed Steel (HSS) is losing share, except for threading processes.

One point to note is that the data covers Spain and Portugal as most dealers cover the two countries. The largest part of the market is in the North of Spain (not just the Basque region) and the Portuguese market is about the same size as Catalonia.



www.aimhe.org

PRODUCT DISTRIBUTION PER FAMILY/CATEGORY

HSS

Producto	% Venta 2T 2023	Evol 2T'23 vs 1T'23
Drills	18,2%	-8,0%
End Mills	3,3%	5,7%
Reamers	2,0%	57,0%
Taps	70,7%	0,7%
Saws	1,8%	24,0%
Miscellaneous	4,0%	30,0%
		1,1%

Solid Carbide Tools

Producto	% Venta 2T 2023	Evol 2T'23 vs 1T'23
Drills	40,4%	36,5%
Deep-hole drills	2,1%	-28,7%
End Mills	40,8%	1,4%
Reamers	2,7%	4,7%
Regrinding / Reconstruction	8,6%	34,1%
Miscellaneous	5,4%	32,7%
		16,5%

Solid Carbide Inserts and holders

Producto	% Venta 2T 2023	Evol 2T'23 vs 1T'23
Drilling inserts	10,1%	-7,2%
Drilling Holderss	4,4%	-4,7%
Milling Inserts	30,7%	-2,2%
Milling Holders	6,6%	5,9%
Turning Inserts	25,4%	-4,2%
Turning Cutting & Grooving	12,5%	-5,2%
Turning Threading	2,0%	0,5%
Turning Holders	6,1%	-11,4%
Miscellaneous	2,1%	134,3%
		-2,6%

Spec. Materials

Producto	% Venta 2T 2023	Evol 2T'23 vs 1T'23
Inserts PCD	13,2%	27,0%
Inserts CBN	41,8%	-8,3%
Inserts Ceramics	16,5%	2,3%
Round Tools PCD	7,1%	-43,3%
Miscellaneous CBN/PCD	21,4%	-13,9%
		-8,6%

Tool Holding

Producto	% Venta 2T 2023	Evol 2T'23 vs 1T'23
All kinds of	42,6%	-8,5%
Rotary accessories for lathes, drilling machines, grinding machines	19,4%	-20,8%
Static accessories for milling	23,0%	4,1%
Induction Machines	0,6%	-76,0%
Presetting machines	14,5%	36,4%
		-5,8%

OtherTools, Acc.And Equipment(Metrology...)

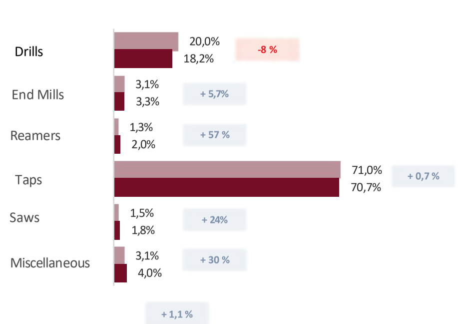
Producto	% Venta 2T 2023	Evol 2T'23 vs 1T'23
Metrology - Soft. Machine, CNC controls	100,0%	-3,1%
		-3,1%

www.aimhe.org

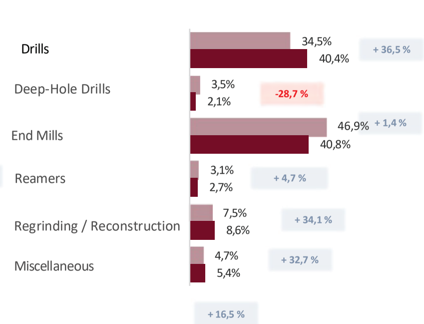
PRODUCT DISTRIBUTION PER FAMILY/CATEGORY

1T 2023
2T 2023

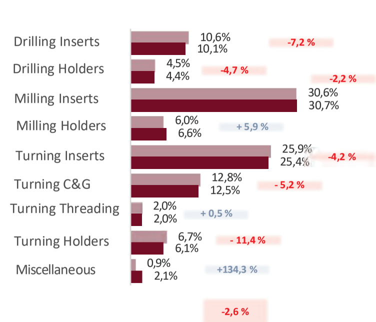
HSS



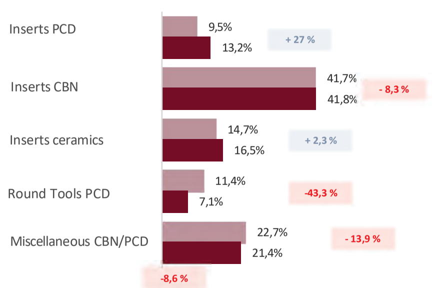
Solid Carbide Tools



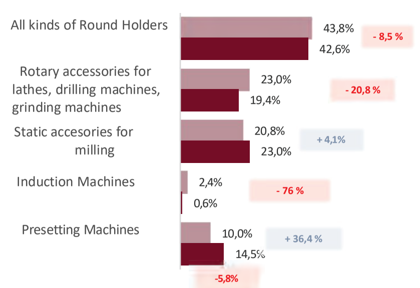
Solid Carbide Inserts and holders



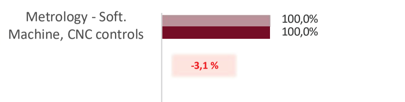
Spec. Materials



Tool Holding

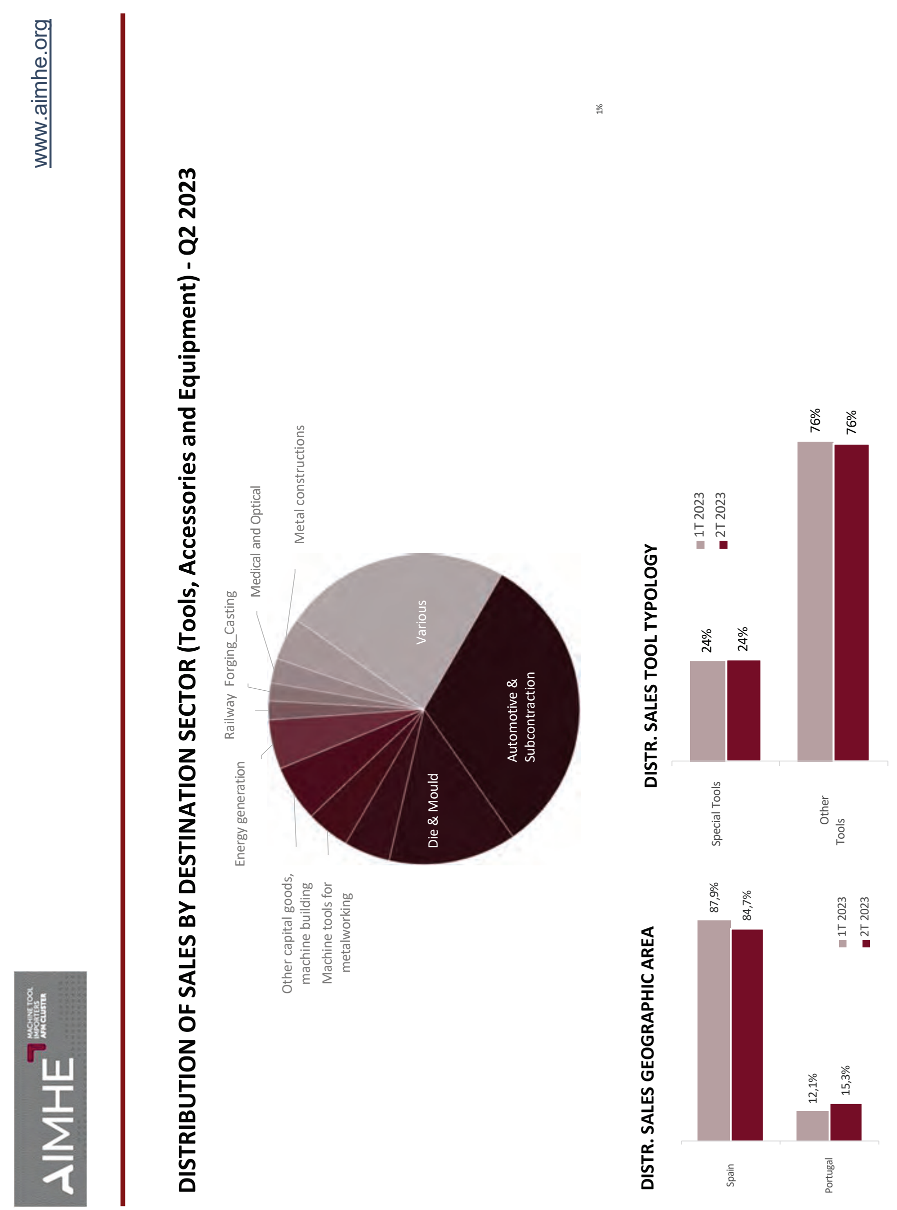


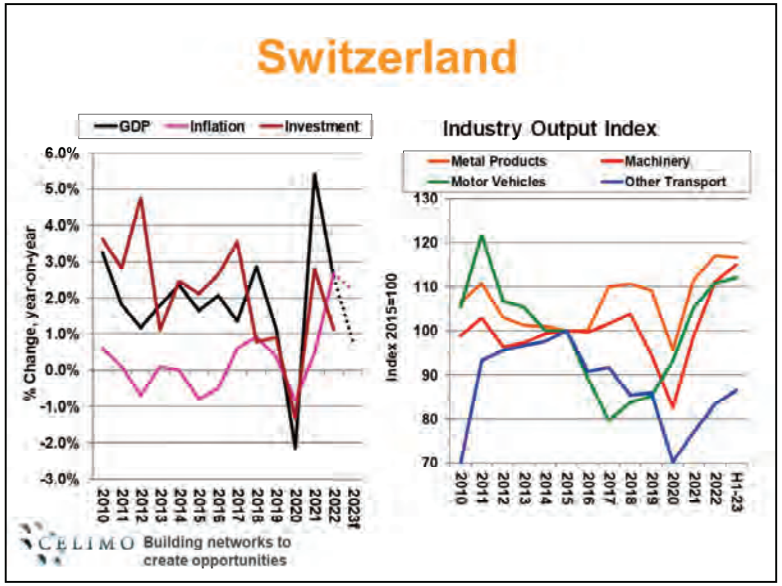
OtherTools, Acc.And Equipment(Metrology...)



GRAPHICS: refers to the weight of the indicated product in the Total Turnover for Q2 '2023.

PERCENTAGE TABLE: indicates the difference in the Turnover Amount of that specific product between both quarters (Q1 vs Q2'2023).





Note: The European Commission macro economic forecasts for Switzerland are from May 2023.

It was noted that there has been a significant increase in population in Switzerland since 2019.

The major economic issue is the strengthening of the Swiss Franc, especially against the Euro both in the long-term (10 years) and in the past 12 months. For the manufacturing sector to remain competitive, the is a need to continue to invest in automation.

The economy (measured in GDP) has grown by +23% since 2019 while taxes have remained stable.

Verband des Maschinen- und Werkzeughandels
Association des négociants en machines et outils
Association of machine and tool distributors

tecnoswiss

CELIMO **Tooling Group Meeting Istanbul**

October 2023
issued by P.J.Petri, 24 th of October 2023
CELIMO Tooling Group Delegate

1

General economic development and forecast in Switzerland

tecnoswiss

current situation of Switzerland in 2023

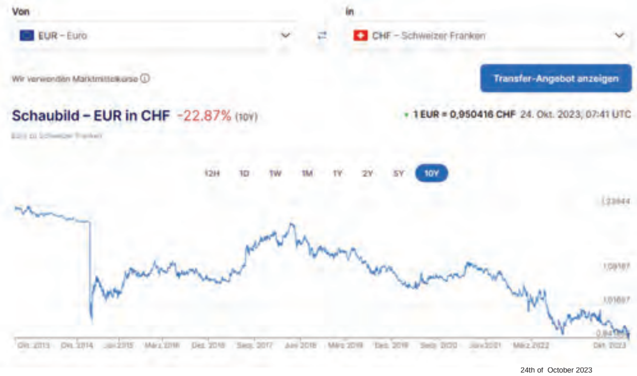
Found: 1291
Area: 41'285 km²
Population: > 8.8 Million **+ 700k vs 2019**

actualized
24th of October 2023

2

EURO exchange rate development within 10 years

tecnoswiss



24th of October 2023

3

EURO exchange rate development within last year

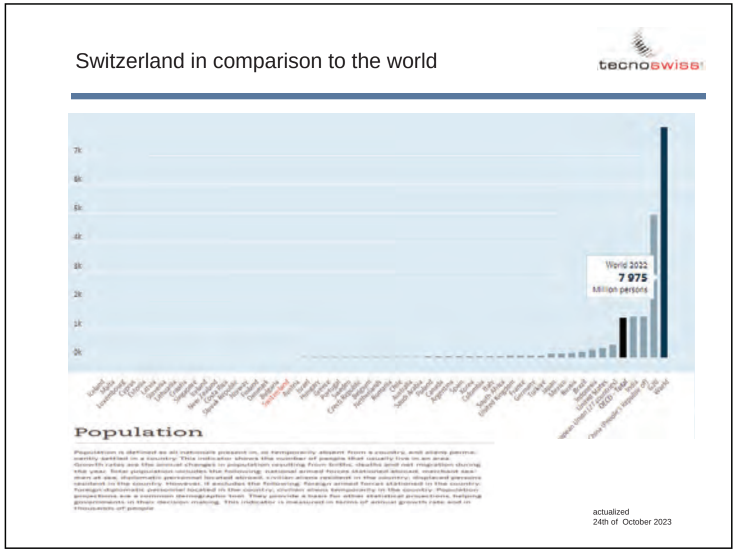
tecnoswiss

actualized
24th of October 2023

4

5

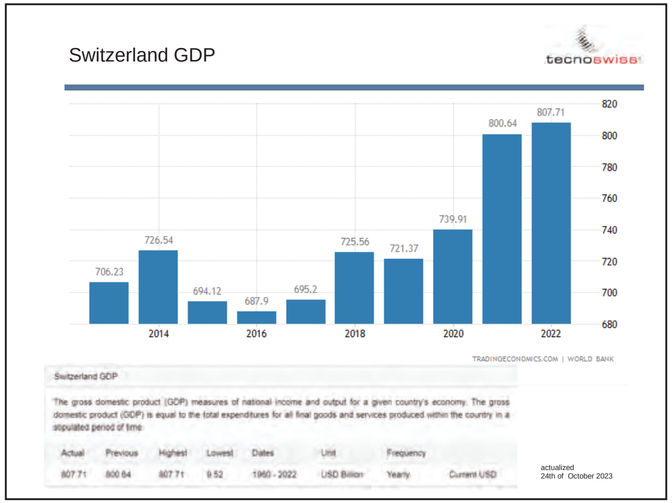
6



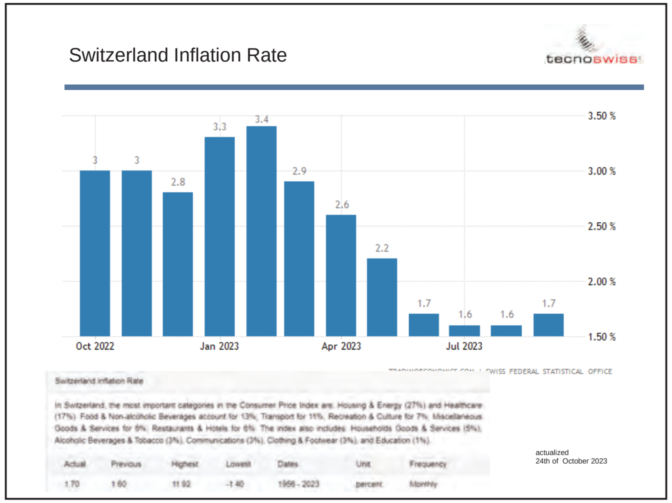
The fact that Switzerland is hard to see on this chart is deliberate - it is designed to show that this is a relatively small country.

Measured in US$ terms, the Swiss economy had a relatively small fall in 2020 (the main pandemic year) and has now recovered, with strong growth in 2021.

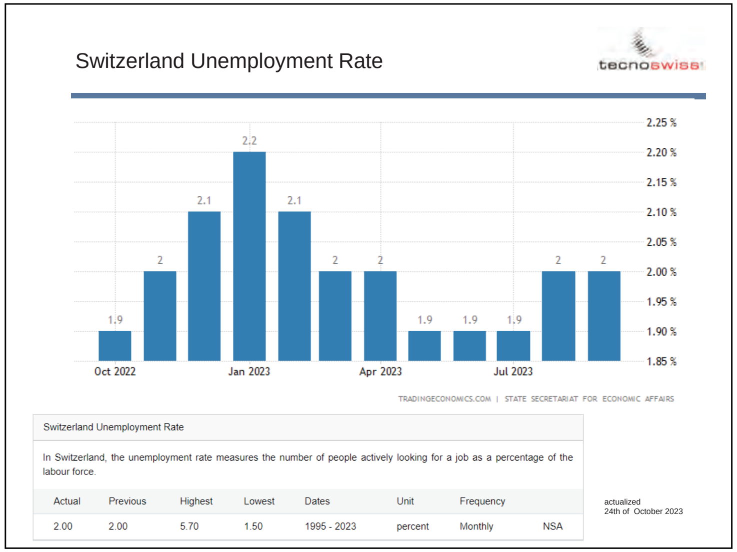
The rate of inflation is relatively low by international comparisons - the rate of +3.4% that was recorded in Febnruary 2023 is an all-time high for the country. Although the numbers are not as dramatic as in some places, this still represented a significant economic shock for Switzerland.



8



9



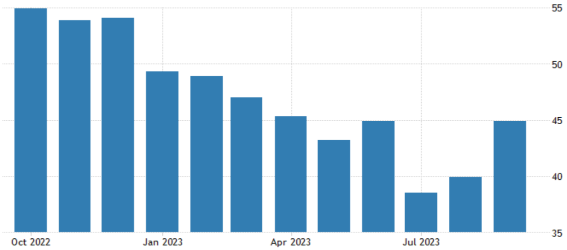
The unemployment rate is also low (despite the rise in population) and companies are finding it hard to find skilled people.

Despite these relatively good signs, the PMI has been below 50 all this year (note the October reading published after the meeting fell back again to 40.6) and the outlook for 2024 is pessimistic.

The latest reading for capacity utilisation of 82.3 is below the average for Switzerland and has been falling for over a year.

Following the weakness in the PMI, industrial production is now starting to fall.

Development of the Swiss Purchasing Managers' Index (PMI) as an indicator for tool distributors



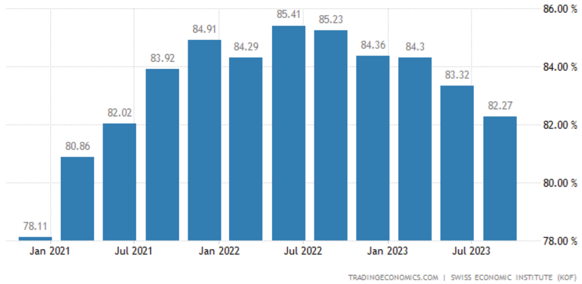
Switzerland Manufacturing PMI

In Switzerland, the procure.ch Manufacturing Purchasing Managers' Index measures the performance of the manufacturing sector and is derived from a survey to executives on their procurement expectations for the following month. The Manufacturing Purchasing Managers Index is based on five individual indexes with the following weights: New Orders (30 percent), Output (25 percent), Employment (20 percent), Suppliers' Delivery Times (15 percent) and Stock of Items Purchased (10 percent), with the Delivery Times index inverted so that it moves in a comparable direction. A reading above 50 indicates an expansion of the manufacturing sector compared to the previous month; below 50 represents a contraction, while 50 indicates no change.

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency	
44.90	39.90	70.00	33.00	1995 - 2023	points	Monthly	SA

actualized
24th of October 2023

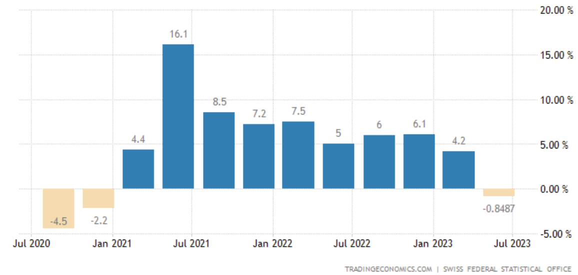
Switzerland Capacity Utilization



Related	Last	Previous	Unit	Reference
Business Confidence	95.90	96.20	points	Sep 2023
Capacity Utilization	82.27	83.32	percent	Sep 2023

actualized
24th of October 2023

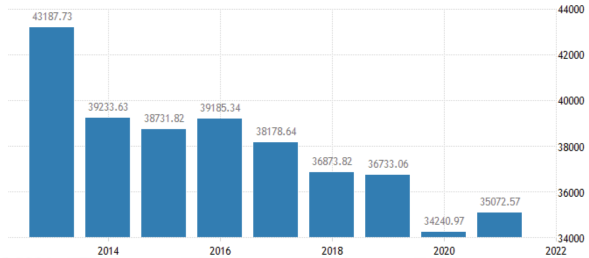
Switzerland Industrial Production



Calendar	GMT	Reference	Actual	Previous	Consensus	TEForecast
2023-05-22	06:30 AM	Q1	3.4%	5.9%		4.4%
2023-08-18	06:30 AM	Q2	-0.8%	4.2%		2.5%
2023-11-17	07:30 AM	Q3		-0.8%		-1.7%

actualized
24th of October 2023

Switzerland CO2 Emissions



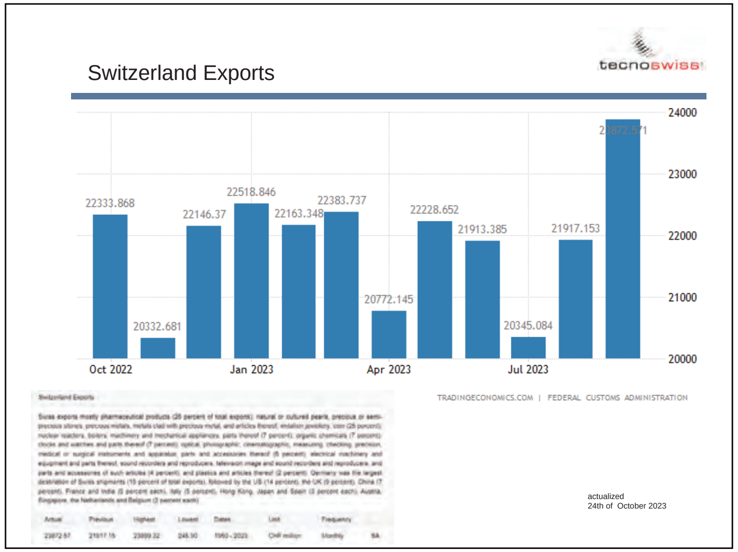
Switzerland CO2 Emissions

Carbon dioxide emissions account for the largest share of greenhouse gases which are associated with climate change and global warming. Data for carbon dioxide emissions include gases from the burning of fossil fuels and cement manufacture, but excludes emissions from land use such as deforestation. Oil releases about 50 percent more carbon dioxide than natural gas, and coal releases about twice as much. Carbon dioxide emissions are often calculated and reported as elemental carbon. The unit of measurement is kt (kiloton).

3ECONOMICS.COM | WORLD BANK

Actual	Previous	Highest	Lowest	Dates	Unit	Frequency
35072.57	34240.97	46262.87	19523.11	1960 - 2021	KT	Yearly

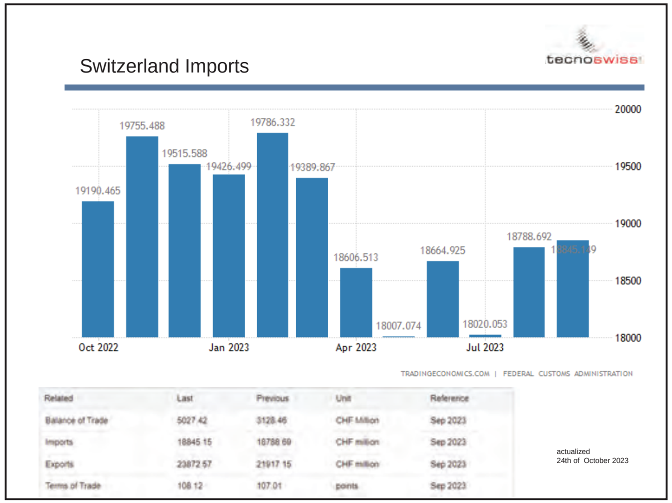
actualized
24th of October 2023



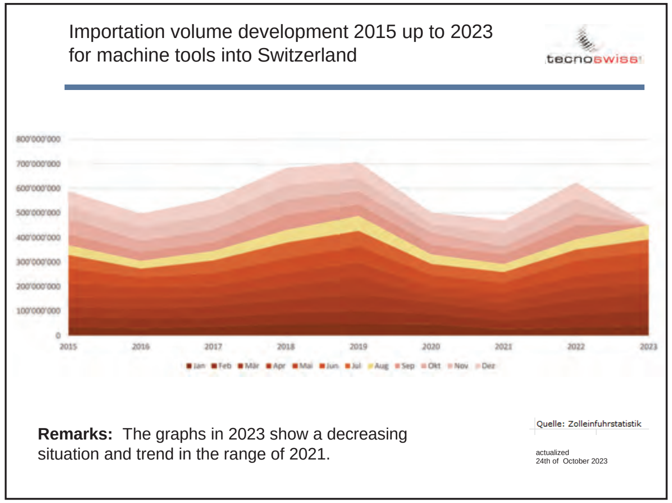
One piece of good news is that CO2 emmissions are continuing to fall (note that the very low level in 2020 is due to the imapct of the pandecmic on all activity, but especially travelling).

Swiss exports were strong in September but it is not clear if this is a one-off event or the sign of a general improvement. Imports are lower than exports and since the Spring, these have been running at a lower level.

Imports of machine tools into Switzerland were, up to August 2023, ahead of the level last year but are not yet at the level for the equivalent period (January to August) 2019.



16



17

Importation volume development 2005 up to 2023
for machine tools into Switzerland

Remarks: The values of the imported machines into Switzerland are showing a stable situastion since 2005. But it shows somehow also the ongoing de-industrialization trend.

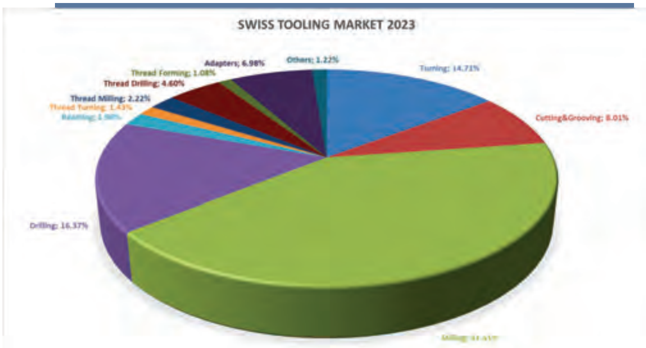
actualized
24th of October 2023

Despite the size of the country, Swiss machine tool imports are high as manufacturing is an important part of the economy.

Milling is the most improtant process in the tooling market and the most important category is solid carbide tools rather than inserts; this is because a lot of companies are doing 5-axis machining. The shares are broadly stable, although turning is slightly higher as it is easier to automate the process.

Solid carbide tooling dominates the market, although HSS still accounts for 9% of the total.

cutting tool market analysis Switzerland IGHM

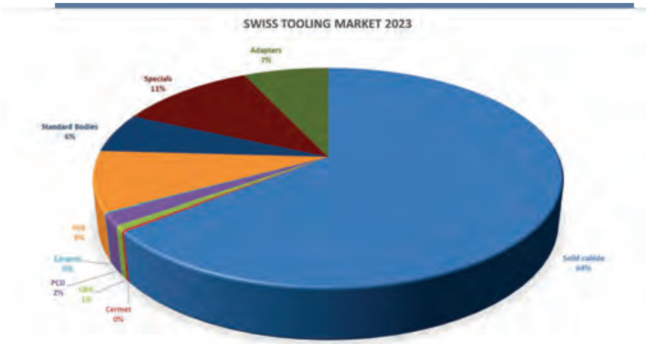


Source: IGHM statistics 2023 with estimated market potential 300 up to 320 Mio. CHF. Percentage values in 2023 are almost unchanged compared to 2015

actualized
24th of October 2023

19

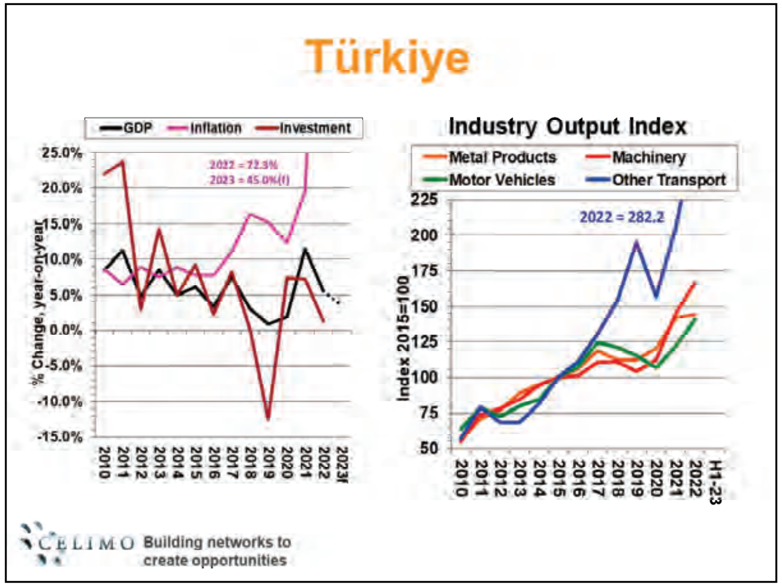
cutting tool market analysis Switzerland IGHM



Source: IGHM statistics 2023 with estimated market potential 300 up to 320 Mio. CHF. Percentage values in 2023 are almost unchanged compared to 2015

actualized
24th of October 2023

20



Note: The European Commission macro economic forecasts for Türkiye are from May 2023.

Mr Demirtas began with an introduction to the history, sights and food of Türkiye and Istanbul. He noted that it is uniquely placed geographically between Europe and Asia.

This year - indeed the weekend of the meeting - marks the 100 anniversary of the founding of the republic by Mustafa Kemal Atatürk.

During our visit to Boehlerit, it was also noted that 2023 is the centenary of the discovery of Carbide as a material, although it was a few years later that it really came into use for tooling.

Area	:	783.562 km2	- 37. in the world
Population	:	85.280.000	- 18. in the world

StrongUnityOfTheSector

TIAD

3

StrongUnityOfTheSector

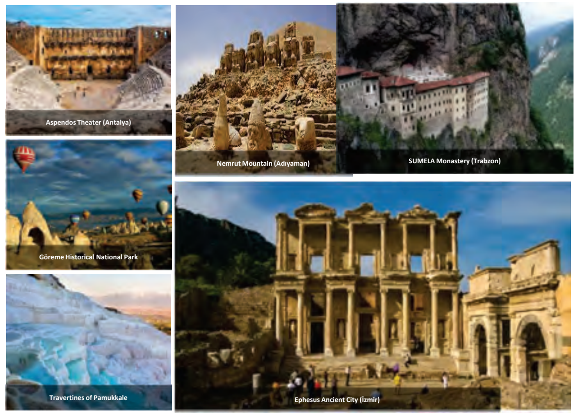
TIAD

4

The founder of the republic of Turkey is Atatürk (in 1923)

Anıtkabir is a mausoleum located in Ankara Çankaya and built for the monument of Mustafa Kemal Atatürk, the founder of the Republic of Turkey.

History



Historical beauties of Istanbul

9

Tourism

Antalya

Çeşme,Bodrum

Fethiye, Muğla

Uludağ, Ski sports

10

Turkish Cuisine

Kebabs

Doner Kebab

Lahmacun

Turkish appetizers

Türkish raki

Fish

11

Turkish Cuisine

Baklava

Turkish delights

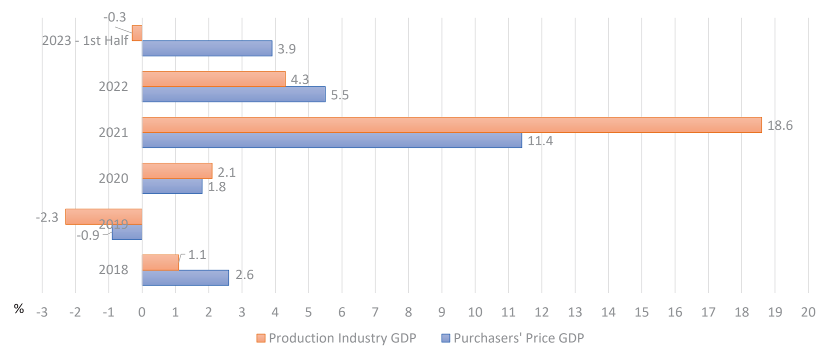
Turkish Coffe

Turkish tea

12

13

RATE OF GROSS DOMESTIC PRODUCT (GDP)

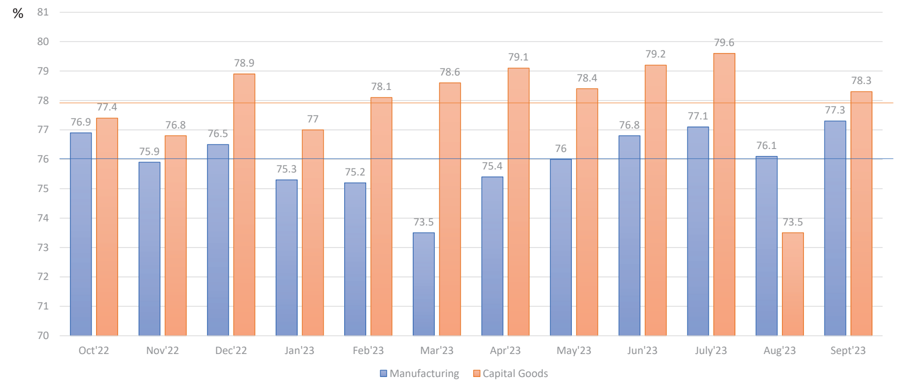


Source: TURKSTAT

StrongUnityOfTheSector

14

CAPACITY UTILIZATION RATE in INDUSTRY



Source: Central Bank Of The Republic of Turkey

StrongUnityOfTheSector

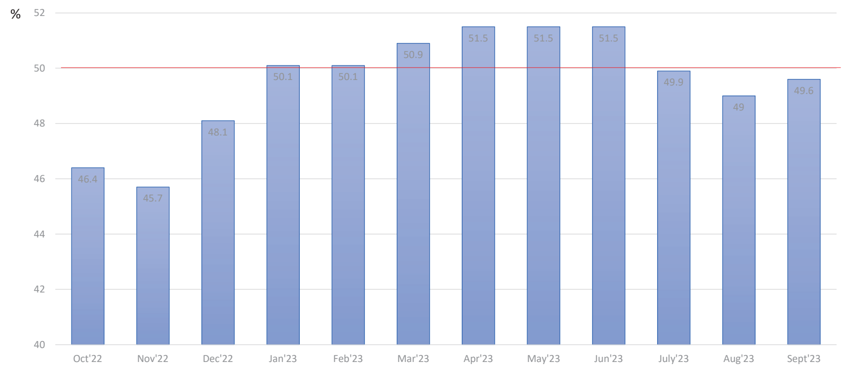
The first half of 2023 has seen a small fall in GDP but the capacity utilisation rate in both manufacturing and the sub-set of capital goods was above average in September.

The PMI had been above 50 earlier in the year but in the latest 3 months it has slipped back into negative territory (note that the October reading, published after the meeting, was 48.6).

The official unemployment rate is 9.2% but the real rate is likely to be higher than this. It has been falling slowly but steadily through most of this year.

As in other economies, there is a problem driven partly by the experiences during the pandemic of people, especially the young, wanting to work less in factories and offices.

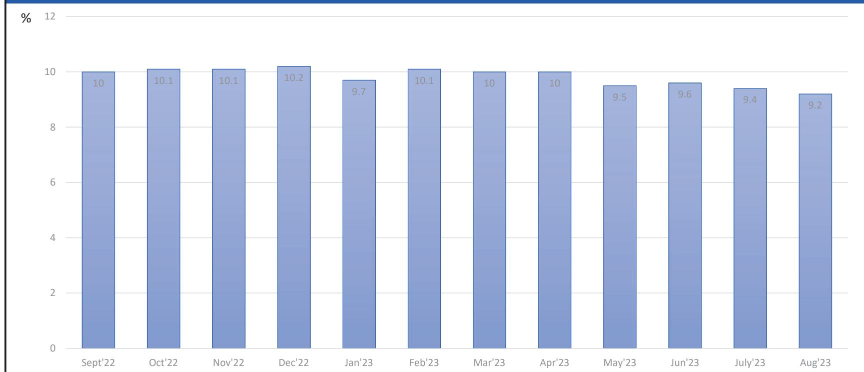
PURCHASING MANAGERS' INDEX (PMI)



Source: Istanbul Chamber of Industry & IHS Markit

StrongUnityOfTheSector

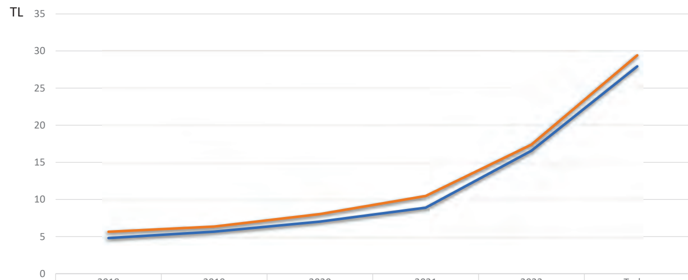
RATE OF UNEMPLOYMENT



Source: Istanbul Chamber of Industry & IHS Markit

StrongUnityOfTheSector

EXCHANGE RATES (AVERAGE)

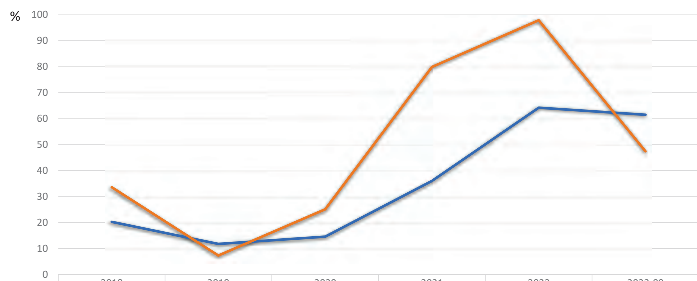


	2018	2019	2020	2021	2022	Today
USD	4.81	5.67	7.01	8.89	16.56	27.93
Euro	5.66	6.35	8.03	10.47	17.38	29.42

Source: Central Bank Of The Republic of Turkey

StrongUnityOfTheSector

RATE OF INFLATION



	2018	2019	2020	2021	2022	2023-09
CPI	20.3	11.84	14.6	36.08	64.27	61.53
PPI	33.64	7.36	25.15	79.89	97.92	47.44

Source: Central Bank Of The Republic of Turkey

StrongUnityOfTheSector

COMMERCIAL INTEREST LOAN RATE

	2018	2019	2020	2021	2022	2023	Today
CPI	17.97	27.62	13	19.62	25.77	13.78	49.35

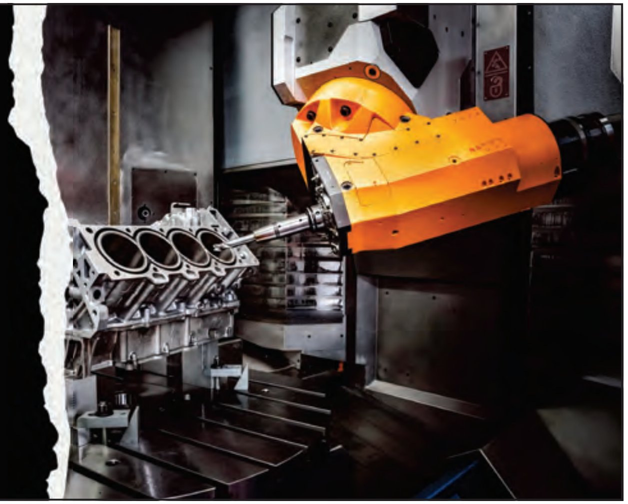
Source: Central Bank Of The Republic of Turkey

StrongUnityOfTheSector

After a period of only modest weakening of the Turkish Lira, the past couple of years have seen this deteriorate significantly; this is causing problems for the economy, although there is some benefit for exporters. It is one of the reasons for the high level of inflation and while producer prices have turned a corner, consumer price inflation is not showing much sign of slowing.

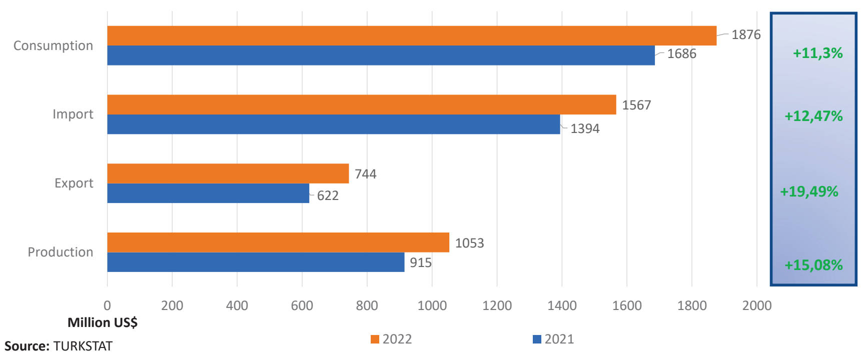
This has led to a sharp increase in interest rates and the real rate that has to be paid is higher than these official figures - the official rate is 35% but most loans are at 55% of more.

MACHINE TOOLS INDUSTRY GENERAL OUTLOOK



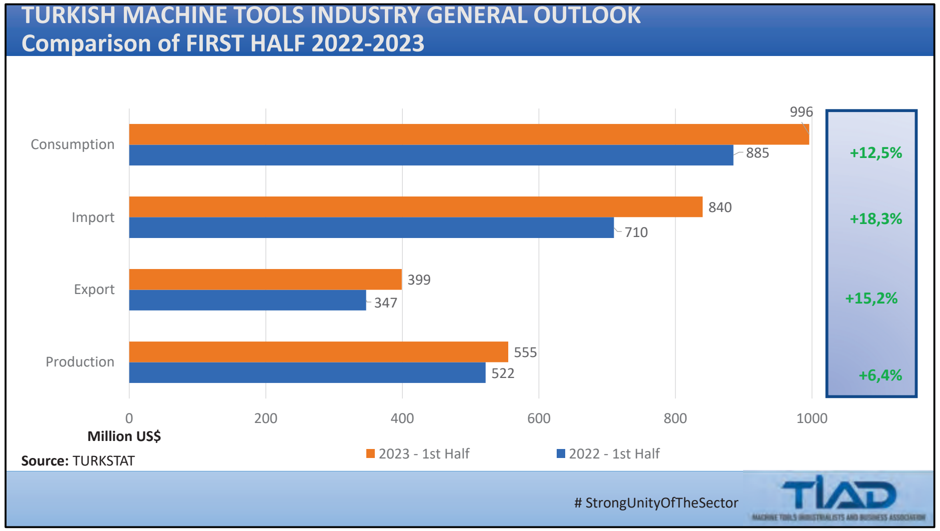
21

TURKISH MACHINE TOOLS INDUSTRY GENERAL OUTLOOK Comparison (2021-2022)



Source: TURKSTAT

StrongUnityOfTheSector



Production of machine tools grew by +15% in 2022 and with exports increasing by +19% and imports by +12%, the growth in consumption was +11%. This growth has continued into the first half of 2023, although imports have accelerated and taken over more of the share from domestic producers whose output is only up by +6% - machine tool consumption has grown by +12.5% compared to the first half of 2023.

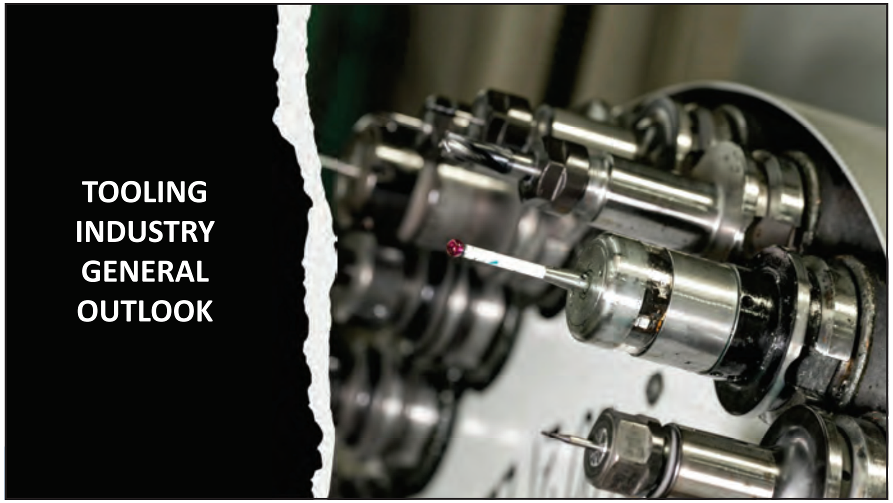
It was noted that Russia remains an important market for exports of machine tools from Turkey. The major Asian countries are the main source of machine tool imports, with only Germany (and Italy for H1-23) representing Europe in the list of top sources.

TOP 5 COUNTRIES SUPPLYING TURKEY'S MACHINE TOOLS

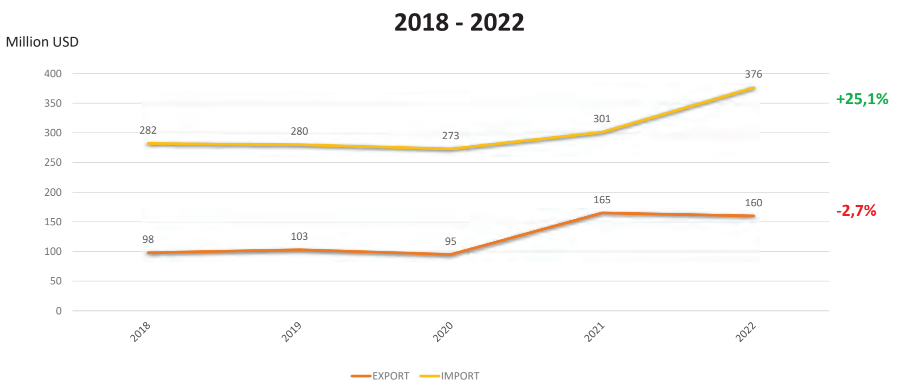
2022			
EXPORT		IMPORT	
Russian Federation	% 11,1	Taiwan	% 19
USA	% 10,1	China	% 17
Italy	% 5,1	Germany	% 14
Germany	% 5,1	Japan	% 12
Poland	% 4,0	South Korea	% 11

FIRST HALF OF 2023			
EXPORT		IMPORT	
Russian Federation	% 19	China	% 21,1
USA	% 6	Taiwan	% 16,7
Iraq	% 5,8	Germany	% 12,9
Italy	% 5,2	Japan	% 12,2
Germany	% 4,4	Italy	% 10,7

StrongUnityOfTheSector TIAD



TURKISH TOOLING INDUSTRY GENERAL OUTLOOK - CUTTING TOOLS



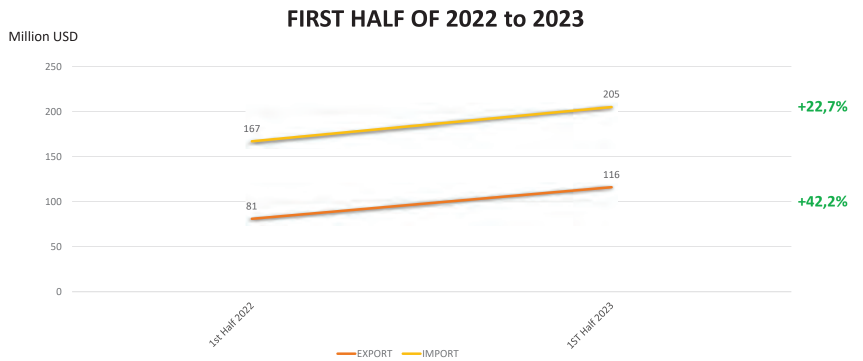
StrongUnityOfTheSector

Imports of cutting tools grew strongly in 2022 and this has continued in the first half of this year; while exports fell slightly last year, there has been a sharp rise in the first half of 2023.

Russia and Germany are the main export markets and, as with the machines, the Asian countries dominate the list of import sources, with Germany again the only European country on the list.

By product type, stamping tools top the list for exports, with inserts and HSS tools also important. For imports, inserts is the main category, with stamping tools also an important part of the market.

TURKISH TOOLING INDUSTRY GENERAL OUTLOOK - CUTTING TOOLS



StrongUnityOfTheSector

TURKISH TOOLING INDUSTRY - CUTTING TOOLS DETAILS

FIRST HALF OF 2023

Product Type	EXPORT	IMPORT
Drilling and Tapping Tools	5	21
Reaming Tools	0,4	4
Milling Tools	5,4	17,8
Turning Tools	1,6	1,4
Slicing and Sawing Tools	1,9	3,2
Insert Tools	29,3	93,1
Stamping Tools	44,1	43,8
Grooving Tools	1,2	14,2
HSS Stick	26,8	7,2

Million USD

IMPORTANT COUNTRIES TO EXPORT

- Russian Federation (23%)
- Germany (18%)

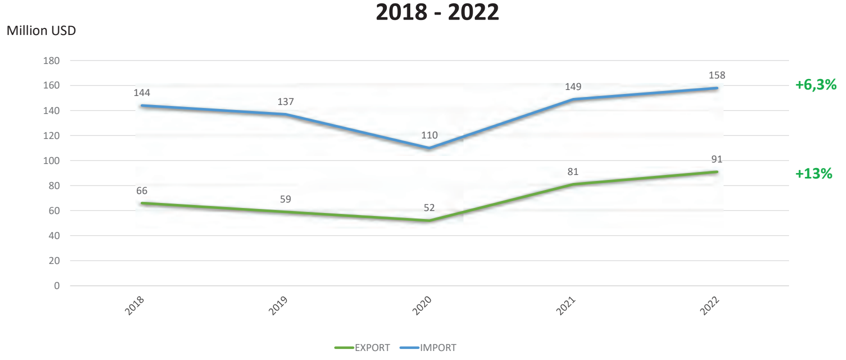
IMPORTANT COUNTRIES TO IMPORT

- China (23,1%)
- Germany (22,8%)
- South Korea (7,9%)
- Japan (7,2%)

StrongUnityOfTheSector

TURKISH TOOLING INDUSTRY GENERAL OUTLOOK – TOOL HOLDERS

2018 - 2022

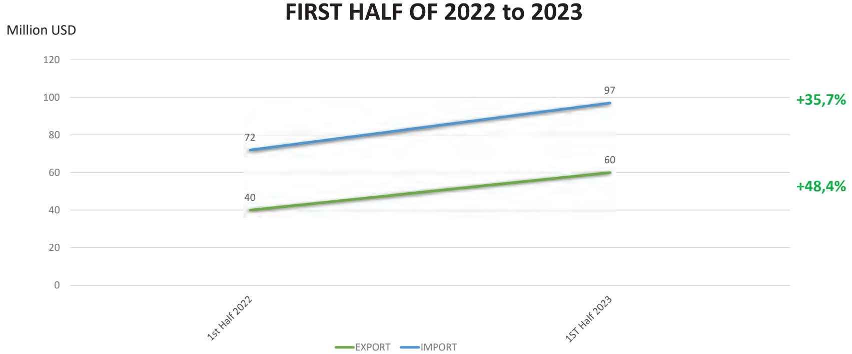


StrongUnityOfTheSector

29

TURKISH TOOLING INDUSTRY GENERAL OUTLOOK – TOOL HOLDERS

FIRST HALF OF 2022 to 2023



StrongUnityOfTheSector

30

TURKISH TOOLING INDUSTRY - TOOL HOLDERS DETAILS

FIRST HALF OF 2023

Product Type	EXPORT	IMPORT
For Metal Cutting	36,6	70,4
For Metal Forming	23,2	26,5

Million USD

IMPORTANT COUNTRIES TO EXPORT

- Germany (22,4%)
- Russian Federation (17,3%)

IMPORTANT COUNTRIES TO IMPORT

- Germany (14,3%)
- China (7,5%)
- Italy (6,9%)

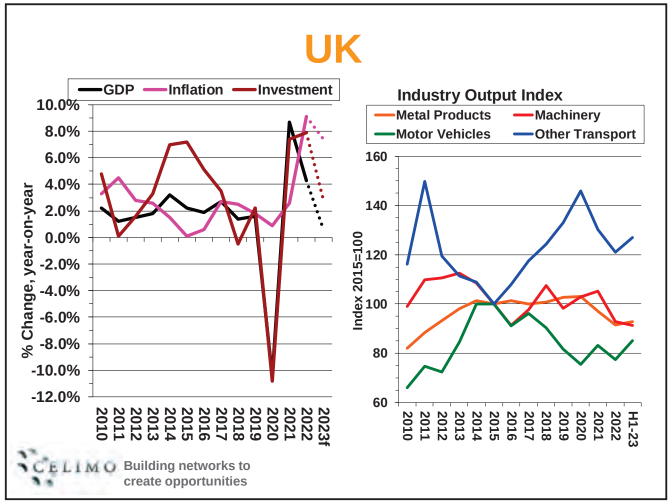
StrongUnityOfTheSector

For tool-holders there was only a modest +6% growth in imports in 2022 but this has accelerated sharply with growth of +36% in the first half of 2023. There has been a similar acceleration for exports which grew by +13% last year and by +48% in the first six months of 2023.

For imports, the largest part of the market is tool-holders for metal cutting with a ratio of 3:1 against metal forming; the export profile is closer to an even picture, although metal cutting is still larger,

The same countries feature as the top export markets as for cutting tools, although Italy makes it into the top three for import sources alongside Germany and China.

It was noted that China is increasingly becoming an important source of imports across the machinery and tooling aspects of our market.

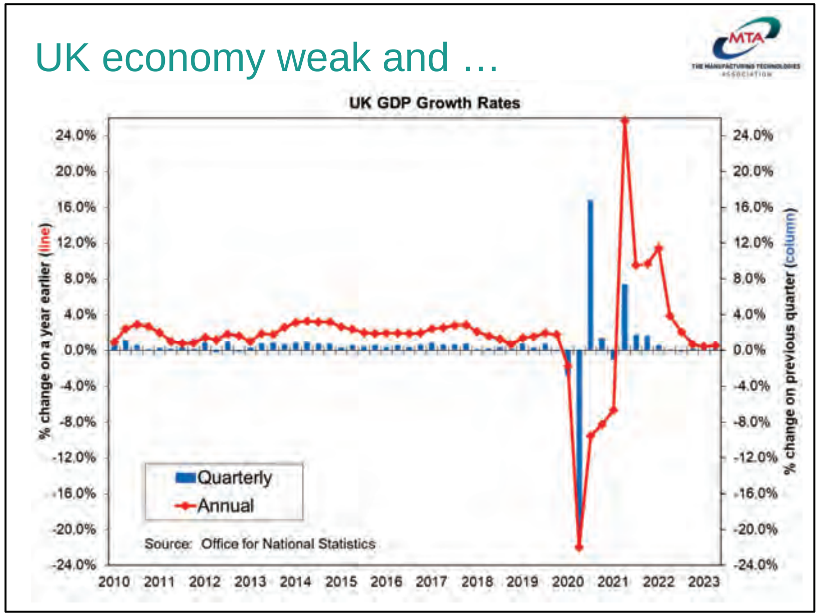


40

Summary

- The UK economy has been weak this year and is unlikely to improve in the near future
- Inflation is slowing but is likely to be above target until the end of 2024 …
- … so interest rates will remain high for longer
- The manufacturing PMI has been negative for 13 months but there is a mixed picture for output by industry
- Investment has held up thanks in part to an incentive that ended in April
- The UK cutting tool market is expected to grow by +10% in 2023 but then to fall by -5% in 2024

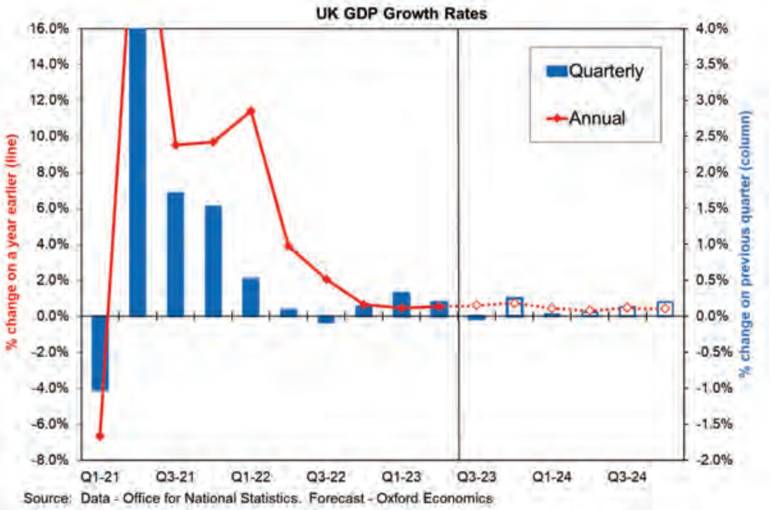
41



The UK economy has been weak since early in 2022 – arguably before that but this is hidden by the data which reflects the end of the post-pandemic recovery.

However, this slide is not really very helpful due the dramatic impact of the initial outbreak of the pandemic, so we take a closer look at more recent data.

… unlikely to improve soon

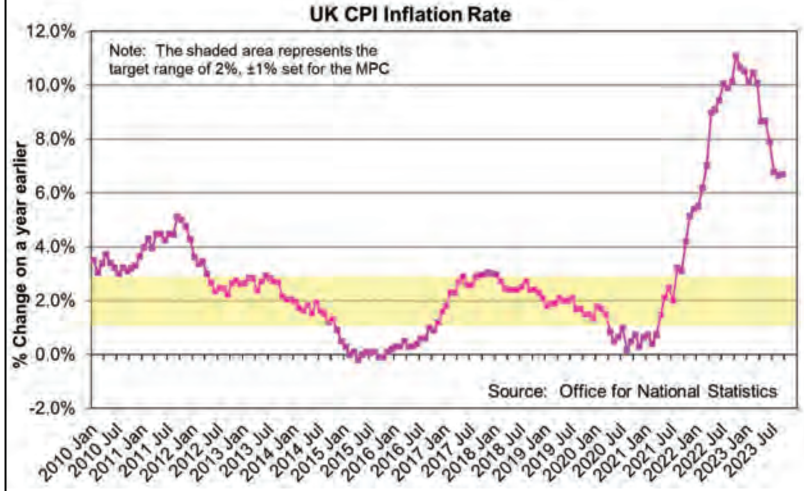


Even starting in 2021 has a couple of quarters which distort the picture and hide the real weakness that has been running since Q2-2022.

The UK avoided a recession with only one negative quarter and even this was largely due to the impact of the extra public holiday for the Queen's funeral.

However, growth has been very sluggish and we may even see a negative value when we get the full data for the 3rd quarter of this year. We don't expect much in the way of a recovery with growth for the whole year of around +0.5% in both 2023 and 2024.

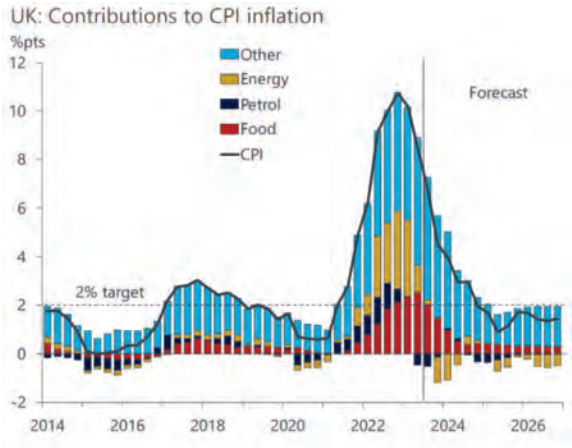
Inflation is slowing …



The rate of inflation is slowing but it remains well above the target rate which drives monetary policy (+2%, ±1 percentage point = +1% to +3% shown in the shaded area om the chart).

Because of the way in which consumer energy prices are regulated in the UK, we see sharp changes every three months. The next impact of this effect will be in the October figures – the September rate is +6.7% and the October figure is likely to begin with a "5".

… but remains sticky …

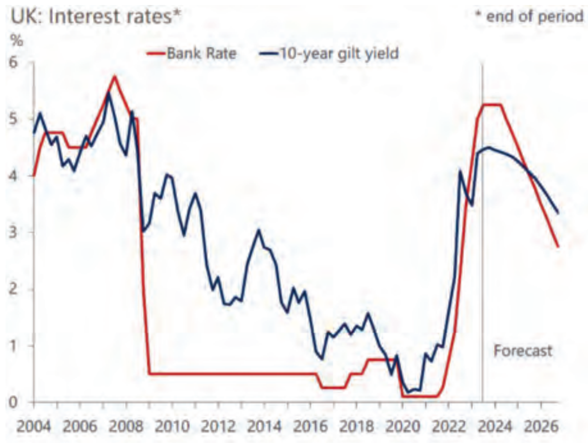


Sources: Oxford Economics, Haver Analytics

Some elements of inflation are already negative ("petrol" is a proxy for all vehicle fuels) and we expect energy prices to exert a negative effect in the final quarter of 2023.

However, we don't expect total inflation to get back to +2% until the very end of 2024. In part this is due to concerns over rising wages and the impact that this has on the service sector where it is the main driver of costs. Wage increases have now gone ahead of the inflation rate (it will always lag behind) so we still see a significant impact from "other" on this chart.

… so interest rates will remain high

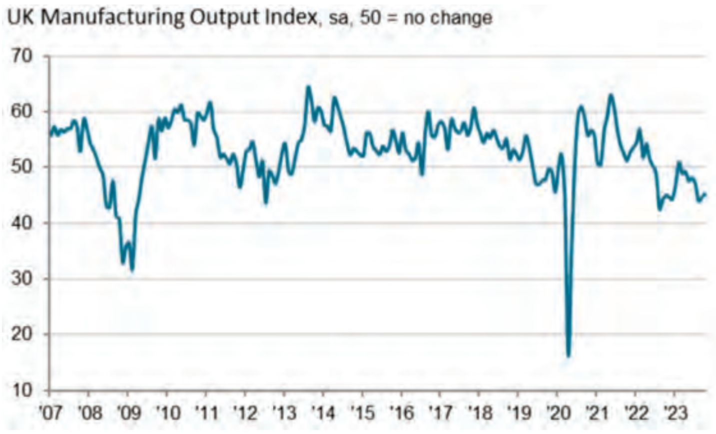


Sources: Oxford Economics/Haver Analytics

This complicates the picture for the next decision on interest rates (due 2nd November) because, while inflation is falling, the increase in wages rates creates an uncertainty for the future path.

Despite this, it seems likely that the current base lending rate of 5¼% will be the peak and the question is more about when we could expect to see interest t=rates fall. Current thinking is that for the UK, this is unlikely to be until the end of 2024.

The manufacturing PMI is weak …

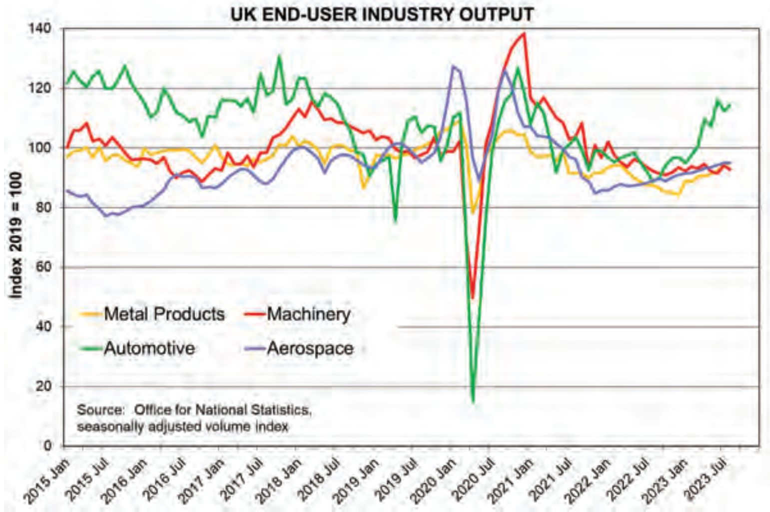


Sources: S&P Global PMI, CIPS.

The UK PMI for manufacturing has been below 50 since early in 2022 with the exception of a couple of months when it just reached this level.

The flash reading for October saw a marginal improvement but this only means things are not going down quite as fast as they were and we are some way from a positive situation.

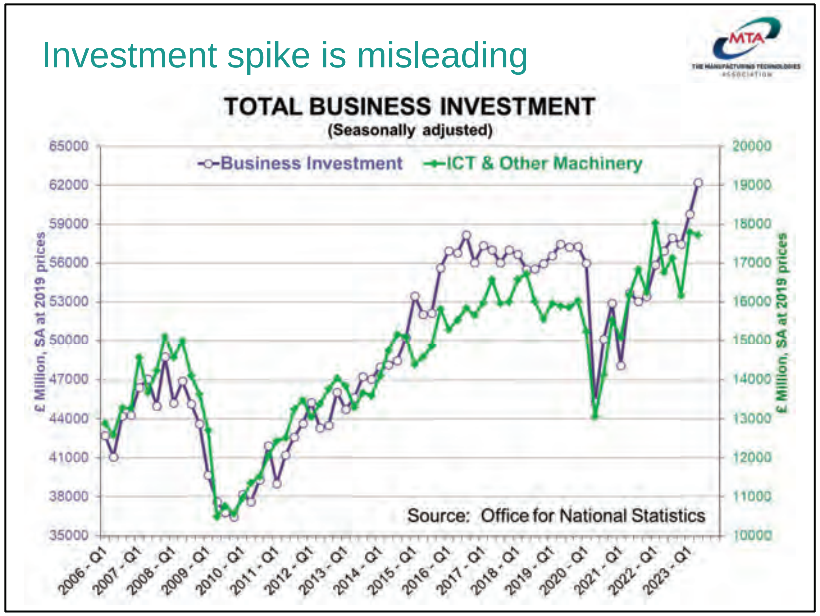
… but a mixed output picture



Output of the key industries has not been as the PMI indicator would suggest.

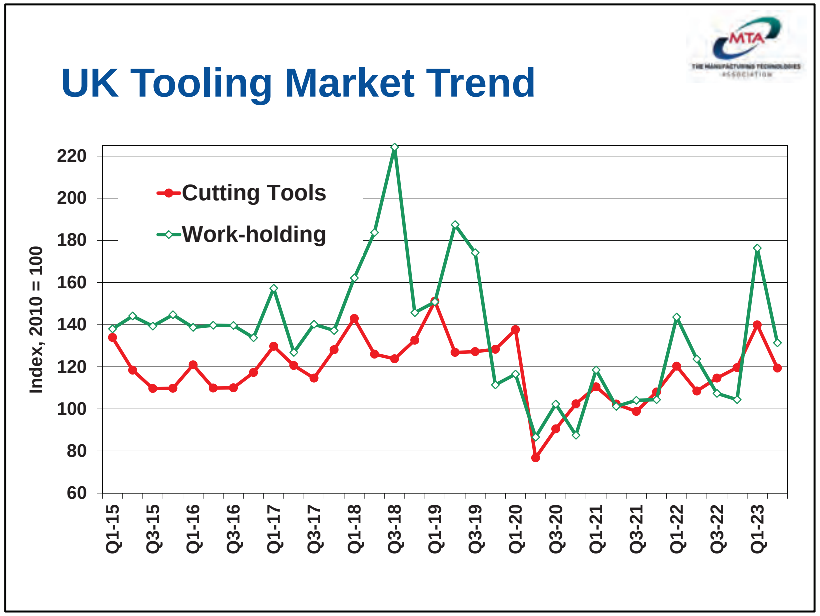
The automotive industry has recovered significantly this year but this is largely driven by working though order backlogs caused by the global shortage of electronic chips in 2022. We now expect this effect to end and to see a downturn in this industry as demand for new cars weakens.

Aerospace is the other important industry and while output has been growing gently, it is partly affected by how the data is collected.



We don't have the breakdown of business investment by industry, so we have to use the analysis by asset type. The key category here is "ICT & Other Machinery" (ICT&OM), as opposed to vehicles, dwellings, buildings or intellectual property; it is also the area at which the super-deduction allowance was targeted.

The latest release has revised away what was a nice peak in spending on this category for Q1-23 but we still have growth of +11% in 2021 and +6% in 2022. The spike in total business investment in the 2nd quarter of 2023 (the latest data point) is somewhat surprising but it was driven by the purchase of new aircraft.

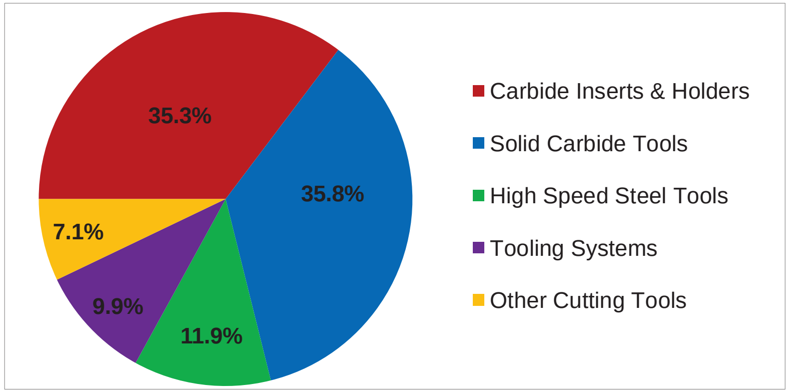


Demand for cutting tools has been growing this year, driven by the automotive and aerospace industries – note that the quarterly series has a strong seasonal factor in the 1st quarter of each calendar year.

Our cutting tool forecast is +10% this year but then to fall by -5% in 2024 as the automotive industry cools; a recovery then sets in during 2025/26.

We don't forecast work-holding equipment but, for the record, our machine tool forecast is +2% in 2023, -5% in 2024 before also recovering in 2025/26.

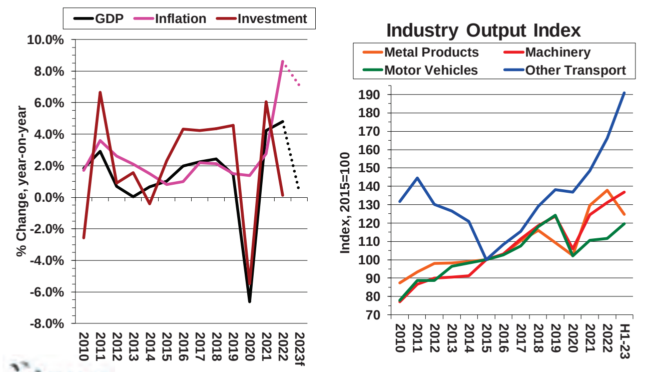
UK Cutting Tool Market by Type (2022)



This chart shows the breakdown of the UK Cutting Tool market by type of product in 2022 based upon our survey returns.

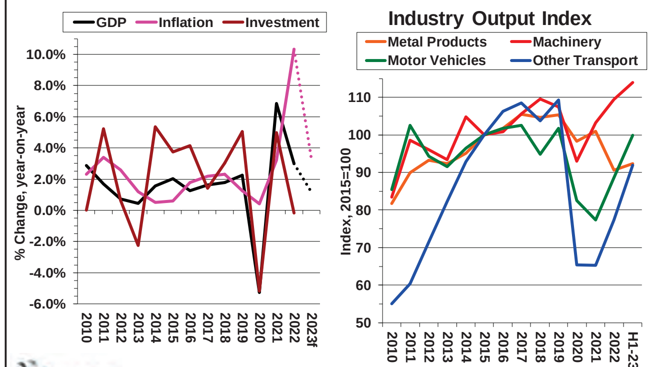
As in other countries, we have seen a rise in the share for solid carbide tools, mainly in place of inserts.

Austria



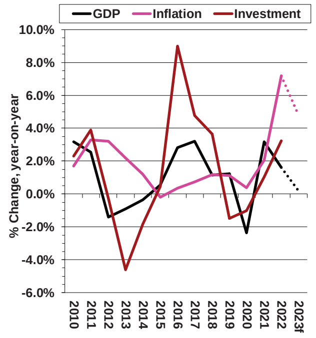
CELIMO Building networks to create opportunities

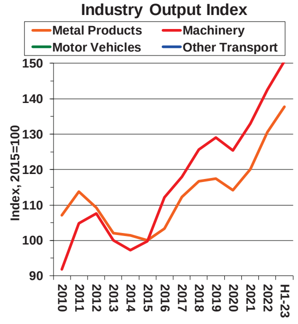
Belgium



CELIMO Building networks to create opportunities

Finland

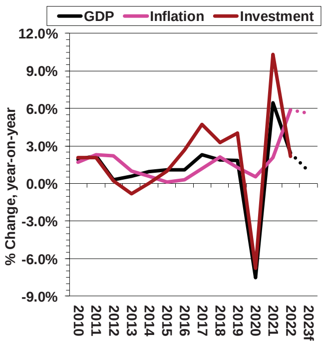


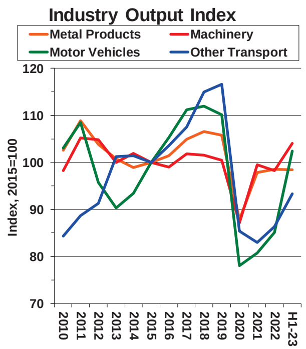


No Eurostat output data for Automotive or Other Transport Equipment

CELIMO Building networks to create opportunities

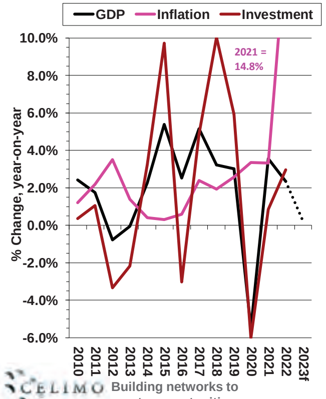
France

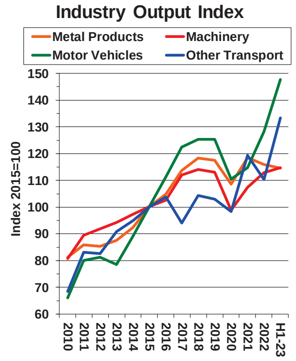




CELIMO Building networks to create opportunities

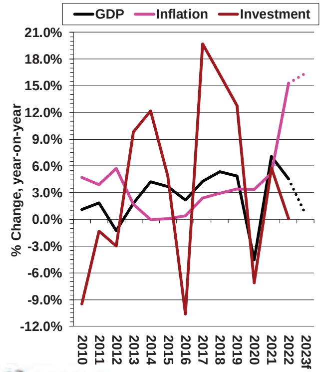
Czechia

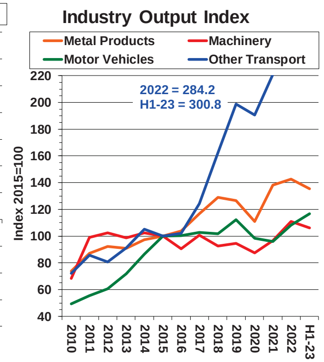




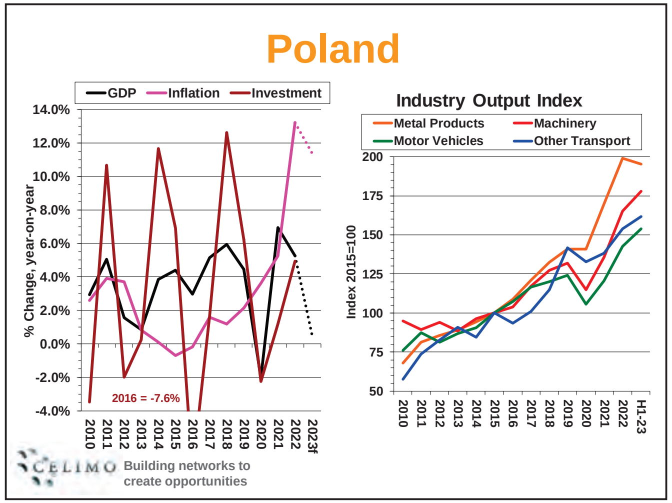
CELIMO Building networks to create opportunities

Hungary

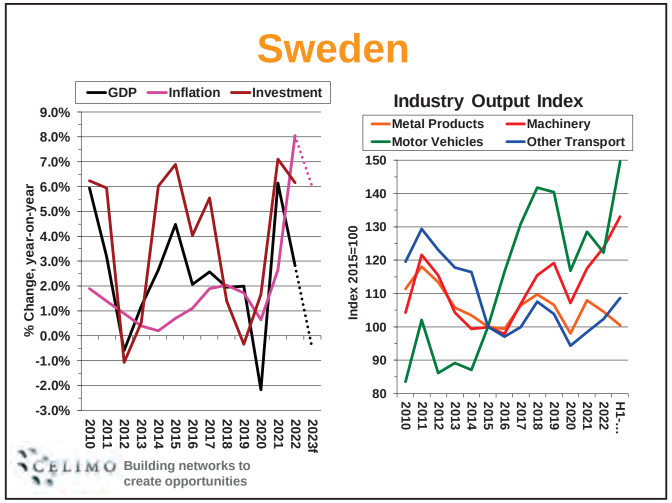




CELIMO Building networks to create opportunities


Poland
GDP
Inflation
Investment
% Change, year-on-year
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
2016 = -7.6%
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023f
Industry Output Index
Metal Products
Machinery
Motor Vehicles
Other Transport
Index 2015=100
200
175
150
125
100
75
50
H1-23
CELIMO
Building networks to
create opportunities

47


Sweden
GDP
Inflation
Investment
% Change, year-on-year
9.0%
8.0%
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
-1.0%
-2.0%
-3.0%
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023f
Industry Output Index
Metal Products
Machinery
Motor Vehicles
Other Transport
Index 2015=100
150
140
130
120
110
100
90
80
H1-...
CELIMO
Building networks to
create opportunities

48