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Manufacturing

Quarterly analysis of manufacturing activity

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Please refer to the glossary on the BER's website for explanations of technical terms.

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Executive summary

After averaging a meagre 17 in the first half of 2023, manufacturing business confidence increased by 6 points to 23 in 2023Q3. While an improvement, this still implies that almost 8 out of 10 respondents were not satisfied with prevailing business conditions. In addition, the latest confidence reading was somewhat lower than during the corresponding period last year.

For all the talk of less intense load-shedding during the survey period and the accelerated implementation of risk mitigation measures against power cuts, complaints about the detrimental impact of load-shedding on factory sector business conditions again dominated the comments from survey respondents. Even so, at least at first glance, respondent answers related to general business activity suggested that the manufacturing sector was in better shape in 2023Q3 than during the previous quarter. This is despite several disruptive events in Q3, including the torching of multiple trucks on the N3 transport corridor and the week-long taxi strike in the Western Cape. The improvement may reflect the boost from some easing in the intensity of load-shedding, particularly in August around the time of the third quarter survey.

Respondents reported much improved domestic and export sales in Q3. In an environment of depressed SA consumer spending and softening economic activity in the Eurozone, a major export market for locally produced goods, it is not obvious what drove this. One explanation could be the beneficial impact, both in terms of import substitution and export revenue, from a sustained weaker rand exchange rate. Production volumes were also up notably in Q3, but given idiosyncrasies in some of the subcomponents, this may have been overstated. Even so, hours worked were up on the previous quarter, while manufacturers were less downbeat about fixed investment intentions and the 12-month outlook for business conditions.

In all, in the context of weak recent quarters, the 2023Q3 manufacturing survey results were encouraging. However, besides coming off a low base, there are sectoral and provincial nuances to the results.

Table of Contents

List of figures

Introduction

After more than recovering from the 2022Q4 output contraction during 2023Q1, actual SA manufacturing production (in real terms) posted robust quarterly growth of 2.3% in the second quarter of 2023. Even so, not only was annual growth in factory production flat in the first half of the year, but the real level of manufacturing GDP in 2023Q2 was still down 2.7% on the pre-COVID (2019Q4) level. In contrast, total real GDP was 1% higher than pre-COVID in 2023Q2. This highlights the extent to which the manufacturing sector has lagged the recovery in overall economic activity. The latest Absa Manufacturing Survey results[1] suggest that although there were signs of improvement in the third quarter, activity in the sector remains depressed.

This report provides an overview of the situation in the manufacturing sector as it developed during 2023Q3, expectations for 2023Q4 and also 12 months hence. The main section of the report discusses the trends in the overall manufacturing industry with the assistance of graphs, followed by a brief outlook for the sector. After this section, separate tables and graphs of the survey data are also provided for each sector and province[2].

A brief overview of the latest official data

MANUFACTURING OUTPUT UNDER PRESSURE IN EARLY Q3

According to Stats SA, seasonally adjusted real manufacturing production had a poor start to the third quarter, declining by 1.6% m-o-m in July. The annual rate of increase slowed to 2.3%, from 4% y-o-y in 2023Q2. Manufacturers of food, textiles and basic iron and steel experienced the biggest monthly declines in output during July. The weakness at the start of Q3 follows a decent second quarter when manufacturing production expanded by 2.3% compared to the first quarter.

The downbeat official data corresponds with the Absa Purchasing Managers' Index (PMI) figures for Q3. The **business activity index** of the Absa manufacturing PMI averaged 44 in the first two (July and August) months of 2023Q3, down from an already depressed 48.1 in the second quarter. With the intensity of load-shedding easing during August in particular, the weak PMI activity indicator may reflect disruptive events so far in 2023Q3. These include transport disruptions on the N3 highway during July and the Western Cape taxi strike in August. With some important caveats, as outlined below, the production indicator from the Absa Manufacturing Survey painted a rosier picture than the PMI suggested for output in the third quarter.

[1] The survey was conducted between 16 and 29 August.

[2] The Manufacturing Survey separately covers eight of the main subsectors of the manufacturing industry as well as the three main provinces (Gauteng, KwaZulu-Natal and the Western Cape).

GLOBAL INDUSTRY FEELING THE HEAT

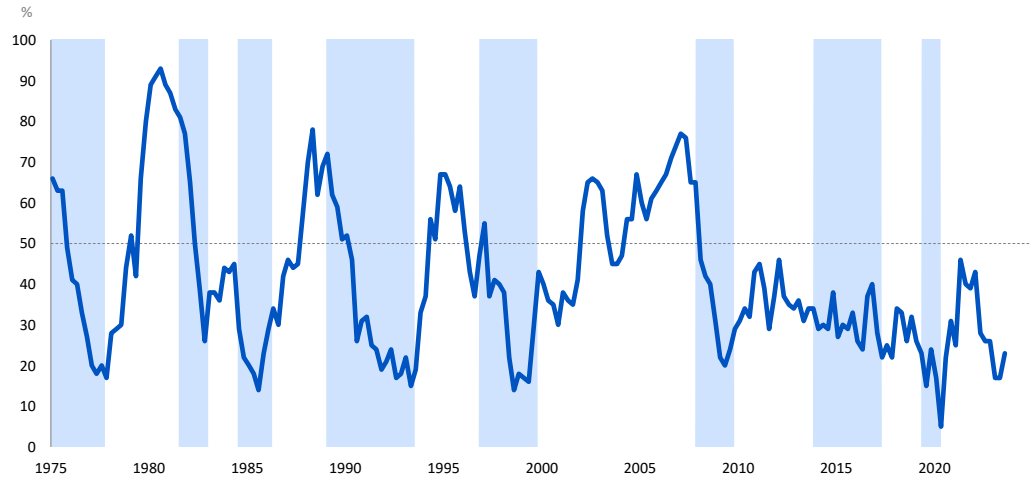
The move away from consumer outlays on goods in favour of services as economies continue to normalise from the COVID shock is weighing on industrial output around the globe. To be sure, US industrial production posted modest annual declines in June and July. In the first seven months of 2023, real US industrial output growth slowed to just 0.3% y-o-y, from 3.4% in 2022. The latest manufacturing PMIs from across the world do not suggest an imminent turnaround. Despite recovering slightly to 49 in August, the JP Morgan Global Manufacturing PMI averaged 48.8 so far in Q3, down from an average of 49.3 in 2023Q2 and highlighting continued poor activity. Of particular concern to SA is that the manufacturing PMIs in the Eurozone (EZ) and the UK hovered around 43 in August, i.e., well below the 50-point mark that separates expansion from contraction. Although under less pressure than in the EZ/UK, both the private sector and official Chinese PMIs continued to gyrate around the key 50 mark in August. This points to stagnant growth in the Chinese manufacturing sector.

The 2023Q3 Absa Manufacturing Survey results

BUSINESS CONFIDENCE PERKED UP SOMEWHAT

Manufacturing business confidence ticked up to 23 in 2023Q3 (Figure 1) after hovering at a three-year low of 17 in the first half of the year. Although the third quarter saw the highest confidence so far in 2023, the current level remains downbeat. Indeed, roughly 8 out of 10 respondents were unsatisfied with prevailing business conditions. From a low base, there was a fairly broad-based move higher in confidence across the sectors covered by the survey. Of the eight major manufacturing subsectors surveyed, six saw higher confidence, one (food) experienced a drop in confidence and in one (textiles) confidence remained largely unchanged. **Metal manufacturers** saw the largest gain in confidence, with sentiment rising back to its long-term average of 35. Except for sharply higher selling prices that may have boosted margins, it is not immediately clear what lies behind the 18-point rise in the confidence of metal producers. However, the confidence gain was supported by the underlying components, with realised business conditions (from -69 to -21), production volumes (from -27 to -14) and export sales (from -10 to 1) all improving notably.

Figure 1: Just more than two out of ten respondents satisfied with business conditions

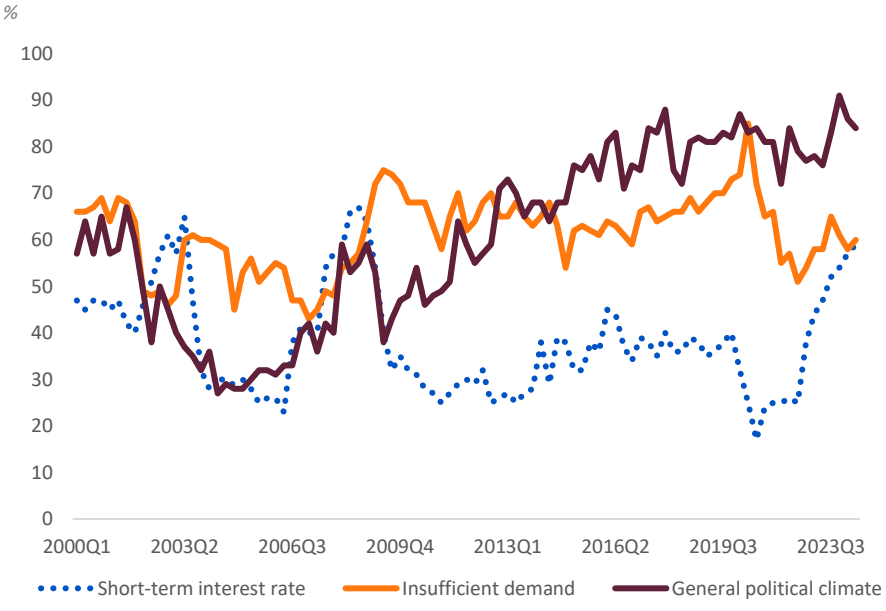


Source: BER, SARB
Note: Business cycle downturns are shaded

At the other end of the scale, confidence in the **food manufacturing** industry fell to the third-lowest level on record. At 10, confidence was only 3 index points above the series-low of 7 in 1998Q3 and a reading of 9 in 2020Q1 just before the hard COVID-19 lockdown. One respondent in the food industry mentioned that the Western Cape taxi strike in August halted output for more than a week, which likely weighed on confidence. In terms of the provincial split in overall confidence, the impact of the taxi strike was also visible. Of the surveyed provinces, manufacturers in the Western Cape recorded both the lowest and the only decline in business confidence in the third quarter.

Despite the improvement in overall confidence, manufacturers remain the most pessimistic of the sectors included in the composite RMB/BER Business Confidence Index. This is despite less intense load-shedding during the second half of August, when the Q3 survey was conducted, relative to high-intensity power cuts around the time of the second quarter survey. The reprieve in load-shedding may have contributed to higher confidence in by far the majority of the surveyed manufacturing subsectors. Increased levels of load-shedding since early-September would most likely have dampened the spirits of manufacturers once again. Earlier in the third quarter, the sentiment boost provided by less intense power rationing was probably diluted by other concerns. These include stumbling growth in some of SA's major trading partners, including the EZ and the UK, as well as domestic disruptions (N3 truck torchings and the taxi strike). In terms of the major constraints on current business activities (Figure 2), the short-term interest rate and insufficient demand constraints moved slightly higher in Q3, while the vast majority (84%) of respondents continued to rate the domestic political climate as a hindrance. Over the past four quarters, of the constraints listed, the rating of the short-term interest rate has deteriorated the most as borrowing costs moved sharply higher. In contrast, raw material shortages have seen the biggest improvement as COVID-related supply-side bottlenecks improved.

Figure 2: General political climate remains the most serious constraint on activity



Source: BER

CAVEATS TO BROAD-BASED INCREASE IN PRODUCTION

In contrast to the poor outcome for the business activity index of the Absa PMI so far in Q3, respondents in the manufacturing survey reported improved production in the third quarter. The production indicator

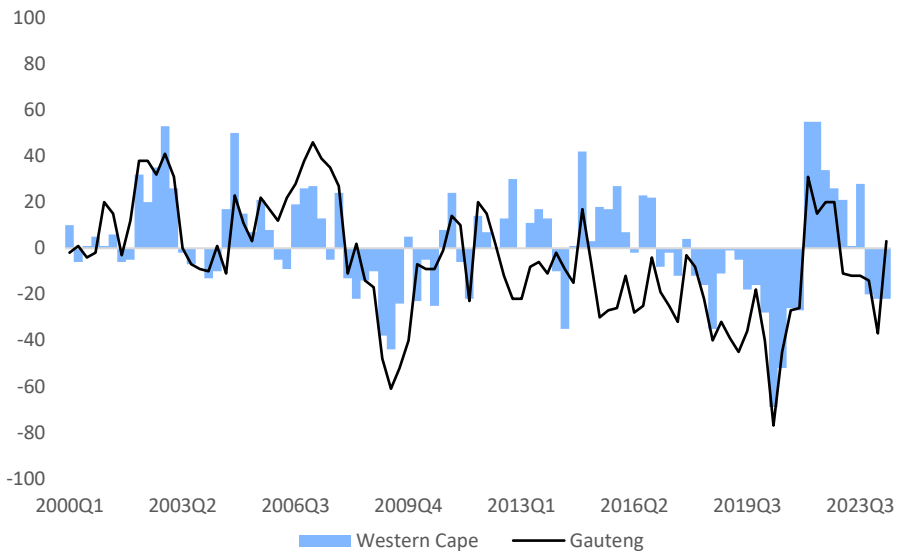
increased significantly to -4, from -34 in 2023Q2. While the Q3 reading still means that a small net majority of respondents reported lower output compared to the same quarter last year, the improvement between the second and third quarter survey is stark. The better output performance was widely dispersed through the sectors covered. Respondents in six sectors reported improved production, with two (food and textiles) saying production deteriorated. In some cases, the transport sector being a case in point, the rise in production was eye-popping. At first glance, both the magnitude and the breadth of the improvement in the overall production indicator could be due to less intense load-shedding during the time of the third quarter survey (second half of August) relative to the Q2 survey (second half of May). Supportive of this view was a less negative reading on **average hours worked** per worker, which moved from -32 in 2023Q2 to -16 in Q3. The Q3 survey also saw a lower rate of capacity underutilisation. This declined from 78 to 69, which is better than the long-term average for the series.

A case could also be made that the sustained weakness of the rand versus the US dollar and other major currencies is starting to assist local manufacturers. On average, the currency was 16% weaker against the dollar in the first eight months of 2023 compared to the same period in 2022. This not only boosts the export revenue of manufacturers, but also encourages local consumers to rely less on imported goods, i.e., it supports import substitution.

Having said that, some caution is warranted about the rise of the BER production indicator in Q3. This is particularly the case in the transport sector. After declining sharply in Q2, production surged in Q3. The Q2 move was counterintuitive and did not correspond to the official Stats SA data that showed a large annual increase in vehicle production during 2023Q2. This came off a low base in 2022 when output in this sector was derailed by the devastating floods in KZN. The BER's production indicator for total manufacturing output was also more negative in Q2 than the official Stats SA manufacturing output figures.

Figure 3: In contrast to other major provinces, production in the Western Cape remained soft

Net balance



Source: BER

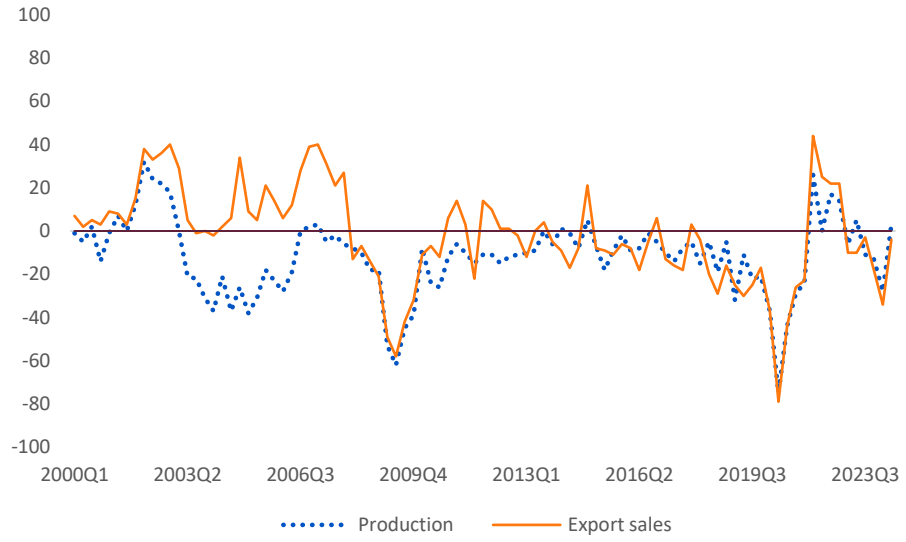
Coming back to the latest results, as reflected in Figure 3, there were diverging trends in the provincial production indicators. Whereas a net 22% of manufacturers in the Western Cape reported lower production in Q3 relative to the same quarter in 2022, manufacturers in Gauteng and KZN reported higher output. As with food manufacturers, the weaker number for the Western Cape probably reflects output losses suffered as a result of the week-long taxi strike that hit the province in August.

EXPORTS IMPROVED AS SELLING PRICES BOTTOM

As with production, manufacturers saw a jump in exports during 2023Q3. A net majority of 3% reported higher exports relative to 2022Q3. This was a large swing from a net 28% who reported lower exports in 2023Q2 compared to the corresponding quarter in 2022. On balance, respondents in all the subsectors that were surveyed registered higher exports in Q3, in some cases substantially so. Especially in the transport sector, the official data already available for the third quarter supports an improved export performance. According to naamsa, vehicle exports surged by almost 50% y-o-y in July. In addition, SARS customs data showed that the value of vehicle and transport equipment exports soared by 60% m-o-m in July. A weaker currency may have contributed to these moves. However, key to the naamsa data is a KZN flood-induced low base in 2022, while the introduction of new vehicle models most likely helped to boost the monthly SARS vehicle export figures.

Figure 4: The production and export sales indicators jumped in Q3

Net balance



Source: BER

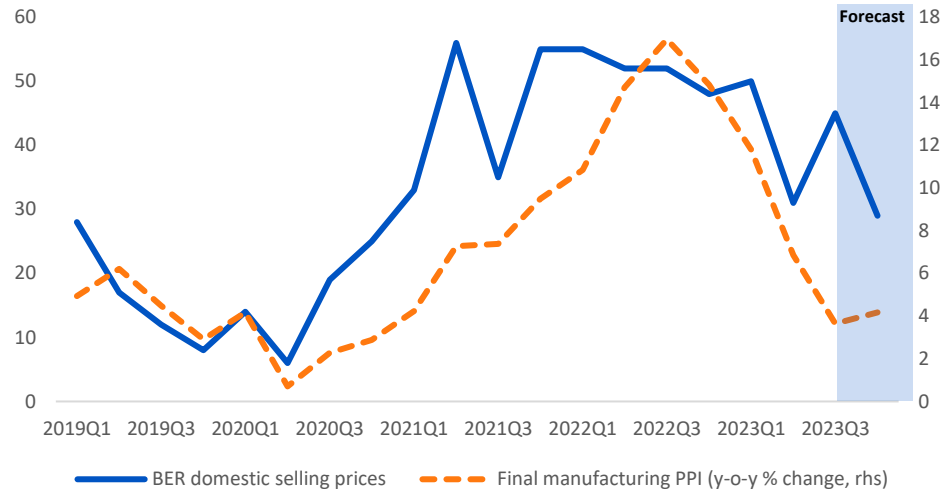
Regarding domestic selling prices, manufacturers reported an uptick in the rate of increase. A net 45% majority of the respondents said prices were higher compared to a year ago, up from 31% that reported higher prices in the second quarter. In terms of the official Stats SA data, the rate of increase for final manufactured goods (headline PPI) slowed further to 2.7% y-o-y in July, down from 6.9% during 2023Q2. One interpretation of the BER's Q3 survey results is that the July PPI number was probably the bottom of the cycle. Indeed, the Q3 manufacturing survey results support our forecast that the annual increase in the headline PPI will re-accelerate from August. Having said that, the fact that manufacturers expect to increase prices at a slower pace next quarter than during Q3 provides some comfort that the projected re-acceleration in the PPI should be contained. However, the survey was completed before the recent spike higher in the Brent crude oil price towards $90/bbl.

The fixed investment indicators showed some improvement in 2023Q3, but remained in net negative terrain. When compared to the same quarters last year, a net majority of respondents expect to invest less in the current (Q3) quarter, as well as the next (Q4). Beyond 2023Q4, the special questions on investment that are added to the survey in the first and the third quarter of the year showed that manufactures were also less downbeat about fixed investment in 12 months' time. Even so, there remains no indication of a groundswell of fixed investment intentions over the next year. With several constraints on business conditions set to

continue in the foreseeable future, the investment that does take place in the manufacturing sector is set to remain focused on sustaining current operations as opposed to capex that facilitates business expansion.

Figure 5: Factory sector selling prices likely bottomed in early Q3

Net balance



Source: BER, Stats SA

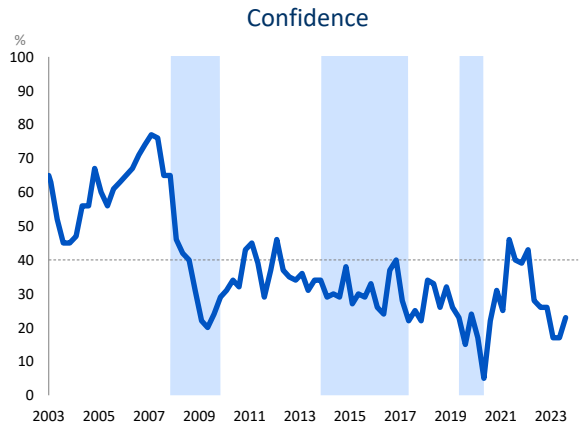
Outlook

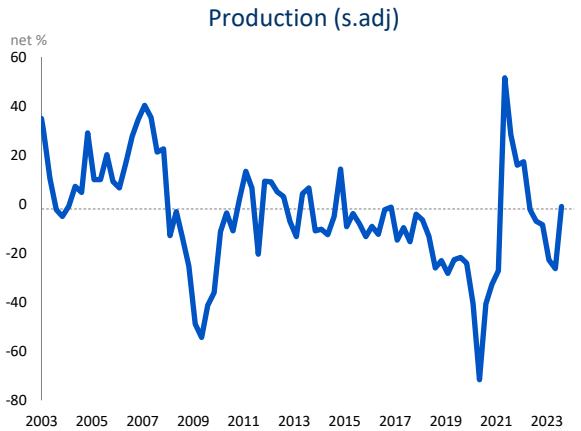
Although improving to the best level so far in 2023, a large net majority of almost 30% of respondents in the manufacturing survey expect general business conditions to be worse in 12 months' time. This speaks to expectations that severe current factory sector headwinds will not be alleviated anytime soon. In addition, some manufacturers are already anxious about the lead-up and aftermath of next year's national and provincial elections. With current constraints top of mind, manufacturers seemingly do not see much light at the end of the tunnel. This helps to explain their subdued fixed investment intentions. With the SA Reserve Bank (SARB) expected to start cutting the policy interest rate from 2024Q2, consumer (CPI) inflation projected to be anchored at 4.5 to 5% in the second half of 2024, and, crucially, less intense load-shedding, there is a case to be made that business conditions will in fact improve in 12 months. *Put differently, given how rock bottom current expectations are, there is some upside*. However, over the near term, a tough domestic economic climate and muted growth in key SA export markets suggest that conditions in the manufacturing sector will remain challenging.

Survey results

MANUFACTURING: TOTAL[3]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	σ_Δ
Confidence	%	21	37	53	39	43	28	26	26	17	17	**23**	6	7
Activity & prices														
Production	Net %	-28	-5	17	22	22	-10	-10	-3	-18	-34	**-4**	30	17
Seasonally adjusted	Net %	-27	-5	17	16	17	-2	-7	-8	-23	-26	**-1**	25	16
Employment	Net %	-29	-15	-2	2	-7	-4	-14	-11	-17	-19	**-18**	1	9
Average hours worked / worker	Net %	-28	-13	2	1	0	-9	-16	-16	-20	-32	**-16**	16	13
Domestic sales	Net %	-32	-7	17	26	14	-16	-7	-5	-17	-39	**-12**	27	18
Domestic selling prices	Net %	15	30	46	55	55	52	52	48	50	31	**45**	14	12
Export sales	Net %	-31	-15	2	17	14	-6	5	-11	-13	-28	**3**	31	14
Export selling prices	Net %	-5	16	36	51	48	44	50	50	43	29	**30**	1	13
Production costs	Net %	46	61	77	81	67	76	81	89	85	84	**77**	-7	12
Stocks & investment														
Finished goods rel. to demand	Net %	1	9	18	-9	-14	-1	5	1	-4	-4	**3**	7	7
Smoothed	Net %	2	9	17	-9	-8	-3	2	1	-2	-2	**-1**	1	5
Capacity underutilisation	%	65	72	79	61	65	64	68	68	74	78	**69**	-9	5
Smoothed	%	66	72	78	64	63	66	67	70	73	74	**74**	0	4
Fixed investment	Net %	-14	1	16	7	13	-5	1	2	-15	-20	**-12**	8	10
Constraints														
Insufficient demand	Net %	54	62	70	51	54	58	58	65	61	58	**60**	2	5
Political climate	Net %	43	62	82	79	77	78	76	83	91	86	**84**	-2	6
Expected in 12 months														
Business conditions	Net %	-33	-13	7	-9	-5	-17	-20	-29	-45	-59	**-29**	30	16
Smoothed	Net %	-30	-13	5	-4	-10	-14	-22	-31	-44	-44	**-44**	0	12
Fixed investment	Net %	-15	0	15		16		-6		-13		**-8**	5	13



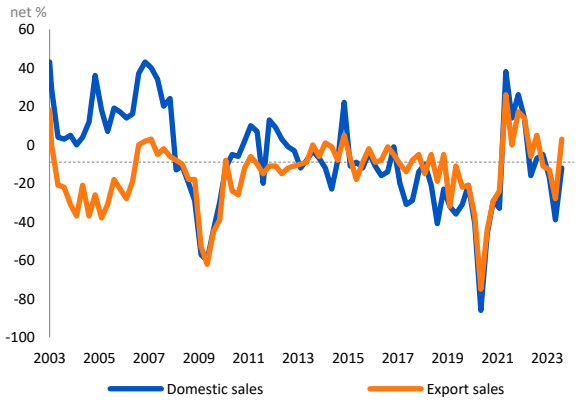


[3] The total consists of 1) food & beverages, 2) textiles, clothing, leather & footwear, 3) wood, paper, printing & publishing, 4) chemical products, rubber & plastics, 5) glass & non-metallic mineral products, 6) basic metals, metal products & machinery, 7) electrical machinery, radio, TV and professional equipment, 8) motor vehicles, parts & transport equipment and 9) furniture & other. Although the BER covers the electrical machinery etc. sector and includes it in the total, it does not publish the results of this sector separately. The BER does not cover petroleum refining (which is part of the chemical etc. sector) and scrap metal (which is part of "other") and they are therefore not included in the total.

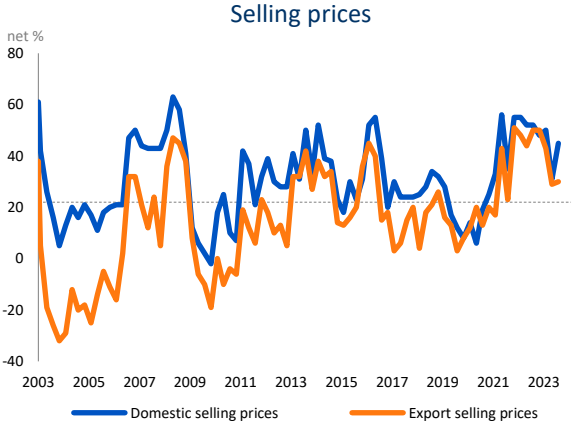
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

MANUFACTURING: TOTAL

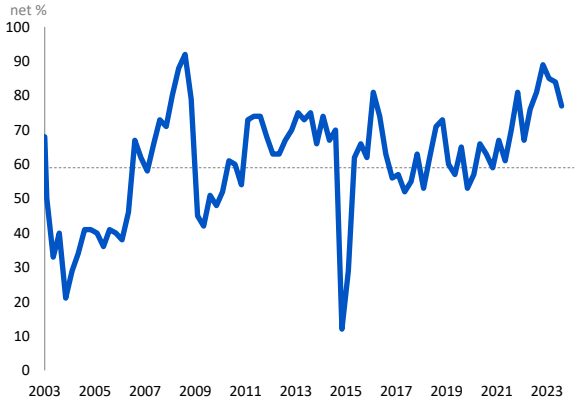
Sales



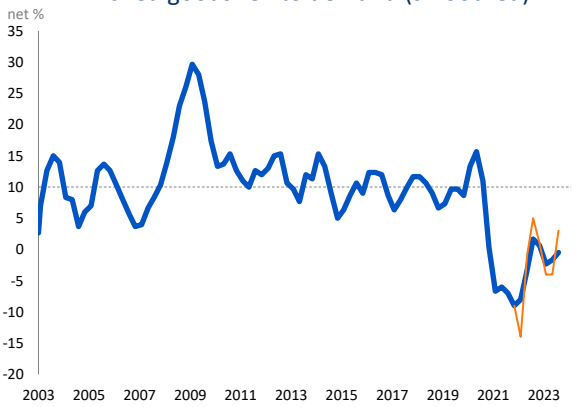
Selling prices



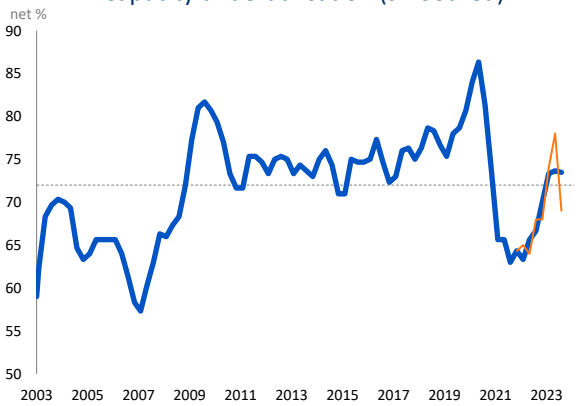
Production costs



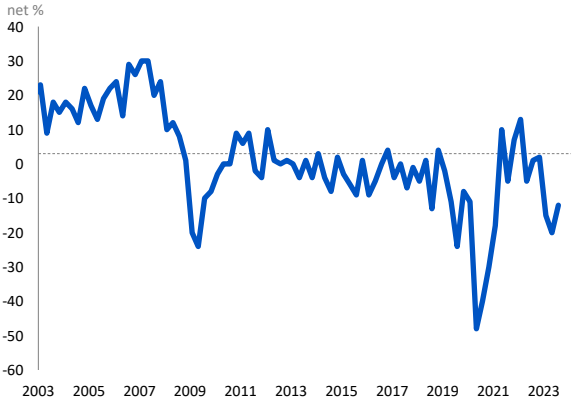
Finished goods rel. to demand (smoothed)



Capacity underutilisation (smoothed)



Fixed investment



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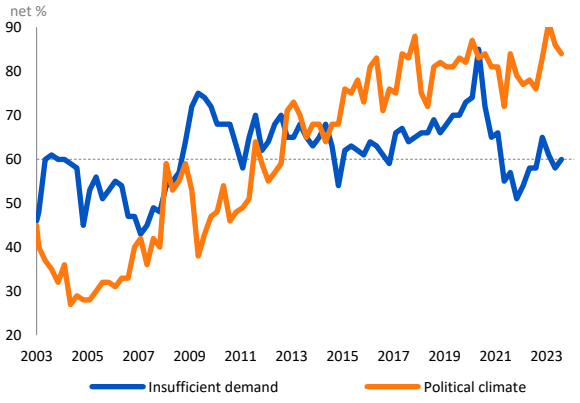
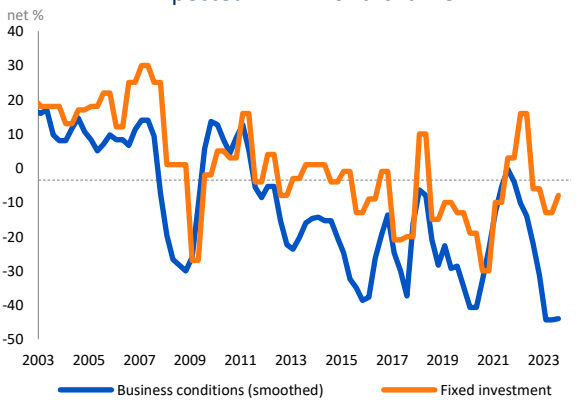
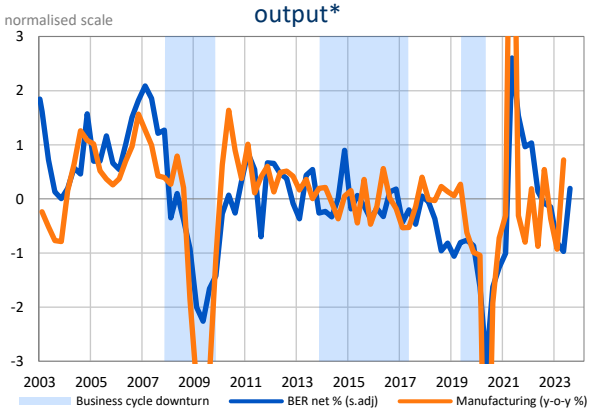


Expected in 12 months' time

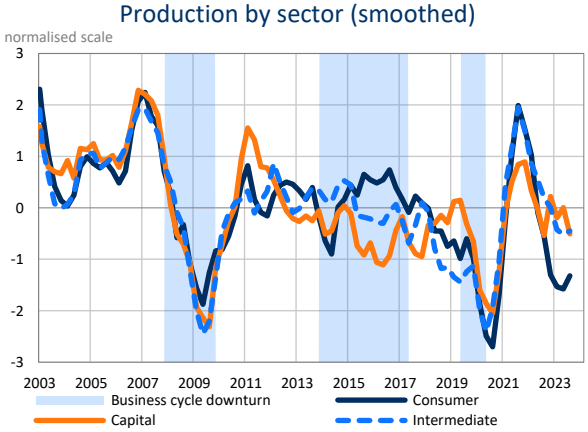


SUMMARY

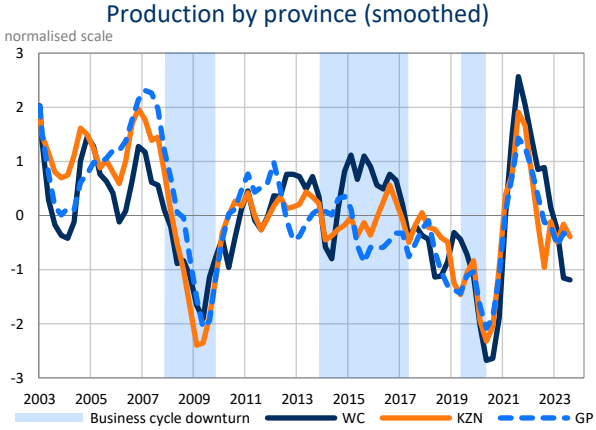
Production & actual manufacturing output*



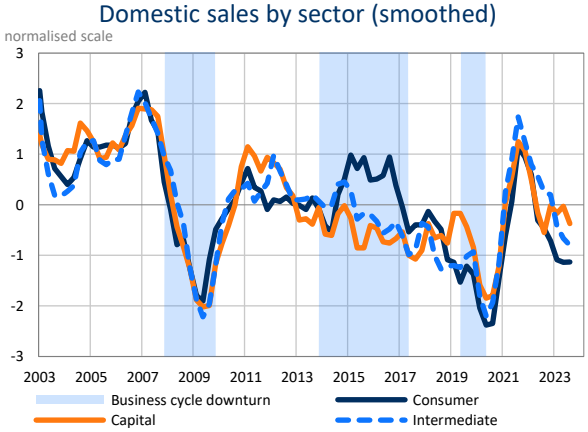
Production by sector (smoothed)



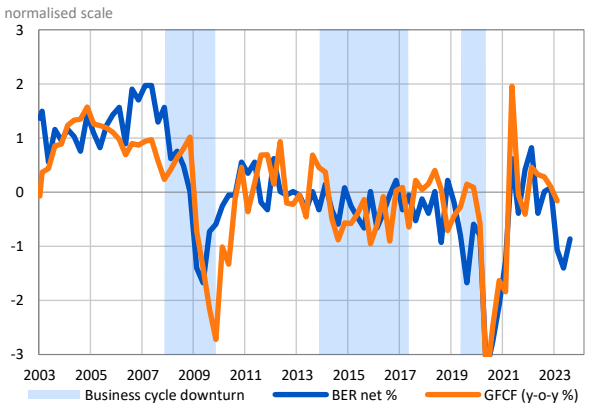
Production by province (smoothed)



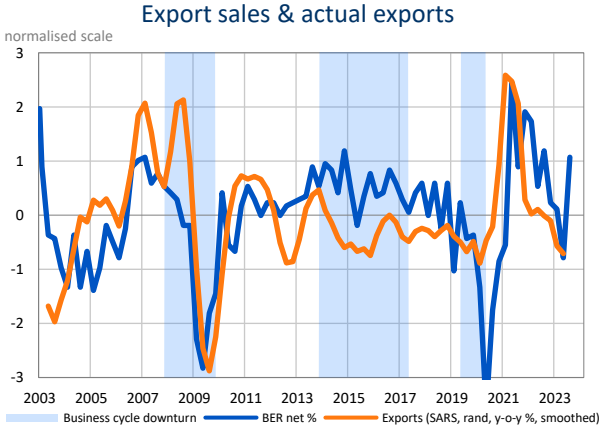
Domestic sales by sector (smoothed)



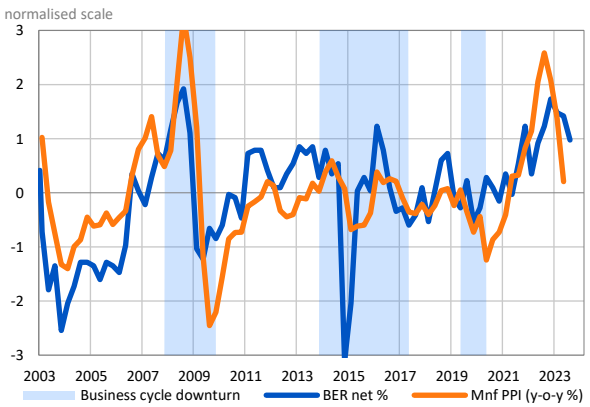
Fixed investment & Private GFCF



Export sales & actual exports



Production cost & PPI-inflation



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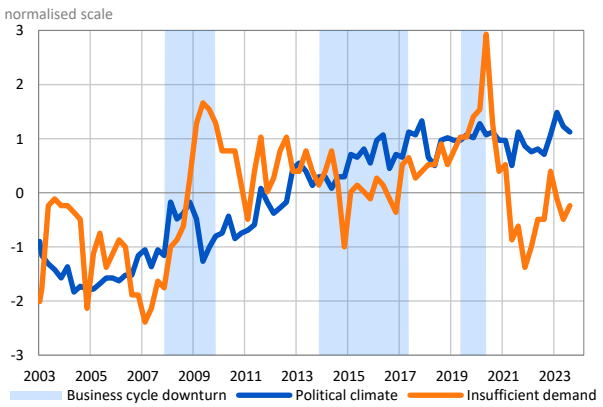


CAPITAL[4], INTERMEDIARY[5] AND CONSUMER[6] GOODS

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Capital goods														
Confidence	%	15	36	57	23	38	11	15	24	13	10	**21**	11	11
Smoothed	%	16	36	55	31	24	21	17	17	16	15	**16**	1	8
Production	Net %	-42	-10	22	2	37	-43	-27	-3	17	-60	**13**	73	30
Smoothed	Net %	-37	-10	16	13	-1	-11	-24	-4	-15	-10	**-24**	-14	20
Domestic sales	Net %	-44	-13	19	17	24	-38	-36	-8	5	-48	**3**	51	26
Smoothed	Net %	-40	-13	15	17	1	-17	-27	-13	-17	-13	**-23**	-10	19
Export sales	Net %	-41	-18	5	16	32	-6	13	3	-12	-25	**-21**	4	23
Smoothed	Net %	-36	-18	0	23	14	13	3	1	-11	-19	**-23**	-4	17
Intermediate goods														
Confidence	%	20	36	52	41	46	32	31	20	15	20	**29**	9	8
Smoothed	%	20	36	51	42	40	36	28	22	18	21	**25**	4	7
Production	Net %	-32	-7	18	23	22	-9	2	-1	-21	-26	**-7**	19	20
Smoothed	Net %	-29	-7	15	26	12	5	-3	-7	-16	-18	**-17**	1	17
Domestic sales	Net %	-37	-10	17	24	17	-15	8	-5	-19	-36	**-22**	14	21
Smoothed	Net %	-34	-10	14	19	9	3	-4	-5	-20	-26	**-29**	-3	17
Export sales	Net %	-33	-16	2	19	-1	0	6	-22	-7	-23	**11**	34	16
Smoothed	Net %	-30	-16	-1	4	6	2	-5	-8	-17	-6	**-6**	0	11
Consumer goods														
Confidence	%	25	40	55	43	40	29	22	37	21	15	**16**	1	9
Smoothed	%	27	40	54	43	37	30	29	27	24	17	**16**	-1	7
Production	Net %	-19	0	19	32	14	2	-21	-8	-33	-32	**-10**	22	17
Smoothed	Net %	-16	0	16	24	16	-2	-9	-21	-24	-25	**-21**	4	13
Domestic sales	Net %	-23	-1	21	34	5	-9	-17	-4	-23	-38	**-7**	31	19
Smoothed	Net %	-20	-1	18	17	10	-7	-10	-15	-22	-23	**-23**	0	13
Export sales	Net %	-31	-12	7	16	27	-14	-1	-5	-21	-35	**7**	42	17
Smoothed	Net %	-28	-12	4	13	10	4	-7	-9	-20	-16	**-14**	2	12

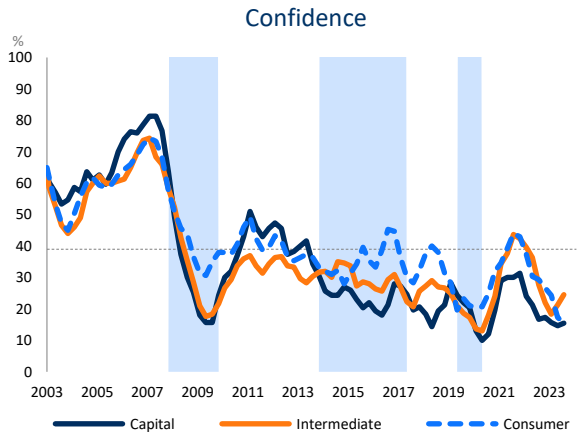
[4] Capital goods: Structural metal products (SIC code 353-4), general purpose machinery (356), special purpose machinery & machine tools (357), electrical motors & generators (361), medical appliances, photo equipment (374-6), motor vehicles & bodies (381-2), parts & accessories (383), other transport equipment (384-7)

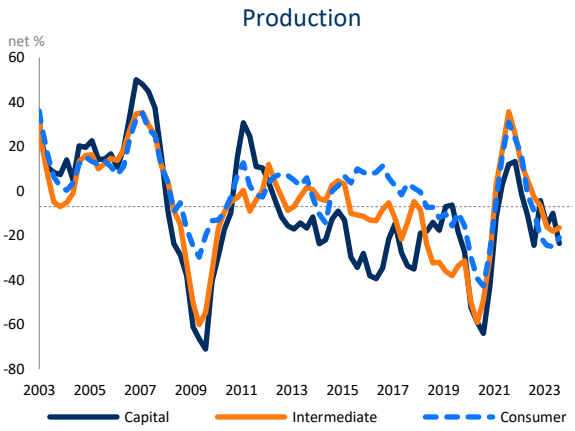
[5] Intermediary goods: Grain mill products, starches & animal feeds (303), spinning, weaving & finishing of textiles, yarns (311), knitted & crocheted fabrics (313), sawmilling, preserving of timber, bark grinding & compressing (321), wood & wood products (322), paper and products (323), basic chemicals (334), rubber (337), plastic products (338), glass & glass products, fibreglass (341), other non-metal mineral products (bricks, tiles, cement, prefab concrete, asphalt, mica products) (342), basic iron & steel (351), basic precious (gold, platinum, silver) & non-ferrous metal (aluminium, copper, lead, nickel, tin, zinc) products (352), other fabricated metal products (355), electrical distribution & control apparatus (362), wire & cable (363), batteries, electrical bulbs & other (364-6)

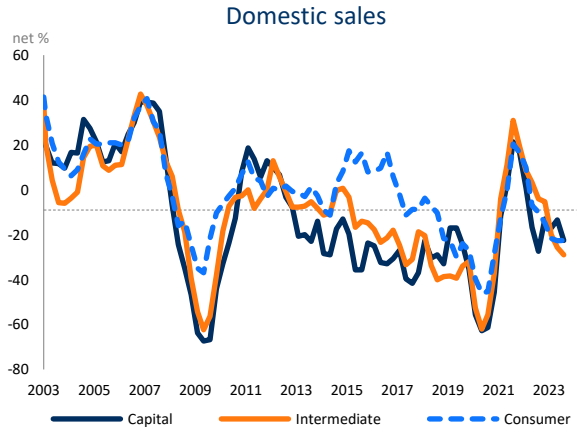
[6] Consumer goods: Meat, fish, fruit, vegetables, oils & fats (301), dairy products (302), other (304), beverages (305), tobacco (306), other textiles (312), wearing apparel & articles of fur (314-5), leather (316), footwear (317), other chemical products (335-6), computers & office machines, household appliances (358-9), TV, radio & communication equipment (371-3), furniture (391), other (e.g. jewellery, musical instruments, games & toys, recycling NOT COVERED) (392)

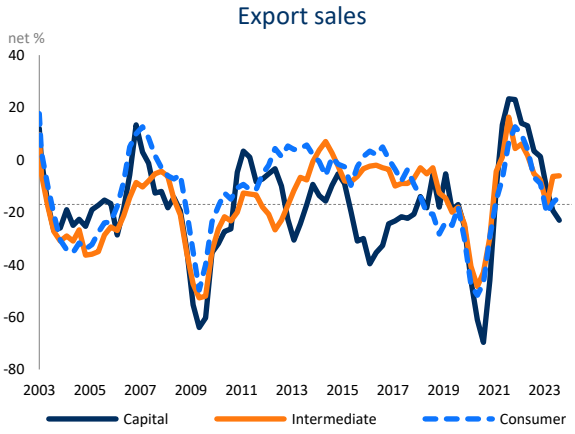
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

CAPITAL, INTERMEDIARY AND CONSUMER GOODS





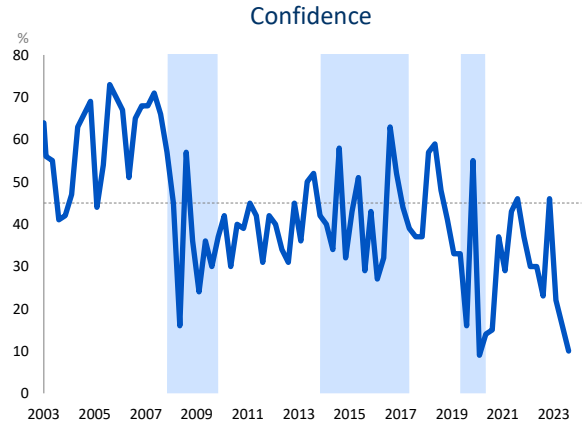


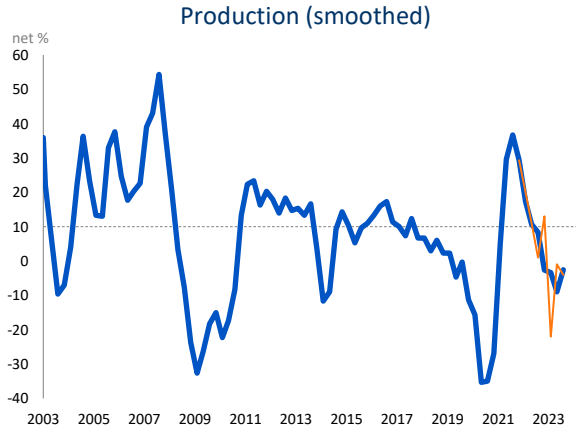


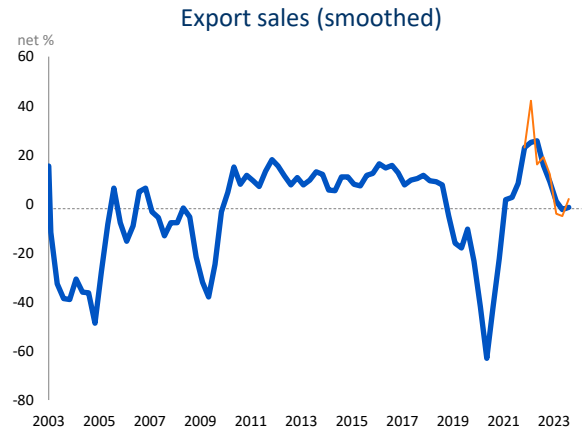
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

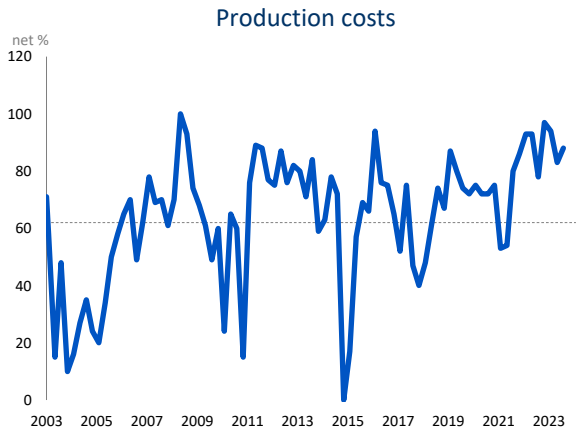
FOOD AND BEVERAGES[7]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	27	42	58	37	30	30	23	46	22	16	**10**	-6	15
Production	Net %	-15	8	31	21	20	11	1	13	-22	-1	**-4**	-3	22
Smoothed	Net %	-11	8	27	29	17	11	8	-3	-3	-9	**-3**	6	17
Export sales	Net %	-25	-2	21	17	42	16	19	12	-4	-5	**2**	7	21
Smoothed	Net %	-21	-2	17	23	25	26	16	9	1	-2	**-2**	0	15
Production costs	Net %	43	65	87	86	93	93	78	97	94	83	**88**	5	19
Business conditions in 12m	Net %	-28	-8	12	4	22	-15	-23	-11	-18	-53	**-27**	26	22







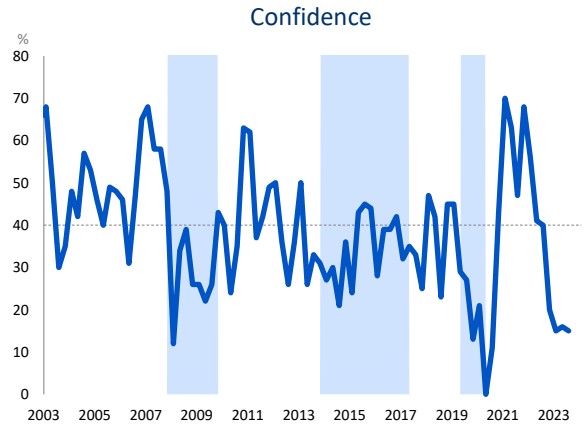


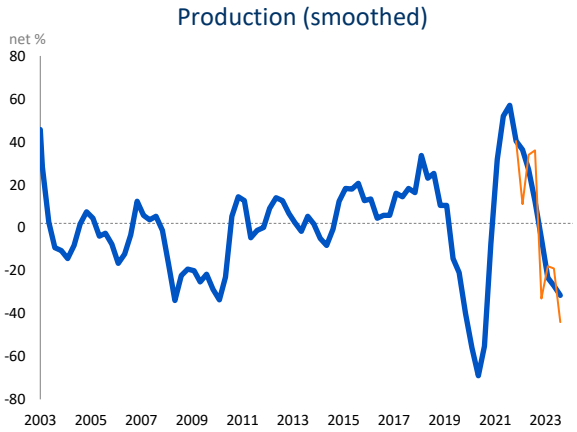
[7] Food & Beverages: Meat, fish, vegetables, oils & fats (SIC code 301), dairy products (302), grain mill products, starches & animal feeds (303), other food (304) and beverages (305). In 2017, this sector contributed 28.4% to production and 11.1% to manufactured exports, petroleum and other excluded in both cases. We recommend that users attach more weight to the trend (smoothed series) than a single data point, as the correlation between the survey production data and reference series is low.

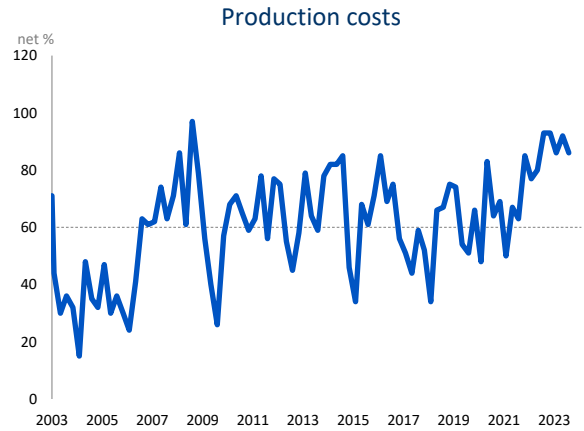
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

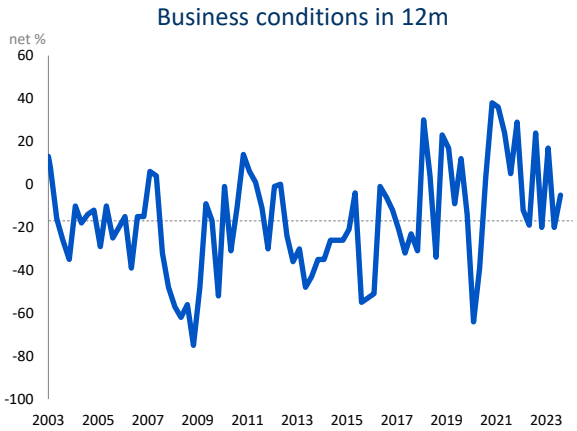
TEXTILES, CLOTHING LEATHER AND FOOTWEAR[8]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	23	38	53	68	56	41	40	20	15	16	**15**	-1	13
Production	Net %	-28	0	27	64	11	34	36	-33	-18	-19	**-44**	-25	26
Smoothed	Net %	-23	0	22	40	36	27	12	-5	-23	-27	**-32**	-5	21
Production costs	Net %	44	62	80	85	77	80	93	93	86	92	**86**	-6	16
Business conditions in 12m	Net %	-42	-17	7	29	-12	-19	24	-20	17	-20	**-5**	15	25







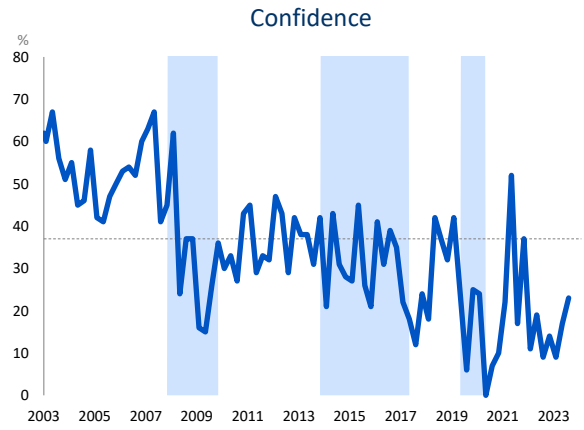


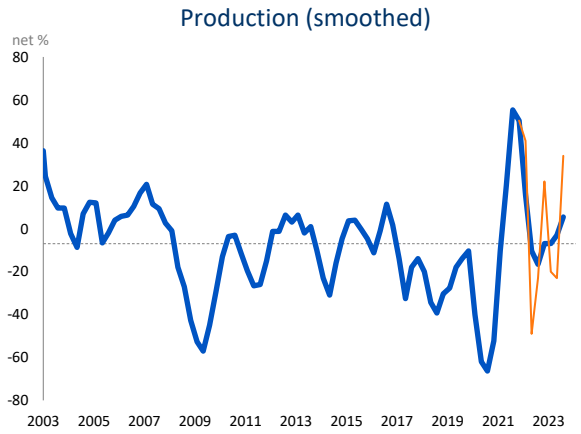
[8] Textiles, Clothing, Footwear & Leather: spinning, weaving & finishing of textiles, yarns (SIC code 311), other textiles (312), knitted & crocheted fabrics (313), wearing apparel & articles of fur (314-5), leather (316) and footwear (317). In 2017, this sector contributed 3.7% to production excluding petroleum and other.

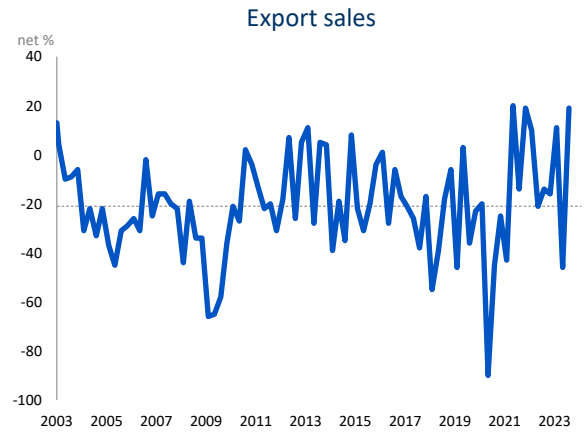
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

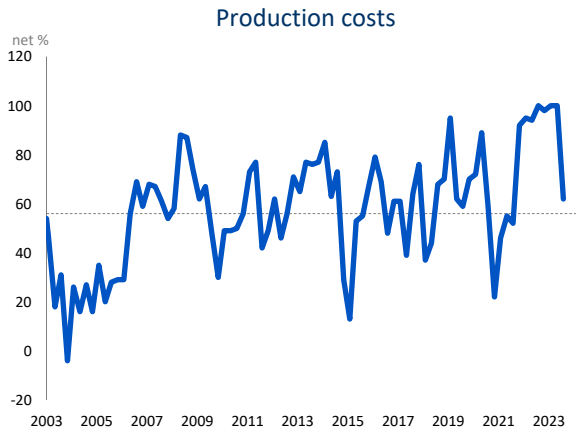
WOOD, PAPER, PRINTING AND PUBLISHING[9]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	18	33	48	37	11	19	9	14	9	17	**23**	6	13
Production	Net %	-38	-9	20	55	41	-49	-23	22	-20	-23	**34**	57	30
Smoothed	Net %	-31	-9	12	50	16	-10	-17	-7	-7	-3	**6**	9	23
Export sales	Net %	-42	-22	-1	19	10	-21	-14	-16	11	-46	**19**	65	26
Production costs	Net %	36	59	82	92	95	94	100	98	100	100	**62**	-38	18
Business conditions in 12m	Net %	-35	-12	11	15	-15	-22	-27	-42	-47	-57	**-29**	28	26







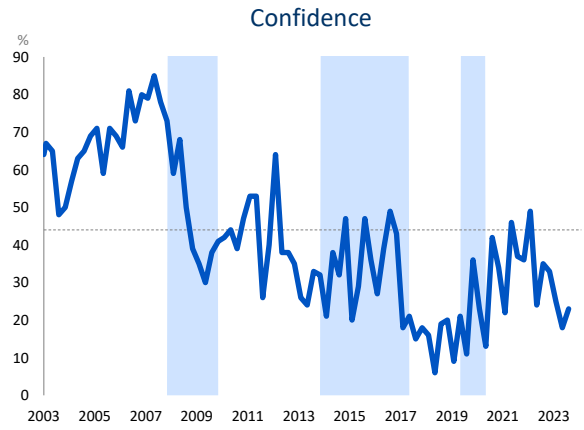


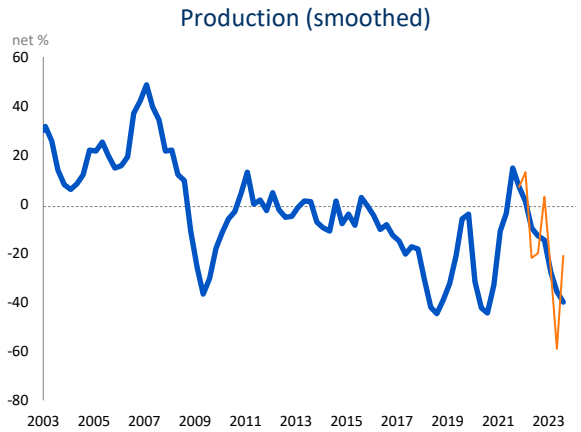
[9] Wood, Paper, Printing & Publishing: sawmilling, preserving of timber, bark grinding & compressing (SIC code 321), wood & wood products (322), paper and products (323) and printing, publishing & recorded media (324-6). In 2017, this sector contributed 13.1% to production and 4.7% to manufactured exports, petroleum and other excluded in both cases. We recommend that users attach more weight to the trend (smoothed series) than a single data point, as the correlation between the survey production data and reference series is low.

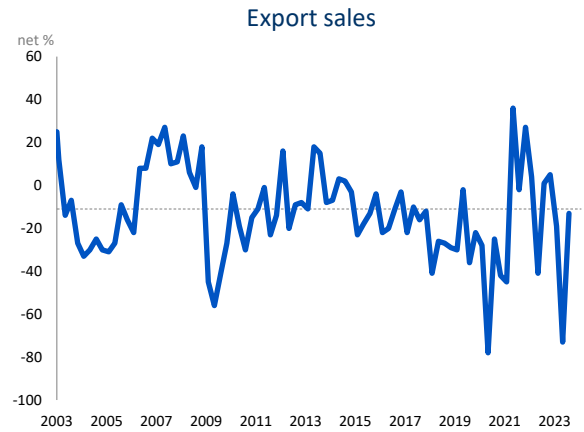
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

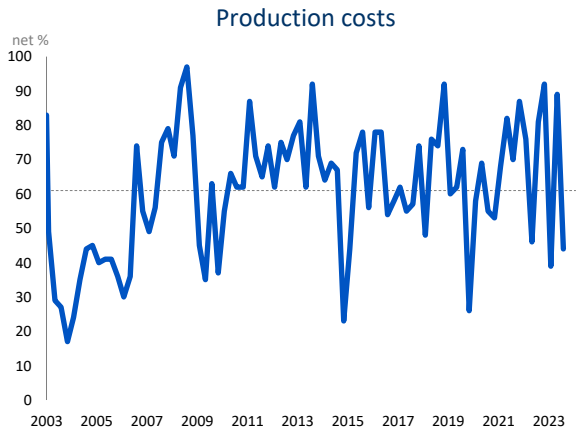
CHEMICAL, RUBBER AND PLASTIC PRODUCTS[10]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	21	41	61	36	49	24	35	33	25	18	**23**	5	12
Production	Net %	-29	-4	21	12	13	-22	-20	3	-27	-59	**-21**	38	23
Smoothed	Net %	-25	-4	17	7	1	-10	-13	-15	-28	-36	**-40**	-4	14
Export sales	Net %	-35	-13	8	27	4	-41	1	5	-19	-73	**-13**	60	24
Production costs	Net %	43	62	80	87	76	46	81	92	39	89	**44**	-45	20
Business conditions in 12m	Net %	-37	-10	16	-17	-19	-22	-27	-21	-41	-68	**-53**	15	22







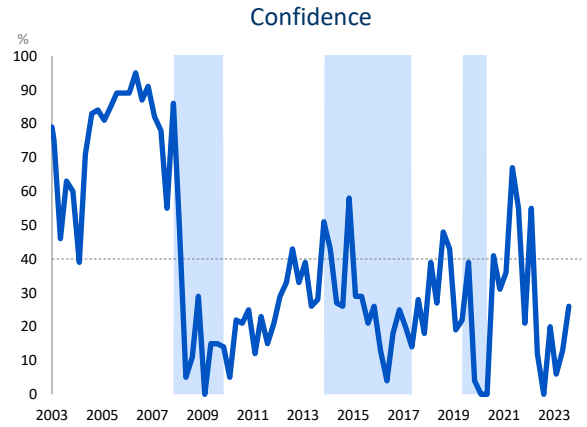


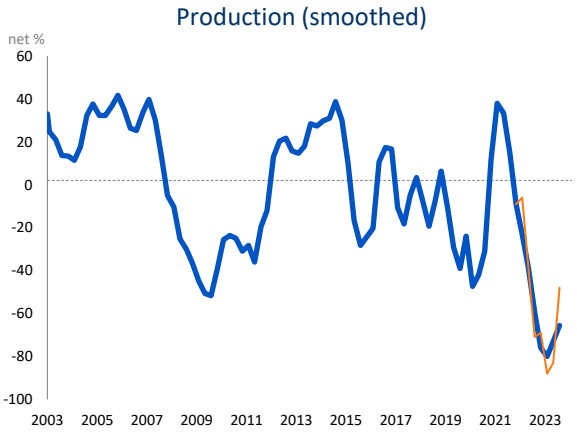
[10] Chemicals, Rubber & Plastics: Refined petroleum & coke (SIC code 331-3) (NOT COVERED), basic chemicals (334), other chemical products (335-6), rubber (337) and plastics (338). In 2017, this sector contributed 16.6% to production and 15.4% to manufactured exports, petroleum and other excluded in both cases. We recommend that users attach more weight to the trend (smoothed series) than a single data point, as the correlation between the survey production data and reference series is low.

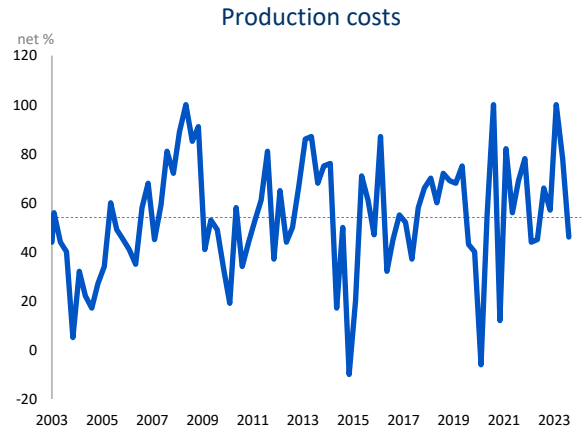
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

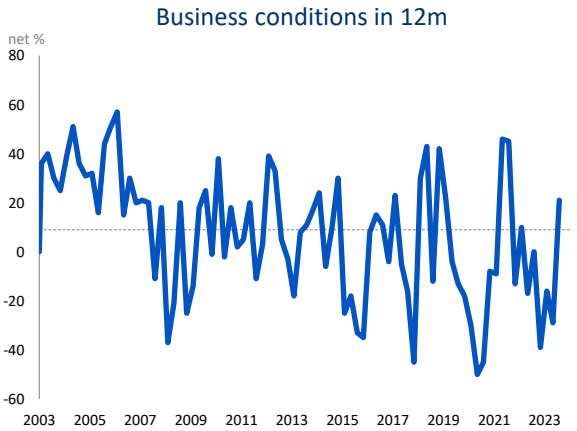
GLASS AND NON-METALLIC MINERAL PRODUCTS[11]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	10	37	64	21	55	12	0	20	6	13	**26**	13	18
Production	Net %	-42	-5	32	-25	-6	-38	-71	-69	-88	-83	**-48**	35	31
Smoothed	Net %	-37	-5	27	-9	-23	-38	-59	-76	-80	-73	**-66**	7	22
Production costs	Net %	31	55	78	78	44	45	66	57	100	78	**46**	-32	28
Business conditions in 12m	Net %	-19	6	32	-13	10	-17	0	-39	-16	-29	**21**	50	28







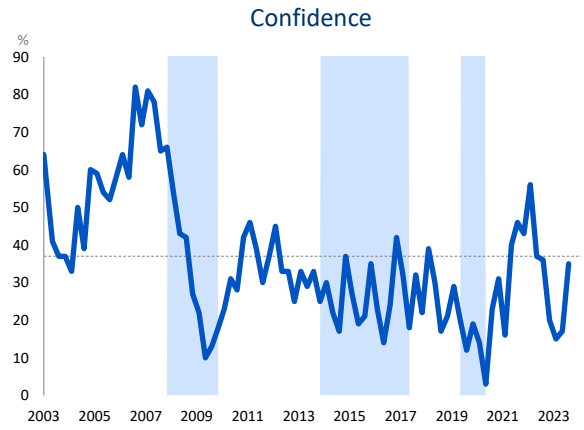


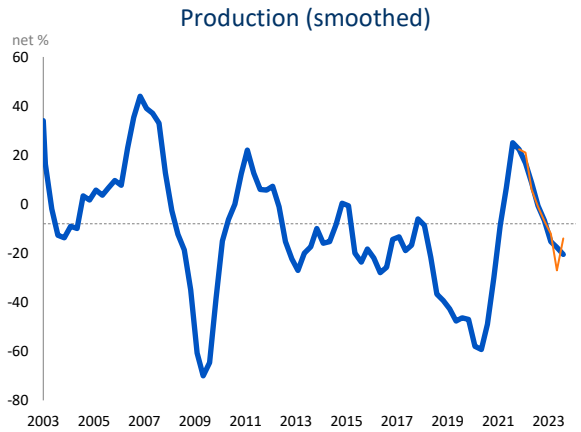
[11] Glass & Non-metallic minerals: Glass & glass products, fibreglass (SIC code 341), other non-metallic mineral products (bricks, tiles, cement, prefab concrete, asphalt, mica products) (342). In 2017, this sector contributed 4.4% to production, excluding petroleum and other.

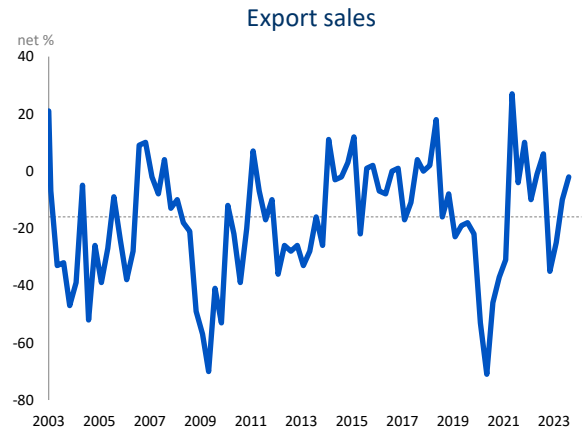
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

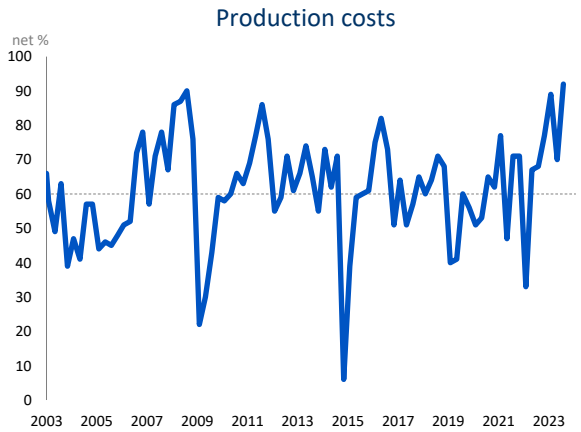
BASIC METALS, METAL PRODUCTS AND MACHINERY[12]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	18	35	52	43	56	37	36	20	15	17	**35**	18	11
Production	Net %	-39	-11	18	23	21	6	-1	-7	-12	-27	**-14**	13	22
Smoothed	Net %	-35	-11	14	22	17	9	-1	-7	-15	-18	**-21**	-3	18
Export sales	Net %	-38	-17	3	10	-10	-1	6	-35	-25	-10	**-2**	8	19
Production costs	Net %	46	61	77	71	33	67	68	77	89	70	**92**	22	17
Business conditions in 12m	Net %	-39	-17	5	-21	-9	-12	-17	-40	-72	-58	**-19**	39	17







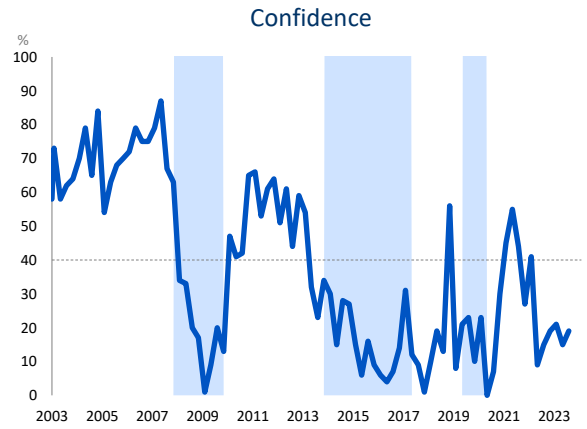


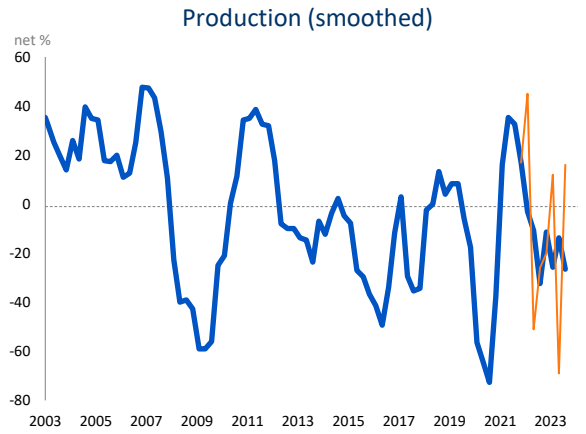
[12] Basic metals, Metal Products & Machinery: Basic iron & steel (SIC code 351), basic precious (gold, platinum, silver) & non-ferrous metal (aluminium, copper, lead, nickel, tin, zinc) products (352), structural metal products (353-4), other fabricated metal products (355), general purpose machinery (356), special purpose machinery & machine tools (357), computers & office machines (358) and household appliances (359). In 2017, this sector contributed 21.1% to production and 42.5% to manufactured exports, petroleum and other excluded in both cases.

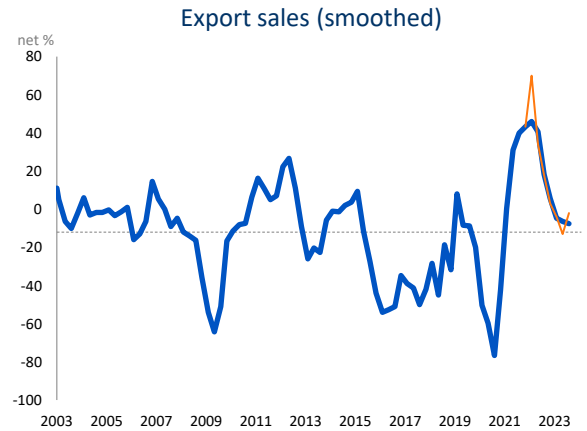
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

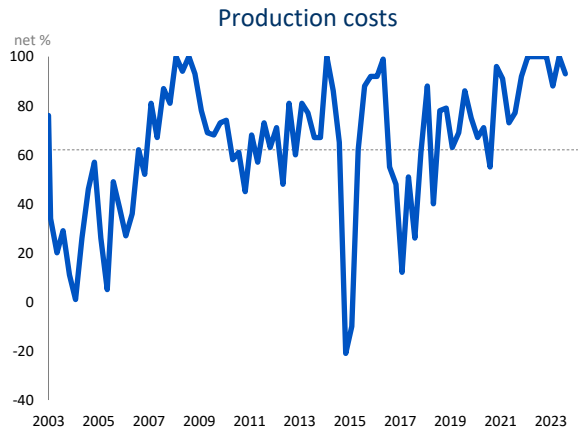
MOTOR VEHICLES, PARTS AND TRANSPORT EQUIPMENT[13]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	11	36	61	27	41	9	15	19	21	15	**19**	4	15
Production	Net %	-43	-5	34	-3	45	-51	-26	-20	12	-69	**16**	85	42
Smoothed	Net %	-35	-5	25	17	-3	-11	-32	-11	-26	-14	**-27**	-13	26
Export sales	Net %	-45	-11	23	34	70	34	18	3	-4	-13	**-2**	11	38
Smoothed	Net %	-37	-11	15	43	46	41	18	6	-5	-6	**-8**	-2	23
Production costs	Net %	38	66	93	92	100	100	100	100	88	100	**93**	-7	23
Business conditions in 12m	Net %	-53	-20	13	-9	-15	-27	-27	-16	-45	-90	**-62**	28	29







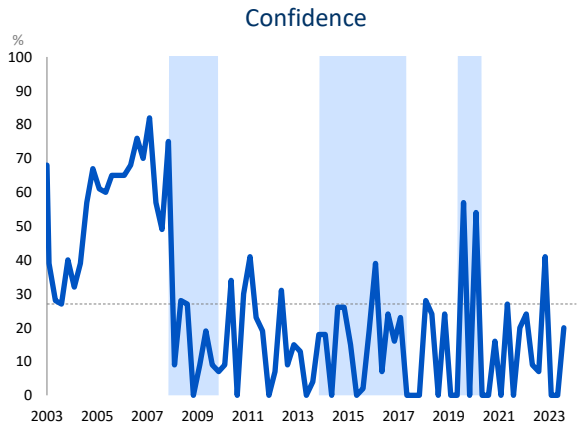


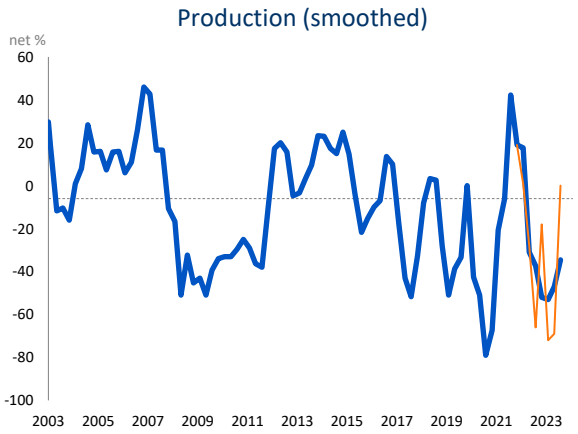
[13] Transport equipment: Motor vehicles & bodies (SIC code 381-2), parts & accessories (383), other transport equipment (384-7). In 2017, this sector contributed 7.7% to production and 16.1% to manufactured exports, petroleum and other excluded in both cases.

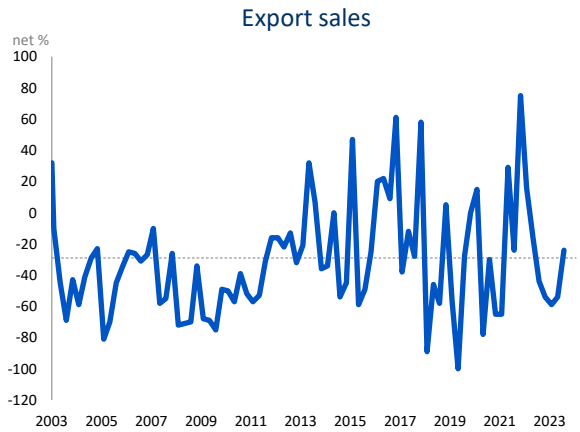
μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

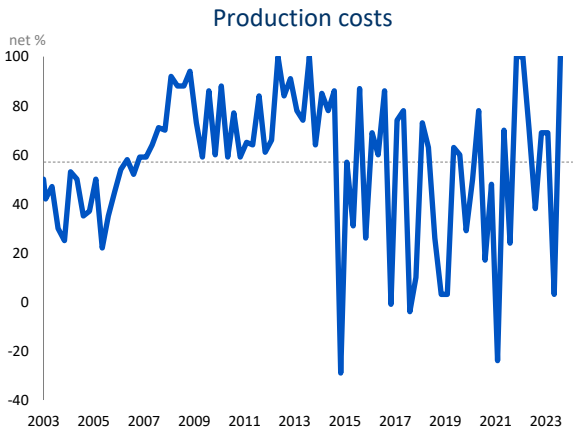
FURNITURE AND OTHER[14]

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Confidence	%	1	24	48	20	24	9	7	41	0	0	**20**	20	22
Production	Net %	-51	-11	29	80	1	-28	-66	-18	-72	-69	**0**	69	48
Smoothed	Net %	-40	-11	17	19	18	-31	-37	-52	-53	-47	**-35**	12	27
Export sales	Net %	-67	-32	3	75	16	-16	-44	-54	-59	-54	**-24**	30	43
Production costs	Net %	28	58	87	100	100	71	38	69	69	3	**100**	97	39
Business conditions in 12m	Net %	-55	-20	15	-19	7	-9	-73	-49	-80	-100	**20**	120	40









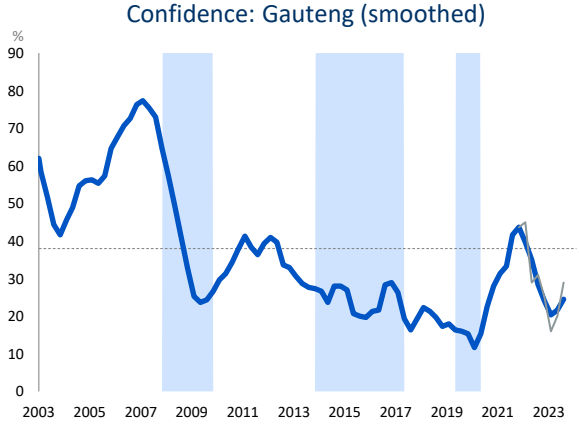
[14] Furniture & Other: Furniture (SIC code 391), other (e.g. jewellery, musical instruments, games & toys, recycling NOT COVERED) (392), tobacco (306). In 2017, this sector contributed 1.2% to production and 1.0% to manufactured exports, petroleum and other excluded in both cases. We recommend that users attach more weight to the trend (smoothed series) than a single data point, as the correlation between the survey production and export data vis-à-vis the reference series is low.

μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

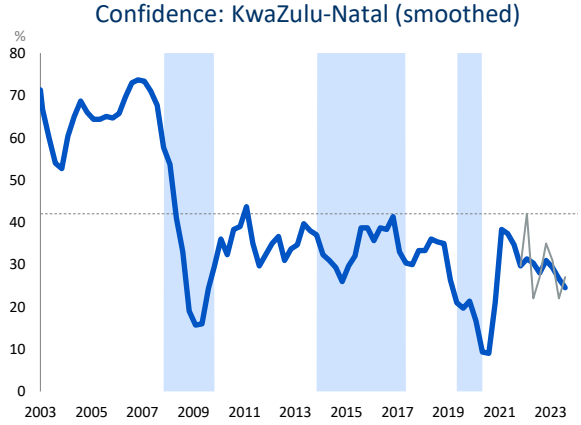
BY PROVINCE

Indicator	Unit	μ-σ	μ	μ+σ	21Q4	22Q1	22Q2	22Q3	22Q4	23Q1	23Q2	23Q3	Δ	Δσ
Gauteng														
Confidence	%	18	35	53	45	45	29	31	25	16	20	**29**	9	8
Smoothed	%	18	35	52	44	40	35	28	24	20	22	**25**	3	7
Production	Net %	-33	-9	16	20	20	-11	-12	-12	-14	-37	**3**	40	18
Smoothed	Net %	-31	-9	13	18	10	-1	-12	-13	-21	-16	**-17**	-1	15
KwaZulu-Natal														
Confidence	%	21	39	56	30	42	22	27	35	31	22	**27**	5	11
Smoothed	%	22	39	55	30	31	30	28	31	29	27	**25**	-2	8
Production	Net %	-30	-3	24	55	37	-52	-5	-16	3	-29	**5**	34	26
Smoothed	Net %	-25	-4	18	33	13	-7	-24	-6	-14	-7	**-12**	-5	17
Western Cape														
Confidence	%	25	39	54	37	37	36	22	32	11	14	**12**	-2	11
Smoothed	%	27	39	52	39	37	32	30	22	19	12	**13**	1	8
Production	Net %	-23	0	24	34	26	21	1	28	-20	-22	**-22**	0	22
Smoothed	Net %	-19	0	19	38	27	16	17	3	-5	-21	**-22**	-1	17

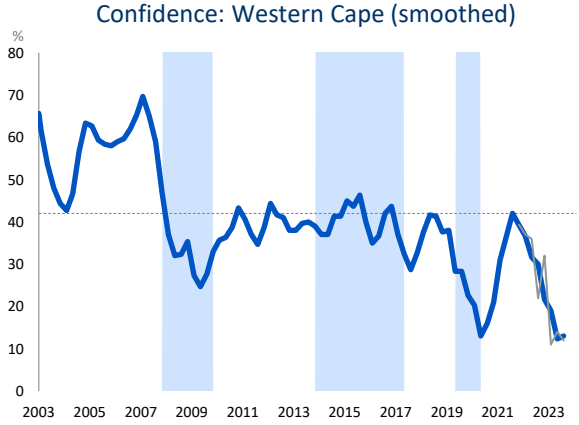
Confidence: Gauteng (smoothed)



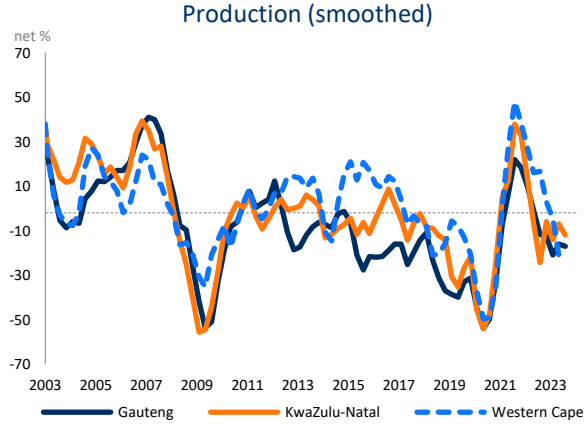
Confidence: KwaZulu-Natal (smoothed)



Confidence: Western Cape (smoothed)



Production (smoothed)



μ – average
σ – standard deviation
Δ – change from previous period
σ_Δ – volatility (standard deviation of the changes)
All of the above calculated over the last 20 years
See technical note for further details

Technical note

Short-term planning is hampered as official (quantitative or numeric) data is released with a time lag. Business tendency *survey* (BTS) *results reveal what happened between the release of the last official figures and the current state of affairs*. The survey results not only reveal earlier developments in sales, production, employment, selling prices, capacity utilisation, investment etc. (for which official figures are published), but also provide unique information, such as business confidence, business conditions, constraints and respondents' expectations (or forecast) for the next quarter for which no official figures exist. It is now widely recognised that such subjective individual expectations play a key role in economic developments. Furthermore, the survey results of successive quarters *provide a means of tracking cyclical movements, pinpointing trend changes* and establishing forecasts.

THE SURVEY METHOD

The survey results are obtained from questionnaires completed by senior executives in the trade, manufacturing and building sector during the middle month of every calendar quarter.

The business survey questionnaire contains a small number of questions. These questions are qualitative in nature, e.g. "Compared to the same quarter a year ago, is the volume of production up, the same or down?". No figures are requested.

The sample of executives remains the same from one survey to the next. A panel is in effect established. The sample provides for the main sectors. The list of participants is reviewed every few years to replace those firms that went out of business or stopped responding during the previous two years with new ones.

To provide for widely differing sizes, each firm in the manufacturing and trade sectors is allocated a weight based on its turnover. Firms in the building sector are not weighted. Participants have to complete a "participant details form" at the time of recruitment and every few years to ensure that their sector classification and turnover (optional) are correct.

The BER conducted its first survey of the manufacturing and trade (i.e. retail, wholesale and motor trade) sectors in 1954. The sector coverage was expanded to the building sector (i.e. main contractors and sub-contractors) in 1969. Architects, quantity surveyors and civil engineering contractors were added later to the building survey.

Consult the BER web page (**www.ber.ac.za**) for more information about the business tendency method.

THE UNIQUE UNITS OF MEASUREMENT OF QUALITATIVE SURVEYS

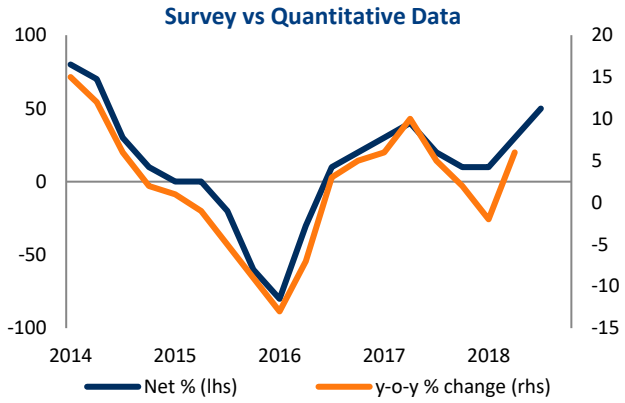
Net percentage (net %)

The responses related to the change in production, prices, employment, business conditions etc. are presented as a "net percentage" (also called a "net balance" or a "net majority"). If, for example, the percentages of respondents rating production as "higher", the "same" or "lower" compared to a year ago are 70%, 10% and 20% respectively, then one can conclude that the

majority of participants experienced higher production. The net percentage is calculated as the percentage of respondents rating "production" as higher less the percentage rating it as "lower". The percentage rating it as the "same" is ignored. The net percentage in this example is therefore 50%, being the difference between the 70% "higher" and the 20% "lower". A net percentage of –10%, for instance, would indicate a decline in production compared to a year ago. Take note that this does not mean a year-on-year contraction of 10%. It only means that the production of a majority of 10% of the respondents was lower compared to a year ago.

The net percentage, or net balance statistic, can theoretically vary between a minimum of -100 (when all participants replied "lower") and a maximum of +100 (when all respondents replied "higher"). Theoretically a value of zero, therefore, indicates no change, between 0 and 100 reflects a rise (or improvement) and between 0 and –100 a decline (or deterioration) compared to the same quarter a year ago. The net balance statistic is a diffusion index, i.e. it indicates the degree to which the indicated change is "diffused" (spread) throughout the sample population. It indicates both the direction and size of the change.

Given that it reflects respondents' estimation of the change in the phenomenon/variable in the current quarter relative to the same quarter a year ago, the net percentage corresponds to a year-on-year percentage change/growth rate in the corresponding/equivalent official data series (see the figure on the right).



Percentage (%)

The responses relating to business confidence and constraints are presented as percentages.

In the case of business confidence, respondents have to rate prevailing business conditions as either "satisfactory" or "unsatisfactory". The percentage of respondents rating prevailing business conditions as satisfactory is taken as an indicator (proxy) for business confidence. A reading of 10 for business confidence, for instance, means that only 10% of the respondents indicated that they were satisfied. In this example, 90% were, therefore, unsatisfied.

In the case of the constraints, respondents have to rate if a particular issue – for instance, a shortage of skilled labour – "seriously", "slightly" or "not at all" hampers their activity. Composite constraint indices are calculated by weighting the responses as follows: The answers of respondents rating a particular constraint as "serious" are weighted by 0.67%; "slightly" by 0.33% and "not a constraint at all" are discarded. The results are then multiplied by 100/67 = 1.49 to convert it to an index that can vary between zero and 100.

Care must be taken when making inferences from the constraints indices given that the list of constraints (issues) remains unchanged over time. Each constraint ought to be analysed relative to its own historical performance rather than comparing the ratings of the different constraints at a specific point in time. The latter inference would be more appropriate if respondents had to list all issues hampering their activity at a particular point in time and rank them in order of their impact.

Theoretically, the confidence and constraints series can vary between a minimum of zero and a maximum of 100. A value of zero would reflect an extreme lack of confidence/no limitation at all and 100 extreme confidence/complete limitation. These results reflect respondents' evaluation of the phenomenon/the survey variable in respect to that specific survey quarter, i.e. not relative to some period in the past or future.

DESCRIPTIVE STATISTICS IN THE TABLES

Smoothed

Some series show erratic/volatile movements, i.e. data jumps around quite a bit between consecutive quarters. In such cases, it is necessary to smooth these movements over a longer period to obtain a general trend. Another case where we added moving averages is when the correlation between the survey results and the corresponding reference series is low or non-existent.

Three-quarter centred moving averages (3qcma) were selected in order to not disturb turning points too much, e.g. the moving average of 17Q4 is calculated as the average of 17Q3, 17Q4 and 18Q1, that of 18Q1 is calculated as the average of 17Q4, 18Q1 and 18Q2 etc. In order for the smoothed series to run up to the last unsmoothed data point, the last smoothed data point is only the average of two quarters, namely the previous and current quarter.

When a smoothed series is added, it is prudent not to attach too much value to the unsmoothed results of a particular quarter, but rather to evaluate it in its historical context.

Seasonal adjustment (SA)

In theory, the time series ought to display no seasonal patterns because respondents are instructed to compare the current quarter with the same one of a year ago (e.g. they have to compare the current Festive Season or wet/dry winter period with the same time a year ago). However, in practice, some series nevertheless reveal seasonal patterns, probably because some respondents incorrectly compare the survey quarter with the one directly preceding it. In such cases, a seasonally adjusted series (i.e. where such seasonal variation is eliminated with X12 ARIMA) is added.

Average (μ)

The neutral level of the time series for the two measurement types, net percentage and percentage, is 50 or zero respectively. The long-term average (mean) is often not equivalent to this neutral level. In such cases, it is more useful to evaluate the current results relative to such a long-term average than the neutral level.

One standard deviation below (μ-σ) and above (μ+σ) the average

The standard deviation indicates the common variation in or dispersion of the values. Data points falling between one standard deviation below and above the average could be regarded as common. Any data point falling outside these ranges, therefore, displays statistically significant variation.

Change (Delta: Δ)

This statistic indicates the change in the results of the latest quarter relative to the preceding quarter.

Volatility (standard deviation of the deltas: Δσ)

This statistic indicates the volatility of the quarter-on-quarter change. If the size (regardless if it is an increase or decline) of the change is greater than the standard deviation of the deltas, then it displays a statistically significant variation.

CONVENTIONS AND AIDS PROVIDED IN THE CHARTS

Shaded areas

Indicates cyclical downturns as demarcated by the South African Reserve Bank. Users need to take note that the business cycle could have already reversed course towards the end of the period covered in the chart, but usually we wait until the bank determines a turning point before changing the shaded areas.

Solid vs. dotted horizontal (X) axes:

A solid line indicates the theoretical mid-points of 50 or zero respectively, while a dotted line indicates the long-term average (mean). Also see the section on the "average" above.

Normalised scale

Time series data is normalised (standardised) when one wishes to observe the co-movement among indicators with different units of measurement, say for instance, between a diffusion index (confidence) and the growth rate in a volume index (GDP growth). Normalisation converts both series to the same scale (unit) by subtracting the long-term average from each series and dividing it by its standard deviation. This ensures that one compares "apples" with "apples" when making a visual inspection and not mistakenly identify co-movements or deviations that different scales could produce.