

PMI Surveys

Introduction to IHS Markit's PMI[™] & Tengri Partners Kazakhstan PMI's

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ECONOMY

To Gauge the Health of the Global Economy, Look to Purchasing Managers

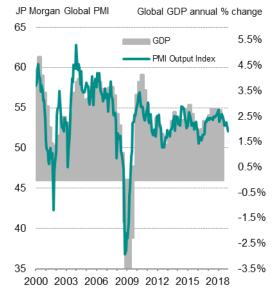
By polling those who sit in the center of supply chains, PMIs can provide an early warning

By Josh Zumbrun

Feb. 5, 2019 5:30 a.m. ET

The global economy's stumbles over the past year have been no surprise to the world's purchasing managers and the people closely following the economic indexes that are produced from their views.

Global purchasing managers' indexes, or PMIs, have come forth as a leading barometer of the health of the world's major manufacturing sectors. Through most of last year, official forecasts like those from the Federal Reserve or International Monetary Fund held steady, and until the fourth guarter, the stock market climbed upward....



Search O



The need for better economic data

Official data :

- Quarterly data plus processing
- Regularly revised
- Volatile

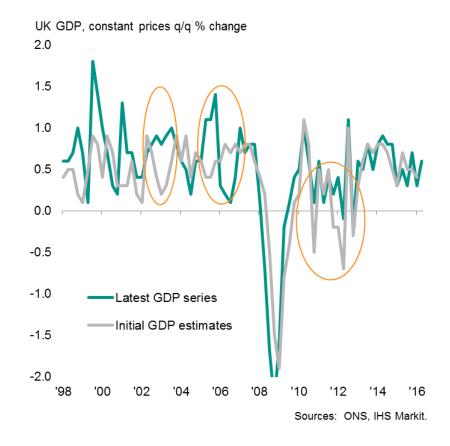
PMI data:

- Monthly
- Not revised
- Clarity

Objective:

 To provide the earliest, most accurate and most comprehensive comparable suite of indicators of business conditions

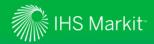
Revisions to official data: re-telling history





Background to the PMI surveys

Methodology and coverage



Not all surveys are the same...

PMI surveys have carefully selected samples:

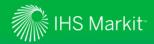
- Based on official data from which we map the structure of the economy
- Not restricted to trade association membership, job title, company size or other constraint
- Willing participants that provide via a give-get model (means accurate information is provided, high response rates and low churn)

PMI surveys have carefully designed questionnaires:

- Ask actual changes compared to prior month = reduced subjectivity and opinion bias
- Small number of questions = high response rates
- Anecdotal elements to each question provides 'colour'

PMI surveys have sophisticated methodology:

- Error checking
- Weighting systems
- Seasonal adjustment
- Reliable indicators: not revised, low noise-to-signal ratio



PMI survey methodology

Survey questions ask respondents to compare the situation in the current month with that of the previous month

For example: Is the level of output at your company higher, the same or lower than one month ago?

Manufacturing

PMI Output (25%) New orders (30%) Backlogs of work Employment (20%) Input prices Output prices Quantity of purchases Suppliers' delivery times (15%) Stocks of purchases (10%) Stocks of finished goods New export orders

Business activity

Services

New business Outstanding business Employment Input costs Prices charged Future expectations

Whole Economy

PMI Output (25%) New orders (30%) Backlogs of work Employment (20%) Overall Input prices Purchase Costs Staff Costs Output prices Quantity of purchases Suppliers' delivery times (15%) Stocks of purchases (10%) New export orders



Business cycle

Firms cut production

Output/business activity falls

Deflation

- Input prices fall, then
- Output prices fall

Surpluses develop

- Delivery times get shorter
- Finished goods inventories rise
- Backlogs of work fall

Demand falls

- New orders fall
- Quantity of purchases fall

Interest rate cut

Demand rises

New orders rise Quantity of purchases rise

Firms increase production

Output/business activity rises

Demand exceeds

supply

Firms boost capacity

Output/business activity rises Demand for investment goods rises

Supply-side constraints

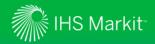
Shortages develop

- Delivery times get longer
- Finished goods inventories fall
- Backlogs of work rise

Interest rate hike

Inflation

- · Input prices rise, then
- Output prices rise



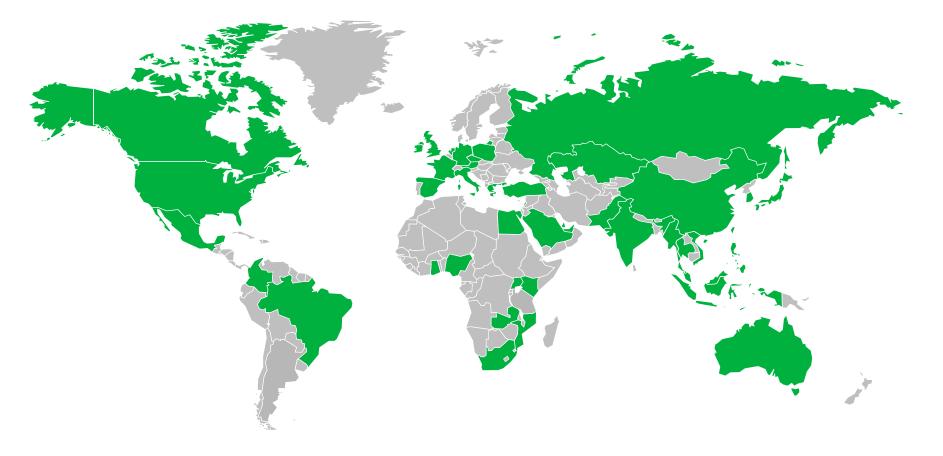
PMI coverage

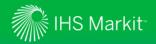
44 Countries covered

28,000+

Companies surveyed every month

87% Global GDP





PMI Global Coverage

	Manufacturing	Services	Whole Economy
ASIA:			
Australia	~	~	
China	~	~	
Hong Kong			~
India	~	~	
Indonesia	v		
Japan	~	~	
Kazakhstan	~	~	
Myanmar	~		
Philippines	~		
Singapore			 Image: A second s
South Korea	~		
Taiwan	~		
Thailand	 Image: A second s		
Vietnam	<		
ASEAN	✓		

21 47	Manufacturing	Services	Whole Economy		
AFRICA/MIDDLE EAST					
Egypt			~		
Ghana			~		
Kenya			~		
Lebanon			~		
Mozambique			✓		
Nigeria			~		
Qatar			 Image: A start of the start of		
Saudi Arabia			~		
South Africa			~		
Uganda			~		
UAE			 Image: A start of the start of		
Zambia			~		
AMERICAS:					
Brazil	~	~			
Canada	~	~			
Colombia	~				
Mexico	~				
United States	~	~			

	Manufacturing	Services	Whole Economy
EUROPE:			
Austria	~		
Czech Republic	~		
Eurozone	~	~	
France	~	~	
Germany	~	~	
Greece	~		
Ireland	~	~	
Italy	~	~	
Netherlands	~		
Poland	~		
Spain	~	~	
United Kingdom	~	~	
OTHER:			
Russia	~	~	
Turkey	~		

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Overview of PMI key advantages

Representative panels

IHS Markit builds business survey panels, carefully designed to accurately represent true industry structure according to official data.

High response rates

High response rates from senior executives in large companies and SMEs ensure high quality data are collected.

'Hard' data

Facts matter more than opinion, so survey questions relate to observed volumes and business metrics, such as a output, employment, prices and new order inflows, not sentiment.

Frequency

Monthly data are produced, so the data are more timely (and more useful) than quarterly GDP data, allowing the easier interpretation of turning points in business activity and price changes.

Timely

Reports are published at start of each month following the reference month, making the PMIs the first 'hard' economic data available.

Accurate

Accurately signals changes in GDP, industrial output, inflation and other data.

Expert analysis

IHS Markit economists analyse the survey data, producing high-quality written analytical interpretation of the data each month.

Sector coverage

Encompassing manufacturing, construction and service sectors, filling huge data gaps.

International comparability

 Identical methodology used worldwide provides unique and rapid global and regional economic data.



Eurozone GDP nowcasting

8

Nowcasting: Trust the Purchasing Managers' Index or Wait for the Flash GDP Estimate?

Gabe J. de Bondt, European Central Bank, Germany

Timely and accurate signals about the current state of the economy are essential for analysts. In this context survey indicators are closely monitored as they can provide up-to-date and often unique monthly signals of current economic developments. This paper focuses on the nowcasting performance of the Purchasing Managers' Index (PMI) survey for the euro area, because the PMI has the advantage compared to other survey indicators of a theoretical nochange threshold of 50 and they are the most closely monitored business surveys in the world. For euro area evidence on the usefulness of the PMI see Lombardi and Maier (2011) and Vermeulen (2011a and b) and for outside the euro area see, among others, Harris (1991), Koenig (2002), Peláez (2003), Rossiter (2010) and Lahiri and Monokroussos (2011). Notwithstanding the focus on the PMI, surveys released by the European Commission (EC) are of course also potentially useful for nowcasting euro area real GDP, but their interpretation is less straightforward than that of the PMI and they are typically designed to match year-on-year growth rates. Studies on the usefulness of EC surveys are for instance Gelper and Croux (2010), who analyse the economic sentiment index and Raffinot (2007) who prefers, among a wide set of survey indicators, industrial production trend observed in recent months together with the general economic situation over the last twelve months for the construction of a monthly tracer of euro area real GDP. Besides the focus on the PMI, this study defines nowcasting in a narrow way as predicting current quarter-onquarter growth in real GDP. Bańbura et al. (2010) provide a more general nowcasting process for euro area real GDP

The main contribution of this paper is that it compares the accuracy of PMI-based nowcast of current quarter-on-quarter euro area real GDP growth

"Regarding timeliness, two months [PMI data] of the current quarter appears to be generally sufficient, which is 2½ months before the flash [eurozone] GDP estimate."

"a closer look at what is driving this outstanding track record"

Journal of Business Cycle Research https://doi.org/10.1007/541549-018-0032-2 REPORT CrossMark A PMI-Based Real GDP Tracker for the Euro Area Gabe J. de Bondt¹ Received: 19 December 2017 / Accepted: 15 September 2018 Springer Nature Switzerland AG 2018 Abstract Real-time evidence for the euro area shows that a tracker for real GDP growth using only the Purchasing Managers' Index (PMI) composite output is of similar accuracy for the final GDP release as the first GDP release. No signs of instability—except during the 2008/09 crisis—in this tracking performance are found. This is surpris-

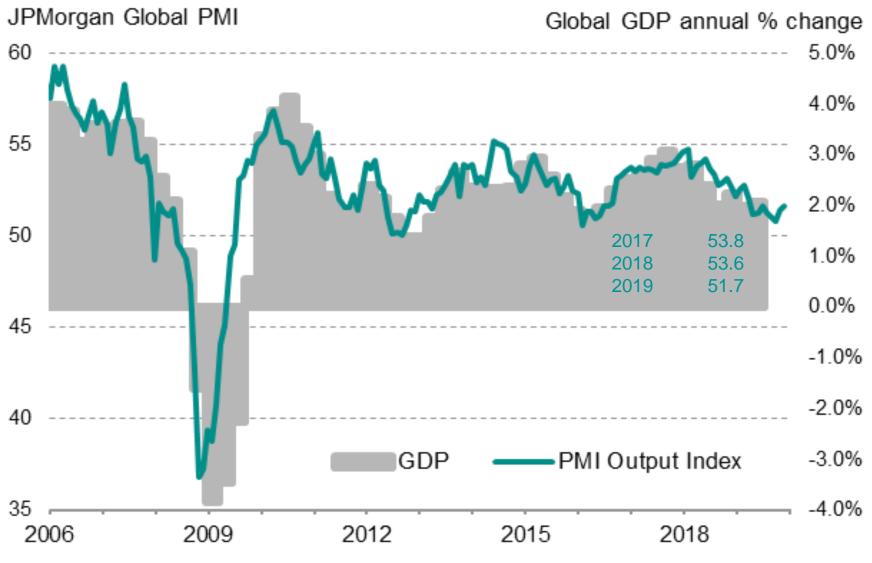
during the 2008/09 crisis—in this tracking performance are found. This is surprising given the small size of the underlying PMI panel. From a closer look at what is driving this outstanding track record, seven conclusions emerge: (i) the level of and change in the PMI composite output explain one-third of the GDP revisions; (ii) later available information is more accurate; (iii) services are key; (iv) firm size breakdown is valuable; (v) export status breakdown creates only noise; (vi) aggregated euro area PMI track record is not consistently related to a particular country; (vii) take firm defaults into account during very bad times. These findings imply that PMI surveys are not only valuable for analysts and policymakers as a timely and reliable GDP tracker, but also for statisticians to potentially improve the accuracy of the first preliminary flash estimate of euro area real GDP.

"Real-time evidence for the euro area shows that a tracker for real GDP growth using only the Purchasing Managers' Index (PMI) composite output is of similar accuracy for the final GDP release as the first GDP release"



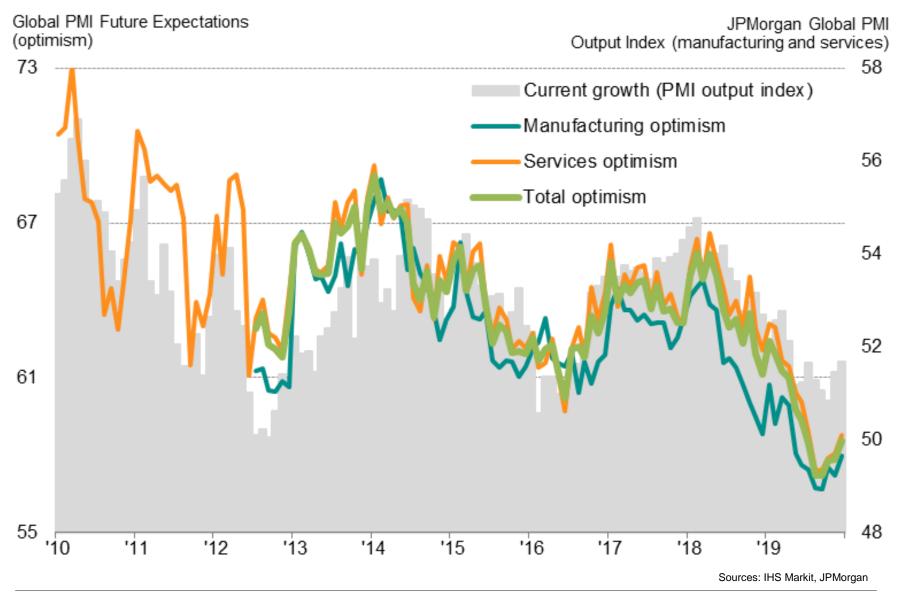
Around the World

Global PMI at eight-month high of 51.7 in December



Sources: IHS Markit, JPMorgan

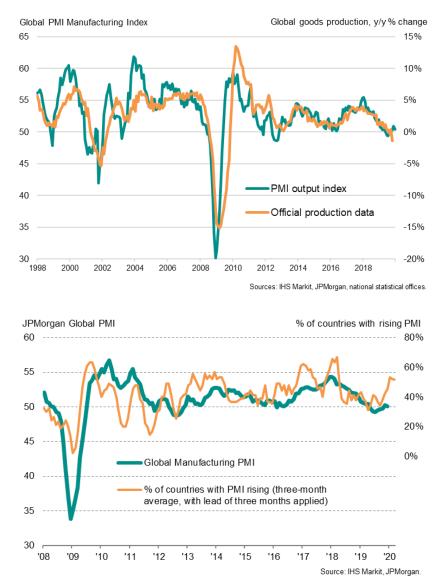
Global sentiment has been on a steady rise since mid-year

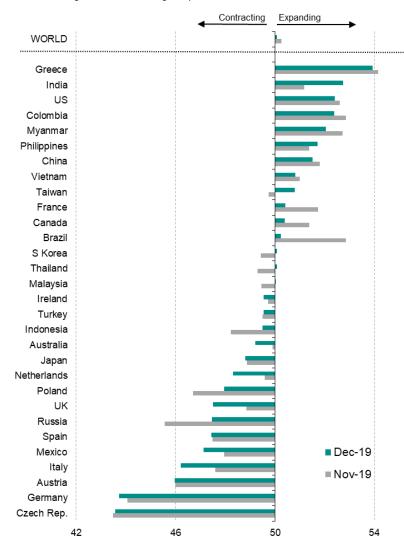


Service sector enjoys faster growth, trade drag eases



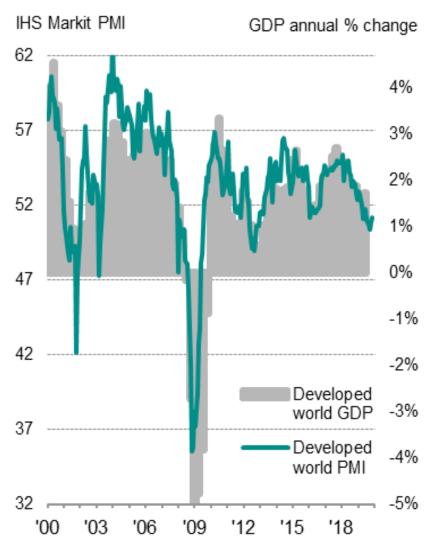
Manufacturing still stalled after worst year since 2012





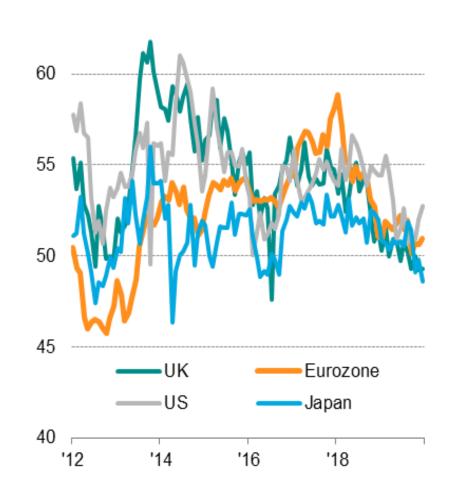
Manufacturing PMI, 50 = no change on prior month

Developed world growth lifts for second months from near 7-year in October

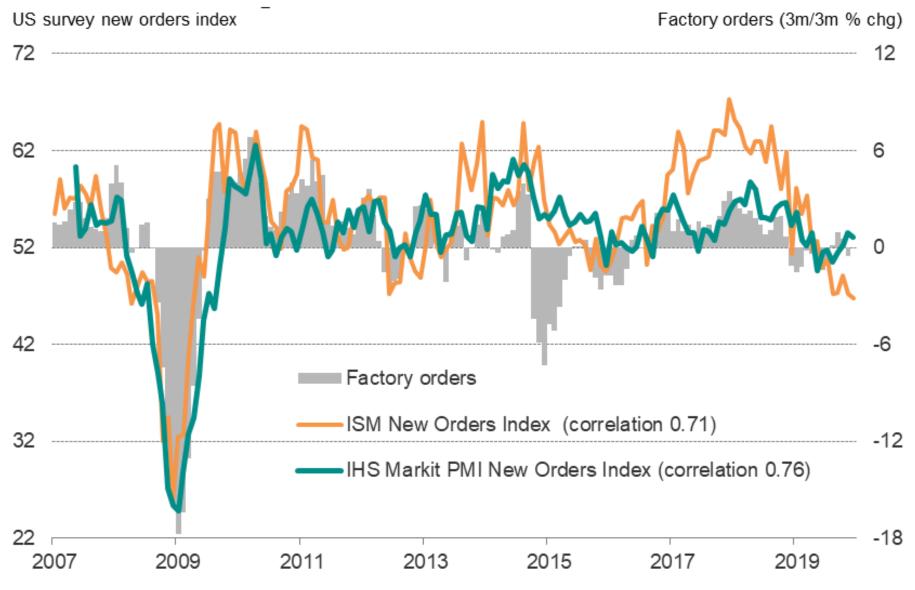


US leads developed world, Eurozone ekes out modest growth, Japan and UK contract

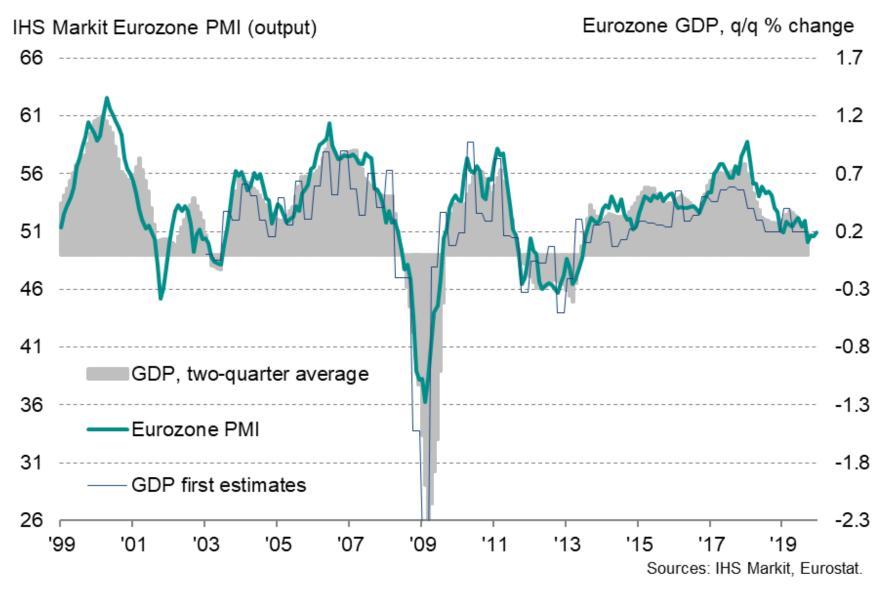
Composite PMI Output/Business Activity Index 65



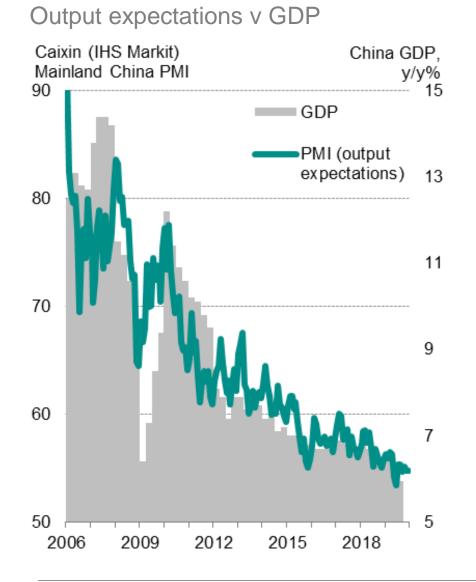
US factory orders: struggling to grow (but not collapsing)



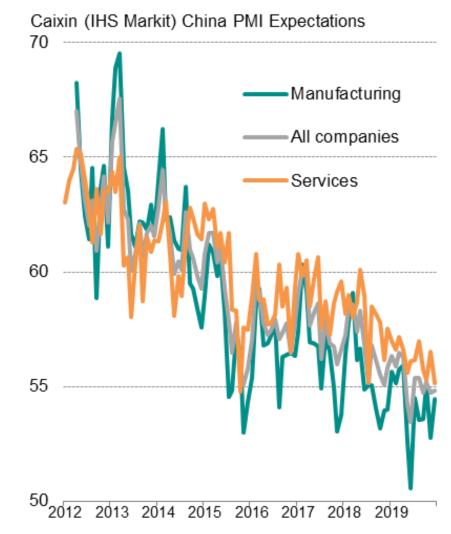
Eurozone PMI at 50.9, Q4 GDP to rise by just 0.1%



China Mainland PMI expectations close to all-time lows



Expectations by sector





Kazakhstan Manufacturing & Services PMI Tengri Partners PMI series



Service Sector Panel structure

Description	Target			
	1-49	50-249	250+	Total
Land Transport: Transport via pipelines	26	7	15	48
Water Transport	3	1	2	6
Air Transport	C	0	3	3
Warehousing, Auxiliary Transport Activities and Post	3	2	. 12	. 17
Accommodation and Food Service Activities	4	- 4	3	11
Recreational, Cultural and Sporting Activities	5	3	3	11
Telecommunications	C	0	2	. 2
Computer and Related Activities	4	. 3	3	10
Financial Intermediation except insurance and pension funding	1	. 3	10	14
Insurance and Pension Funding	1	-		
Auxiliary Financial Intermediation Activities	2	2	3	7
Real Estate Activities	10	12	2	24
Other Business Activities	21	. 12	. 18	51
Research and Development	2	. 1	0	3
Renting of Machinery and Equipment	1	. 2	. 4	. 7
Education	C	1	1	2
Health and Social Work	1	. 0	1	2
Other Activities of Member Organisations	2	. 0	0	2
Other Services Activities	20	2	1	23
				250



Manufacturing Sector Panel structure

Description	Target			
	1-49	50-249	250+	Total
F&D, Tobacco	8	8 15	28	51
Textiles & Clothing	C) 1	1	2
Paper & Paper Products	C) 0	1	1
Coke & Petroleum	e	5 4	4	14
Chemicals & Pharmaceuticals	2	2 8	6	16
Rubber & Plastics	1	. 1	3	5
Mineral Products	2	2 3	8	13
Metals & Metal Products	29	54	32	115
Electrical & Electronic Equipment	t	. 1	2	4
Machinery N.E.C. & Repair	3	6	7	16
Transport Equipment	1	. 4	6	11
Other Manufacturing	C) 1	1	2
				250



The Tengri Kazakhstan PMI series

Embargoed until 1100 ALMT (0500 UTC) 29 January 2020





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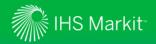
24



Thank You



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