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May 9, 2025

PMIs and monetary policy

Using PMI data to better understand monetary policy decisions

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Introduction

In this paper, we use Purchasing Managers' Index™ (PMI®) data from S&P Global to calculate the likelihood of changes in monetary policy at the world's major central banks. PMI data are advantageous as a tool for central banks, providing timely sets of macroeconomic information that are released monthly and not revised. This contrasts with official data, such as GDP, employment or the Consumer Price Index (CPI), which have a longer publication lead times and are often subject to revision. In fact, PMI data are frequently referred to in central banks' reports and meeting minutes, highlighting their importance in monetary policy debates. This paper explores how likely monetary policymakers are to loosen or tighten at certain PMI thresholds based on historical data from 1999 to 2025. The findings of this research may be used to better understand how a central bank sets interest rates, evaluate the appropriateness of monetary policy decisions and even aid in its forecasting.

Previous research showed how the timely, high-frequency and unrevised publication of PMI survey data provides central banks with a valuable tool for monetary policy decisions. We have revisited this research in an environment where interest rates are no longer at the zero lower bound and no longer principally driven by the demand side to retest the relationship between monetary policy and the business cycle. Using a multinominal logistic regression model, we calculate probabilities of interest rates being either cut, hiked or left unchanged by the European Central Bank (ECB), the Bank of England (BOE) and the Federal Reserve at certain PMI values.

We use prices, activity (output) and employment PMI data to model probabilities of interest rate changes.

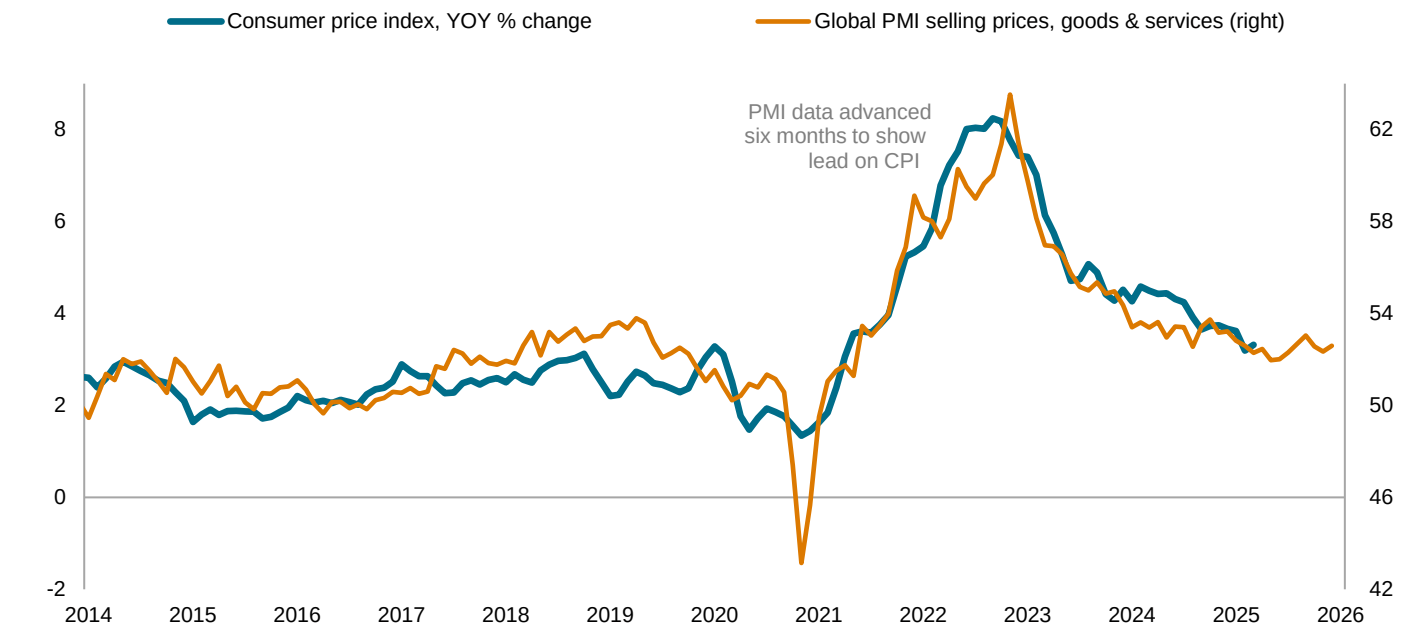
Our PMI-powered models find that the ECB, BOE and the Fed have turned more inflation-averse since the pandemic and have become more likely to increase interest rates if inflation is running too high, even if the economy is running weak in terms of output or employment.

The models also illustrate differences in monetary policy setting between the three major central banks. For example, the BOE show a greater reluctance than the ECB and the Fed to tighten monetary policy when economic activity is weak. Our research also clearly shows variations in behavior owing to differences between central banks' policy objectives. For example, the Fed's "dual mandate" of targeting price stability and maximum employment means that labor market conditions are an explicit factor in monetary policy decisions, which the PMI-powered model captures.

PMI's role in monetary policy discussions

The PMI has earned a strong reputation as a leading indicator of the business cycle, particularly when compared to less timely official statistics relating to popular economic measures such as GDP, employment and inflation. This is because it has a proven track record of accurately reporting changes in economic conditions (see Figures 1 and 2) with a considerably shorter lead time (a matter of days between data collection and publication) and without the need for multiple revisions. As such, monetary policymakers can use the data to support real-time decisions.

Figure 1: Global consumer price inflation and PMI selling prices

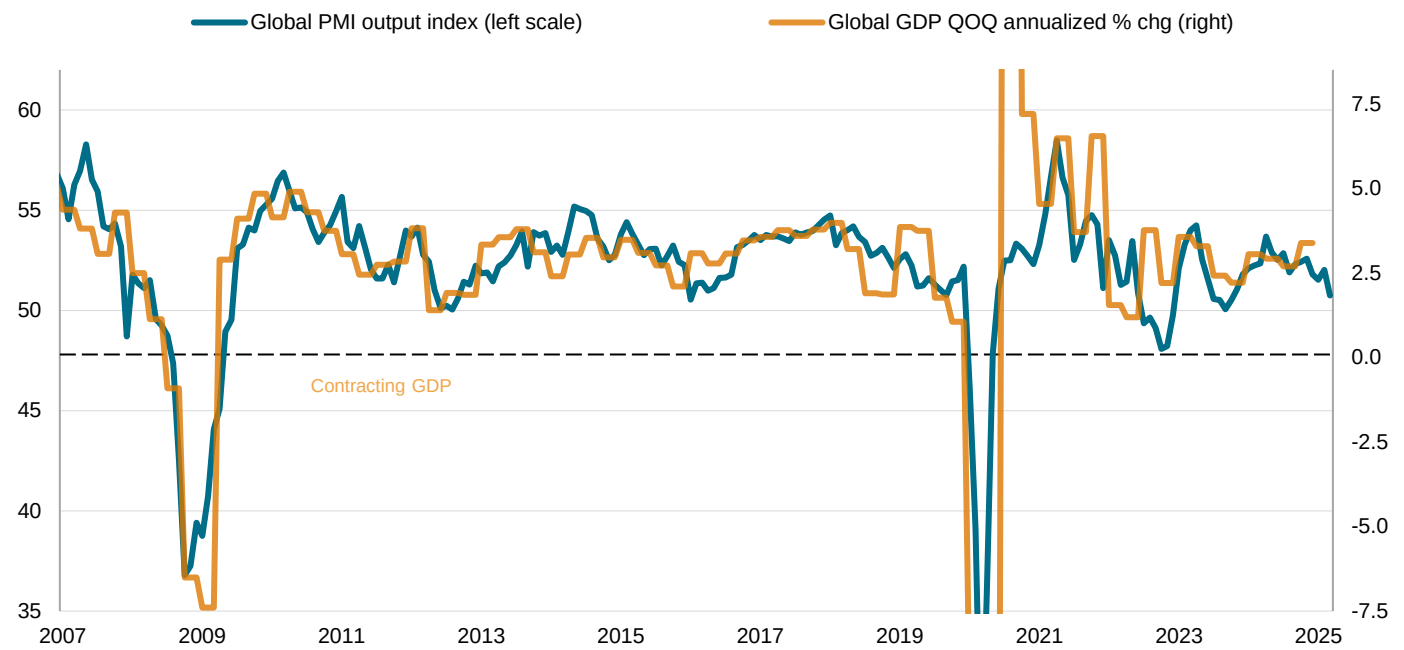


Data compiled May 2025 including PMI data to April 2025, advanced six months.

PMI (Purchasing Managers' Index) value of 50 = no change on prior month.

Sources: S&P Global PMI with J.P. Morgan, S&P Global Market Intelligence.

Figure 2: Global economic growth and the PMI



Data compiled May 2025 including PMI data to April 2025
QQQ= quarter over quarter.

PMI (Purchasing Managers' Index) value of 50 = no change on prior month.

Source: S&P Global PMI with J.P. Morgan, S&P Global Market Intelligence.

This suggests PMI data should be used by "central bank watchers," such as portfolio managers, lenders and borrowers, as changes in PMI data can give advanced signals of changes in monetary policy, which will have ramifications for asset allocation decisions, corporate profit margins and business investment plans. The PMI can be used to assess the extent to which a central bank's decision is corroborated by the most up-to-date information on firms' price-setting behavior and business conditions — an exercise that cannot be achieved with official data.

Methodology

A central bank's objective of price stability is inextricably linked to the business cycle, and central banks need to assess the current and expected paths of economic activity and prices when setting monetary policy. Following this assessment, a central bank will make one of three choices when it meets to set rates — tighten, loosen or not change.

The likelihood of a decision falling into one of these three categories can be modeled using a multinominal logistic regression. With this specification, we use PMI data for activity and input prices, or employment and input prices, to calculate the implied probability of tightening, loosening or no change by the ECB, BOE and the Fed. The choice of which PMI variables are used is dictated by a central bank's policy mandate.

For all three economies, we test with various cuts of time series data, including and eliminating periods where interest rate decisions were impacted by factors outside of the business cycle. This method allows us to focus on periods during which economic conditions are truly driving interest rate decisions. For instance, we test a sample period that starts in 1999 and ends in 2019[1], so it excludes the business environment seen during and immediately after the COVID-19 pandemic, which was mostly dictated by the stringency of lockdown restrictions at the time. In a similar vein, we create sample periods that run from 1999 to 2025 but exclude certain months between 2020 and 2022 owing to severe post-pandemic distortions to global economies and supply chains. We believe economic conditions during this period did not always conform to the normal ebb and flow of the business cycle, making it difficult to truly model conventional monetary policy behavior when historical relationships were not holding true, and we therefore make these exceptions.

Results

Eurozone

The objective of the ECB is to keep prices stable, which the Governing Council considers to be 2% inflation. Through its monetary policy, it also "influences the "temperature" of the economy,"[2] i.e., prevent growth from overheating or the economy from plunging into a recession. Therefore, we model the ECB's policy-setting behavior with the Input Prices and Business Activity Indices from the Eurozone Composite PMI (covering both goods and services) to track inflation and economic output. We use the Input Prices Index as this should typically lead firms' decisions on price-setting and thus indicates pipeline price pressures. We calculate probabilities of each of the three decisions the ECB can make at its policy meetings.

When we model ECB decisions using a pre-pandemic sample, we find changes in activity and prices can both trigger the ECB to tighten but inflation takes precedence. However, when it comes to loosening, the ECB is more reactive to output than prices.

When using our sample between 1999 and 2025, adjusting for post-pandemic distortions, only prices are statistically significant for interest rate rises, suggesting that ECB policymakers have become more willing to tolerate slower economic growth to reduce inflation since 2020. During the ECB's recent hiking cycle between 2022 and 2023, we observed the monetary policy tightened despite the PMI signaling a contraction in the eurozone economy. For interest rate cuts, both activity and prices are now statistically significant, as opposed to just activity. This again highlights that the ECB has become more hawkish since the pandemic.

[1] We have included probability matrices for the pre-pandemic sample in an appendix.
[2] See European Central Bank, "Introduction," https://www.ecb.europa.eu/mopo/intro/html/index.en.html.

These statistical findings are best demonstrated by probability matrices[3] , which show the likelihood of tightening (see Table 1.1) and loosening (see Table 1.2) at different levels of the PMI using the 1999–2025 sample. If the Business Activity Index were to record 44.0, which is consistent with euro area GDP contracting by roughly 0.5% on a quarterly basis, the model implies a 39% chance the ECB will raise interest rates if the Input Prices Index is 70.0. This is much higher than the corresponding probability in the pre-pandemic sample, where the implied chance of ECB policymakers hiking the rate is just 5%, indicating a greater determination to bring inflation under control.

This hawkish tilt is even seen when looking at the implied rate cut probabilities from the ECB, which show that for a Business Activity Index reading of 44.0 the chance of monetary loosening is just 10% if the Input Prices Index is at 70.0. This is slightly lower than the 15% chance of stimulus signaled using the pre-pandemic sample. Nonetheless, activity remains the principal driver of interest rate reductions. Take an Input Prices Index reading of 58.0, which would signal above-trend[4] inflation, and a Business Activity Index reading of 50.0, the implied likelihood of an interest rate decrease is just 11%, but this rises threefold to 33% if the Business Activity Index drops to 44.0. In fact, until business activity in the euro area declines, the probability of stimulus from the ECB is generally low.

[3] All tables reflect results from sample data ranging between 1999 and 2025, with certain months removed between 2020 and 2022 to remove data severely distorted in the aftermath of the COVID-19 pandemic.
[4] Calculated as the average between the series start date of July 1998 and December 2019.

Table 1

Implied probabilities of ECB monetary policy decisions

1.1. Probability of a rate hike

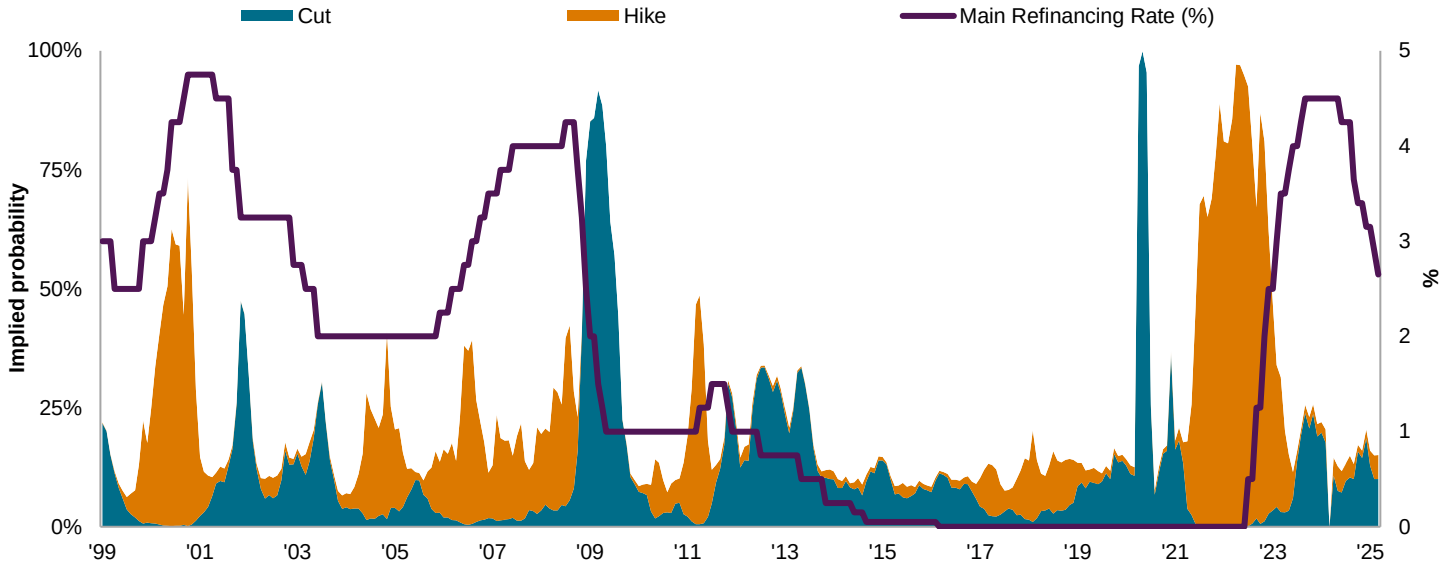
		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	0%	0%	0%	1%	1%	2%	4%	6%	18%	39%
	46	0%	0%	1%	1%	2%	3%	5%	8%	21%	44%
	48	0%	0%	1%	1%	2%	3%	6%	10%	24%	48%
	50	0%	0%	1%	1%	2%	4%	7%	12%	28%	53%
	52	0%	1%	1%	2%	3%	5%	8%	13%	31%	56%
	54	0%	1%	1%	2%	4%	6%	10%	15%	34%	60%
	56	1%	1%	1%	2%	4%	7%	11%	17%	38%	63%
	58	1%	1%	2%	3%	5%	8%	12%	19%	41%	66%
	60	1%	1%	2%	3%	5%	9%	14%	22%	44%	69%
	62	1%	1%	2%	4%	6%	10%	16%	24%	48%	72%
	64	1%	2%	3%	4%	7%	11%	18%	27%	51%	75%

1.2. Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	53%	49%	45%	41%	37%	33%	29%	26%	18%	10%
	46	42%	38%	34%	31%	27%	24%	21%	18%	12%	6%
	48	31%	28%	25%	22%	19%	16%	14%	12%	7%	4%
	50	22%	19%	17%	15%	13%	11%	9%	8%	5%	2%
	52	15%	13%	11%	10%	8%	7%	6%	5%	3%	1%
	54	10%	9%	8%	6%	5%	5%	4%	3%	2%	1%
	56	7%	6%	5%	4%	4%	3%	2%	2%	1%	0%
	58	4%	4%	3%	3%	2%	2%	2%	1%	1%	0%
	60	3%	2%	2%	2%	1%	1%	1%	1%	0%	0%
	62	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%
	64	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

Figure 3: Eurozone



As of March 2025.

Sources: S&P Global PMI; European Central Bank; S&P Global Market Intelligence.

UK

The BOE's policy objective is to keep inflation low and stable, which it does by keeping growth in prices anchored at 2% (± 1%). We therefore again opted for a model that uses the Input Prices Index and Business Activity Index from the respective UK Composite PMI datasets.

When modelling BOE decisions using the pre-pandemic sample, we find activity to be highly statistically significant for both tightening and loosening. We find prices are also statistically significant for decisions to increase and decrease interest rates, but to a smaller degree. However, in our up-to-date sample (which, as was the case with the eurozone, excludes the 2020–22 period), prices become a lot more statistically significant, indicating that the BOE has also become more sensitive to prices since 2020.

Studying our probability matrices for the UK and comparing them to the equivalent for the pre-pandemic sample (See Appendix), our models highlight this hawkish tilt by the BOE since 2020. For example, if the Business Activity Index recorded 50.0, signaling stagnation in the UK economy, but the Input Prices Index was at 70.0, the implied probability of a monetary tightening using the up-to-date sample is 19% (see Table 2.1). This compares to an implied probability using the pre-2020 sample of just 1%, suggesting that the BOE are now more likely to tighten monetary policy when the economy is weak if inflation is running too hot.

However, sluggish economic activity has a much greater influence on the BOE than prices do when it comes to enacting stimulus measures. Assuming the Input Prices Index records 58.0, its pre-pandemic trend level, a fall in the Business Activity Index from 54.0 to 46.0 sees the implied probability of an interest rate cut shoot up to 46%, from 7% (see Table 2.2). This is much larger than the swing in probability holding UK economic growth at its trend rate (54.0) but dropping the Input Prices Index into deflation territory. Monetary loosening probabilities in the UK are generally aligned when compared to our matrix derived from the pre-pandemic sample, although there is still evidence of the BOE becoming more aggressive on controlling inflation. For instance, when the Business Activity Index is below 50.0, the implied probabilities of interest rate cuts are lower for above-average Input Prices Index readings when compared to those using the pre-pandemic sample.

Table 2

Implied probabilities of BOE monetary policy decisions

2.1. Probability of a rate hike

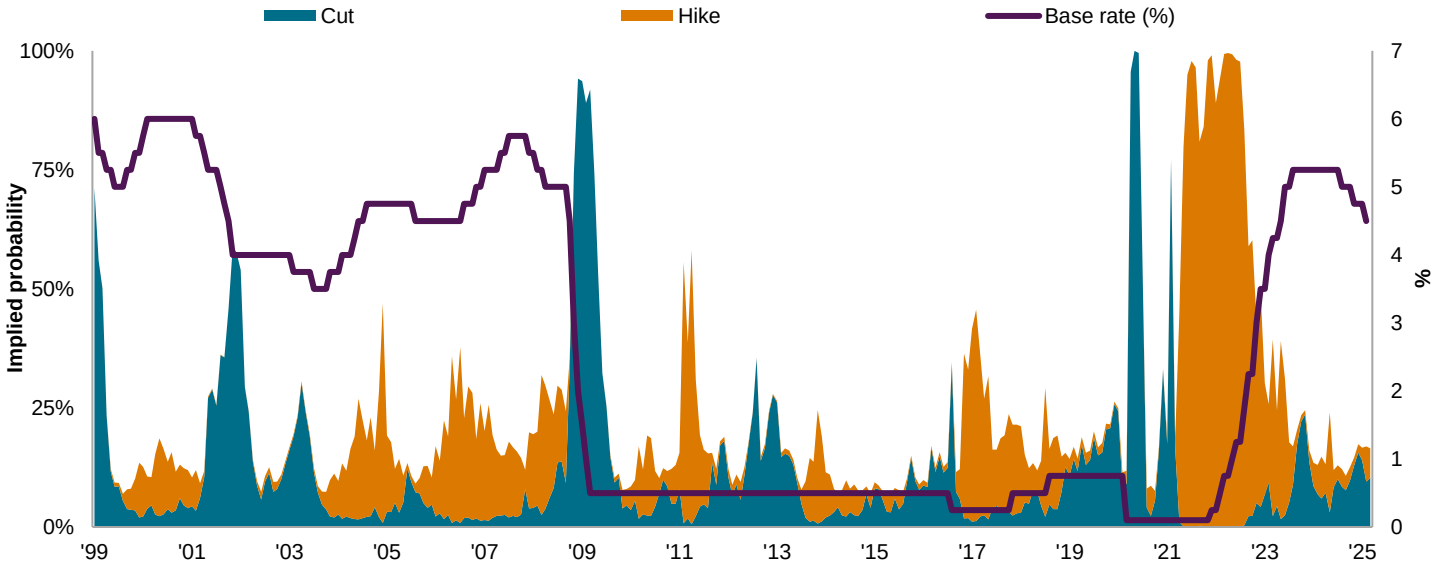
		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%
	46	0%	0%	0%	0%	0%	0%	0%	1%	2%	5%
	48	0%	0%	0%	0%	0%	0%	1%	1%	4%	11%
	50	0%	0%	0%	0%	0%	1%	1%	2%	7%	19%
	52	0%	0%	0%	1%	1%	2%	3%	5%	14%	32%
	54	0%	0%	1%	1%	2%	3%	6%	9%	24%	48%
	56	0%	1%	1%	2%	4%	6%	10%	17%	37%	64%
	58	1%	1%	2%	4%	7%	11%	18%	28%	53%	77%
	60	2%	3%	5%	8%	13%	20%	30%	42%	69%	87%
	62	3%	5%	8%	14%	22%	32%	45%	58%	81%	92%
	64	6%	9%	15%	23%	34%	48%	61%	73%	89%	96%

2.2. Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	79%	76%	72%	69%	65%	60%	56%	51%	42%	33%
	46	68%	64%	59%	55%	50%	46%	41%	37%	29%	21%
	48	54%	49%	45%	40%	36%	32%	28%	24%	18%	12%
	50	39%	35%	31%	27%	24%	21%	18%	15%	10%	7%
	52	27%	23%	20%	17%	15%	13%	11%	9%	6%	3%
	54	17%	14%	12%	10%	9%	7%	6%	5%	3%	1%
	56	10%	8%	7%	6%	5%	4%	3%	3%	1%	1%
	58	6%	5%	4%	3%	3%	2%	2%	1%	1%	0%
	60	3%	3%	2%	2%	1%	1%	1%	1%	0%	0%
	62	2%	2%	1%	1%	1%	1%	0%	0%	0%	0%
	64	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

Figure 4: UK



As of March 2025
Source: S&P Global PMI, Bank of England via S&P Global Market Intelligence

US

Monetary policy in the US differs from that in the euro area and the UK because the Fed is mandated by the US Congress to promote maximum employment and stable prices (commonly referred to as the “dual mandate”). For this reason, we tested models that not only use the Business Activity Index and Input Prices Index, but also use the Employment Index and Input Prices Index. As was the case with the euro area and the UK, we adapted our sample to exclude incidences where monetary policy was influenced by factors outside of the business cycle. The 2020–22 period is removed, as are the months in late-2007 and early-2008 when interest rate reductions were a direct response to the sub-prime mortgage crisis and financial market conditions.

Using activity and prices, we find that only activity is statistically significant when it comes to the Fed providing stimulus to the economy. Conversely, activity becomes insignificant when the Fed is considering interest rate increases, with only prices significant. In plain terms, economic output carries a far greater level of importance than prices when considering monetary policy easing, while the opposite is true for tightening.

However, when we use employment and prices, results differ. Notably, for interest rate increases, we find that employment and prices are highly significant. We also find that prices become even less important for loosening policy compared to the model that includes activity. To interpret these in nonquantitative terms, PMI data demonstrate how the Fed is highly responsive to signs of overheating in inflation and the labor market, but has been more inclined to adopt a loosening bias when employment needed support, which is consistent with its dual mandate.

We demonstrate the above findings with probability matrices . First, when considering whether to tighten financial conditions, our results suggest that, even if US economic activity is deteriorating at a sharp rate (Activity Index at 44.0), there stands roughly a one-in-three chance of an interest rate hike if the Input Prices Index is at 70.0 (see Table 3.1). However, if we consider the Employment Index at 44.0 (irrespective of activity), signaling rapidly rising slack in the US labor market, the chance of monetary tightening is just 2% (see Table 3.2). This reiterates the Fed’s commitment to its dual mandate as interest rate increases when employment levels are falling sharply would likely exacerbate job losses.

Table 3

Implied probabilities of Fed monetary policy tightening

3.1. Probability of a rate hike

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	1%	1%	2%	2%	4%	5%	7%	10%	19%	32%
	46	1%	2%	2%	3%	5%	7%	10%	13%	23%	38%
	48	2%	2%	3%	5%	7%	9%	12%	17%	28%	44%
	50	2%	3%	4%	6%	8%	11%	15%	20%	33%	49%
	52	3%	4%	6%	8%	10%	14%	18%	24%	38%	54%
	54	4%	5%	7%	9%	12%	16%	22%	28%	42%	59%
	56	4%	6%	8%	11%	15%	19%	25%	31%	47%	63%
	58	5%	7%	10%	13%	17%	22%	28%	35%	51%	67%
	60	6%	8%	11%	15%	20%	25%	32%	39%	55%	70%
	62	7%	10%	13%	17%	22%	28%	35%	43%	59%	73%
	64	8%	11%	15%	20%	25%	32%	39%	47%	63%	76%

3.2. Probability of a rate hike

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Employment	**44**	0%	0%	0%	0%	0%	0%	1%	1%	1%	2%
	46	0%	0%	0%	1%	1%	1%	1%	2%	3%	5%
	48	1%	1%	1%	1%	2%	2%	3%	4%	7%	11%
	50	1%	2%	2%	3%	4%	5%	7%	9%	14%	21%
	52	3%	4%	5%	7%	9%	11%	14%	17%	26%	37%
	54	7%	8%	11%	13%	17%	21%	25%	30%	42%	55%
	56	13%	16%	20%	25%	30%	36%	42%	48%	61%	72%
	58	24%	29%	35%	41%	47%	54%	60%	66%	76%	84%
	60	40%	47%	53%	59%	65%	71%	76%	80%	87%	92%
	62	59%	65%	70%	75%	80%	83%	87%	89%	93%	96%
	64	75%	79%	83%	86%	89%	91%	93%	95%	97%	98%

As of March 2025.
Source: S&P Global Market Intelligence.

Table 4

Implied probabilities of Fed monetary policy loosening

4.1. Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	59%	57%	54%	51%	48%	45%	41%	38%	30%	22%
	46	48%	45%	43%	40%	37%	34%	31%	28%	21%	15%
	48	37%	35%	32%	30%	27%	24%	22%	19%	14%	9%
	50	28%	25%	23%	21%	19%	17%	15%	13%	9%	6%
	52	20%	18%	16%	14%	13%	11%	10%	8%	6%	3%
	54	13%	12%	11%	10%	8%	7%	6%	5%	3%	2%
	56	9%	8%	7%	6%	6%	5%	4%	3%	2%	1%
	58	6%	5%	5%	4%	4%	3%	2%	2%	1%	1%
	60	4%	3%	3%	3%	2%	2%	2%	1%	1%	0%
	62	2%	2%	2%	2%	1%	1%	1%	1%	0%	0%
	64	2%	1%	1%	1%	1%	1%	1%	0%	0%	0%

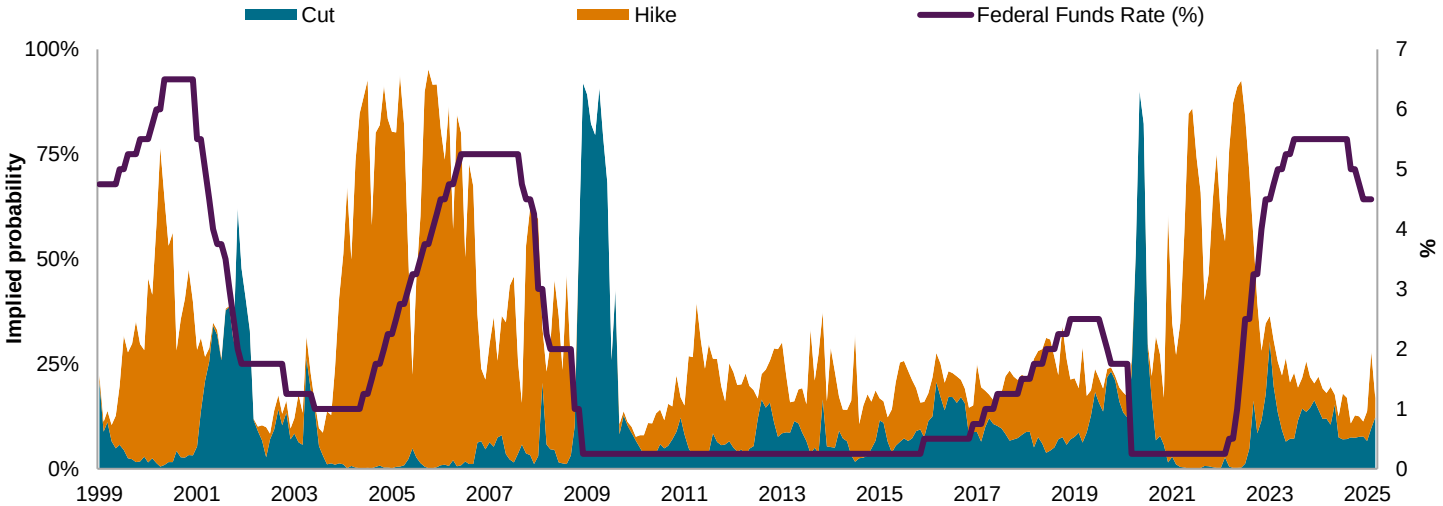
4.2. Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Employment	**44**	46%	44%	42%	39%	37%	35%	33%	31%	27%	23%
	46	36%	34%	32%	30%	28%	26%	24%	23%	19%	16%
	48	27%	26%	24%	22%	21%	19%	17%	16%	13%	11%
	50	20%	18%	17%	16%	14%	13%	12%	11%	9%	7%
	52	14%	13%	12%	11%	10%	9%	8%	7%	5%	4%
	54	9%	9%	8%	7%	6%	5%	5%	4%	3%	2%
	56	6%	5%	5%	4%	3%	3%	2%	2%	1%	1%
	58	4%	3%	3%	2%	2%	1%	1%	1%	1%	0%
	60	2%	2%	1%	1%	1%	1%	0%	0%	0%	0%
	62	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%
	64	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

As for monetary policy easing, we find the strongest signals to loosen are from low Business Activity Index values, as opposed to low Employment Index values. For instance, when the Input Prices Index is at its long-term trend (54.0), a Business Activity Index of 44.0 would yield an implied probability of the Fed delivering an interest rate cut of 51% (see Table 4.1). Switch to a 44.0 reading of the Employment Index and this probability falls to 39% (see Table 4.2)

Figure 5: US



As of March 2025.

*using S&P Global PMI Composite Employment Index and Input Prices Index for hike and Business Activity Index and Input Prices Index for cut. US ISM PMI data is used prior to November 2009.

Sources: S&P Global PMI; Federal Reserve; ISM; S&P Global Market Intelligence.

We therefore find value in using combinations of activity, employment and input prices for modelling US monetary policy. To help us select a "best" model, we refer to the Akaike Information Criterion (AIC). From this, our findings suggest that using employment and input prices are more appropriate for monetary policy tightening probabilities, whereas activity and input prices are better suited for interest rate cut probabilities. Intuitively, activity is likely to be a better predictor of monetary policy loosening than employment, given declines in jobs tend to lag declines in activity, so the Fed is likely to pre-empt rising unemployment by being more reactive to decreasing output levels (i.e. recession risk).

Comparing UK, US and eurozone monetary policy setting

We summarize differences in how monetary policy is set across the eurozone, UK and US in Table 5.

Table 5

Summary of probabilities

P-values		Pre- and post-pandemic			Pre-pandemic		
		Activity	Prices	Employ*	Activity	Prices	Employ*
ECB	Tighten	27.1%	0.0%	-	2.4%	0.2%	-
	Loosen	0.0%	8.5%	-	0.1%	18.3%	-
BoE	Tighten	0.2%	0.0%	-	0.0%	6.1%	-
	Loosen	0.0%	1.5%	-	0.0%	7.4%	-
Fed	Tighten	14.2%	0.0%	0.0%	1.5%	0.0%	0.0%
	Loosen	0.0%	16.1%	1.0%	0.1%	9.7%	3.1%

As of March 2025.
Employ P-values are for the Composite PMI Employment Index, regressed alongside the Input Prices Index.
This model is most relevant for the US, therefore we have excluded the results for the UK and eurozone here.
Source: S&P Global Market Intelligence.

The BOE is more growth-oriented than the ECB and the Fed, with business activity a highly significant factor when mulling interest decisions in general. Probabilities of interest rates rising when activity is weak are a lot lower for the BOE, compared to the ECB and the Fed.

We find that the ECB display a stronger degree of aversion toward high inflation than the BoE and the Fed, as the implied likelihood of ECB tightening is greater at low Business Activity Index readings when compared to the other two. This is despite the fact the ECB changed its definition of price stability following its strategic review in 2021, moving away from an inflation target of “below, but close to, 2%” to a symmetric one more akin to what is seen in the UK.

The Fed’s “dual mandate” of achieving price stability and maximum employment is best modeled by using S&P Global’s PMI Employment Index and Input Prices Index. The Fed is subsequently more reactive to hiring trends than the ECB and BOE, and we see interest rate increase probabilities in the US rise quickly as the PMI signals an overheating jobs market.

Conclusion

Research carried out here is by no means exhaustive. Monetary policy can be impacted by events occurring outside of the business cycle and the probabilities of central bank decisions that are implied by these statistical models are intended to be viewed alongside other factors which may affect interest rate decisions. Instead, we have purported to give guidance to conventional monetary policy setting, using the PMI as a tool to help central bank watchers understand the typical thresholds in the business cycle that can trigger loosening or tightening. As the PMI data are frequently referred to in reports and meeting minutes disseminated publicly by central banks, they clearly carry importance in monetary policy discussions. This paper has helped to contextualize this.

Links to more resources

Sign up to receive updated commentary in your inbox here.

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Running commentary on the PMI survey findings

PMI Frequently Asked Questions

Background to the PMIs (video)

Understanding the headline PMI and its various subindices

PMI data use-case illustrations, from nowcasting to investment strategy

Contact us

Joe Hayes
Principal Economist
T: +44-1344-328-099
joe.hayes@spglobal.com

David Owen
Senior Economist
T: +44-1491-461-017
david.owen@spglobal.com

The Americas
T: +1-877-863-1306

EMEA
T: +44-20-7176-1234

Asia-Pacific
T: +852-2533-3565

spglobal.com/marketintelligence/en/mi/products/pmi.html

Appendix

Probability matrices using pre-COVID-19 sample period.

Eurozone

Appendix A

ECB probability matricies using pre-COVID-19 sample period
Probability of a rate hike

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	0%	0%	0%	0%	0%	0%	0%	1%	2%	5%
	46	0%	0%	0%	0%	0%	0%	1%	1%	3%	9%
	48	0%	0%	0%	0%	0%	1%	1%	2%	5%	14%
	50	0%	0%	0%	0%	1%	1%	2%	3%	8%	22%
	52	0%	0%	0%	1%	1%	2%	3%	5%	13%	31%
	54	0%	0%	1%	1%	2%	3%	5%	8%	20%	43%
	56	0%	1%	1%	2%	3%	4%	7%	12%	29%	55%
	58	0%	1%	1%	3%	4%	7%	12%	19%	41%	67%
	60	1%	1%	2%	4%	7%	11%	18%	27%	53%	77%
	62	1%	2%	4%	7%	11%	17%	26%	38%	65%	84%
	64	2%	4%	6%	10%	16%	25%	37%	50%	75%	90%

Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	51%	47%	43%	39%	36%	32%	29%	26%	20%	15%
	46	39%	35%	32%	28%	25%	22%	20%	17%	13%	9%
	48	28%	25%	22%	19%	17%	15%	13%	11%	8%	6%
	50	19%	17%	15%	13%	11%	10%	8%	7%	5%	3%
	52	12%	11%	9%	8%	7%	6%	5%	4%	3%	2%
	54	8%	7%	6%	5%	4%	4%	3%	3%	2%	1%
	56	5%	4%	4%	3%	3%	2%	2%	2%	1%	0%
	58	3%	3%	2%	2%	2%	1%	1%	1%	0%	0%
	60	2%	2%	1%	1%	1%	1%	1%	0%	0%	0%
	62	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%
	64	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

UK

Appendix B

BOE probability matricies using pre-COVID-19 sample period

Probability of a rate hike

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	46	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	48	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	50	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%
	52	0%	0%	0%	0%	1%	1%	1%	1%	2%	4%
	54	1%	1%	1%	1%	2%	2%	3%	4%	6%	10%
	56	2%	2%	3%	3%	4%	6%	8%	10%	16%	24%
	58	4%	6%	7%	9%	12%	15%	19%	23%	34%	47%
	60	11%	15%	18%	23%	28%	33%	40%	46%	60%	72%
	62	27%	33%	39%	45%	52%	59%	65%	71%	81%	88%
	64	51%	58%	64%	70%	75%	80%	84%	87%	92%	95%

Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Activity	**44**	78%	76%	73%	70%	67%	64%	60%	57%	49%	42%
	46	66%	63%	59%	56%	52%	49%	45%	41%	34%	28%
	48	52%	48%	44%	41%	37%	34%	31%	28%	22%	17%
	50	37%	33%	30%	27%	24%	22%	19%	17%	13%	10%
	52	24%	21%	19%	17%	15%	13%	11%	10%	8%	6%
	54	14%	13%	11%	10%	8%	7%	6%	5%	4%	3%
	56	8%	7%	6%	5%	5%	4%	3%	3%	2%	1%
	58	5%	4%	3%	3%	2%	2%	2%	1%	1%	1%
	60	2%	2%	2%	1%	1%	1%	1%	1%	0%	0%
	62	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
	64	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

Appendix C

Fed probability matricies using pre-COVID-19 sample period

Probability of a rate hike

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
	44	0%	0%	0%	1%	1%	1%	2%	3%	5%	10%
	46	0%	0%	1%	1%	2%	2%	3%	5%	9%	16%
	48	1%	1%	1%	2%	3%	4%	5%	7%	13%	23%
	50	1%	2%	2%	3%	5%	6%	8%	11%	19%	30%
	52	2%	3%	4%	5%	7%	9%	12%	16%	25%	38%
Activity	**54**	3%	4%	6%	7%	10%	13%	17%	21%	32%	46%
	56	5%	6%	8%	10%	13%	17%	22%	27%	40%	55%
	58	6%	8%	11%	14%	18%	23%	28%	34%	48%	63%
	60	9%	11%	15%	19%	23%	29%	35%	42%	57%	70%
	62	12%	15%	19%	24%	30%	36%	43%	50%	64%	76%
	64	16%	20%	25%	31%	37%	44%	51%	58%	71%	82%

Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
	44	80%	77%	74%	70%	65%	61%	56%	51%	41%	31%
	46	68%	64%	59%	55%	50%	45%	40%	35%	26%	18%
	48	53%	48%	44%	39%	34%	30%	26%	22%	15%	10%
	50	37%	33%	29%	25%	21%	18%	15%	13%	8%	5%
	52	24%	21%	17%	15%	12%	10%	8%	7%	4%	2%
Activity	**54**	14%	12%	10%	8%	7%	6%	4%	4%	2%	1%
	56	8%	7%	5%	4%	4%	3%	2%	2%	1%	1%
	58	4%	4%	3%	2%	2%	1%	1%	1%	0%	0%
	60	2%	2%	1%	1%	1%	1%	1%	0%	0%	0%
	62	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
	64	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

Fed probability matricies using pre-COVID-19 sample period (continued)

Probability of a rate hike

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Employment	**44**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	46	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	48	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%
	50	1%	1%	1%	1%	1%	2%	2%	2%	3%	3%
	52	3%	3%	4%	4%	5%	5%	6%	7%	8%	10%
	54	9%	11%	12%	13%	14%	16%	18%	19%	23%	28%
	56	26%	29%	31%	34%	36%	39%	42%	45%	50%	56%
	58	55%	58%	60%	63%	66%	68%	71%	73%	77%	81%
	60	80%	82%	84%	85%	87%	88%	89%	90%	92%	93%
	62	93%	94%	95%	95%	96%	96%	96%	97%	97%	98%
	64	98%	98%	98%	98%	99%	99%	99%	99%	99%	99%

Probability of a rate cut

		Input prices									
		48	**50**	**52**	**54**	**56**	**58**	**60**	**62**	**66**	**70**
Employment	**44**	42%	39%	37%	34%	32%	30%	28%	26%	22%	18%
	46	33%	31%	29%	27%	25%	23%	21%	19%	16%	14%
	48	26%	24%	22%	20%	19%	17%	16%	14%	12%	10%
	50	19%	18%	16%	15%	14%	12%	11%	10%	9%	7%
	52	14%	13%	12%	11%	10%	9%	8%	7%	6%	5%
	54	10%	9%	8%	7%	6%	6%	5%	4%	3%	3%
	56	6%	5%	4%	4%	3%	3%	2%	2%	2%	1%
	58	3%	2%	2%	2%	1%	1%	1%	1%	1%	0%
	60	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%
	62	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	64	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

As of March 2025.
Source: S&P Global Market Intelligence.

CONTACTS

Europe, Middle East, Africa: +44 (0) 134 432 8300
Americas: +1 800 447 2273
Japan: +81 3 6262 1887
Asia-Pacific: +60 4 291 3600

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