CHINA DATA INSIGHTS

China GDP Tracking: A Real-Time Nowcasting Framework

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- China's official real GDP growth slowed to 4.3% yoy in Q2 from 5.0% yoy in Q1, putting renewed focus on whether reaching the full-year growth target range of 4.5-5.0% is at risk and whether policymakers will step up easing if momentum weakens further.
- To track official real GDP growth more closely, we introduce a China GDP nowcasting model built around three models: a PMI signal model based on official manufacturing and non-manufacturing PMIs early in the month, a bridge indicator model incorporating PMI, export and auto production data toward mid-month, and a production-side model using official industrial production and the services output index after these data are released.
- Model evaluation using root mean squared error (RMSE) shows that forecast accuracy improves significantly as more monthly data become available. After first-month activity indicators are released, we track GDP growth using an equal-weighted average of the three models, which delivers the lowest forecast error and provides a more robust reading than any single specification.
- Our tracker points to 4.1% yoy real GDP growth in 2026Q3 based on partial data for the quarter, but we maintain our 4.4% yoy forecast for now, reflecting our view that September activity data are likely to pick up notably on quarter-end residual seasonality, increased government bond issuance, and improved weather conditions. That said, our GDP nowcasting model implies some downside risk to our Q3 real GDP growth forecast and consensus expectations.

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China GDP Tracking: A Real-Time Nowcasting Framework

China's official real GDP growth slowed to 4.3% yoy in Q2 from 5.0% yoy in Q1, raising investor concerns over whether full-year growth can still reach the official 4.5–5% target (Exhibit 1). Growth in the first half of 2026 averaged 4.7% and remained broadly on track relative to the growth target, and the July Politburo meeting sent more dovish signals compared to the April Politburo meeting. However, July and August activity data showed persistent softness, prompting us to lower our Q3 real GDP growth forecast to 4.4% yoy from 4.6% yoy previously. Against this backdrop, the key questions for investors are whether growth can stay within the target range and whether renewed policy support will emerge if momentum weakens further.

This uncertainty is compounded by the fact that GDP forecasting has become harder since the Covid pandemic. The mean absolute error of Bloomberg consensus forecasts for quarterly GDP growth over the past few years has been roughly three times larger than in the pre-pandemic period (Exhibit 2).

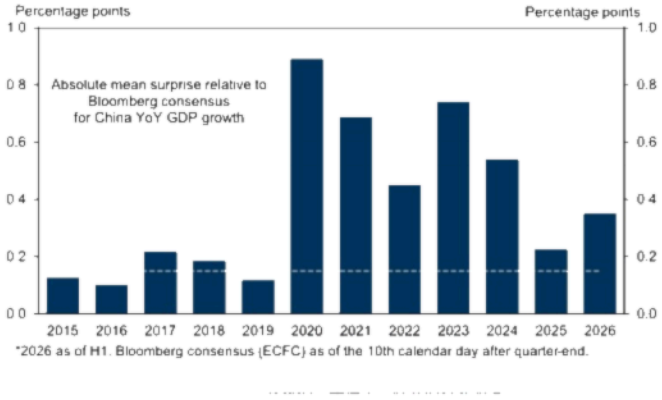
In our view, two factors help explain the deterioration in forecast accuracy. First, the Covid shock and subsequent reopening introduced unusually large swings and volatility into year-over-year growth rates, especially in contrast to the stable official real GDP readings historically. Second, the policy reaction function and policy transmission have shifted over time. Before Covid, cyclical easing during economic downturns tended to be sizable and its impact on growth was more immediate. Post-Covid, policy easing has become more measured and the impact of such easing on growth seems more muted and fleeting. Therefore, forecasts relying on historical patterns may have introduced larger forecasting errors in recent years.

Exhibit 1: China's GDP growth slowed to a post-reopening low in Q2



Source: Haver Analytics

Exhibit 2: GDP surprises have been larger in China versus the pre-Covid period



Source: Bloomberg, Goldman Sachs Global Investment Research

These forecasting challenges make a more systematic real-time tracking framework useful. In the US, models such as the Atlanta Fed's GDPNow and the New York Fed Staff Nowcast update current-quarter GDP estimates as new macro data arrive, translating high-frequency indicators into a timely reading on quarterly GDP growth. GDPNow follows a bottom-up expenditure-based national-accounts approach, mapping source data such as retail sales, housing starts, construction spending and trade data into GDP expenditure components. Our US Economics team's GDP tracking adopts a similar approach. By contrast, the New York Fed Staff Nowcast uses a top-down dynamic factor

model, updating its estimate based on the statistical "news" in releases such as nonfarm payrolls, jobless claims and the ISM Manufacturing Index.

The same approach is hard to replicate in China. Unlike major economies such as the US, the Euro area and Japan, which publish quarterly GDP levels and growth rates by major expenditure component, China does not publish quarterly GDP by expenditure component and only reports the contributions of final consumption, gross capital formation and net exports to headline GDP growth. We therefore construct a GDP nowcasting model that combines soft survey data, trade data, and production-side output indicators to assess underlying growth momentum and identify the potential window for incremental policy easing[1].

Our GDP Nowcasting Model

We estimate the GDP nowcasting model using more recent data in which the relationship between activity indicators and GDP was less distorted by pandemic-related shocks: 2017Q1-2019Q4 and 2023Q2-2026Q2, excluding the Covid and reopening period from 2020Q1 to 2023Q1.[2]

We construct the GDP nowcasting model around three separate models, each reflecting the information set available at different points in the quarter.

The PMI signal model provides the earliest read on monthly activity.[3] We regress current-quarter GDP growth on official manufacturing PMI and non-manufacturing PMI, using PMI readings to provide the initial estimate of within-quarter momentum before hard activity indicators become available. Exhibit 3 suggests the model performed better before Covid, when GDP growth was smoother and its relationship with survey indicators was more stable.

As the data flow broadens, we then incorporate a **bridge indicator model** that combines timely soft and hard indicators.[4] Specifically, we relate GDP growth to non-manufacturing PMI, real export growth, auto output growth and one-quarter-lagged GDP growth.[5] This model is used once the relevant monthly indicators for the first month of the quarter are released. This model helps capture growth momentum across key sectors and gauge the implications for headline GDP growth.

Finally, once monthly activity indicators are available mid-month, we use a **production-side model** that builds headline GDP growth from sectoral activity. We

1 Our objective is to nowcast reported official GDP growth, not an estimate of "actual" GDP growth.

2 The starting point is constrained by data availability, as monthly growth of the services output index is only available from December 2016. Although other indicators such as PMI provide longer time series, calibrating lookback windows too far back into the pre-Covid era risks introducing more noise than signal. Given the relatively short sample, out-of-sample performance remains an important caveat.

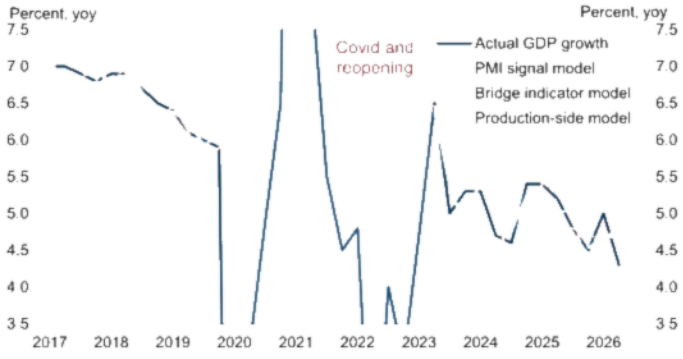
3 For PMI and other monthly indicators used in the framework, the nowcast is updated sequentially as data become available: the first-month reading is used initially, followed by the average of the first two months and, once available, the full-quarter three-month average. For indicators reported as year-on-year growth rates, we use the average of the year-on-year growth rates over the available months.

4 Given the limited effective sample, we avoid a dynamic factor model to reduce overfitting risk and keep the framework parsimonious.

5 Customs typically releases the trade volume index around two weeks after nominal trade data. Before the volume index becomes available, we estimate real export growth by deflating nominal export growth with a forecast export price index. Specifically, we forecast export price growth using China PPI inflation and USD/CNY movements.

estimate headline GDP growth as a weighted average of agriculture, construction, industry and services, with weights based on each sector's share of nominal GDP in the previous year.[6] Industrial GDP is tracked using monthly industrial production data and one-quarter-lagged industrial GDP growth, while tertiary GDP is tracked using the services output index and one-quarter-lagged tertiary GDP growth. In theory, this production-side approach should track GDP growth more closely than the PMI and bridge models since industrial production and services output are inputs to official GDP.

Exhibit 3: PMI signal model performed better before Covid, whereas production-side model has tracked GDP growth more closely in recent quarters



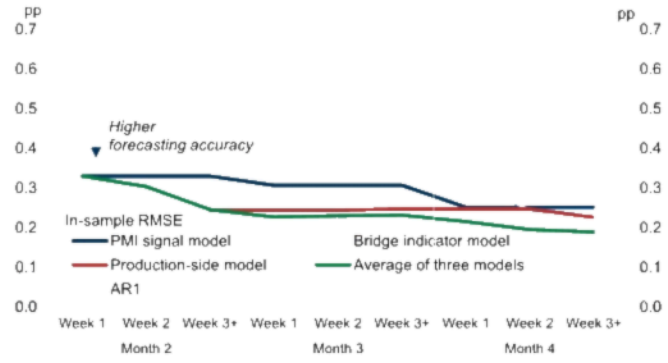
Source: Goldman Sachs Global Investment Research

Model Evaluation: Comparing Real-Time Accuracy

We evaluate the real-time in-sample performance of the three models using root mean squared error (RMSE), where lower values indicate smaller forecast errors and higher accuracy (Exhibit 4). Four takeaways stand out. First, early survey indicators provide a useful initial signal before hard activity data are available. Second, forecast accuracy improves as the quarter progresses, as subsequent releases—particularly third-month indicators given stronger quarter-end residual seasonality—materially improve the estimate. Third, the framework outperforms a simple AR (1) benchmark, suggesting that incorporating real-time data adds forecasting value. Finally, an equal-weighted average of the three models performs better than any single specification by reducing idiosyncratic noise and incorporating signals from both survey and hard data.

[6] Because high-frequency data tracking agriculture and construction GDP growth remains limited, we carry forward the previous quarter's growth rates for these two sectors, which together account for around 12% of nominal GDP currently.

Exhibit 4: Meaningful RMSE reductions as new data are incorporated over the quarter



Source: Goldman Sachs Global Investment Research

Based on the RMSE results, we use an equal-weighted model average to track GDP growth (Exhibit 5). Early in the second month of each quarter, the nowcast relies on the PMI model, as survey data provide the main within-quarter signal. As monthly hard data such as trade and auto production become available, we move to a two-model average of the PMI and bridge indicator models. After first-month activity indicators are released around the 15th of the second month, the nowcast shifts to an equal-weighted average of all three models for the rest of the nowcasting window, with each model updated as its underlying data are released.

Exhibit 5: Data flow in our China GDP nowcasting model

	Month 1			Month 2			Month 3			Month 4		
	Week 1	Week 2	Week 3+	Week 1	Week 2	Week 3+	Week 1	Week 2	Week 3+	Week 1	Week 2	Week 3+
PMIs				Month 1 data			Month 2 data			Month 3 data		
Bridge					Month 1 data			Month 2 data			Month 3 data	
Production-side						Month 1 data			Month 2 data			Month 3 data
Now-casting				**PMI only**	**Average of 2**	**Average of 3**						*GDP release*

Source: Goldman Sachs Global Investment Research

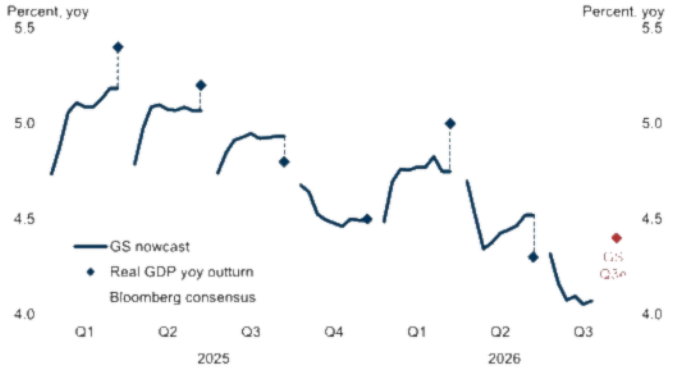
Our View on 2026 Q3 GDP

Exhibit 6 shows how our China GDP nowcasting model would have performed in recent quarters. Because this exercise is based on backward-looking in-sample analysis rather than real-time nowcasts produced at the time, the results should be viewed as indicative of the model's signal extraction rather than as a definitive historical track record. That said, the framework has generally delivered a more directionally accurate signal than consensus forecasts around GDP releases: when GDP outperformed consensus expectations, the tracker was also above consensus; when GDP missed expectations, the tracker was below consensus.

Turning to 2026Q3, our GDP nowcasting model points to real GDP growth of 4.1% yoy, decelerating further from 4.3% yoy in Q2. While this suggests softer underlying

momentum, we maintain our 4.4% yoy forecast for now because of factors that are not fully captured by the latest data points in our model: incremental policy support, improved weather conditions in September and a recent pattern of stronger quarter-end activity even after seasonal adjustment. Fiscal policy appears to have become incrementally more accommodative in September, with faster government bond issuance and the reported implementation of the RMB800bn new policy-based financial instrument. That said, our GDP nowcasting model implies some downside risk to our Q3 real GDP growth forecast and consensus expectations. We will revisit our Q3 tracker ahead of the official GDP release as key September data arrive, including the PMI release on September 30 and trade data on October 14.

Exhibit 6: Our China GDP nowcasting model shows 4.1% yoy Q3 real GDP growth currently



Bloomberg consensus (ECFC) for 2026Q3 GDP is as of September 25, 2026; for other quarters, the ECFC consensus is as of the 10th calendar day after quarter-end.

Source: Haver Analytics, Goldman Sachs Global Investment Research

Yuting Yang

The author would like to thank Samson Yau, an intern on the Asia Economics team, for his help on this report.

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Appendix

Exhibit 7: Inputs into our China GDP nowcasting model

China		
Variable	**Type**	**Release***
NBS Manufacturing PMI	Soft	First week
NBS Non-manufacturing PMI	Soft	First week
Auto Output	Hard	First week
Export Growth	Hard	Second week
Industrial Production	Hard	Third week
Service Output Index	Hard	Third week

*Approximate release time

Source: NBS, Wind, CEIC, Haver Analytics

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