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Norway — The Case for Cuts (Vashkinskaya)

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- Norges Bank's Monetary Policy Committee held the policy rate at 4.5% at its August meeting, reiterating its reluctance to lower policy rates soon. However, it pointed out that "if prospects suggest that inflation will return to target faster than projected in June, the policy rate may be lowered earlier than previously envisaged". We thus take a close look at core inflation (CPI-ATE) and its drivers using a "thick modelling" approach, which estimates a large number of different specifications.
- Given Norges Bank's emphasis on wage growth as a key driver of inflation, we start by assessing the wage outlook by estimating a range of wage Phillips curves for Norway. We find that slowing growth, increasing slack and receding inflation expectations point to a somewhat faster cooling in pay growth than Norges Bank forecasts (at 4.9% vs 5.2% in 2024 as a whole).
- Turning to inflation, we find that services inflation tends to be best explained by wage growth, inflation expectations, and domestic activity. Imported goods inflation loads on the exchange rate, global inflation, and gas prices. We expect rent inflation to exhibit some stickiness in the near term. However, decelerating services ex. rent and imported goods inflation leave our core inflation forecast at 3.2% by year-end, below Norges Bank's 3.5% projection.
- In a final step, we attempt to replicate Norges Bank's policy rate path model to gauge the implications for the rate outlook, which considers prices and wages, inflation expectations, domestic demand and other factors. Under our forecast for wage growth and inflation, the model points to two rate cuts this year. But using Norges Bank's higher wage and core inflation forecast implies a more hawkish rate path with just one rate reduction this year.
- Our analysis therefore supports our forecast for two 25bp cuts this year (November and December), contingent on inflation and wage growth developing in line with our projections. We expect Norges Bank to make quarterly 25bp cuts thereafter to a terminal rate of 3% in 2025Q4.
- That said, the rate outlook is quite uncertain, and we set out a number of alternative policy scenarios. We assign a 45% probability to our baseline with two cuts this year, followed by quarterly cuts. We see the risks as skewed towards less easing, however, with a 35% chance of slower cuts and a 20% probability of faster easing. Nonetheless, our baseline and probability-weighted

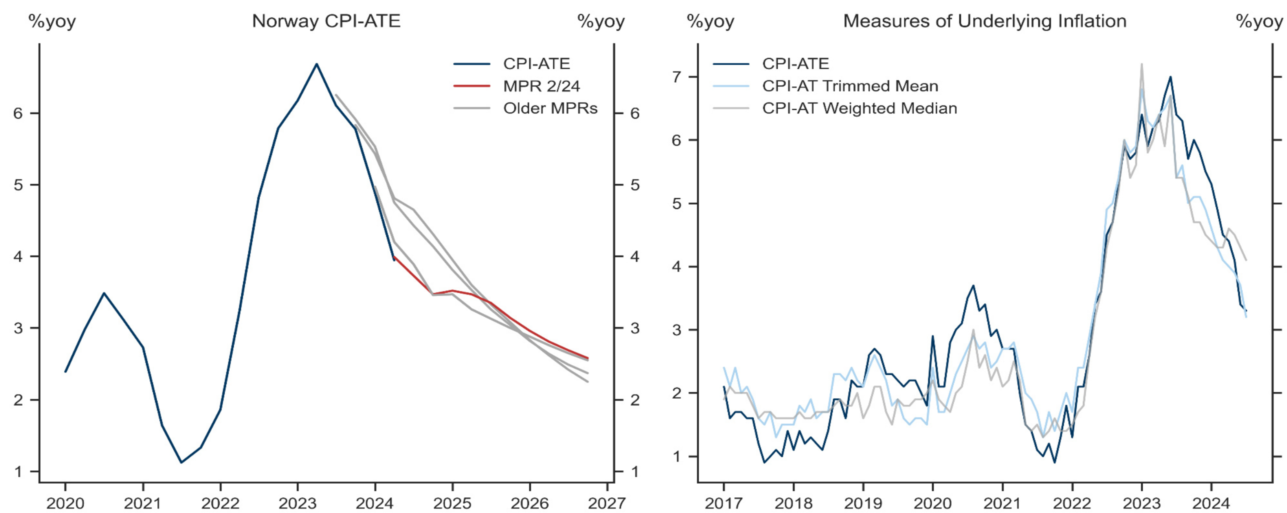
paths are notably below both Norges Bank's policy rate path and market pricing over the next six months.

Norway — The Case for Cuts

Norges Bank's Monetary Policy Committee held the policy rate at 4.5% at its August meeting, as widely expected, and kept its guidance broadly unchanged. However, it did not reiterate its forecast for a first cut in 2025Q1, and pointed out that "if prospects suggest that inflation will return to target faster than projected in June, the policy rate may be lowered earlier than previously envisaged".

The lack of softening in the Bank's guidance was somewhat surprising, given the downside surprises to Norges Bank's inflation projections over the past four quarters (Exhibit 1, left). Inflation has been on a clear downward trajectory, on both core and underlying inflation measures (Exhibit 1, right), with the former running at a sequential pace of 15bp for the past two months.

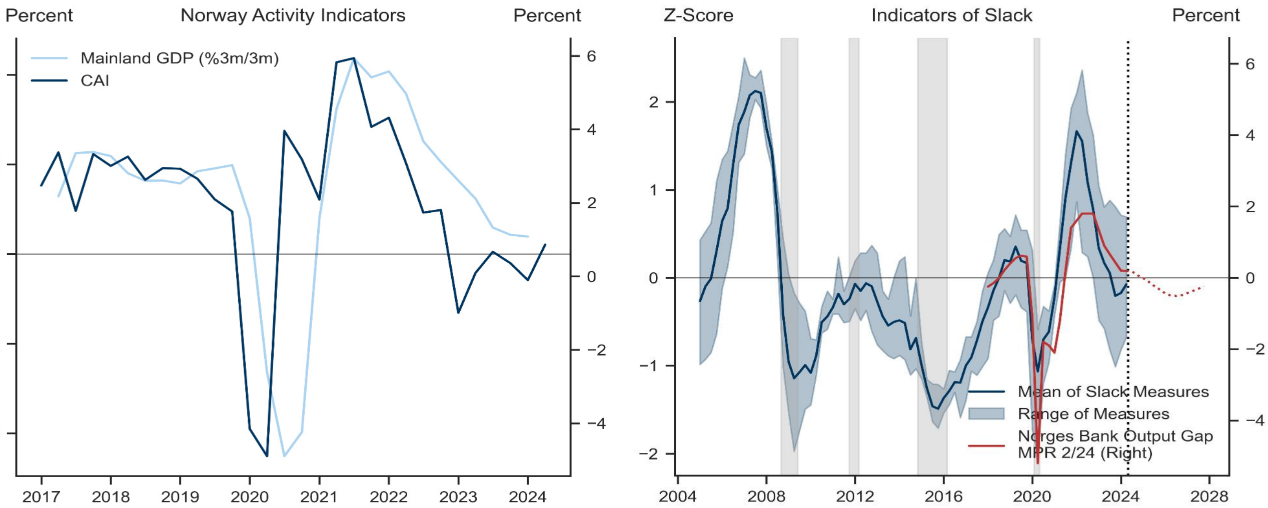
Exhibit 1: Inflation Has Undershot Norges Bank's Projections, with Underlying Inflation Consistently Lower



Source: Goldman Sachs Global Investment Research, Haver Analytics, Norges Bank

Against a backdrop of consistently decelerating inflation, activity has been on the softer side. Mainland GDP growth printed at 0.15%qoq in Q1 and we expect it to remain flat at 0.2%qoq in Q2. Other, more up-to-date hard data indicators, such as retail sales and industrial production in the manufacturing sector, remain subdued (Exhibit 2, left). Meanwhile, soft data indicators look more promising: the PMI rebounded in July and companies surveyed in Norges Bank's Regional Network Survey (RNS) continue to expect a slight pick-up in growth and employment in the coming quarters. Sluggish growth has been accompanied by accumulating slack, as evidenced in Norges Bank's output gap and a range of other indicators (Exhibit 2, right). Norges Bank projects that the output gap will turn negative in 2025Q1, and that growth will remain below potential thereafter, suggesting that the current highly restrictive monetary stance is no longer required.

Exhibit 2: Subdued Activity Picture And a Build-up in Slack

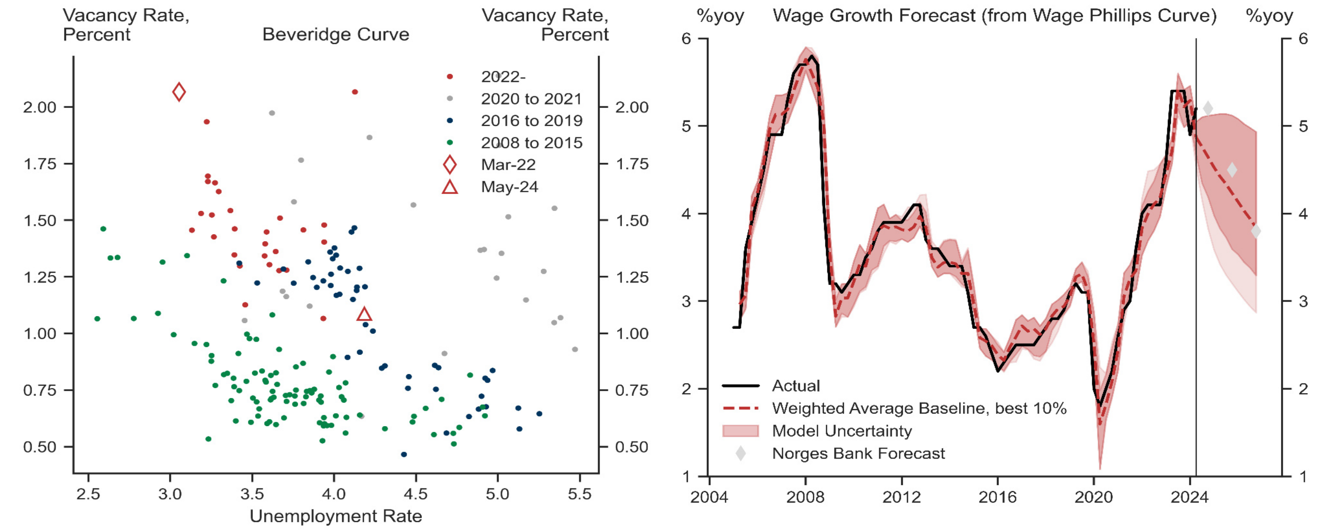


Source: Goldman Sachs Global Investment Research, Haver Analytics, Norges Bank

At the same time, the labour market has shown signs of weakening. The LFS 3-month centred moving average of the unemployment rate has increased (or remained unchanged) in 11 of the past 12 months, and stood at 4.2% in May. Registered unemployment, a focus for Norges Bank, ticked up to 2.1%, above Norges Bank's projections, and is projected to grow further. Exhibit 3 (left) shows that the post-pandemic labour market rebalancing has run its course, with recent movements happening down the Beveridge curve. The latest observation points to a return to a somewhat flatter, pre-pandemic curve.

Despite higher unemployment, wage growth was firm in the first two quarters of 2024, according to the RNS's annual wage growth series. This owes in part to Norway's wage negotiation model, which relies on collective bargaining, benchmarked by the agreed wage growth in internationally competitive sectors. Although industrial workers have reached an agreement for 5.2% wage growth in 2024, this does not necessarily translate into a 5.2% whole-economy pay rise, or "wage norm", due to the lower international exposure of other sectors.

Exhibit 3: Labour Market Weakening, Amid a More Benign Wage Outlook



On the left, we use LFS unmeployment rate.

Source: Goldman Sachs Global Investment Research, Haver Analytics, Norges Bank

Given Norges Bank's emphasis on wage growth as a key driver of inflation, we start by assessing the wage outlook, and estimate a range of wage Phillips curves for Norway. Our prior work on the Euro area suggests that wage growth is best explained by labour market tightness, inflation expectations and current inflation pressures, while the Norges Bank's work emphasises the importance of the wage and inflation expectations of social partners, overall capacity utilization in the economy, exchange rate developments, and firms' profitability.

Since official wage growth statistics are reported on an annual basis, we concentrate on forecasting the RNS's annual wage growth series, and use a "thick modelling" approach.[1] We consider a range of combinations of various specifications, allowing for different slack measures (including both LFS and registered unemployment rates and the job vacancy rate), resource utilization measures for Norway (including general and industrial capacity utilization metrics), forward- and backward-looking inflation measures (proxied by social partners' one- and two-year-ahead inflation expectations), exchange rate developments and productivity growth.

We use our own and Norges Bank's forecasts and a suite of simple models to project each explanatory variable. This, in turn, allows us to analyse the full range of over 2,000 models, which we estimate over the period 2005Q2-2024Q2 and rank by their in-sample fit.[2] The best models tend to be backward-looking in terms of inflation (i.e., loading more on lagged inflation), and pick up both capacity utilization and labour market tightness indicators, along with the exchange rate and the RNS's last-quarter profitability measure. Exhibit 3 (right), which illustrates the fit and the forecast of the best 10% of the models, points to a somewhat more pronounced cooling than in Norges Bank's latest forecast,

[1] Which tends to be highly correlated with the "wage norm" series and is available on a quarterly basis.

[2] In-sample fit is defined through adjusted R-2. The results are robust to using different estimation horizons, including the sample ending in 2019Q4.

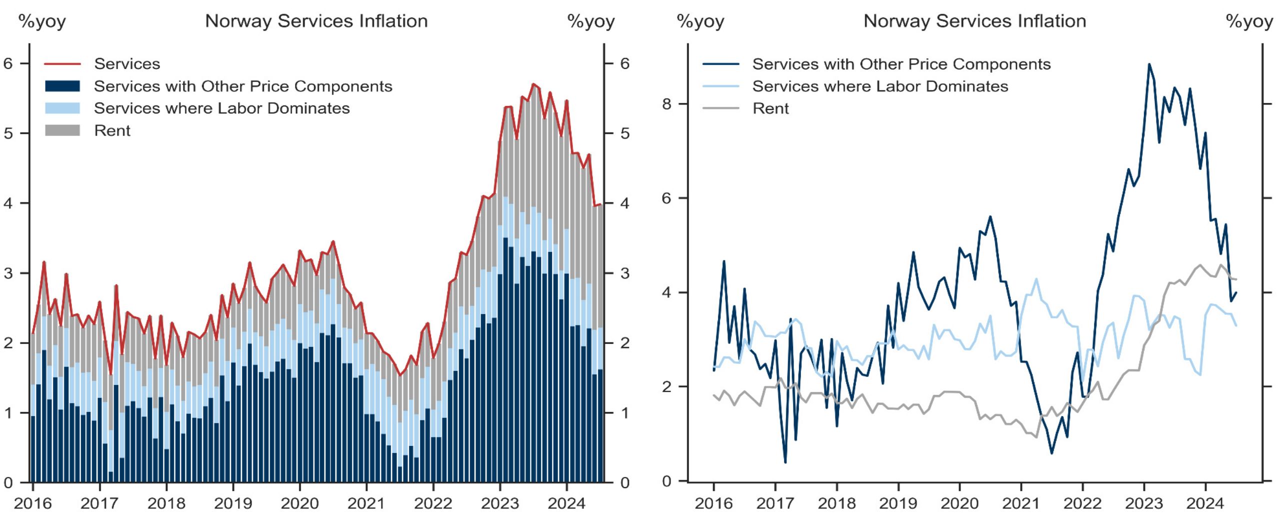
to annual wage growth of 4.9%yoy in 2024 (vs 5.2%) and 4.3% in 2025 (vs 4.5%).

Turning to inflation, we take a closer look at core inflation (CPI-ATE) and its drivers in Norway using both a "top-down" and a "bottom-up" approach. We concentrate on forecasting and decomposing core, imported and domestic goods (agricultural and non-agricultural products), rent, and services ex. rent inflation to allow for different drivers of each aggregate.[3]

Adopting the "thick modelling" approach again, we construct a set of Phillips curves by combining economic variables across key drivers, found to be important in our previous work on the Euro area and academic research on Norway. We combine variables proxying slack and activity in the domestic economy, inflation expectations, including wage growth[4], supply constraints, the exchange rate, energy prices and global factors (for both activity and price pressures), and estimate a suite of models for each of the six dependent variables over the 2005Q2-2024Q2 period.[5]

We start with services inflation (52% of core), since it has driven the strength in core inflation as of late: the rent (21% of core) and services ex. rent (31% of core) components contributed around 2pp each to the yoy rate of services inflation in July (Exhibit 4, left). While rent inflation picked up going into 2024, services where labour dominates have exhibited mixed dynamics over the past 2 years. Inflation in other services has seen a pronounced cooling from its high in February 2023 (Exhibit 4, right).

Exhibit 4: Services Inflation Has Driven Core Inflation Recently



Source: Goldman Sachs Global Investment Research, Haver Analytics

Exhibit 5 (left) shows our rent inflation forecast resulting from the best 1% of models,

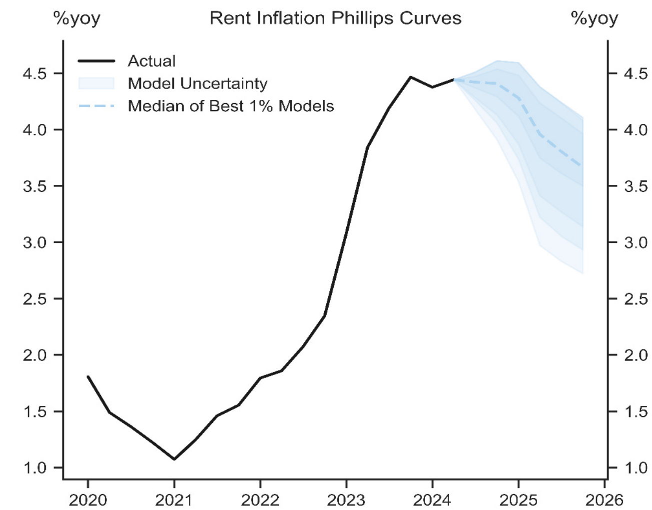
[3] Since Norges Bank publishes some of the aggregates from 2015 onwards, due to series rebasing, we utilize discontinued series, specifically for Norwegian consumer goods, to reconstruct the longer series.

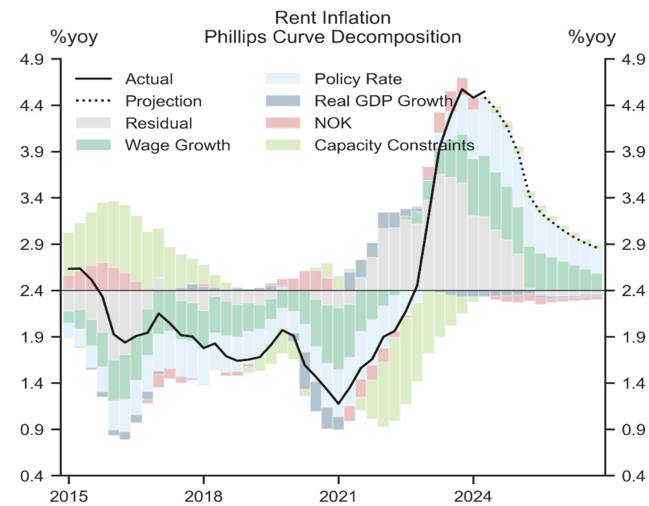
[4] We use fitted values and forecast from the Wage Phillips curve to avoid breaks in the series.

[5] We again use our own forecasts and simple models, such as Okun's law, to project the majority of explanatory variables. In addition, we utilize the gas and oil forwards, and Norges Bank's inflation forecasts to project inflation expectations, and adopt their import-weighted exchange rate projections from the June report. We then rank the models based on their in-sample fit, and record the occurrence of the variables picked up by the best-performing models out of over 3000 estimated for each variable.

surrounded by model uncertainty. The median forecast points to some medium-term stickiness and a gradual deceleration from 2025 onwards, with uncertainty somewhat skewed to the downside, implying the possibility of a faster deceleration.[6] To identify the drivers of the deceleration, we settle on a specification that uses a lag, wage growth, domestic activity, capacity utilization and the exchange rate. Since a large share of the rent component is "imputed rent", which is closely linked to mortgage rates, we add a change in policy rate as a proxy for mortgage costs. Our model points to the majority of the slowdown coming from wage pressure relief, rate cuts going forward, lower capacity utilization, and a strengthening krone.

Exhibit 5: Rent Inflation Still Sticky But Falling on Rates Cuts and Slower Wage Growth



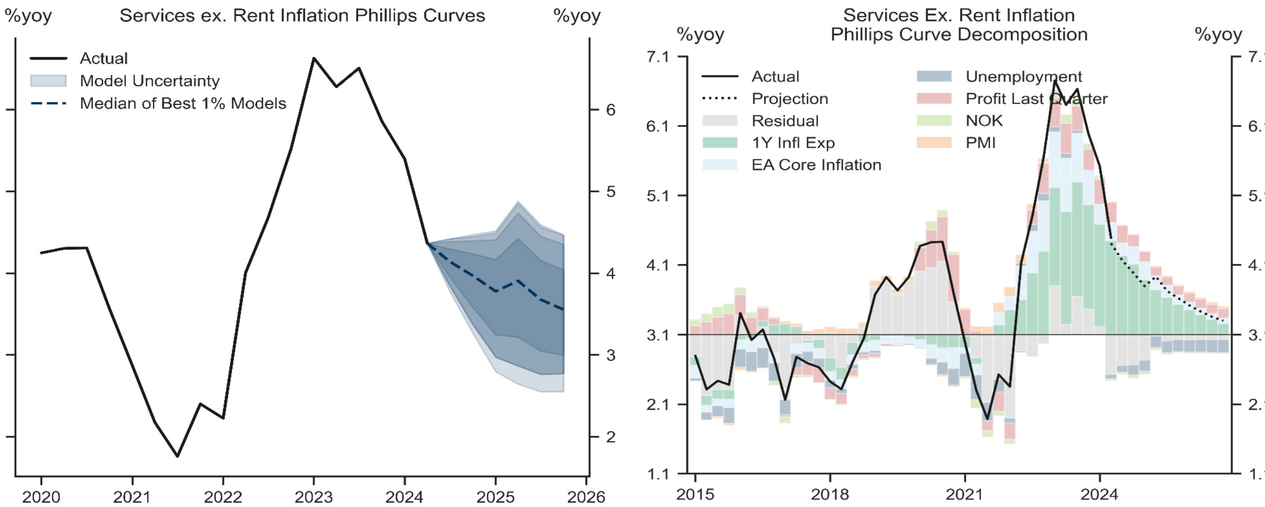


Source: Goldman Sachs Global Investment Research, Haver Analytics

We then turn to services ex. rent inflation, where we view risks around the median estimate as fairly balanced (Exhibit 6, left). As the best-performing models load mostly on inflation expectations, global factors, labour market indicators, firms' profitability, and the currency, we zoom in on a model with a lag, 1-year-ahead inflation expectations, global inflation proxied by Euro area core inflation, the unemployment rate, the currency, and profitability last quarter. We see a pronounced role for inflation expectations and their subsequent cooling as drivers of this inflation component, along with receding global price pressures and rising unemployment in the near term.

6 The best-performing models tend to load on wage growth, domestic activity, the unemployment rate, capacity utilization and the exchange rate.

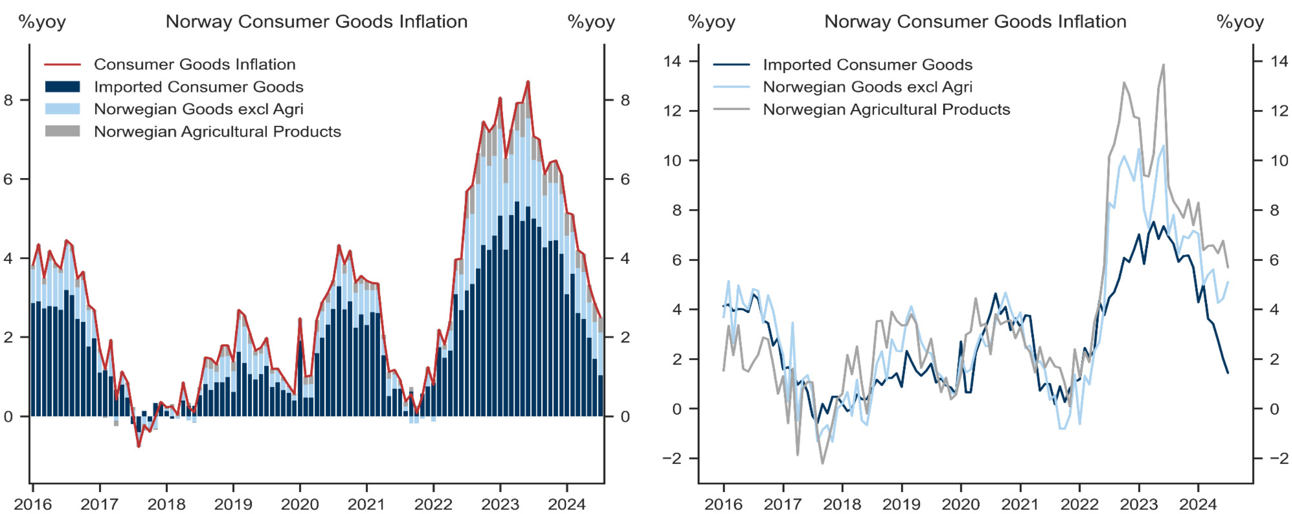
Exhibit 6: Other Services Inflation Decelerating Due to Lower Inflation Expectations And Global Inflation



Source: Goldman Sachs Global Investment Research, Haver Analytics

We then turn to goods inflation (48% of core), which saw a more pronounced acceleration but peaked slightly earlier than services inflation, and was running close to target at 2.5%yoy in July (Exhibit 7, left). While imported goods inflation (35% of core) has driven the majority of the variation and contributed the most to the inflation acceleration in recent years, domestic goods inflation rose to almost 12%yoy at its peak, although the pass-through to overall goods price pressures was fairly limited due to its relatively low weight in the basket (27% of core goods and 13% of core) (Exhibit 7, right).

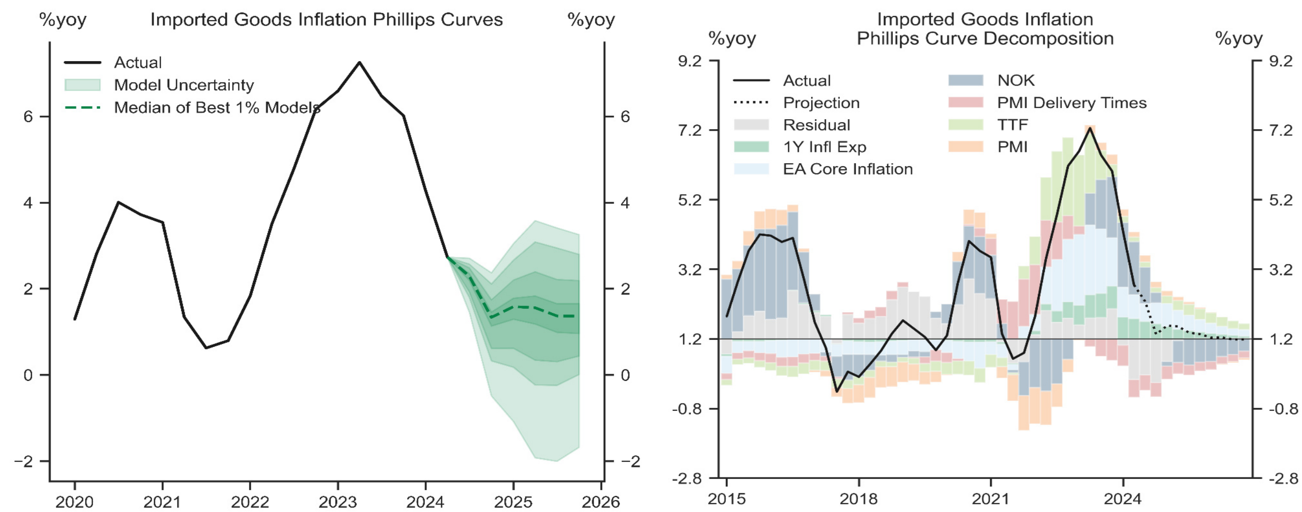
Exhibit 7: Goods Inflation Substantially Lower, Especially for Imported Goods



Source: Goldman Sachs Global Investment Research, Haver Analytics

We thus concentrate on the imported goods component, which, according to the best 1% of models, should decelerate further and settle below 2% in the short- to medium-term, with risks skewed to the downside (Exhibit 8, left). We use similar domestic variables to decompose the deceleration in imported goods inflation, and find a much more pronounced contribution from global, goods-specific drivers, such as PMI delivery times, our proxy for supply bottlenecks, and gas prices. In our view, the outlook for this category hinges on the projected strengthening of the krone, which we view as one of the strongest drivers, especially in recent quarters (Exhibit 8, right).

Exhibit 8: Imported Goods Inflation on a Clear Downward Trajectory, But the Outlook for FX is Key



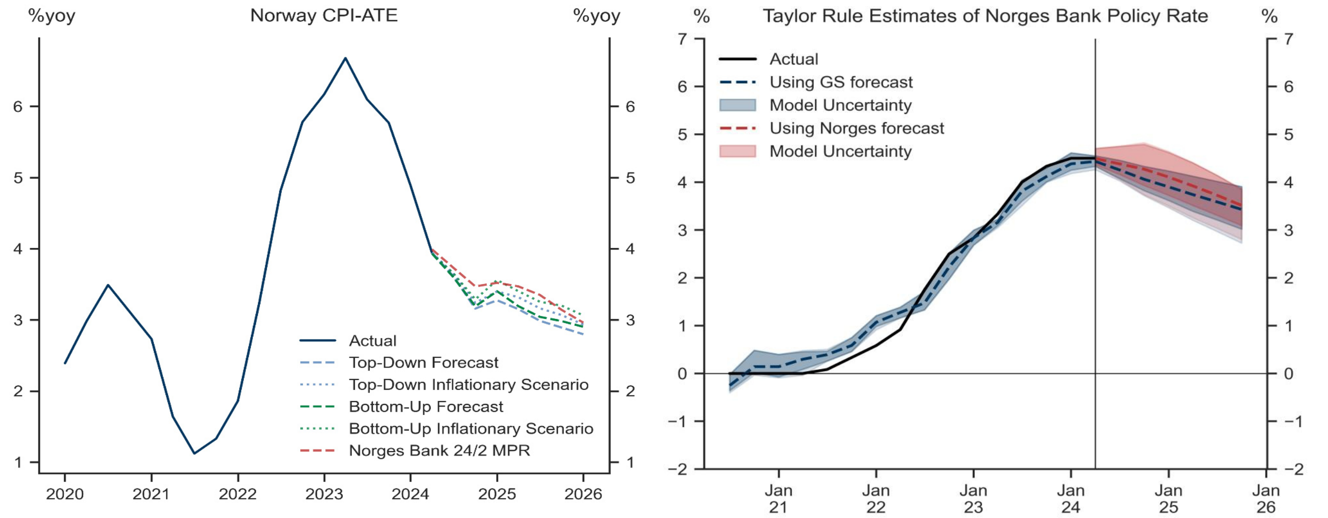
Source: Goldman Sachs Global Investment Research, Haver Analytics

Pulling together our forecasts for the core components, we arrive at a "bottom-up" core inflation path. Combined with the "top-down" model-implied path, this suggests that inflation should decelerate faster than Norges Bank expects, with 2024Q4 core inflation ranging between 3.16%yoy ("top-down" approach) and 3.19%yoy ("bottom-up approach") vs. Norges Bank's projection of 3.47%yoy (Exhibit 9, left).

Since wage and FX developments play a pronounced role in shaping inflation outcomes, we re-estimate the models using Norges Bank's forecast for wages and fixing the import-weighted FX at its current values, assuming no recovery.[7] The dotted lines in Exhibit 9 (left) represent the outcomes from accounting for this potential "inflationary" environment. Despite showing an overall stronger path, this would still see inflation decelerating faster, with 2024Q4 values ranging from 3.24%yoy to 3.29%yoy.

[7] The baseline forecast takes the FX forecast from Norges Bank's June projections, with the "inflationary scenario" assuming it stays at the July value of 120.

Exhibit 9: Inflation to Slow Faster than Norges Bank Projects, Pointing to More Cuts



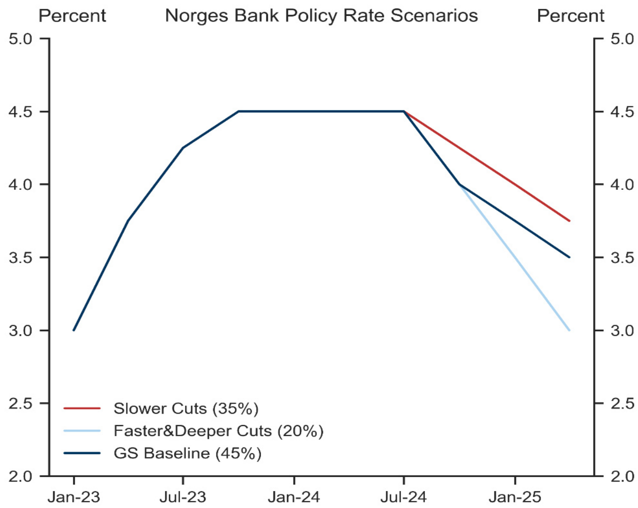
Source: Goldman Sachs Global Investment Research, Haver Analytics, Norges Bank

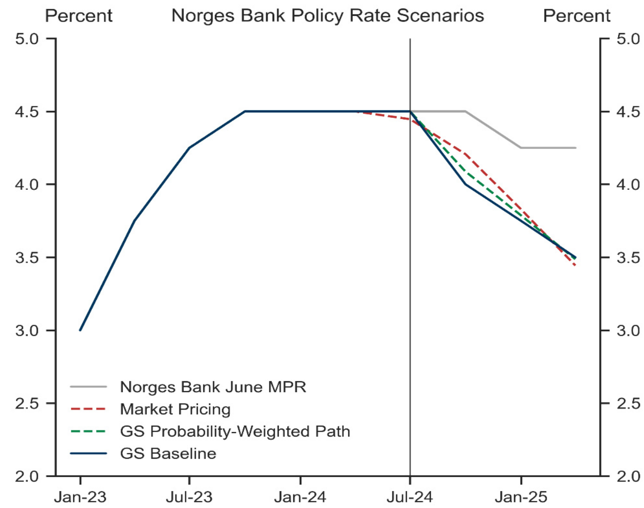
Finally, we attempt to replicate Norges Bank's policy rate path model, which includes the following drivers: the exchange rate, domestic demand, prices and wages, external factors, petroleum prices and investment. We once again utilize a "thick modelling" approach, used in estimating Taylor Rules in the Euro area and Sweden, which allows for different combinations of variables, proxying for the above-mentioned drivers. The best-fitting model combines domestic capacity utilization, global growth, inflation expectations, the exchange rate and oil prices.

Exhibit 9 (right) illustrates the fit and projections of the best 10% of our models (dashed lines), surrounded by model uncertainty. Using our forecasts for the inputs, we see the policy rate going from the model-implied 4.45% in 2024Q2 to 4.05% in 2024Q4, pointing to two rate cuts this year, consistent with our forecast. Incorporating Norges Bank's wage and core inflation forecast and a weaker currency results in a slightly more hawkish rate path, which converges to 4.27% in 2024Q4. This would imply one rate cut this year even with higher wage growth and a weaker exchange rate.

Our analysis therefore supports our forecast for two 25bp cuts this year (November and December), contingent on inflation and wage growth developing in line with our projections, as well as a stronger krone. We therefore continue to expect Norges Bank to keep the policy rate unchanged at the upcoming meeting and begin to cut in November.

Exhibit 10: Our Forecast Is Below Market Pricing in the Medium Term





Source: Goldman Sachs Global Investment Research, Haver Analytics, Norges Bank, Bloomberg

That said, the rate outlook is quite uncertain and we therefore set out a number of alternative scenarios. We assign a 45% probability to our baseline with two cuts this year, followed by quarterly 25bp cuts to a terminal rate of 3% in 2025Q4. The risks are, however, skewed towards less easing this year, given Norges Bank's guidance. We assess the probability of one cut this year at 35% and attach a probability of 20% to scenarios with quicker easing (Exhibit 10, left). Our baseline and probability-weighted paths are notably below both Norges Bank's policy rate path and market pricing over the next six months.

Katya Vashkinskaya

Disclosure Appendix

Reg AC

We, Sven Jari Stehn, Filippo Taddei, Alexandre Stott, James Moberly and Katya Vashkinskaya, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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