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Climate change, climate protection and inflation

Overview

We have already entered a new inflation regime: one where supply constraints are becoming the driving force behind inflation. A world shaped by unusually low supply has major implications for monetary policymakers. Climate change is a key aspect in a world shaped by supply as the climate transition may add to, and extend, the supply constraints currently driving inflation. Like the pandemic, the climate transition will bring about pronounced sectoral shifts, albeit stretched over a longer timeframe. These sectoral shifts argue for greater inflation tolerance. A world driven by supply also brings about more macro volatility. This can be expected to enhance central banks' willingness to live with higher inflation. All these developments will have profound consequences for the policy landscape. Monetary policy is limited in its ability to bring down supply-driven inflation, unless central banks are prepared to destroy demand and let unemployment surge across the economy to contain inflation pressures.

A new inflation regime

The post-pandemic activity restart provided a first glimpse of the power that supply shifts have in shaping the macro environment. Even though the post-COVID activity restart will eventually be completed, this will not be the end of the era of supply constraints. The climate transition to net zero will have effects similar to an activity restart drawn out over many years. The reallocation of resources between sectors necessary to achieve the climate transition is likely to cause additional supply constraints. These will push up inflation through broad-based macro and

through sector channels. The International Monetary Fund (IMF) estimates that over 2% of the global workforce will ultimately need to change sector. If demand shifts faster than resources, the resulting mismatch will push inflation higher. A disorganized transition characterized by delayed, abrupt policy changes will be materially more inflationary than an orderly transition process driven by credible long-term policy commitments.

It has to be borne in mind that a major requirement for the transition to be successful is to consider and include the costs of climate change in all economic decisions. These costs can be reflected or accommodated in different ways: carbon taxes, emission permits, government regulations or shifts in consumer preferences. Independent of how exactly the costs of climate change are accommodated, we will likely see a broad-based impact on inflation due to increasing energy costs. Estimates vary widely depending on the assumptions used for the carbon price and the timeframe. Not including (internalizing) the costs of climate change will also be inflationary since not addressing climate change will hit economies much harder in the long run. As a result of climate change, crop yields will decline and food price inflation will rise. The frequency of extreme weather events and natural disasters is expected to increase, resulting in bottlenecks in global supply chains. Rising average temperatures will lower labor productivity. All in all, climate change is likely to cause inflation to be higher and more volatile.

So, we are in a new inflation regime, and due to the ongoing war in Ukraine and the West's desire to wean

itself off Russian energy supply, the risk of inflation expectations de-anchoring and central banks being forced to step on the monetary policy brakes have risen. Central banks may be forced into a painful destruction of demand and jobs by raising interest rates beyond their neutral level and pushing monetary policy into restrictive territory.

A world shaped by supply

Supply-driven inflation presents central banks with a fundamental dilemma. Monetary policy simply cannot stabilize inflation and activity at the same time anymore, an important departure from, say, dealing with an overheating or undercooling economy. Central banks have to choose between inflation and growth. In order to limit growth volatility, central banks will probably be inclined to live with somewhat higher inflation if it is supply-driven – provided that inflation expectations remain anchored.

A key aspect of the new era shaped by supply is that there are not only supply constraints at the aggregate macro-level, but also very sizable shifts between sectors due to changing consumer preferences. We have seen the impact of such sectoral shifts already during the pandemic when consumer spending shifted toward goods and away from services. This shift created severe bottlenecks in some places and spare capacity in others. As prices tend to rise faster in response to bottlenecks than they fall in response to spare capacity, sectoral shifts can propel overall inflation even when aggregate activity has not fully recovered.

The transition to net zero is expected to materially reinforce sectoral shifts in coming years, if not decades, as demand increasingly switches to

lower-carbon activities. Accommodating higher inflation of this type in monetary policy decisions yields better economic outcomes, by facilitating a swifter reallocation of resources toward the new economic structure. If central banks were insisting instead on pushing inflation back to target this would lead to overly tight monetary policy. It would not only actively destroy demand but also make the transition more costly in terms of job losses and in terms of adjusting the stock of physical capital.

Rethinking central bank frameworks

Given the likely persistence of such supply constraints in the future, further adjustments to central bank inflation-targeting frameworks might be necessary – despite the Fed and the European Central Bank (ECB) having only recently overhauled their policy frameworks. For starters, pursuing price stability as the only goal of monetary policy might imply greater output volatility in a world shaped by supply as divine coincidence would no longer hold. Greater macro volatility could also mean increased financial stability risks. In addition, an empirical evaluation of existing inflation targets could be warranted to assess whether they provide sufficient breathing space for the necessary adjustment in relative prices that would need to be facilitated in the course of decarbonization. Finally, the strict application of average inflation targeting, or even price level targeting, would not be suitable as it would impose an excessively tight policy well into the future after a period of supply-driven inflation overshoot. A flexible application of average inflation targeting with the ability to look through an inflation overshoot on a discretionary basis

would seem more suitable in case of inflation pressures primarily being caused by sectoral shifts.

Conclusion

We are in the midst of a new era driven by supply which is producing higher rates of inflation and higher macro volatility. These trends will be reinforced by the transition to net zero. And the stepped-up efforts to foster energy security in the West is likely to cause the transition to be reinforced in Europe, and also more divergent globally. The new regime challenges current central bank policy frameworks and could question the status of government bonds as safe assets. Faced with higher inflation trends and higher interest-rate volatility,

the term premium is likely to widen and could eventually move into positive territory. From a financial-stability point of view, government bonds are likely to struggle to provide effective ballast.

