FORCES AT PLAY

Advanced economies are contending with several major long-term structural changes that will affect the way monetary policy is conducted. These ongoing changes inevitably affect the natural level of interest rates—at which inflation and output are at their optimum—and how monetary policy is transmitted.

The green transition

Annual clean energy investment will need to reach \$4 trillion by 2030 to get to net zero emissions by 2050.1

The green transition will require a substantial reallocation of resources away from fossil fuels toward renewable sources of energy—mainly wind and solar. The transition will likely require a large increase in investment, possibly encouraged by some form of subsidy. Increased investment demand will tend to increase the natural level of interest rates, so the green transition will probably require central banks to support a higher policy rate.

Remote work

Remote work has increased by 44 percent over the past 5 years.²

Remote work shapes inflationary conditions through two channels: the supply of labor and its productivity. Remote work tends to increase the amount of working hours households can supply: workers are willing to take a pay cut when allowed to work a given job remotely. However, certain jobs cannot be performed as efficiently in a remote setting, which reduces productivity per worker-hour. The effect of these two forces tends to increase firms' marginal costs (and therefore generate inflationary pressure) if the reduction in productivity outweighs the increased supply of labor. The productivity channel also affects households' demand: lower productivity leads workers to anticipate lower future wages, which causes them to reduce their demand for goods and creates a countervailing downward force on prices. How they play out will shape demands on monetary policy.

Several slow-mo economic trends affect monetary p over the long te

De-globalization

Trade openness peaked at about **60 percent** in 2008 and has fallen since then.³

De-globalization tends to impoverish countries by creating barriers to trade and encouraging reallocation of resources toward less-efficient industries. A drop in output can **reduce government revenues** and cause **fiscally driven** inflation if the government does reduce spending and/or increase taxes. **Supply and demand** will add inflationary forces, the strength of which will depend on whether a country is primarily an importer or exporter. Importing countries will

find it more difficult to purchase goods from abroad, which creates inflationary pressure at home. Exporters, by contrast, will anticipate lower future income from foreign sales, causing household demand to fall.

Demographics

The number of people in the world over **60 years** old will double by 2050.4

Demographic change is likely to create **demand**, **supply**, **and political pressures**. An aging population will lower demand as individuals save for retirement, which will temporarily reduce the natural level of interest rates. On the supply side, declining labor force participation will reduce potential output and result in slower income growth that incentivizes individuals to save for the future. After the transition to an older population is complete, the saving pressure may abate: the retired tend to consume from savings at a high rate, and labor force participation

will stabilize. In the long run, then, it is not clear that demographic change will lead to permanently lower real interest rates or deflation—or what the effect will be on monetary policy.



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Central bank digital currency

More than 100 countries are currently exploring CBDC.⁵

The advent of central bank digital currency (CBDC), part of the ongoing digital currency revolution, will allow central banks to directly set the rate of interest paid by CBDC, which will permit them to **transmit monetary policy directly to households**, not indirectly through banks as they do now. Banks do not fully transmit rate changes (especially increases) to households. So an increase in the policy rate set by central banks

doesn't lead to a one-for-one increase in deposit rates.

The introduction of CBDC will also be critical in shaping the central bank's role in the economy. If central banks issue digital currency directly to households, they will likely have to **expand their balance sheets permanently**. The central bank could decide to invest its enlarged portfolio in government bonds, providing strong support to fiscal policy, or it could lend to the private sector, driving investment in specific industries. Central banks will have to manage their reputation for independence carefully, because any investment decisions could be politically fraught.

Prepared by F&D staff based on research by Markus K. Brunnermeier of Princeton University.

¹ International Energy Agency https://www.iea.org/reports/net-zero-by-2050

² NorthOne https://codesubmit.io/blog/remote-work-statistics/

³ IMF Staff Discussion Note 2023/001 https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2023/01/11/

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⁴ World Health Organization https://www.who.int/news-room/fact-sheets/detail/ageing-and-health

⁵ The Atlantic Council https://www.atlanticcouncil.org/cbdctracker/