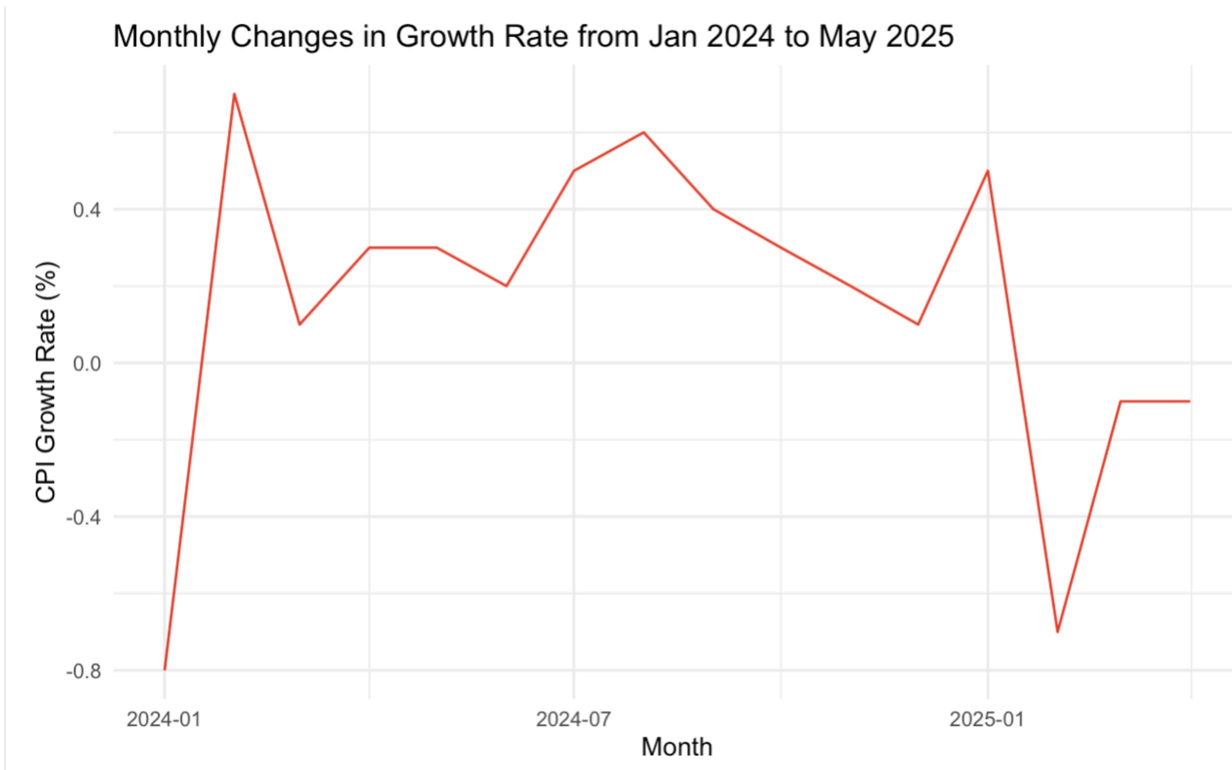
Summary

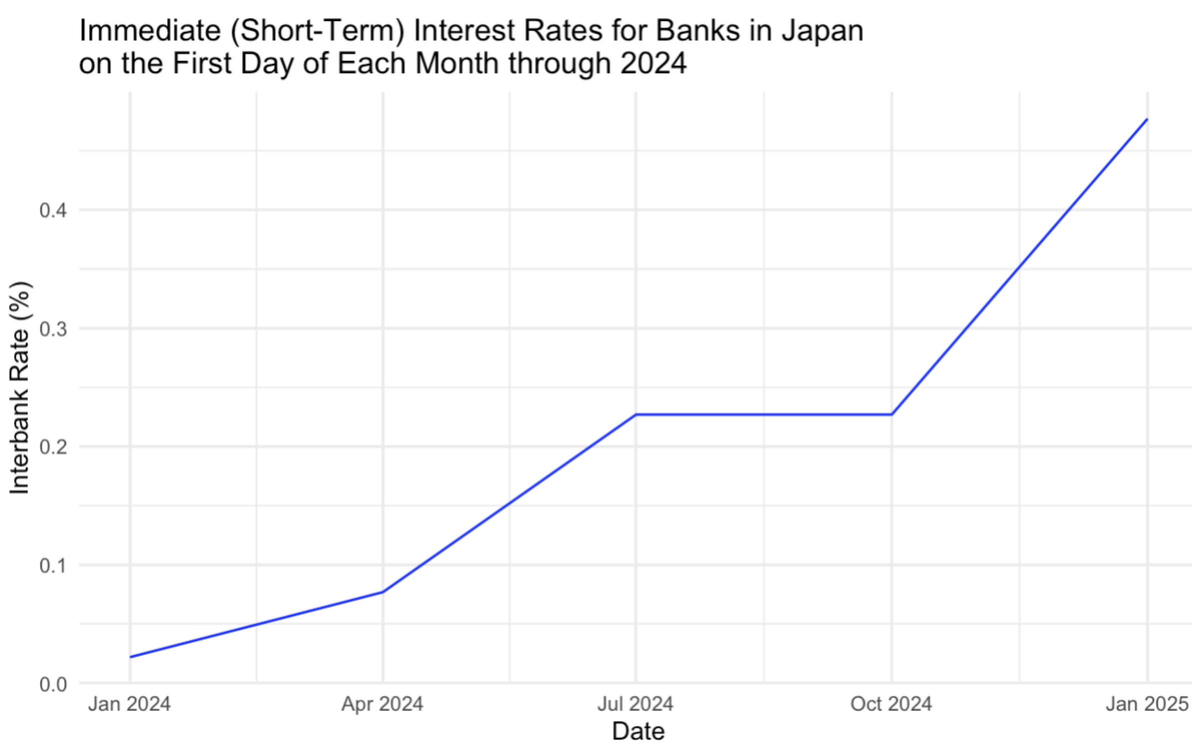
With respect to the international economy, the last six months of 2024 certainly indicated growth inverse to the unemployment rate, but this second half was not necessarily characterized by "significant" developments. In particular, the Federal Reserve has engaged in a quantitative tightening agenda in order to decrease interest rates and the quantity of money in the foreign exchange market. Additionally, sharp regional differences are observed in terms of the second half of 2024's worldwide economic growth.

Three years into the Russian invasion of Ukraine has continued to exacerbate inflation in the energy industry in Europe whereas countries in Asia have supported their gross domestic product through increased net exports in the quaternary sector. The Chinese central banking system has engaged in quantitative easing to demonstrate output compared to previous quarters through means such as subsidizing the auto industry as well as durable consumer goods. However, China's efforts to revitalize growth have been offset by decreased aggregate demand, one notable example being lower investment demand in the real estate sector leading to a decreased price level. Observing a deflationary trend over the past year, we model the rate at which inflation in China changed on a monthly basis using metrics like the Consumer Price Index (CPI) and the Harmonized Index of Consumer Prices (HICP) in the following plot:



Furthermore, the shortage-inducing effects of political conflicts on supplies of resources such as energy certainly have potential to raise inflation globally. Although there are disparities by country, prices of goods and services consequently followed a trend of disinflation marked by increasing, concave down graphical patterns. That is, marginal differences in prices have decreased over time. When excluding goods and services that tend to fluctuate in price, though, inflation has decreased.

The strategy of quantitative easing appears consistent among most central banks worldwide in order to stimulate the economy, such as the European Central Bank (ECB), the Bank of England (BOE), and the Reserve Bank of India (RBI). Besides China, emerging market economies, or EMEs, tend to follow a similar growth trend as advanced foreign economies, or AFEs, in that slight deflation occurred in the years leading up to the COVID-19 pandemic, followed by a massive surge in inflation in 2022 and then decreased inflation again by the end of 2024. However, in AFEs, the percentage difference between inflation in 2022 and the second half of 2024 is around 4.5%, which is larger than the difference of about 2.5% for EMEs apart from China. The Bank of Japan (BOJ) is a notable exception to the general trend, since the Japanese central bank aimed to curb its own inflation by increasing the policy rate that influences all interest rates across financial institutions in Japan. We observe the influence of the Japanese policy rate on loans between banks that last less than a day and confirm the general increasing pattern in the following line graph:



Finally, as indicated by the trade-weighted US dollar index, the United States dollar has greatly appreciated relative to other currencies, which implies a domestic advantage for importing goods and services abroad. Conversely, the GDP metric for foreign countries benefits from being competitive with exports that are perceived as cheaper by the United States in the sense that net exports would rise from an increased demand for foreign goods. Due to variations in interest rates from assets like Treasury bills, government bonds, and other financial securities, 2024 saw multiple net increases and decreases in the value of the US dollar, again supported by the trade-weighted US dollar index metric. US-imposed tariffs on other countries in an effort to subsidize domestic industries through additional tax revenue has raised the price level as a result of US firms paying taxes to the US government.

Works Cited

Board of Governors of the Federal Reserve System. (2025, February 7). *Monetary Policy Report*. Report to Congress. Retrieved from https://www.federalreserve.gov/publications/files/20250207_mprfullreport.pdf

Organization for Economic Co-operation and Development. (2025, September 10). *Consumer Price Index: Total for China* [Data set]. FRED, Federal Reserve Bank of St. Louis. Retrieved from https://fred.stlouisfed.org/series/CPALTT01CNM659N

Organization for Economic Co-operation and Development. (2025, September 10). *Interest Rates: Immediate Rates (< 24 Hours): Call Money/Interbank Rate: Total for Japan* [Data set]. FRED, Federal Reserve Bank of St. Louis. Retrieved from https://fred.stlouisfed.org/series/IRSTCI01JPQ156N