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Will Inflation Kill Growth?

Matteo Cominetta, London

Introduction: Strong Consumers Meet Even Stronger Inflation

Inflation is fast outpacing wage growth in Europe and the U.S. Households are losing purchasing power and becoming poorer. Answering precisely when inflation might tip an economy into recession depends on many factors, but we have attempted answers under two very different scenarios that can develop from here:

a) ***Credible central banks scenario*:** Inflation continues to outpace wage growth, and real income and consumption suffer, eventually bringing about a growth and inflation slowdown. Central banks may hasten the path to this outcome with rate hikes. By our estimates, the euro area would fall into recession if inflation averages 6% in the next 12 months, while the U.S. economy would flirt with recession if inflation averages 9%.

b) ***Wages-prices spiral scenario*:** Wage growth picks up as workers demand their purchasing power be protected and, in a context of tight labor markets, they succeed. Real income and consumption are protected, inflation does not come under control unless, or even if, central banks embark on a very aggressive tightening cycle. Under this scenario, inflation would have to rise to 9% in Europe and 12% in the U.S. before a recession is likely.

Simulating Consumption Growth in the Two Scenarios

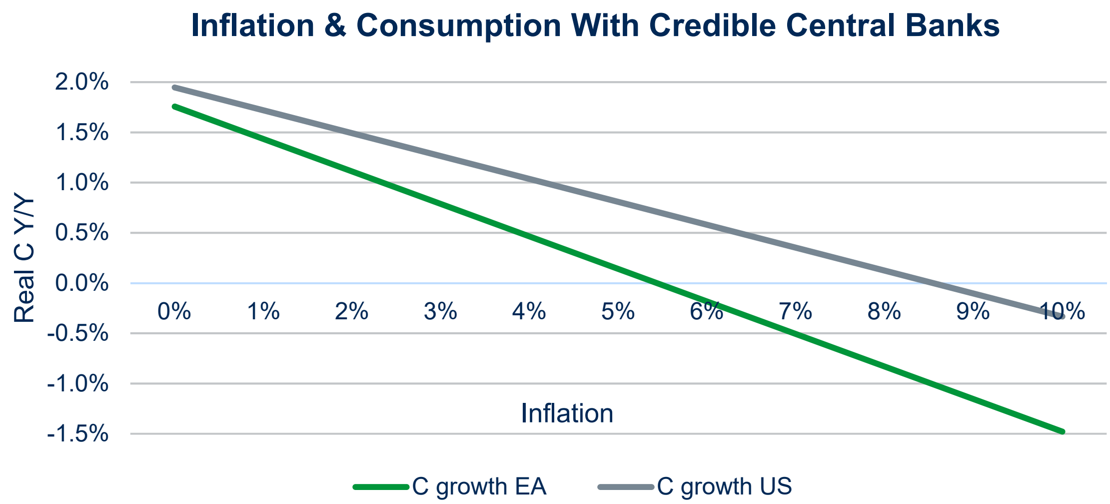
Employing the most commonly used models of private consumption and its drivers, we estimate the inflation rate that would cause consumption growth to turn negative under different assumptions of wage, employment, and fiscal transfers' growth, as well as financial and housing market returns. Consumption representing between 50% and 70% of GDP in Europe and the U.S., we consider these as the conditions needed for a recession to unfold. Please see the Appendix for details on the modeling techniques followed.

Scenario 1: *Credible central banks scenario*

In this scenario, central bank credibility and labor market rigidities keep wage growth anchored:

- Wage growth: accelerates, but mildly (from the current 5% to 6% in the U.S. and from 1.8% to 2.5% in euro area)
- Employment grows to pre-pandemic levels
- Unemployment rates remain broadly unchanged at 3.8% in U.S. and 7.1% Europe
- Transfer income grows as it did in strong fiscal support years (e.g. on the back of fuel subsidies in and other spending in Europe)
- Equity and bond returns are assumed average and house prices grow at the rate seen in the last four quarters (18% in U.S. and 8% in the euro area)

Under these assumptions, the relationship between inflation and real consumption growth is estimated as follows:



Source: Barings calculations and Haver. As of April 22, 2022.

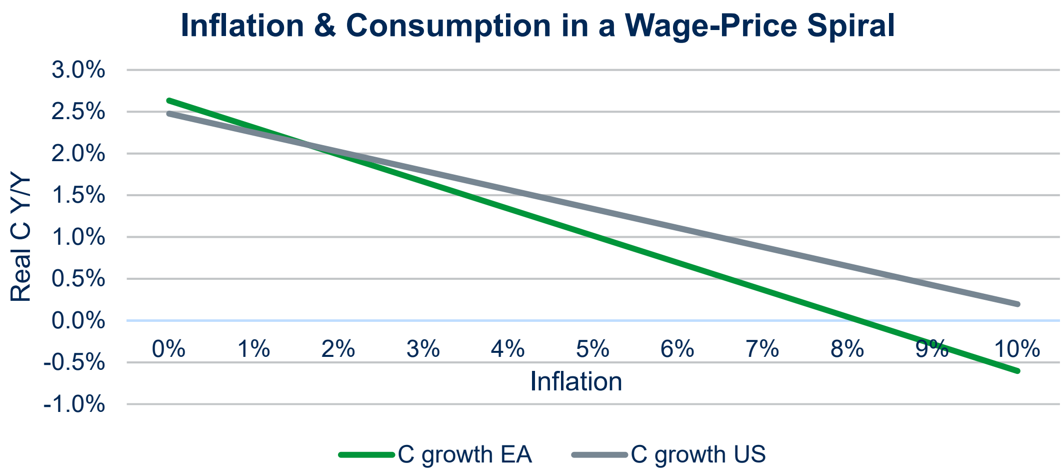
The vertical axis of the chart shows the estimated consumption growth at different levels of inflation in the next 12 months (horizontal axis). In the euro area (green line), a CPI inflation rate averaging 6% in the next 12 months reduces real incomes enough to bring consumption, and thus most likely GDP growth, into negative territory in the same time span. In the U.S., given the stronger dynamics in consumption drivers (wages, employment, and property income are growing faster), a much higher inflation rate is needed for real incomes and consumption to be hurt; for this to turn negative, CPI should average 9% in the next 12 months. In other words, a recession driven by high inflation seems an unlikely scenario in the U.S., but not so in Europe. That is, unless one expects inflation to average a number close to double-digit rates in the next 12 months.

Scenario 2: *Wages-prices spiral scenario*

Things are different if labor strength and/or unanchoring inflation expectations trigger a further strong acceleration in wages. To model this scenario, we hold the same assumptions behind the previous one, except for two changes:

- Wages accelerate strongly (from the current 5% to 9% in the U.S. and from 1.8% to 6% in euro area)
- Employment grows faster (by 3% in the U.S. and 2% in the euro area)

As expected, under these assumptions labor income growth is strong enough to compensate for inflation. This has to reach 9% to cause a recession in the euro area, and 11% to cause one in the U.S. This is a 1970s scenario, where central banks have lost control and, to regain it, need to engineer a sharp demand slowdown by hurting employment and wages. A very aggressive tightening becomes necessary.



Source: Barings calculations and Haver. As of April 22, 2022.

A Word of Caution: Long- vs. Short-term Determinants of Consumption

Notice that these simulations focus on the long-run determinants of consumption (income and wealth). No effect from indebtedness levels, interest rates, nor consumer confidence on consumption decisions is assumed. However, these play an important role in short-term dynamics. Qualitatively, one could argue that confidence is likely to be further hurt by the tightening cycles and the war, hindering consumption. On the other hand, large piles of extra savings, particularly in the U.S., should increase propensity to consume.

Should the post-COVID reopening make consumers confident and deploy their savings, consumption could prove stronger than we estimate, under all levels of inflation. On the other hand, should the war, energy shocks, and further inflation acceleration sap consumer confidence, the slowdown could be even more marked than we estimate. The impact of the latest consumer confidence drops on discretionary spending (e.g. durable goods, big-ticket items) will be crucial to understand which way this is going.

While the joint impact of savings and confidence is hard to gauge, as both look stronger and less impacted by the war in the U.S. than in Europe, the differences between consumption growth across the two sides of the Atlantic could be even more pronounced that in these simulations.

Conclusions: A Slowdown, Possibly a Recession in the Making

Unless central banks lose control of wage-price dynamics, the rate of inflation currently expected to prevail in Europe and the U.S. in the coming year (6%) will act as a substantial drag to private consumption, likely causing a sharp slowdown in U.S. growth and a recession in the euro area.

For central banks, the room for error is small. On one hand, they need to tighten policy in order to safeguard their credibility, thereby keeping peoples' beliefs that they will tame inflation. On the other, they must avoid exacerbating a slowdown that may be already in the making, as inflation is currently outpacing wage growth in both Europe and the U.S.

As monetary policy decisions taken today affect the economy in one or two years, central banks must strike this fine balance now, with huge uncertainty surrounding the inherent strength of the economy, the effect of multiple shocks ranging from the Russian invasion to lockdowns in China, and the degree to which the global economy has been changed structurally.

A soft landing to a new world of stable growth and inflation is possible, but it requires almost everything to turn out well.

Appendix – Private Consumption Modeling

For the euro area, we follow the "thick modeling" approach pursued in the ECB paper: "*Private consumption and its drivers in the current economic expansion*", ECB Economic Bulleting (5) 2018. Thick modeling is appealing because, instead of following one estimation technique, it averages the results of all the most commonly used techniques to get an estimate of the marginal propensity to consume out of income and wealth for the euro area consumer.

The models averaged in this thick modeling exercise use data from 1999 to 2018 to estimate the MPC out of the main income and wealth components separately: labor, property, rental and social transfer income, financial and non-financial (housing) wealth. Data on the relative shares of income and wealth sources in the euro area come from Eurostat, the EU Commission statistical office.

The yearly growth of real (net of inflation) consumption is estimated by the following equation:

$$C = I * MPC_I + W * MPC_W$$

Where I and W are the yearly growth in real income and wealth and MPC_I and MPC_W their marginal propensity to consume out of income and wealth, respectively.

Income and wealth growth are obtained assuming yearly growth in their main drivers, and then netting out inflation to obtain real income and wealth growth rates. Euro area income and wealth growth drivers and their assumed values under the credible central banks scenario are shown in this table:

	MPC	**Driver 1**	**Driver 2**	**Driver 1 Growth**	**Driver 2 Growth**
Labor Income	28%	Wages	Employment	2.5%	1%
Non-Labor (Property) Income	40%	Investment & Rental Income	Transfer Income	2%	6%
Financial Wealth	0.5%	Equity Returns	Bond Returns	6%	3%
Non-Financial (Housing) Wealth	0.4%	House Prices		8%	

While these values are assumed for the wages – prices spiral scenario for the EA:

	MPC	Driver 1	Driver 2	Driver 1 Growth	Driver 2 Growth
Labor Income	28%	Wages	Employment	6%	2%
Non-Labor (Property) Income	40%	Investment & Rental Income	Transfer Income	2%	6%
Financial Wealth	0.5%	Equity Returns	Bond Returns	6%	3%
Non-Financial (Housing) Wealth	0.4%	House Prices		8%	

For the U.S., we use the same equation used for the euro area. As for the MPC, we use the estimates appearing in "*The Distribution of Wealth and the Marginal Propensity to Consume,*" QJE 2017, the most-quoted paper on U.S. MPC estimation. We compare them with the estimates of the widely used Penn Wharton Budget model and, reassuringly, the two sets of estimates are remarkably similar, even if the modeling techniques are completely different. For information on the Penn Wharton Budget model please visit: https://budgetmodel.wharton.upenn.edu/

All other data comes from the BEA personal income and its disposition tables. In the credible central banks scenario, U.S. income and wealth drivers are assumed as follows:

	MPC	Driver 1	Driver 2	Driver 1 Growth	Driver 2 Growth
Labor Income	22.4%	Wages	Employment	6%	2%
Non-Labor (Property) Income	22.4%	Investment & Rental Income	Transfer Income	4%	5%
Financial Wealth	0.4%	Equity Returns	Bond Returns	7%	3%
Non-Financial (Housing) Wealth	0.4%	House Prices		18%	

While in the wages – prices scenario, they are assumed as shown in this table:

	MPC	Driver 1	Driver 2	Driver 1 Growth	Driver 2 Growth
Labor Income	22.4%	Wages	Employment	9%	3%
Non-Labor (Property) Income	22.4%	Investment & Rental Income	Transfer Income	4%	5%
Financial Wealth	0.4%	Equity Returns	Bond Returns	7%	3%
Non-Financial (Housing) Wealth	0.4%	House Prices		18%	

For both the U.S. and the EA, the two scenarios differ only for the assumed wage and employment growth.

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