Investment Managers

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Investment Institute *Macroeconomics*

The unequal impact of inflation: How governments are responding

How rising prices impact people differently and government responses

Macroeconomic Research

David Page
Head of Macro Research,
Macro Research – Core Investments

Key points

- Inflation has reached multi-decade highs in most economies, driven by rising food and energy prices
- Different economies face different inflation rates – as do differing income groups and individuals
- Low-income households typically spend proportionally more on energy and food; they are disproportionatley affected by inflation and less likely to have a savings cushion
- Governments have been quick to respond. Looking at the four largest Eurozone economies and the UK, measures began a year ago but have increased since February. They have accelerated further recently and we expect more to be announced over the coming months
- The latest measures have drifted from the least economically distortive approach. If this drift continues it risks conflicting with other longer-term goals of price and fiscal stability and emissions reductions
- The latest measures have not recognised the distributional impact of the energy shock. The longer-term distributional impact will be a complex mix of receding inflation, rising interest rates and recession

Inflation impacts low incomes hardest

Inflation has risen to multi-decade highs in most international economies, both developing and emerging. Most recently it has been driven by Russia's invasion of Ukraine, which has significantly impacted food and energy prices. However, beyond the headline measures of inflation, the effect of rising food and energy prices typically has a greater impact on lower-income countries, households and individuals.

In this paper we examine the differential impact of inflation on different income groups and consider how governments have responded. Government policies have increasingly moved from an initial tendency of targeted and income-based support, to something which is now looking more general and price-based. This creates tension with other longer-term goals such as price and fiscal stability and greenhouse gas (GHG) emissions reductions.

With high energy prices likely to persist, we fully expect additional fiscal announcements over the coming months, particularly from Eurozone economies. However, we review the measures that have been announced to date and consider some of the implications for income distribution.

Inflation in the eye of the beholder, or pocket of the spender

Globally, inflation is the highest it has been for decades. In the United States (US), inflation recently set a 40-year high of 9.1%, across the Eurozone it has reached a record high of 10%, including 10.9% in Germany, and it is around a 40-year high of 9.9% in the UK – and it is expected to rise further. This backdrop is not confined to the developed world; inflation has peaked at over 12% in Brazil, is currently at 8.7% in Mexico, 9.9% in Poland, 15.6% in Hungary, 7% in India, 6% in Indonesia and around 80% in Argentina and Turkey.

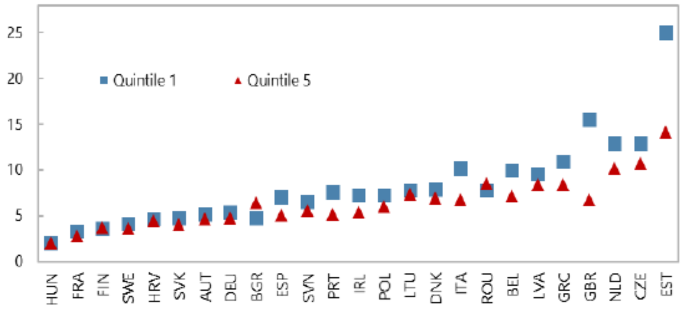
As the above list highlights, headline inflation rates vary widely between countries. They reflect the different composition of countries' consumption, including variations in energy imports and usage. They also reflect economies at different stages in the economic cycle (and development), those that are producing in excess of their potential capacity and those that are still below.

But inflation varies by more than just between countries; inflation is different for each individual, depending idiosyncratically on what they consume. For instance, US consumers who spend a large proportion of their income on information technology products have benefitted from falling prices, as annual average prices have fallen in excess of 7% from 1990 to 2022. In contrast, those who spend more of their income on energy have witnessed annual average increases of 4% over the same period and an average 25% from the start of 2021.

But it is even more complex than this. Even within certain price categories there can be large variations. For example, the current food price increases have been driven by a rise in wholesale food items including wheat, grains and cereals. Rice has not seen as fast a rise – in a large part because production has not been impacted by the Ukraine crisis. As such, nations whose typical consumption includes more rice than other food staples have generally experienced lower food inflation (something that has helped Asian economies maintain lower prices). Yet beyond that, products containing proportionally more of those staples, for example basic pasta, have seen larger proportional price increases driven by the sharper increase in total costs. This has led to 'value' items rising faster in prices than premium items[1]. So even within a single category like food, individuals can face different inflation rates depending on the type of foods they consume.

The current rise in inflation has had a disproportionately larger impact on lower income countries, households and individuals. This is in part because those with lower incomes tend to spend a larger proportion of their incomes on energy. Exhibit 1 illustrates International Monetary Fund (IMF) impact estimates – measured as a percentage of household consumption – of energy prices on the highest and lowest 20% of households by income across different countries. With few exceptions, lower income households face a bigger impact from rising energy prices than higher incomes and in some cases this is particularly stark, including the United Kingdom (UK) and Estonia.

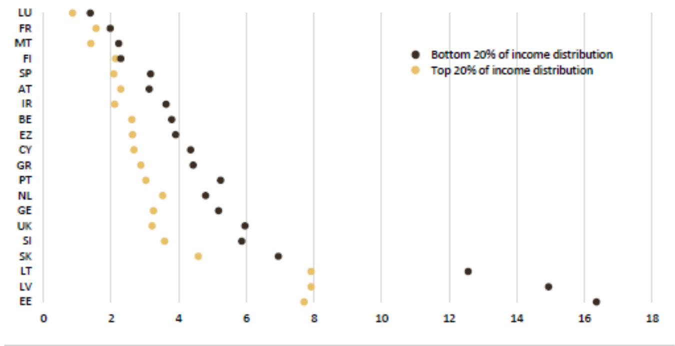
Exhibit 1: Distributional impact of energy price increase across countries (in % of household consumption)



Source: IMF, July 2022

When we add food into this comparison, this difference becomes even greater. Exhibit 2 shows an estimate of the cost-of-living increase from rising food, gas and electricity prices between the top and bottom 20% of the income distribution for European countries. The majority of countries sampled show at least a 1.5 percentage point (ppt) larger impact on lower income households than higher income households.

Exhibit 2: The cost-of-living increase from rising food, gas and electricty prices (Dec 2021 to Aug 2021, % HH consumption)



Source: Eurostat, ONS and UBS calculations

In some instances, there are examples of lower-income households seeing some mitigating benefits. For example, in the US non-supervisory wage growth has exceeded the headline measure by an average of 1.2% over the last year. However, on balance these larger adjustments to real incomes are having a greater overall impact on lower income households, which typically are more vulnerable, as they are less likely to have financial buffers to cushion the greater shock.

Governments to help support the vulnerable

In the face of this material cost-of-living crisis, governments have acted to soften the blow. However, many governments

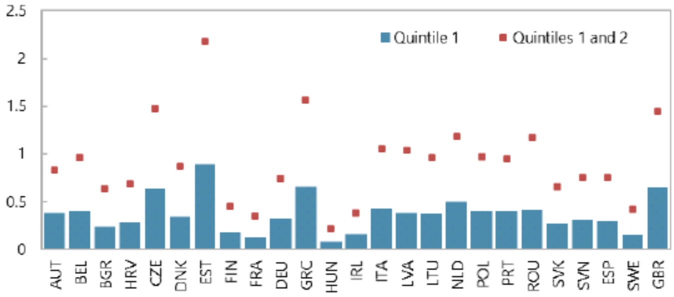
[1] Holmes, H., "Is Jack Monroe right about food inflation hitting the poorest hardest", The Grocer, 28 January 2022.

across the globe have become materially more indebted following significant interventions during the pandemic. Moreover, with inflation so elevated, central banks globally have been tightening monetary policy to reduce aggregate demand relative to supply and restore price stability. Both prevailing dynamics constrain governments ability to act.

The IMF considered the impact of energy inflation and how governments should ideally craft support[2]. It suggested:

- **Policies should preserve strong incentives for conserving energy and transitioning from fossil fuels**. Although the IMF accepted that as a temporary measure price suppression used for a short-lived shock could be acceptable, it advocated preserving price signals for the longer term. It suggested measures of income support, rather than energy cost adjustment, or volume-based subsidies to create incentives for demand reduction.

Exhibit 3: Cumulative revenues to fully compensate lower-income households (% of GDP)



Source: Bloomberg, Eurostat, IMF, July 2022.

- **They should be cost-effective, time-bound and targeted.** Exhibit 3 illustrates the IMF's estimated cost of support to the lowest 20% and 40% of households across different countries. This aims to protect households that most need it while limiting government intervention, which in turn slows the adjustment in consumption, and minimises the additional build-up in public debt. The IMF suggested windfall profit taxation "can be an option" but warned that careful design would be necessary to avoid "unintended consequences", strictly limiting this to "excess profits".

- **They should not aim to offset the loss of real income, but rather aim to protect poor and vulnerable households**. The IMF went on to add that fiscal policy should not add to aggregate demand to avoid exacerbating price pressures. Several central banks have discussed the increased need for additional tightening of monetary policy in the event of loosening fiscal policy.

- **Support for firms should be more considered, limited to liquidity support for otherwise constrained firms, with special considerations for energy importers and distributers.** The IMF equally advocated a quantity- rather than price-based subsidy to preserve energy saving incentives and lowering GHG emissions.

Review of government measures

Appendix A presents a detailed table of measures introduced by governments in the larger Eurozone economies and the UK in response to the growing impact of rising energy prices. Exhibit 4 provides a breakdown of the estimated measures announced for each country as a proportion of 2021 GDP, although we caution that some of the large costs that are estimated by governments will be subject to significant variation, depending on the future path of energy prices. We also warn against direct comparison of some measures, with for example the UK having announced a two-year price freeze programme, versus most European countries that have been rolling measures over shorter time frames and are highly likely to continue to add to measures over the coming quarters.

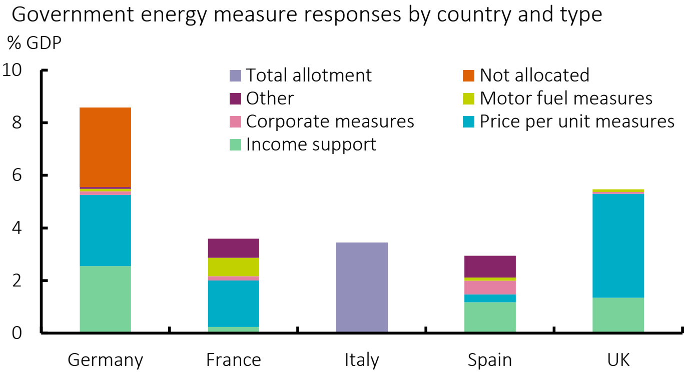
Initially, at least, government appear to be following IMF prescriptions, providing support against rising energy prices by boosting incomes rather than interfering with prices. France was an early mover in this regard providing one-off €100 'social bonus' to 5.8mn households, plus a means-tested additional €100 on top from last autumn. Since then, each of the five countries covered in detail has employed a range of one-off payments ranging from specific groups including lower income households, pensioners and students, to broader household payouts and have included cash payments, vouchers, benefits, increased tax thresholds and increased minimum and state wages (for civil servants). This covers a wide range of measures. However, our analysis suggests these income support measures have not been the largest of the measures announced by governments.

By contrast, governments have also embarked on a series of measures to suppress energy price signals, either directly or indirectly, against IMF recommendations. Again, France was the first to do this, capping energy prices in rolling short-term fixes from autumn last year, and which are now due to expire in early 2023 with 15% gas and electricity price rises. We believe a further deferral is likely. However, other countries have followed suit: The UK announced a two-year cap on household electricity costs per unit – although has subsequently reduced this to six months – and a similar package for corporates. Germany has also recently announced an 'economic defence shield' to provide subsidises to electricity and gas bills using a benchmark volume cap. Moreover, each country has lowered its value-added tax

[2] "Surging Energy Prices in Europe in the Aftermath of the War: How to Support the Vulnerable and Speed up the Transition Away from Fossil Fuels", IMF, 29 July 2022.

(VAT) rate on energy, also indirectly affecting the per-unit cost of electricity. In total, these measures will suppress the adjustment in consumption that high energy prices would otherwise have delivered.

Exhibit 4: Different government energy reactions



Source: European Commission, Breugel, OBR and AXA IM Research, October 2022

We have also seen a variety of measures introduced to support corporates. Several nations have reduced taxes and charges from a range of energy companies, while Germany (Uniper), the UK (Bulb energy) and France (Électricité de France) have each bailed out, and in France's case nationalised, energy companies to support the broader industry. Additionally, most countries have provided support for broader business. France and Spain have provided state-backed loans to businesses, with the former additionally providing further targeted measures for heavily exposed companies. Italy has been the most active, introducing tax credits and cuts for large users in autumn last year, but supplementing those this year to support transport, agriculture and fishing industries and other measures for the most affected productive sectors and small and medium-sized enterprises. The UK has also recently frozen business per-unit costs for six months and will announce further measures for vulnerable firms for after this period by year-end.

Governments also separately addressed the impact of rising oil prices on motor fuel costs. All countries have enacted some price per unit rebate on petrol/diesel (including Germany, France and Italy), on oil (Spain), or reduced fuel duty (UK).

There have also been a number of more innovative measures to address rising oil costs. Germany implemented a popular €9 per month public transport ticket for three months until August and is considering a similar €45-€65 per month ticket for next year to incentivise public over private (car) transport. Spain introduced a similar 50% reduction on public transport costs which started in September and will run to end-2023.

Finally, individual Eurozone government responses come against a backdrop of the broader European Commission plans to accelerate investment in non-fossil fuel generation[3]. REPowerEU built on Europe's already ambitious Fit for 55 proposals, which had proposed a reduction of 100 billion cubic metres (bcm) gas consumption by the end of the decade, proposing a further 53-78bcm reduction by 2030. We estimate this pace of reduction would have eliminated Russian gas dependency by 2025, although we are more sceptical of the likelihood of reaching the broader targets.

These wider plans may be somewhat further complicated by measures which have emerged as part of overall packages in recent years. For example, Germany removed its renewables surcharge last autumn in a bid to supress energy prices. Germany and Italy have both also announced windfall profit taxes, which may affect renewable companies' incentives to invest. Moreover, the UK, committed to a net zero target by 2050 and 78% reduction from 1990 levels of GHG emissions by 2035, made its task harder by removing its climate change levy and increasing North Sea oil drilling licences and removing a ban on fracking – although a caveat of "where there is local consent" might make this moot.

Governments have helped – politics trump economics in striking the right balance

In the face of the sharpest rise in inflation in four decades and the pressing energy price increases, governments have acted swiftly. But as the crisis has become more acute, governments have been pulled from providing targeted income support to vulnerable households to a broader ranging set of measures. And these measures threaten to raise public debt levels unnecessarily higher, cut across broader macroeconomic goals (restoring price stability and fiscal stability) and climate change targets – and delay the readjustment to what looks likely to be a persistent period of elevated energy inflation.

From a distributional perspective, measures to provide targeted income support that would have provided most help where it was needed have become swamped by more blanket measures. With most Eurozone economies still yet to pass draft 2023 budget proposals it is too early to make a full distributional comparison. The UK's large fixed per-unit cost for all households for two years had stood out as the largest policy, most ill-suited to help with the uneven impact of inflation. It now proposes a six-month fix with a different scheme to be considered thereafter – with an implication that this will be more targeted in design.

That said, all interventions are likely to help cap headline inflation – the UK's measures are likely to reduce peak inflation from around 14% to 11%. But additional measures in most countries raise the prospect of a slower decline in core inflation over the coming years, something that is likely to result in higher interest rates for longer. This will likely slow economic activity by more than would otherwise have been the case, making an analysis of the the longer-term distributional implications complex.

[3] "Page, D. and Eugene, O., "The impact of the Ukraine crisis on climate change", AXA IM Research, 7 June 2022.

Appendix A – Detailed summary of government measures

Country	Date	Measures	Cost (€/£bn)	% of 2021 GDP (total)
Germany	Q3-Q4 2021	- 43% reduction in renewable surcharge (EEG) in Jan 2022. EEG will be reduced to zero in Jul 22 - Support for households (tax relief, heating subsidies)'	8.7	10.9%
	March	- 3 months rebate, €0.30 for gasoline and €0.14 cents for diesel - taxpayers will receive a one time payment of €300 - one-off boost to child support of €100 - a monthly ticket for public transport at €9	35.3	
	July	- Uniper bail out - renewed support to energy and trade intensive companies	17	
	September (i)	- brake in the price for electricity used in basic consumption, subsidies to electricity grids to dampen the rising prices - one time lump sum of €300 to pensioners and €200 to students - increase of rent subsidies, child benefit, welfare payments - discussion on a new cheap train ticket (€45-65) to start in Jan 23 - changes on income tax brackets to prevent bracket creep - designing a reduced VAT rate on gas bills to compensate a new levy of €0.025cents per Kwh used to bail out Uniper from October - Loan guarantees for energy firms (67bn)	132	
	September (ii)	- €200bn "economic defense shield" (total amount not necessarily going to be all spent) - subsidise gas and electricity prices, using a benchmark volume cap, aiming at supporting both consumers and businesses	200	
France	Autumn 21	-Temporary caps on regulated energy price hikes (gas price frozen since Oct 1st, electricity price capped at 4%) - social bonus for energy bills (€100) for 5.8mn households - Means-based €100 transfer to 38mn in Dec 21 and early 22	22.3	3.6%
	March	- fuel rebate of €0.18 until end of June 22 and ask oil companies to make another effort of €0.10 - targeted measures for heavily exposed companies such as transport, agriculture, fishery…etc (state guarantee loans, delayed taxes, extension of part time working scheme) - new fiscal incentives to accelerate energy transition	11.5	
	July	- extension of the price shield on gas and electricity until year end - increasing wages for civil servants (3.5%), pensioners (4%), social benefit (4%) - €0.30/lt rebate on fuel prices - food voucher worth €100 per household + €50 for each child; elimination of the TV licence fee - EDF nationalisation (€10bn)	18.1	
	August	- fuel rebates of €0.30 in Sep, Oct, €0.18 cents then until year-end	20	
	September	Extension of cap on energy prices into 2023 for households, SMEs. Regulated electricity prices will rise by 15% in Feb 23. Regulated gas prices, which have been frozen since Oct 21, will rise by 15% in Jan 23. In addition 12millions low income households will receive one-off payments of €100 or €200 (depending on income bracket). Cap on gas and electricity will have a net cost of €16bn (gross €34bn), funded by transfers from renewables electricity producers. One off transfers will cost €1.8bn. Government also decided on front-loading increase in pensions and social benefits.	17.8	
Italy	Q4 21 - Q1 22	- Reduction in natural gas and electricity renewable charges, natural gas VAT reduction to 5%, social bonuses for 3mn HH - Tax credit for all energy intensive companies (20% of the cost of energy consumed in Q1 2022), reduction of system charges and taxes for large users	16	3.4%
	March	- Fuel rebate of €0.25 until end of April - number of vulnerable low income households for which rise will be capped rose to 5.2mn (from 4) - Excess profits tax on some energy companies - specific interventions for firms in transport, agriculture, fishing	6	
	April	- €5.5bn helping the most affected productive sectors - system charges on electricity bills will be kept at zero - VAT on gas bills will be fixed at 5% - social bonus extended for all low income households	8	
	May	- extension of the €0.30/ltr tax cut on car fuels until 8 July, - a €200 one-off energy subsidy for households with less than 35K annual income, - €200mn grants for SMEs directly exposed to the rise of energy price, - a multi year €7bn fund aimed at adjusting costs of planned public works to higher raw material prices (of which €3bn this year)	14	
	June	- New energy package aid worth €3.3bn of which extension of the reduced 5% VAT rate on gas bills, suspension of general system charges in the electricity system	3.3	
	September	- €6bn to cover the extension of cut on VAT on gas bills, fuel levies (€0.30), €5bn for cancelling off taxes on energy bills. - 400 millions for townhalls and metropolitan energy's bills, public transport as well - extending tax credit - a new €150 voucher for workers and pensionners + €60 euro transportation bonus (for public transport)	14	
Spain	Autum 21	- Tax cuts to VAT, electricity generation tax and excise tax on electricity - caps on gas prices and minimum supply guarantee of electricity to 1.5mn of HH - Social bonus for electricity bill Mar 31 for 1.2mn HHs, thermal bonus (€90 per beneficiary)	2.7	2.1%
	March	- Lower VAT on electricity and taxes for electricity generator until end of June - oil rebates (€0.20) until end of June - State guarantees (€10bn)	6 (we exclude €10bn of state guarantee)	
	June-July	- Iberian exception : a price cap on gas is set at €40/Mwh for six months, then gradually increase from the seventh by €5 per month, then completely reconnected to european market / financed with extra charges imposed on buyers benefitting from the measure - VAT reduction from 10% to 5% on electricity bill - extension of €0.20 cents fuel rebates until the end of the year - 50% reduction on all monthly transport ticket - €200 subsidy for low incomes	16.8	
UK	Autumn 21	- Energy support package - council tax rebates and discount on bills in October - Government bailout of Bulb energy	10	4.1%
	23-Mar	- 5p cut in fuel duty - Increase in NI repayment thresholds	9	
	23-May	- £650 Cost-of-living payment to those on benefits - £300 Pensioner cost of living payment - Additional help with energy bills + £200 (now £400 in total) - £150 Disability Cost of living payment - £500m extra HH support fund	15	
	08-Sep	- Freeze energy bills at £2,500 (a cap on the price of electricity) for 6 months - Cap the per unit price of electicitiy for businesses for at least 6 months	60	

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AXA Investment Managers SA
Tour Majunga – La Défense 9 – 6 place de la Pyramide 92800 Puteaux – France
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