Inflation and Retirement - Thoughts

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Inflation is often thought of as being the change in the consumer price index (CPI) of a country. But in the real world, many aspects of this simple formula present critical issues for both those preparing for and those in retirement. Although this index may adequately serve as an aggregate measure for an entire country or a theoretical 'average' person, it may not accurately describe the change in the cost of consumption or living for you, me, or any particular individual or household. The purpose of this essay is to discuss these shortcomings.

But first, if such an index is only a theoretical construct without much relevance to a person, why is there so much interest in it? My answer is that it does have several useful and legitimate purposes, including serving as a signaling tool for decision-makers regarding the overall rate of change in the nation's prices, input to wage discussions, term premia for fixed financial instruments, basis for an aggregate inflation-adjusting mechanism such as annual changes in U.S. Social Security benefits[1], something for the media to highlight each month, a topic to complain about over dinner with friends, and, for those planning for retirement – how much savings should be accumulated to achieve a desired standard of living.

People are really affected by the actual cost of the goods and services they purchase every day. For instance, I have recently stared at the rolling digital pump readout moving from $60 to $100 while filling my car's tank of gas and my hot chocolate at Starbucks increased from $4.19 to $4.39 last week. I don't react emotionally to the latter so much, as I simply tap my card against a small screen, impervious to the 5% increase. But both types of change can make a big impact on many tight household budgets.

Inflation Measures

There has been a great deal written about what is the best technical measure of inflation – among the contenders have included:

- *CPI-W* (for urban wage earners and clerical workers)
- *C-CPI-U* (chained CPI) that more directly reflects substitution effects
- *CPI-E* (for the elderly), based on relatively small samples of people, with items not necessarily representative of where those aged 62 and older shop with, according to critics, not properly tracking widespread senior discounts
- *Elder Index*, a measure of the income that those over age 65 need to meet their basic needs and age in place with dignity

[1] This and subsequent references to U.S. Social Security benefits assume that the U.S. government 'fixes' the future financial position of the Social Security trust funds in a timely manner without a reduction in benefits.

- *Core inflation*, which excludes the cost of food and energy, prices of which can be volatile
- *Trimmed mean inflation*, which eliminates a percentage of both the smallest and largest price changes, sometimes 8% of them
- *Supercore inflation*, which excludes the cost of shelter; and
- *Median inflation*, developed by the Cleveland Federal Reserve Board, excludes extreme price movements of any kind, representing the change in prices of the good or service whose expenditure weight is in the 50th percentile of price changes

Each measure relates to price patterns that affect the theoretical average person who purchases the same market basket of goods and services every month. The change in their values can be looked at on a monthly, quarterly, or annual basis—the choice being a function of its application and the desired tradeoff between stability and responsiveness to different conditions. The indices that strip away extreme or unusual values have sometimes been used to attempt to indicate the embedded rate of price changes (also referred to as the self-perpetuating, entrenched, or persistent measure), although they do not consider changes resulting from the external environment, such as changes in Federal Reserve Board interest rate actions. Depending on the circumstances, they can result in similar or quite different values.

The CPI includes a relatively small substitution effect, that is, if the price of a good or service is greater than that of a similar or related good or service available at a lower price, the tendency of people is to purchase a less expensive good or service instead. This is reflected, to some extent, in the CPI-W, but to a greater extent by the chained CPI. Nevertheless, such substitutions only reflect broad averages—a household can make more or fewer substitutions than the average. It doesn't reflect the change in resources/income created by adapting to the changes affecting a particular individual's life cycle, for example, the reduction in cost from downsizing or moving to an apartment from a larger house, an unexpected dental bill, or needed major repairs to one's home.

Heterogeneity

In any case, there are very few 'average' people who buy the same market basket every month, and their prices can differ significantly depending on when and where they are purchased. The change in a household's cost of living from month to month is not the same as a country's inflation, no matter which index is used to measure the theoretical national average. The true cost of living relates to the individual, reflecting their particular needs, desires, and resources. Just like a person's discount rate is not necessarily the same as that observed in a financial market.

This heterogeneity is the result of several factors, including where the person lives, and how large the person's income, wealth, health, and frugality are. Key characteristics include:

1. *What a household consume*s.

   Indices measure the cost of goods and services[2] from a constant basket of similar quality across time, with or without substitution effects. But the content of a household's basket of goods and services can differ widely from time to time and from household to household. For example, differences between the family structure and consumption habits and those hypothesized in the index can differ enormously. No

[2] They are updated from time to time.

aggregate index can address the differences in the number, composition, or changes in a household or its needs that dictate the availability, amount, and use of its resources.

They also do not reflect the effect of such items as taxes[3], one-time purchases such as vacations, upsizing/downsizing, a new roof, or a medical emergency. Which measure to use will depend on the application – is it for a national policy decision or to assess how well (or poorly) a particular household is faring against its weekly budget or life cycle goals?

2. *The amount paid for each item*.

   Where you shop and your attitude toward how much you are willing to pay, influenced by peers and your socioeconomic status, affect the prices and quantity of the goods and services you consume. The economic concepts of local supply and demand can be consistent or inconsistent to national factors. Local conditions and peer pressures can play a role in the composition of a household's basket each period.

   The cost of living and its rate of change can differ dramatically by location. For example, the Elder Index indicates that the average cost of meeting the daily needs of those over age 65 represents 90% of the cost of living in rural West Virginia but just 38% in San Francisco. These costs and their changes over time can also differ dramatically by the individual household.

   A significant share[4] of a household's total costs relates to housing – usually a far greater share for those with limited income than for those with a high income. Rising housing costs especially affect those who rent (about a third of American households rent[5]). But most renters have leases, which means that their rent largely reflects the state of the rental market sometime in the past, so the official rent measures lag behind market rent changes, possibly by a year.

   The annual cost of owning a home is very different than the cost of renting one, although some costs are similar, particularly those either paid by the owner or implicitly passed through the rent charged. In the early fall of 2022, asking rent increased by 12% nationally and by more than 20% in the southern and western parts of the United States. Most American mortgages are fixed[6], rather than the variable nature of mortgage interest in many other countries, resulting in an even longer lag in many cases.

3. *Current or future consumption and saving*.

   Continuing with the housing example, neither renters nor owners have complete control over housing costs. Owners typically bear the brunt of the cost of a new roof or a new furnace, while both owners and renters are affected by changes in the cost of utilities. Some of these costs are uniform over the entire country, while others are very dependent on location. Those who rent tend to have a lower income than the owner, and in retirement may rely on Social Security benefits – but that program's benefits respond to annual changes in the CPI-W, which can offset some of these cost increases, even though not tailored to the individual. And the timing of furniture purchases is far from uniform over the life of the home, let alone over a year.

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[3] Taxes do have an indirect effect, as it affects everything from consumption, productivity, and take-home wages.
[4] It has been estimated that, on average, housing costs constitute about 32% of total costs and 40% of core costs.
[5] Just under 40% of those under age 35 own their homes, while at least 75% of those older than 55 do.
[6] About 37% of those who own a home do not have a mortgage.

The market basket of goods and services can also differ by an individual's risk and cost tolerances, as well as their socioeconomic/sociodemographic profile. For example, whether one's roof gets repaired can depend on how close a person is to selling it.

Changes in the cost of consumed goods and services can differ widely between those saving for retirement and those who are in retirement. It is generally accepted that, on average, retirees tend to spend relatively more of their income on health care and housing than those of working age, while spending less on food, beverages, and transportation. Between 1983 and 2003, the change in the CPI-E was running at about 0.4% greater than the CPI-W (for urban workers), but since then the difference has only been 0.05%. But premiums for Part B for Medicare are usually deducted from Social Security benefits, which usually increases more than CPI-W – although not in 2023 when Social Security benefits will increase by 8.7%, while the cost of Part B will decrease somewhat. And in both 2021 and 2022, the change in CPI-E has been less than CPI-W[7].

Inflation expectations over various periods can be quite important to society, its institutions, and individual households. For example, these expectations strongly influence the relative importance of current versus delayed consumption and savings, both regarding societal and personal decision-making.

- Societal expectations can, for example, affect economic growth, rates of savings and consumption—both their type and timing, investment returns, and discount rates. They also can indicate to the monetary authority the needed type, level, or duration of monetary policy changes.
- Personal expectations affect the level and type of personal consumption and savings, influenced by a person's experience, as well as what their favorite news source and friends think. Near retirement age, it can affect whether to continue working, take on a second or part-time job, or retire. And it can serve as an early warning signal to the pre-retiree as to how much needs to be saved and the extent to which retirees need to reduce their costs to achieve a desired standard of living.

Wage Inflation and Income

Although changes in income, especially in wages, may not be thought of as being relevant to a discussion of price inflation, it is important to not only recognize the pressure that changes in wages have on price levels, but also their effect on the ability to pay for goods and services. Sources and amounts of income include wages and other sources of income, including changes in the value of owned assets, such as equities and homes. The value of all of these can be volatile and can differ dramatically during a person's life and work cycle, as well as between people.

The real wage differential, the difference between the changes in wages and the change in price inflation over the same period, is an important concept in assessing the effects of inflation, wage-related income, and savings for retirement. In a macro sense and under 'normal' conditions, improvements in productivity and marketplace demand for a person's labor will result in a positive real wage differential, although sometimes with a lag. This is especially

[7] The 2023 Cost of Living Adjustment (COLA) is 8.7%, more than the corresponding 8% rise in the CPI-E. In 2022, the COLA was 5.9%, also greater than the 4.8% increase in the CPI-E. On average, those in their 60s and older devote more to medical care and housing and less to transportation, while the CPI-W had relatively limited weight for medical care. But over the past two years, transportation costs, largely gasoline, contributed disproportionately to inflation, with medical care less so.

applicable when inflation (or deflation) is surging. Real wages can deteriorate, at least temporarily, during which those actively working will see a reduction in their real wages – when inflation is often discussed in the media.

But this concept only relates to those working—for retirees, other than other sources of income, their standard of living is primarily affected by their expenditures on goods and services. It behooves those attempting to accumulate funds for use during their retirement to keep this in mind.

Conditions during periods of higher inflation can differ considerably for retirees and their families. Three situations might arise: (1) those retirees who depend primarily on fixed-income pension benefits or investment earnings will be financially challenged if the cost of their consumption increases, (2) those who are fortunate to have an adequate investment nest egg, including the value of their owned home, with a return greater than the rate of their inflation, will be in a favorable situation, and (3) if their retirement income primarily depends on Social Security benefits with its COLA for their retirement income, they will be in a neutral position if their cost of living changes in a manner consistent with CPI-W, although with a lag. In any case, if personal inflation is greater than that expected in retirement savings goals, then additional belt-tightening or other actions will be necessary.

The Vulnerable

Within any group, the income and other resources of many people and households won't be able to keep up with their costs. There has been and will continue to be at least some, and possibly a lot, of inequality and poverty.

Although I usually think about inflation in the context of those around me, who can 'afford' some inflation, have a decent retirement income, and can afford the services of a financial planner, those with a smaller amount of current income and resources often have a difficult time financially and may be forced to live a downsized lifestyle, especially as their marginal propensity to consume (to borrow economic terminology) is often greater than that of those with more income and resources. As James Baldwin said, "Anyone who has ever struggled with poverty knows how extremely expensive it is to be poor." It has to be remembered that it is the net of income less the cost of their goods and services that count for a standard of living, and many retirees have limited net income.

If inflation just increases a household's costs with no corresponding increase in their income, their financial position will inevitably deteriorate. Those without a contingent source of savings will be especially affected. While many of pre-retirement age face and meet the challenge of developing a way to save enough for a comfortable, or at least adequate, retirement, other retirees will be unable to work and will experience a challenging retirement. Despite this, most will somehow learn to adapt, downsize, and scrape by, possibly by working a part-time job. After rent, utilities, other daily necessities, and maybe having something available for a rainy day or funeral arrangements, there may be little left for food for one person, let alone a family. Some who live in a marginalized situation may end up going to bed hungry at night and skimp on even what is thought to be necessities, possibly even becoming homeless. This is the catastrophic side of inflation.

The cumulative effect of inflation can devastate the adequacy of planned savings for retirement, if any, without supplemental help.

Government Actions

In some cases, governments can offset some of the increase in the cost of living through subsidies[8], especially for the basics of living, such as gasoline (petrol) for cars, healthcare, bread, or milk. Although such subsidies might be greatly appreciated by less well-off individuals, they may at the same time mess up supply or demand for the products subsidized, possibly wreaking havoc on economies and finances, and when curtailed, can have a significant political effect. These tradeoffs are usually considered in public policy making.

Even though many societies are currently in the middle of a significant bout of high inflation (the fall of 2022), price pressures are, in most countries, unlikely to continue at current levels (above 7%) over a long period. Actuaries may have to confront the question of what the best long-run expectation of aggregate inflation is. Although unlikely to be flat and will certainly be influenced by perturbations and cycles, overall, it will probably, on average, be close to what the monetary authorities want it to be, as they normally have the power and the challenging responsibility to influence inflation through various monetary tools[9]. Although it is easy to assume that government will ride to the rescue, that is not guaranteed. Government decisions can play a crucial role in many people's future financial condition.

Uncertainty

Inevitably and importantly, future inflation and its components carry with them an inherently significant amount of uncertainty. It is good personal practice, at least to the extent it can be afforded, to accumulate some type of contingency fund – for the unexpected, which can include the cumulative effects of increases in the cost of living. And immediately after a one-time need is met, one needs to attempt to build up savings again, as compound costs and cascading risks have a habit of recurring. Although the extent of uncertainty differs by individual, the more fragile their finances are and the less margin has been provided for in the form of accumulated savings, the greater the need for additional funds.

To the extent that financial support is fragile, i.e., without adequate back-ups from either personal, family, community, or government sources – household finances will remain a challenge and a source of personal tension and stress.

"… an explosion of food and energy prices for those that are better off is inconvenience—for the poor people, tragedy."[10]

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[8] In some cases, such decreased prices are only available to those with lower income, while in others they are available to everyone.
[9] At least to the extent that you believe that, at least in large part, the amount of 'money' (whatever definition is used) is a primary driver of overall inflation, as Milton Friedman did.
[10] Kristalina Georgieva, International Monetary Fund Managing Director. September 2022.