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Part 1: Personal Finance

Question 1:

We will need to set up some parameters for our spreadsheet.

Projected Interest Rate: 6%

Projected Inflation Rate: 2%

Basic income Requirement: \$50,000

CPP Amount (Annual): \$16,375.20

CPP Age of Eligibility: 65

OAS Amount (Annual): \$8560.08

Age of Retirement: 55

Use these parameters to set up your spread sheet to analyze the amount required for retirement. You will need to account for the interest income on the initial amount, the income from OAS, and the income from CPP. You will need to increase the required income amount annually by the inflation rate. Assume that your initial capital contribution is subject to annual compounding interest.

Briefly explain your above choices:

Interest Rate: <https://www.bankofcanada.ca/rates/interest-rates/> As per the bank of Canada's website, the current repo rate is around 5%. I choose 6% as it accounts for interest rate fluctuation between higher and lower amounts, and it offers a generous balance of not overestimating nor underestimating.

Inflation Rate: The bank of Canada aims for the inflation rate to be around 2% given a margin of 1-3%.

Income Requirement: I choose \$50,000 as I personally do not tend to spend as much in a year and can get by with an annual spending of \$50,000.

CPP Amount: I picked \$16,375.20 since that is the maximum amount one can receive as per the CPP website. Note: the amount on the website is mentioned per month while I mentioned mine per annum.

CPP Age of Eligibility: Simply choose 65 since that was the minimum allowed.

OAS Amount: Maximum amount receivable multiplied by 12 to get per annum amount.

Age of Retirement: I simply do not find myself working beyond that age and I believe I can accumulate enough assets, income, and savings to happily and securely retire by 55.

Question 2:

How long does your savings last?

With the current parameters, my savings will last forever essentially. However, that is highly subjective to my annual expenditure.

How sensitive are your calculations to changes in the inflation rate? If the inflation rate increased by 2%, what happens to your results?

If the inflation rate increased by 2% which means for my case it goes to 4% then I would run out of my savings at the age of 94. By 93, I would be at the last of my savings which account to \$46.71. Beyond this my savings go into negative values. Given there are no changes to the other parameters.

Part 2: Reading Activity

Question 1: Why is big government spending and slow economic growth, such as the case of Italy, a particular problem? (Hint: Debt to GDP ratio). Explain.

Italy's high government spending and slow economic growth is a particular problem because it leads to an unsustainable debt-to-GDP ratio. The debt-to-GDP ratio compares a country's total debt to the size of its economy (measured by GDP). A high and rising debt-to-GDP ratio indicates that a country's debt is growing faster than its economy, which can eventually lead to a debt crisis. Italy's situation is concerning for several reasons:

Slow Economic Growth: Italy's economy is expected to grow by less than 1% this year. Slow growth means the country's GDP is not increasing fast enough to keep up with its rising debt levels.

High Debt Burden: Italy's net public debt in 2022 was 144% of its GDP. This means the country's debt is significantly larger than the size of its entire economy. Servicing such a large debt becomes increasingly difficult, especially if economic growth remains sluggish.

Rising Interest Rates: As interest rates rise, the cost of servicing Italy's debt also increases. If interest rates exceed the rate of economic growth, the debt-to-GDP ratio will continue to rise even if the government balances its budget.

Reduced Private Investment: High government spending can lead to reduced private investment and slower economic growth. As public spending increases, it may lead to higher wages which cut into company profits, thus reducing private investment.

If Italy continues to run large budget deficits while its economy grows slowly, its debt-to-GDP ratio will keep increasing. At some point, investors may lose confidence in the government's ability to repay its debts, leading to even higher borrowing costs and potentially a debt crisis. To avoid this scenario, Italy needs to implement reforms to boost economic growth and reduce its budget deficits to put its debt-to-GDP ratio on a sustainable path.

Question 2: Explain why Italy pays higher interest rates than Germany.

Higher Debt-to-GDP Ratio: Italy has a much higher debt-to-GDP ratio than Germany. In 2022, Italy's net public debt was 144% of its GDP, while Germany's was significantly lower. A high debt-to-GDP ratio indicates that a country may have difficulty repaying its debts, which makes lending to that country riskier. As a result, investors demand higher interest rates to compensate for this increased risk.

Slower Economic Growth: Italy's economy has been growing at a slower pace than Germany's. Slow economic growth makes it harder for a country to reduce its debt burden and can lead to concerns about its ability to repay its debts. This perceived risk translates into higher borrowing costs for Italy.

Political Instability: Italy has a history of political instability, with frequent changes in government. This instability can create uncertainty about the country's future economic policies and its ability to implement necessary reforms. In contrast, Germany is known for its political stability. Investors generally view political instability as a risk factor, which can lead to higher borrowing costs.

Investor Confidence: Germany is seen as a safe haven for investors due to its strong economy, political stability, and track record of fiscal discipline. As a result, investors are willing to accept lower interest rates on German government bonds. In contrast, investors may have less confidence in Italy's ability to manage its debt and implement necessary economic reforms, leading to higher borrowing costs.

ECB Policies: While the European Central Bank (ECB) sets a uniform benchmark interest rate for all euro area countries, the actual interest rates paid by individual countries can vary based on their specific economic conditions and perceived risk. As a result, countries like Italy with higher debt levels and slower growth tend to pay higher interest rates compared to financially stronger countries like Germany.

In summary, Italy pays higher interest rates than Germany because of its higher debt-to-GDP ratio, slower economic growth, political instability, and lower investor confidence. These factors make lending to Italy riskier, and investors demand higher interest rates to compensate for this risk.

3: “When Italy’s government, led by Giorgia Meloni, revealed its budget plans on September 27th, that yield-spread duly went up.” How did the yield-spread go up in such a short period? How does this affect the Italian government? (Do they pay a more back to existing bonds in the market?) (Wikipedia: In finance, the yield spread, or credit spread is the difference between the quoted rates of return on two different investments, usually of different credit qualities but similar maturities. It is often an indication of the risk premium for one investment product over another.)

The yield spread between Italian and German government bonds can change rapidly in response to new information or events that affect investors' perception of risk. In this case, when Italy's government led by Giorgia Meloni revealed its budget plans on September 27th, investors likely saw the plans as fiscally irresponsible, increasing the risk of lending to Italy. This perception of higher risk caused investors to demand higher yields on Italian bonds relative to German bonds, leading to a rapid increase in the yield spread.

The gap between the yields on Italian benchmark 10-year BTP bonds and safer German Bunds has risen to around 1.86 percentage points (186 basis points), the widest since late May. Morgan Stanley forecasted the spread would rise to 200-210 basis points by the end of the year, stating "The supportive factors that allowed the spread to reach our 160-basis point bull-case scenario have vanished. We expect higher fiscal deficits and weaker growth."

Impact on the Italian Government

A higher yield spread means that the Italian government will have to pay higher interest rates to borrow money in the bond market. This applies to new bonds issued by the government, not existing bonds that have already been sold. However, if the government needs to refinance maturing bonds or issue new debt to cover its budget deficit, it will have to do so at these higher interest rates.

Key impacts of a higher yield spread:

Increased Borrowing Costs: The Italian government will face higher costs to service its debt as it issues new bonds at higher interest rates. This can put further strain on the country's budget and make it more difficult to reduce the deficit.

Reduced Fiscal Flexibility: Higher borrowing costs may force the government to cut spending or raise taxes to meet its debt obligations, limiting its ability to implement its desired fiscal policies.

Investor Confidence: A rapidly widening yield spread can signal declining investor confidence in the Italian economy and the government's ability to manage its finances. This can lead to further increases in borrowing costs and potentially a debt crisis if not addressed.

To mitigate these risks, the Italian government may need to adjust its budget plans to demonstrate fiscal responsibility and regain investor confidence. This could involve reducing the planned budget deficit, implementing structural reforms to boost economic growth, and working closely with European institutions to ensure compliance with EU fiscal rules.

Question 4: “Should spreads on government debt start to spiral out of control, the ECB has committed itself to buying that debt.” What will “buying that debt” do to the yields of the bonds? How is this helping a government?

How the ECB Buying Government Debt Affects Bond Yields

When the European Central Bank (ECB) commits to buying a country's government debt, it can help to stabilize or reduce the yields on those bonds. This is because the ECB's bond purchases increase the demand for the bonds, which drives up their prices. Since bond prices and yields have an inverse relationship, higher bond prices result in lower yields.

For example, if the yield on Italian government bonds starts to rise rapidly due to investor concerns about the country's fiscal situation, the ECB can step in and buy Italian bonds. This increased demand from the ECB can help to counteract the selling pressure from other investors, stabilizing or even reducing the yields on Italian bonds.

How ECB Bond Purchases Help Governments

The ECB's commitment to buying government debt can help countries like Italy in several ways:

1. **Lower Borrowing Costs:** By stabilizing or reducing bond yields, the ECB's bond purchases can help to lower the government's borrowing costs. This means that the government can issue new debt or refinance existing debt at more favourable interest rates, reducing the cost of servicing its debt over time.
2. **Improved Market Access:** The ECB's support can help to maintain investor confidence in the government's ability to access bond markets and refinance its debt. This is particularly important for countries with high debt levels, as a loss of market access could lead to a debt crisis.
3. **Fiscal Flexibility:** Lower borrowing costs and improved market access can provide the government with more fiscal flexibility. This can help the government to maintain essential spending, invest in growth-enhancing projects, or implement necessary reforms without facing prohibitively high interest rates.

However, it is important to note that the ECB's bond purchases are not unconditional. The ECB has stated that its support is contingent on the country in question accepting budgetary discipline. This means that governments must still take steps to manage their finances responsibly and address underlying economic challenges to ensure long-term fiscal sustainability.

In summary, the ECB's commitment to buying government debt can help to stabilize bond yields, lower borrowing costs, and improve market access for countries facing fiscal challenges. However, this support is not a substitute for sound fiscal policies and structural reforms needed to ensure long-term economic stability and growth.