s:fi

SFI Public Discussion Note

Low Interest Rates in a Post-pandemic World

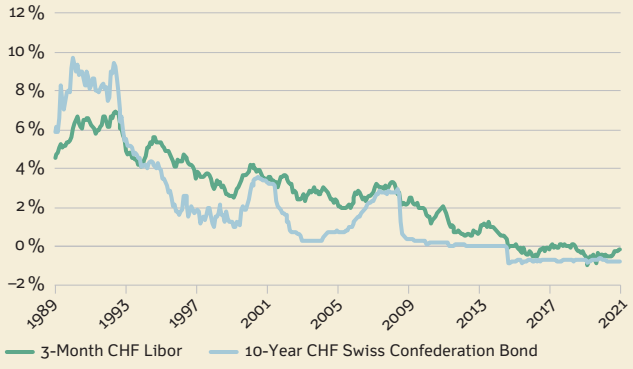
September 2021

Introduction

Prof. Philippe Bacchetta
SFI Senior Chair,
University of Lausanne

When the Swiss National Bank (SNB) set its policy rate at –0.75% in January 2015, this was considered an exceptional measure. More than six years later, the short-term interest rate is still at this level and long-term rates have also become negative. When will the Swiss economy return to positive interest rates? And what are the implications of negative rates? These questions, and several related issues, were addressed in the previous SFI Public Discussion Note, published in March 2020 just before the start of the pandemic.

Figure 1: Nominal Interest Rates in Switzerland



Source: Swiss National Bank

To what extent is the COVID crisis affecting the evolution of interest rates? In this Note, we revisit the issues related to low interest rates in the aftermath of the COVID crisis. We also provide some new perspectives not covered in the previous Note. Therefore, the current Note is complementary to the previous one.

We begin by providing a broader perspective on Swiss interest rates and show that they have not declined as much as in other countries. Swiss real interest rates have also become more correlated with global interest rates, so that we can no longer talk about the Swiss interest rate island. We then discuss the impact of the COVID crisis on the potential evolution of interest rates and inflation. We also discuss the role of monetary and fiscal policy. Finally, we review the evidence on the impact of low interest rates on the banking sector.

With its Public Discussion Note series the Swiss Finance Institute (SFI) is actively promoting a well-founded discussion of topics relevant to the financial industry, politics, and academia. Furthermore, SFI disseminates its findings through research, publications, Master Classes, conferences, and continuing education courses.

Part of the content of this Note is based on a study written for the Swiss Secretariat for Economic Affairs (SECO). Readers interested in a more detailed analysis can consult Bacchetta Philippe, Benhima Kenza, and Renne Jean-Paul (2021), "Understanding Swiss Real Interest Rates in a Financially Globalized World," Grundlagen für die Wirtschaftspolitik Nr. 25. State Secretariat for Economic Affairs (SECO), Bern, Switzerland [hereafter Bacchetta et al. (2021)].

Low and Negative Interest Rates: A Dual Phenomenon

The implications of negative rates are discussed at length in the previous Note, but it is important to clarify one basic issue. As inflation is very low, Switzerland is experiencing both negative *nominal* and negative *real* interest rates (real rate = nominal rate – expected inflation). This phenomenon is a historical first. Real interest rates have been negative in the past, after the two World Wars, as shown in Figure 2. However, nominal rates have not been negative before.

Figure 2: Real Interest Rate 10-Year Swiss Government Bonds since 1880

Source: Bacchetta et al. (2021)

It is useful to distinguish the different implications of nominal and real interest rates. Very low or negative *nominal* rates have a negative impact on the interest differential business, e.g., the banking sector, because it is difficult to charge negative rates on customer deposits. They are also problematic for monetary policy because they limit the ability to apply lower interest rates to stimulate the economy. These limitations emerge in a situation analysts describe as the Zero Lower Bound (ZLB) or the Effective Lower Bound (ELB). Central banks then need to use unconventional monetary policies such as quantitative easing. The SNB mainly relies on foreign exchange intervention for its monetary policy.

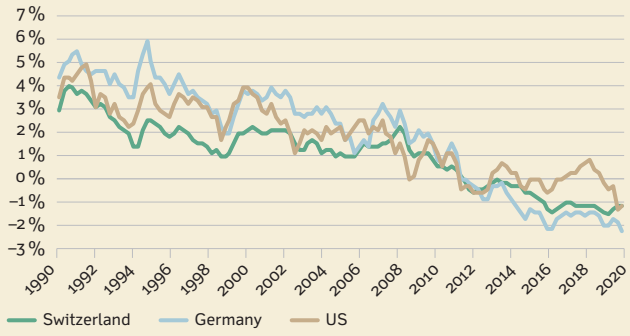
Very low or negative *real* interest rates have wider consequences that are not specific to banks or monetary policy. In particular, they benefit borrowers, who face cheaper funding and hurt savers, who will see lower future income. This may lead investors to consider more risky investments in a search for yield, and could threaten financial stability. It could also fuel mortgage borrowing and lead to a real estate boom. Recent experience also shows that a low rate environment may exacerbate inequalities: higher-wealth households benefit from higher returns thanks to their participation in financial markets, e.g., equities, while lower-wealth households face no returns on their deposits.

To illustrate the difference between nominal and real rates, imagine a situation where inflation increases sharply but real interest rates remain low. Nominal interest rates would increase, which would improve interest rate margins for banks and allow the SNB to raise its interest rate and return to standard interest rate policy. On the other hand, we would still be faced with the implications of low real interest rates. This also illustrates the benefits of somewhat higher inflation. Indeed, the Federal Reserve and the European Central Bank (ECB) have changed their policy framework with the objective of raising inflation expectations. At this stage the SNB does not find it useful to change its policy strategy.

The Decline in Global Interest Rates

In many countries, nominal interest rates started to decline sharply in the 1980s, in particular in the US Volcker deflation, i.e., after the very restrictive monetary policy conducted by the Federal Reserve. As for real interest rates, their decline started in the 1990s. Figure 3 shows the evolution of real 10-year government yields in Switzerland, Germany, and the US.

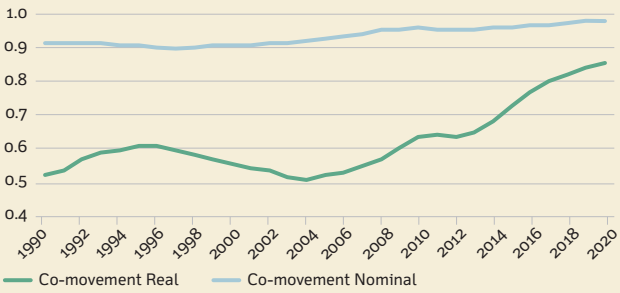
Figure 3: 10-Year Government Yield Adjusted for Inflation Expectations



Source: Bacchetta et al. (2021)

One can draw interesting lessons from Figure 3. First, the decline in real rates has been substantial: 3 percentage points over the last two decades. Before the global financial crisis, the real return on Swiss government bonds was about 2 percent, while it has been below -1 percent in recent years. Second, the decline in real rates is a global trend that can be observed in all developed countries. In fact, there has been a convergence of real interest rates, caused in particular by financial globalization. Convergence can be measured by an index of co-movement, since interest rates tend to move much more together. Such an index is shown in Figure 4. The convergence has been stronger for real rates than for nominal rates that already had high co-movements. Therefore, the decline in Swiss real interest rates cannot be attributed to Swiss-specific factors but is part of a global phenomenon.

Figure 4: International Co-movement of Interest Rates in Advanced Economies



Source: Bacchetta et al. (2021); the figure displays the share of the variance accounted for by the principal component of the interest rate in 17 advanced economies (on a 30-year rolling window).

A third lesson is that the decline in real interest rates has been smaller in Switzerland than in most other countries. The reason for this is that nominal interest rates and inflation were initially lower in Switzerland, so that there was less room for a decline. Switzerland, with traditionally low interest rates, has long been considered an "interest rate island." This is no longer the case. Figure 3 shows that the Swiss 10-year was systematically lower than the German rate until 2011, but that it has been higher in the last decade.

Interest Rates and the Safe Haven Status of the Swiss Franc

Lower interest rates in Switzerland have traditionally been explained by the safe haven status of the Swiss franc. But real interest rates are now higher in Switzerland than in Germany. Has Switzerland lost this status? Not at all. The strength of the Swiss franc shows its attractiveness. Based on survey exchange rate expectations, we can compute expected differences in returns. The results show that the risk premium or safety premium of the Swiss franc has even increased in recent years.

If the Swiss franc is still considered a safe haven, how can we explain that real interest rates are higher in Switzerland? There are two explanations. First, inflation expectations are typically lower in Switzerland, while nominal interest rates are at levels similar to German ones (since they cannot decrease much). Therefore, the real rate is higher. The second explanation is related to real interest rate parity. In recent years, the Swiss franc has been very strong and has been expected to depreciate in real terms. To compensate for this real expected depreciation of the Swiss franc, investors should be compensated by higher real interest rates in Swiss francs.

The Impact of COVID on Current and Future Interest Rates

Financial markets were significantly destabilized at the outset of the crisis in March 2020. However, the rapid and strong reaction of some central banks avoided major instability. For example, the Federal Reserve intervened quickly in the US Treasury market and bought massive amounts to offset large sales by various types of investors. It also extended swap lines to other central banks. Lockdowns and health-related disruptions also significantly affected the real economy and led to a deep recession in 2020. Fortunately, there has been a quick turnaround in 2021, but there remains a high level of uncertainty related to the extent of the recovery, due to the evolution of the pandemic and the emergence of new variants of the virus.

Surprisingly, interest rates have not been much affected by the pandemic shock. At the outset of the COVID pandemic, interest rates were already negative in Switzerland and very low in most countries, and they have remained so. By mid-2021 nominal bond yields were similar to their levels in early 2020.

While interest rate levels only experienced small movements, uncertainty about future rates has increased. There is uncertainty both about real rates and about future inflation. Given the recession implied by the pandemic, there are several fundamental factors that put downward pressure on both real interest rates and inflation. But there are also some factors that may lead to higher interest rates and inflation.

As mentioned before, the evolution of real interest rates has become a global phenomenon. Therefore, what matters is global saving and global investment: low investment and strong saving put downward pressure on real interest rates. The recent literature points to various factors that imply that private saving will remain strong and investment will remain low. As vaccination rates increase and economies recover, many households increase their consumption. However, the COVID crisis is likely to have a lasting effect on household saving: the dramatic situation during the crisis may affect risk aversion or the perception of future extreme negative shocks. The literature also points to an increase in inequality. Since high-income households have a lower propensity to consume, a higher level of inequality reduces the aggregate propensity to consume and thus increases the saving rate. The literature also mentions potential long-lasting changes—caused by the pandemic—that might weaken investment or foster saving. These changes include, in particular, a loss of human capital due to the disruption of the pandemic, firm restructuring in various sectors, and a shift toward technological/services sectors. All these factors would imply a sustained period of very low real interest rates, in Switzerland and most other countries. However, we do not know at this stage how large and persistent these effects will be.

On the other hand, real interest rates and inflation can increase if the recovery is very strong. Economic recovery has actually occurred faster than initially anticipated. However, it has been unequal across countries and across sectors. Also, there is high uncertainty regarding the evolution of the pandemic, due to the appearance of new variants. Uncertainty regarding the strength and persistence of the recovery therefore generates uncertainty about the future evolution of interest rates. By the summer of 2021, there had been no indication of a strong recovery, and the upward pressure on interest rates is thus weak.

There was an interesting debate regarding inflation in early summer 2021. Between April and June, inflation had been increasing in the US, reaching more than 5 percent, which is much higher than what was expected. The question is whether this is a temporary phenomenon, due to a base effect and to a series of bottlenecks in the wake of the COVID crisis, or the beginning of a period of a higher inflation. So far, the consensus is that this increase in inflation is temporary, and that long-term interest rates have not been affected. This recent debate illustrates the degree of uncertainty and the difficulty of making predictions about future developments.

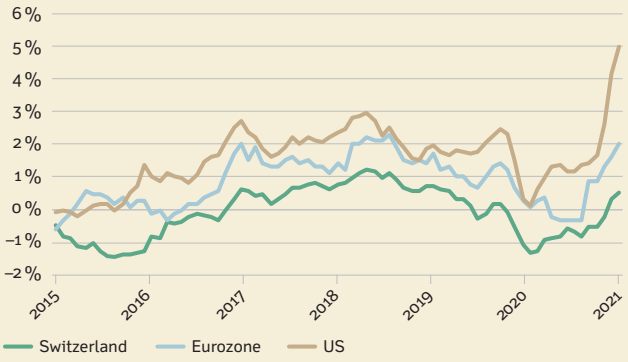
Another element pointing toward a period of low interest rates is a historical study of previous pandemics. By analyzing pandemics in previous centuries (e.g., the Spanish flu, or the Black Death in the fourteenth century), researchers observe a decline in real interest rates for several decades after. They also observe inflation rates below trend for a decade. Obviously, historical events were different in many dimensions. For example, there were no active fiscal and monetary policies, as there are in the current crisis. Therefore, this evidence does not give us a precise prediction, but a long period of low interest rates and inflation after the COVID pandemic would be in line with historical precedent.

The Role of Monetary Policy

Several central banks played a key role in stabilizing the impact of the pandemic shock. In particular, the Federal Reserve lowered its policy rate and purchased large amount of domestic assets. The SNB played a much more limited role as it could not lower its interest rate further and does not buy domestic assets. But it was able to stabilize the Swiss franc through foreign exchange interventions. The SNB also recommended the relaxation of Swiss macro-prudential policy by reducing the capital requirement of banks in the context of the countercyclical buffer. It also implemented fiscal policy through COVID loans (COVID-19 refinancing facility).

As for future interest rates, national monetary policies have little impact on real long-term interest rate, as they are determined globally by real factors. But they could affect inflation expectations. It is in this spirit that the Federal Reserve and the ECB have recently changed their monetary policy strategies. The Federal Reserve now targets inflation to be on average 2%. This means that the Fed will allow inflation to be above 2%. The ECB also targets inflation to be around 2% and will react symmetrically when inflation is above or below this target. Other central banks may follow, but at this stage the SNB is not considering such a change. It has expressed skepticism on the impact of this change on inflation expectations. If other central banks move toward less restrictive monetary policies, this could naturally put pressure on the Swiss franc.

Figure 5: Annualized CPI Inflation Rates



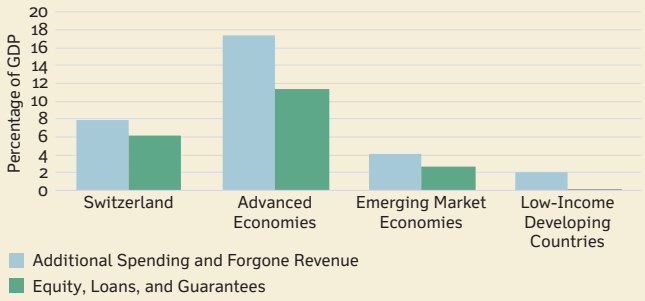
Source: Federal Reserve Bank of St. Louis

When interest rates increase, central banks will be able to return to their standard interest rate policies. But this will also raise a challenge related to their large balance sheets. To what extent and at what speed should central banks undo their quantitative easing operations and sell their assets? The answer to these questions will definitely condition markets when interest rates start to increase.

Low Interest Rates and Fiscal Policy

In many countries fiscal policy played a key role in the reaction to the COVID crisis. Countries with fiscal space were able to implement support measures through transfers and loans. Extended unemployment benefits and short-time work compensation played a key role. These policies have been widely discussed in the Swiss context. Although these fiscal measures could have been even more generous, they helped in dampening the recession. Figure 6 shows that the fiscal response to COVID was substantial on average in advanced countries, especially in the US, and in Switzerland was much lower than the average. But it was even lower in emerging market economies and less developed countries.

Figure 6: Fiscal Response to the Covid Crisis (IMF Estimates July 2021)



Source: International Monetary Fund

The fiscal reaction to COVID is combined with the usual impact of a recession on public deficits, with a reduction in tax income and an increase in transfers. This has been generating substantial fiscal deficits in 2020 and 2021 in many countries. This is also sharply increasing public debt, although it is too early to have precise numbers. An increase in global public debt puts an upward pressure on interest rates. So far, this pressure has not materialized because central banks have purchased a large share of the debt increase through their operations of quantitative easing. When central banks unwind their positions, the upward pressure from increasing public debt will counter the other factors pointing to low interest rates.

An important question is whether fiscal policies should be adjusted to generate surpluses in the next few years to reduce public debt. Countries that already had high public debt levels before the COVID crisis may face difficulties rolling over their debt and may require adjustments, or even restructure their debt. It is to be hoped that this situation will not escalate in a wave of sovereign debt crises. Given inequal recovery from the crisis, this is a real risk for less developed economies.

For those countries, like Switzerland, that started with low public debt there is no need to generate surpluses by reducing public spending or by raising taxes. On the contrary, fiscal austerity will slow down the economic recovery and will put downward pressure on interest rates. Some economists even argue that countries could keep reasonable fiscal deficits. To illustrate this point, consider a simple example. Assume that Swiss public debt represents 50% of GDP, that nominal GDP grows at 2%, and that the interest rate on government debt is zero. In this scenario, public debt to GDP naturally declines even if there is no fiscal surplus. With a zero primary surplus, public debt to GDP would decline to 41% after 10 years. Alternatively, public debt could be maintained at 50% even if the government runs a deficit of almost 1% of GDP.

It is sometimes feared that large levels of public debt could lead to a burst of inflation to deflate the debt. Although there are several historical episodes with high inflation and large public debt, this is unlikely to happen in modern times. Indeed, it is difficult to see an explosion in inflation as prices are rigid and central banks do their best to control inflation. If inflation gradually increases, nominal interest rates will increase, so that the real cost of new debt is not reduced. In other words, there is limited scope for inflation reducing public debt in advanced economies.

Negative Interest Rates and the Banking Sector: What Do We Know?

As already mentioned, negative nominal interest rates hurt banks when they do not charge negative interest rates on their deposits. Banks also suffer from any decline in long-term rates since banks typically benefit from positively sloped yield curves as they face longer term rates on assets than on liabilities. In this context, it is important to know whether negative interest rates can destabilize the banking sector by squeezing profits, with potential implications for the real economy.

Somewhat surprisingly, recent international experience does not show a systematic bank profits decline in countries with negative interest rates. This is in particular the case for Switzerland. There are actually a growing number of empirical studies analyzing the impact of negative interest rates on bank profits. The broad finding confirms that, in aggregate, lower interest rates exert at most a modest negative effect on bank profits. There is some evidence that smaller banks that rely more heavily on retail deposits have experienced a stronger negative impact, but there is some debate about this result. There is also some evidence that bank profits decline in prolonged low interest rate environments. While low interest rates may induce a search for yield and increase the riskiness of assets, any increase in risk has not impacted profits so far. But this is an outstanding risk.

There are numerous factors that can explain the limited impact of negative interest rates on bank profits. They include:

- Banks receive negative returns only on a proportion of their assets, especially if there is a tiered reserve remuneration, as in Switzerland.
- Deposits only represent a share of banks' liabilities (about half for the average of Swiss banks).
- Banks have been able to charge negative rates on corporate deposits, so that only retail deposits of limited size face a lower bound on rates.
- Banks have increased their fees on deposits.
- Banks have restructured their activities toward fee-generating and trading activities.
- Banks have benefitted from capital gains.
- Lower interest rates contribute to a stronger economy and to more resilient borrowers.

It should be noted, however, that this evidence is still based on only a small number of years. It remains to be seen whether negative rates still have only a limited impact on profits in the longer run, especially for institutions that depend more on deposits.

Conclusion

The objective of this Public Discussion Note is to provide an updated perspective on the low interest rate environment. Negative nominal interest rates are a new phenomenon and our understanding improves as time passes. There is high uncertainty regarding the future evolution of rates, but many factors point to a prolonged period of low real interest rates. A scenario of many more years of very low real rates is entirely possible. While very low interest rates seem to have had a limited impact on the banking sector so far, a prolonged period may have more fundamental implications.

An increase in inflation appears more likely in the medium term. This would imply that nominal rates could start increasing. This would allow central banks in many advanced countries to return to their more traditional interest rate policies. This return may take longer for the Federal Reserve and the ECB, since their new framework potentially allows for more inflation. Central banks will have to unwind their massive purchases of assets. The potential impact of these operations is uncertain as we have never lived through such an experiment. Fiscal policy wil also play an important role in the years to come. Countries with high debt levels have limited space for action, but low-debt countries can contribute to ending the negative interest rate period with non-restrictive fiscal policies. There are interesting times ahead of us.

Swiss Finance Institute

The Swiss Finance Institute (SFI) is the national center for fundamental research, doctoral training, knowledge exchange, and continuing education in the fields of banking and finance. SFI's mission is to grow knowledge capital for the Swiss financial marketplace. Created in 2006 as a public–private partnership, SFI is a common initiative of the Swiss finance industry, leading Swiss universities, and the Swiss Confederation.

This publication was printed on sustainable "Refutura" paper, which is certified with the "Blue Angel" label.

swiss:finance:institute

Walchestr. 9, CH-8006 Zurich, T +41 44 254 30 80
info@sfi.ch, www.sfi.ch

Version 09/2021