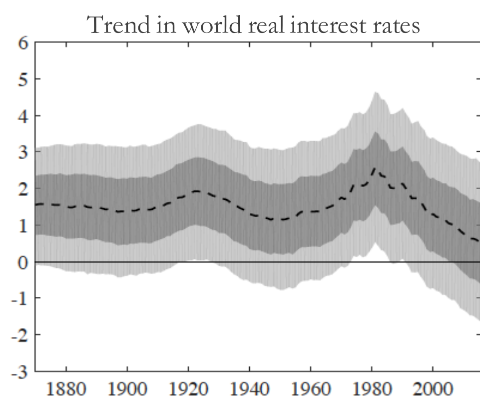
Introduction

Real interest rates have been fluctuating around 2% for safe and liquid asset for nearly a century before they entered a downwards trend in the last thirty years. This trend is most prevalent in advanced economies where the rate on 10-year government securities has been around 3, 1 and 0.4 percent for the US, UK and Germany while Japanese rates are essentially at zero (as of January 2019). Low interest rates, especially negative rates, can have a very profound impact on the banking system and bank profitability. What has so far been banks' responses to various central banks' expansionary monetary policies? How do these institutions protect their bottom lines in such low rate environment? This paper will delve into the history and fundamentals of interest rates, look at the reasoning behind rate cuts and analyze the banking system's response to this external shock.

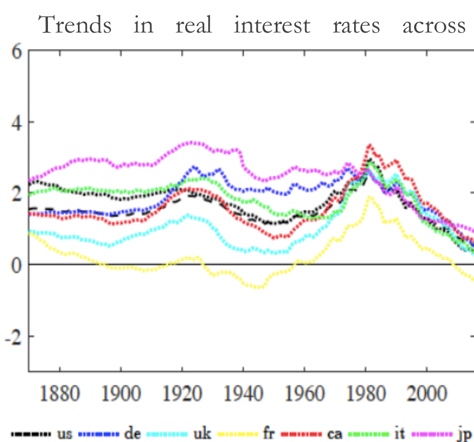
What has the interest rate trend been in the previous few years?

In virtually all advanced economies, interest rates have reached their lowest level in the last 150 years. In fact, some sources estimate real interest rates have dropped by about 2 percentage point over the last thirty years. At the time this article was written, the central bank rates for some of the world's most advanced economies stood at: 1.75% (USA), 0.75% (Australia), -0.1% (Japan), 0.75% (UK) and 0% (Europe, ECB). Roughly speaking, real rates had remained hovering around 2% up to the 1980s where they experienced a sharp decrease. Moreover, a discernible trends amongst interest rates is their convergence within most advanced economies in the last thirty years. The convergence of real interest rates, to the point where country-specific trends have nearly disappeared, is effectively in line with the growing integration of international capital and asset markets over the same period. Over the last fifty years, the increased liberalization of capital movements has helped bring global capital markets closer to the perfect arbitrage ideal, further nudging long-run rates into convergence.

Trend in world real interest rates



Trends in real interest rates across



Low interest rates in general can fundamentally be driven by two factors as outlines by Marco Del Negro in his 2018 paper "Global Trends in Interest Rates": convenience yields and global economic growth. The convenience yield is effectively the amount of interest investors are willing to forgo in exchange for liquidity and safety (equal to high quality securities). An increasing trend in global convenience yields point to an imbalance between the demand for safe and liquid asset and its supply. Such imbalances can be viewed as drivers for lower rates. Moreover, a global decline in growth rates, or growth rate of per-capita consumption to be more specific, has also played a factor in pushing rates to an all-time low.

Why do central banks engage in rate cuts?

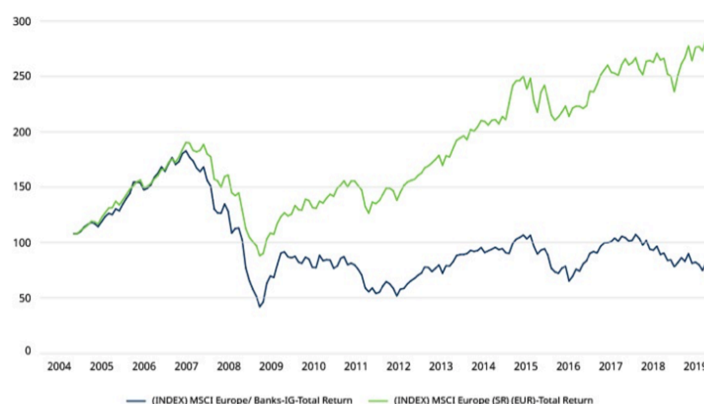
While having the possibility of a negative spillover onto the banking sector, central banks may decrease interest rates for a multitude of reasons which benefit the economy as a whole. Though expansionary monetary policy

i.e. rate cuts, central banks maintain a target inflation rate and attempt to prevent economic slowdowns. A low interest rate environment incentivizes both consumption and investment while offsetting import drops in the face of depreciating exchange rates.

In recent years, more than thirty of the world's central banks have cut their rates in order to shore up their economies. Interestingly, this effort to drop rates or enforce some sort of stimulus package in unison globally was last observed during the financial crisis. Indeed, many central banks today are concerned about a global economic downturn, trade conflicts and recession risk as a whole. Central bankers and policy makers today have very little room to maneuver as both interest rates and inflation are at historic lows in many countries, in turn leaving less room for encouraged lending and spending with cheap money. The focus here might be on cheapening the domestic currencies. A depreciated home currency results in cheaper goods and services exports while making imports more expensive. This mechanism helps to prop up domestic prices and might be the new objective of monetary policy when interest rates are immutable. It is important to bear in mind that exchange rate oriented monetary policies tend to be short lived and carry much geopolitical risk with them. Countries may be labeled currency manipulators or become engaged in a currency war.

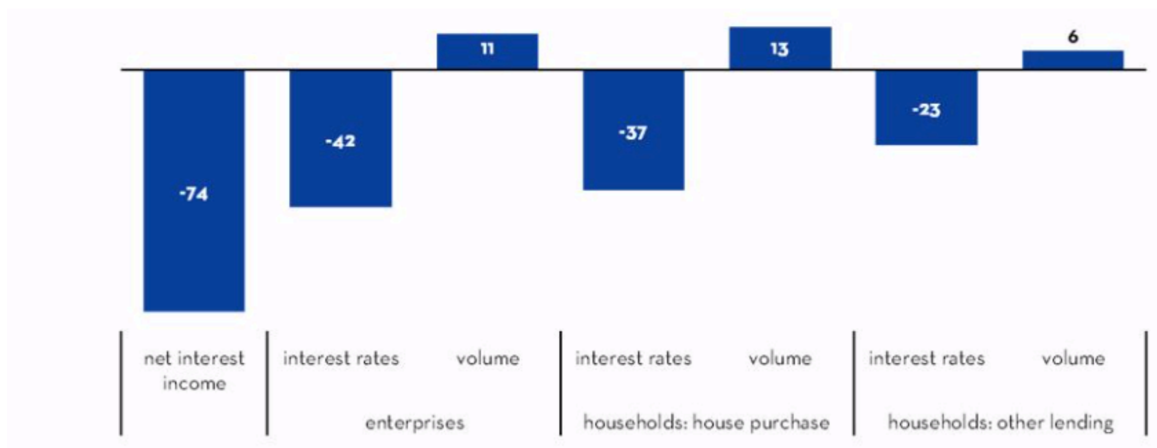
How does a low or negative rate environment effect the banking system?

The first note to be made here is that low interest rates are a symptom of an already weak economy; they are, after all, a stimulant meant to increase borrowing and investment. Thus, when talking about this low or negative interest rate environment banks are in, we must also recognize the stagnant economic conditions of many countries, especially those within the European banking sector. Indeed, most of these European banks are still facing losses as a result of NPL (non-performing loan) disposals *i.e. Italy*. The negative effect of low rates can correspondingly be observed in many banks' market underperformance. We may observe this using the Morgan Stanley Composite Index (MSCI), comparing European banks to Europe as a whole.



Monetary policy rate cuts tend to transmit directly onto banks' profitability through a clear transmission mechanism. Lower rates first decrease bank lending rates and, in the spirit of expansionary monetary policies, stimulate borrowing. Yet, from a bank perspective, the maintenance of profitability has everything to do with the spread between loan and funding rates. A narrow spread could potentially offset any positive effect from higher loan volumes. For example, banks with a substantial amount of deposit funding in negative rate environments would have a hard time transmitting rate cuts to depositors (as deposit rates generally don't fall below zero) and will suffer from a tighter spread. Lower policy rates also effect the return of financial securities, obstructing the flow of interest contribution and further squeezing the net interest income.

Lower rates do also have some positive effects on the banking sector, mainly on bank balance sheets. Lower policy rates result in higher financial asset valuations whose increase in price boosts the income statement. Furthermore, lower rates also decrease the probability of credit quality deterioration resulting in banks holding lower loan loss provisions. All these factors tend to have ambiguous effects on a banks aggregate income statement depending on the size and direction of their movements and need to be looked at individually for clear interpretation. That said, we can refer to the Euro area bank lending survey for the 3rd quarter of 2019 which clearly shows a negative effect on net interest income as a result of the impact of negative rates within the EMU:



What mechanisms do banks employ in order to maintain profitability?

Assuming banks maintain a zero floor for the rate on bank deposits, banks need to find mechanisms other than lowering their funding rate (deposit rate) to deal with lower lending rates. Coincidentally, lower policy rates generally translate into a reduction in the cost of other bank liabilities, namely debt securities. These lower security rates, however, effectively behave as a double-edged sword: lower funding rates also mean lower interest income from purchased securities such as government bonds. The overall result is more often than not a reduction in the banks' overall net interest margins.

We do, however, observe different results when taking into account the possibility of negative rates levied on depositors. Although this tactic is more common practice when talking about corporate and institutional depositors, there are banks which levy negative rates on retail depositors. In Germany, for example, where the rates hit an all-time low of -0.5% in 2019, surveys estimate 60% of German banks charged a negative rate on corporate clients and more than 20% on retail customers. When the detrimental effect of low or negative rates is passed on to depositors, the negative effect on the net interest income is much less pronounced (bear in mind that negative rate transfer on depositors can, at best, be partial). Banks, however, need to tread lightly when applying negative rates on depositors. In recent years we have seen a paradigm shift towards safer asset holdings by corporations. Non-financial corporations with large cash holdings might be willing to accept negative rate deposit accounts as "safe" and "liquid" assets to fund their need for liquidity and might not be able to continuously shift their deposits based on short-term deposit conditions. Smaller household and retail investors, however, who worry less about the soundness of their bank will have more of a propensity to switch to more favorable deposit conditions.

Banks can also combat the effects of low/negative rates by shifting focus to non-interest, profit generating activities such as fees and commission income. Areas such as asset management, transaction banking *i.e. payment*

services, foreign exchange, etc. and other fee and commission generating units within the banking sector have seen strengthening over the last few years. This, along with income generated from trading and fair value valuation increases (increase in balance sheet value due to lower rates) has helped boost gross income in the face of lower policy rates.

Tags: low interest rates, monetary policy, banking sector, European banking sector, bank profitability, corporate finance