

Interest Rate Effects on Personal Investors amidst Covid-19 Pandemic

Yoke Yue Kan

Henley Business School

University of Reading Malaysia

4 June 2021

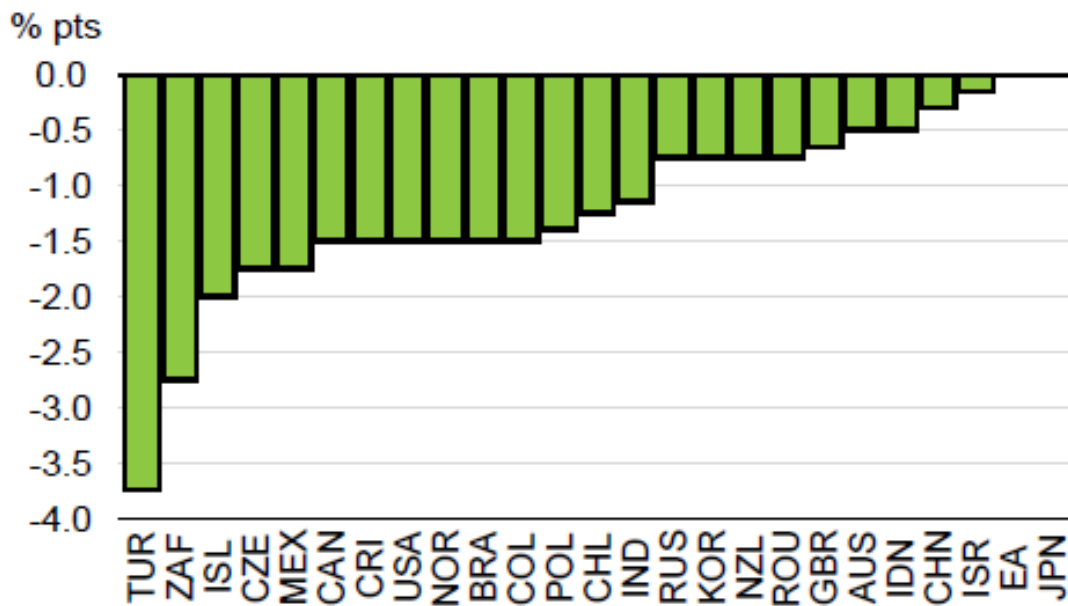
1. Introduction and Background

Negative interest rate policy (NIRP) becomes the central of discussion after the rounds of cutting policy rates by central banks in many countries in response to the Covid-19 pandemic. On 4 February 2021, the Bank of England gave a six-month period to British banks to prepare their systems for a possible negative interest rate policy (The Financial Times, 2021).

The unanticipated advent of Covid-19 pandemic in 2020 has caused loss of lives and economic hardship globally. Contact-intensive sectors, including tourism, hospitality, medical, global value chain, retail, energy, transportation, food, and a range of social activities, are particularly hard hit. The risk of financial turmoil is magnified with increasing debt levels and corporate bankruptcies. Financial markets have come under considerable strain, with market indexes fell in March 2020 and reach their lowest point since the start of the pandemic crisis. In addition, commodity prices have dropped and business and consumer confidence have turned down [(Congressional Research Service, 2020; OECD, 2020); (World Bank, 2021)].

Central banks in the many countries responded by cutting interest rates (Figure 1). The policy rates in advanced economies with sufficient policy space are lowered on average by around 1 percentage point in 2020 (OECD, 2020). Toward the end of year 2020, around 90 percent of advanced economy policy interest rates were below 1 percent, and one third were at or below zero. In emerging markets and developing economies, 20 percent central banks have cut policy rates below 1 percent (World Bank, 2021).

Figure 1 Change in policy interest rates since end-2019



Source: OECD (June 2020)

The objective of zero lower bound on policy rates is to mitigate the negative effects of the Covid-19 pandemic on domestic economy and to provide support for recovery. The uncertainty related to the coronavirus makes it essential for monetary policies to be supportive. The zero lower bound on interest rates are only partly the choice of the central bank as such policy also reflects the long-term, secular nature of specific economies, as well as the legacy of financial crisis (Bean, et al., 2015).

Amid the resurgence in Covid-19 cases, a deep economic recession and surging unemployment, the trend of ultra-low or negative policy rate would likely to continue for years. The normalisation of interest rates seems remote in near term due to uncertainty brought by the Covid-19 pandemic, the prolonged period to repair the economy and to return activity to pre-pandemic levels. Furthermore, the resurgence in the number of Covid-19 cases could lead to a renewed or partial shutdown of the economy in order to preserve lives.

Objective of Paper

This paper reviews the recent empirical research on ultra-low and negative interest rate policy and presents an analysis of the current environment. This paper contributes to the literature by exploring the consequences of ultra-low interest rates for individual investors after the outbreak of Covid-19 pandemic. Individual investors face a world with the uncertainty about when the pandemic will end. This paper aims to help investors understand the potential challenges faced when low interest rates persist.

NIRP may become even more important given that interest rates are currently extremely low and further accommodation actions may be needed in response to the current pandemic crisis. To present a balance view, this paper evaluates the effectiveness of NIRP, as well as the potential negative impact to individual investors. A comprehensive understanding the current environment and potential challenges will help investors plan and make better decisions.

This paper uses thematic analysis to identify themes from review of research journals (Rowley & Slack, 2004). I survey and review the nascent literature the last 10 years, in line with the implementation of ultra-low and negative interest rate in many countries after the 2008 Global Financial Crisis. I synthesize the themes identified and relate to how they will affect individual investors. The analysis in this article takes a broad view of recent development, and empirical research findings.

The structure of the paper is organized as follows. First, I review the empirical studies on the effectiveness of NIRP. Next, I examine the potential challenges and implications of current interest rate environment to individual investors. The final section of the paper concludes the main findings.

2. Is Negative Interest Rate Policy (NIRP) Effective?

Since the global financial crisis in 2008, the unconventional monetary policy has fuelled polarized debate on its implications. After a prolonged period of low interest rates, there is concern that a further decrease in interest rates will make little or no difference, and the impact on demand, growth and recovery may be modest. Worst still, instead of encouraging lending and spending, NIRP can even exposing the economy to greater financial instability, and may work in the opposite direction.

Using interest rates as a policy accommodation tool is not new. Negative interest rates have no precedent in economic history up to 2012. The first bank to do so was the Danish National Bank in July 2012, followed by the European Central Bank (ECB) in June 2014, the Swiss National Bank in January 2015, the Sveriges Riksbank of Sweden in February 2015, and the Bank of Japan in 2016.

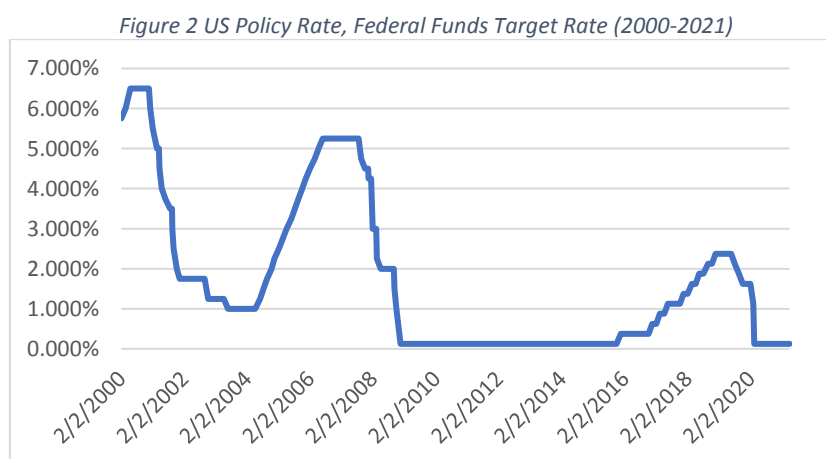
The world major economies, US, UK and China have never brought their benchmark policy rates into negative territory. In emerging markets, policy rates are generally higher due to supply and demand factor, economic strength, credit quality, inflation environment and risk. Table 1 summarizes the policy rates of major economies as of June 2021. The policy rates in most economies are either closed to zero or negative.

Table 1 Policy Rates of Major Economies as of June 2021

Country	Benchmark	Rate
United States	Policy rate, Fed Funds Target Rate	0.125%
United Kingdom	Policy rate, Bank of England	0.100%
China	China Policy Rates, Deposit Rate, 1 year	1.500%
Japan	Policy rate, Bank of Japan	0.100%
Euro Area	Policy rate, ECB Deposit Rate.	0.500%
Germany	Policy rate, Discount Rate/Short term euro repo rate	0.000%
India	Policy rate, Reverse Repo Rate	3.350%
Malaysia	Policy rate, Overnight Policy Rate	1.750%

Reference: Central bank’s website and author’s compilation

The Federal Reserve is not considering going into negative interest rate policy to date. Base on history record, US has used interest rate policy aggressively after the global financial crisis. The target level of the funds rate at the beginning of 2007 was 5.25 percent. The Federal Reserve cut the target by 1 percentage point over the last four months of 2007 and by an additional 2.25 percentage points over the first four months of 2008. After the events of September, it cut the target in three additional steps in October and December, bringing it to its current level of 0 to 0.25 percent (White House, 2010). In response to an improved outlook for the U.S. economy, the Federal Reserve began to normalize its balance sheet in December 2015. During the years 2016–18, the Federal Reserve raised its policy rate eight times. Though the Federal Reserve subsequently reduced rates on three occasions in 2019. With the outbreak of the Covid-19 pandemic, The Federal Reserve lowered its target for the Federal funds rate by 150 basis points to 0.125 percent at unscheduled meetings on March 3, 2020 and March 15, 2020 (White House, 2021). The US policy interest rate since 2020 was already near zero. The Federal Reserve may not be able to lower nominal interest rates below this zero lower bound (Figure 2).



Source: Refinitiv Eikon

Some research report that NIRP have served the intended purpose of boosting economic growth, and complementing the broader set of expansionary measures employed by central banks. Gambacorta, et al. (2014) find that an exogenous increase in central bank balance sheets at the zero lower bound leads to a temporary rise in economic activity and consumer prices. Czudaj (2020) empirically examine the effectiveness of the NIRP conducted by several central banks and find that the NIRP appears to be effective in boosting economic growth and overcoming a deflationary spiral. Through the signalling channel, the NIRP appears to be an effective monetary tool.

Others, however, emphasize financial stability risks associated with NIRP and claim that they may have weakened banks' willingness to lend, contributed to financial market distortions, further inflated asset prices, and delayed the implementation of necessary macroeconomic and structural policies (Arteta, et al., 2017).

In addition, the zero bound on interest rates poses a constraint on the ability of monetary policy to counter recession. When the policy rate has been driven down to zero, a central bank would not have sufficient policy space and can no longer use its traditional means of stimulating aggregate demand and counter downturn (Tokic, 2016).

The ineffectiveness of NIRP is evidenced in empirical literature. Borio and Gambacorta (2017) study a sample of 108 large international banks. They find that monetary policy is less effective in stimulating bank lending growth when interest rates reach a very low level. The impact of low rates on the profitability of bank's traditional intermediation activity helps explain the subdued evolution of lending in the period 2010-14 (Borio & Gambacorta, 2017).

Demiralp, et al. (2019) study a sample of 252 euro area banks and find that euro area banks that are most reliant on retail deposits and who hold excess liquidity significantly increase their lending to households and enterprises under NIRP. NIRP is instrumental in providing additional monetary policy accommodation in a situation in which euro area faced subdued loan dynamics, low output growth and inflation rates well below those consistent with its mandate (Demiralp, et al., 2019)

Using Italian data, Bottero, et al. (2020) find that NIRP has expansionary effects on bank credit supply and firm outcomes through a portfolio rebalancing channel. NIRP incentivized banks to reduce their holdings of low or negative yielding assets and expand credit supply to preserve profitability. This induces sizable firm-level real effects, especially investment and wages. There is no evidence of contractionary retail deposit channel (Bottero, et al., 2020).

Yoshino, et al. (2017) evaluate the situation of Japan after the Bank of Japan started NIRP in February 2016. They report that the role of monetary policy and the NIRP in Japan cannot help the country to recover from recession and deflation situation for the long term. The rate of return on investment must be positive and companies must be willing to invest if interest rates

were set too low. The recession in Japan is coming from structural problems that cannot be solved by the monetary policy (Yoshino, et al., 2017).

3. Potential Impact on Personal Investors

Although lowering interest rates could mitigate the negative effects of the Covid-19 pandemic, such policy is associated with various financial instabilities, particularly if the interest rates go substantially below zero or are employed for a protracted period. Using some recent studies that have examined the various implications of NIRP, we explore the potential challenges faced by personal investors going forward. In this section, I posit that there are five main risks that make the prolongation of ultra-low or negative interest rates counterproductive.

3.1 Repression on savings

Low interest rates may have implications for those who are more dependent on interest income, such as holders of savings accounts. When the rate of return to saving declines, it becomes more difficult to meet a target level of saving. Therefore, lowering interest rates may contribute to higher, not lower, saving rates. Savers may try to save more out of current disposable income to compensate the low rate of return. The consequence from low interest rates is anyone saving for their retirement will have to either save more, retire later or face lower income in old age.

Such tendency can be especially true in an economy with aging population, underdeveloped social protections, insufficient unemployment benefits, as well as gloomy and volatile economic outlook. Low interest rate is effectively a form of taxation and financial repression on savers. Financial repression will lead to the behaviour of precautionary depending on economic or policy conditions (Nabar, 2011).

IMF (2020) reports that household saving has risen to high levels in US, with household saved 23% of disposable income in May 2020, up from a saving rate of around 8% prior to the pandemic.

3.2. Low return for pension and life insurance

Investors who invest in institutional investment vehicles, such as mutual fund, pension fund and life insurance would face low return going forward. With persistently low or negative-yielding bonds, institutional fund may struggle to generate adequate returns to meet their long-term liabilities. This is because institutional investment fund often maintain portfolios with large government bond holdings in pursuit of stable, risk-adjusted returns.

The adverse effects of low interest rates are greater for funds that already have unfunded liabilities before the outbreak of the pandemic. Funding gaps of pension funds have risen since the global financial crisis to around 30% of total assets in the UK and the United States. (IMF, 2016)

Low interest rates are also bad for life insurance product and potentially exposing insurance companies to risk. Many life insurance and annuity products have embedded guarantee or attached rider that promise policyholders a minimum return over the duration of their policies. As interest rates decrease, the guarantee or rider can be affected. The returns and the solvency of life insurers might deteriorate and become increasingly sensitive to interest rates, as observed in the United States since the global financial crisis (Berends et al. 2013).

3.3. Risk-taking behaviour

NIRP aggravates risk-taking behaviours in two ways. First, borrowers are under no pressure to reduce their debt. Instead, negative rates could encourage them to borrow more. In addition, the ultra-low interest rates flatten the debt service ratio, painting a misleading picture of debt sustainability. Yet ultra-low or negative rates are not the solution to the debt problem, rather they aggravate it.

Second, the search for yield engineered by ultra-low interest rate policy could lead to more risk-taking where investors shift out of bonds and into riskier assets. Investors may form reference points of investment returns. When interest rates fall below the reference level, people experience discomfort, and become more willing to invest in risky assets to seek higher returns. The reference point can be shaped by what people have become used to over past experiences.

Lian, et al. (2019) find that individuals reach for yield and have a greater appetite for risk-taking when interest rates are low. Low interest rates lead to significant higher allocations to risky assets among diverse populations.

3.4. Appreciation in property prices

Ultra-low interest rate environment is a potential drivers of property price appreciation. The prolonged low interest rate environment incentivizes banks to increase real estate lending. In addition, low interest rates boost asset prices through the discounting mechanism. Any asset whose supply is fixed will benefit from ultra-low interest rates as its future cash flows are discounted at a lower rate. Therefore, property market, especially those in cities where it is not possible to build, will rise in price.

For example, condominium prices appear to be moderately overvalued in Tokyo, Osaka, and several outer regions, exceeding the values predicted by fundamentals by 5 to 10 percent (International Monetary Fund, 2020). According to UBS Global Real Estate Bubble Index, the majority of cities in property bubble-risk territory are from the Eurozone, where low rates are fuelling housing prices (UBS, 2020).

3.5. Income inequality

NIRP has the potential to affect income and wealth inequality. Changes in interest payments and receipts, higher financial asset prices, higher house prices and better labour market outcomes from a stronger economy have all been important channels through which such policy has affected the distribution of income and wealth.

Lowering interest rates reduce returns to lenders and increase those to borrowers. Most households will lose from the dwindling returns on their savings as they are not sophisticated asset managers who can realise capital gains in financial markets when long-term yields fall. The “new monetary orthodoxy” of imposing a tax on savers and providing a subsidy to borrowers is unlikely to result in higher global output or better living standards (Hannoun, 2015)

If policy affects wages and labour income, then households for which wage is the most important source of income will be affected by more. If monetary policy substantially alters asset prices, high income households which hold financial wealth will be highly affected. (Mumtaz & Theophilopoulou, 2017)

Some studies of the euro area, Japan, the United Kingdom, and the United States, have found that asset purchase programs have increased wealth or income inequality. The evidence from Mumtaz & Theophilopoulou (2017) suggests that the policy of quantitative easing may have contributed to the increase in inequality in UK over the Great Recession. Juan-Francisco, et al. (2019) find that unconventional monetary policy applied by the Federal Reserve in the USA could increase wealth and income inequality through the portfolio channel. However, such evidence was not demonstrated in the Eurozone. Taghizadeh-Hesasry, et al. (2019) find that the zero and negative interest rate policy of the Bank of Japan increased income inequality through a rise in the price of the financial assets that just benefited the rich income groups, which resulted in widening the income gap among different income groups.

4. Conclusion

After the outbreak of the Covid-19 pandemic, central banks in the many countries responded by cutting interest rates. This paper reviews the recent empirical research on ultra-low and negative policy rates and presents an analysis of the current low interest rate environment. The

literature shows that the effects of NIRP vary among countries over time. Personal investors could face various challenges with the prolongation of ultra-low or negative interest rates, which include the repression of savings, low return on investment, higher risk-taking tendency in the marketplace, appreciation of property prices and income inequality. It is hoped that a comprehensive understanding these challenges will help investors plan and make better decisions. Amid the resurgence in Covid-19 cases, the ultra-low or negative policy rate would likely to continue for years.

Bibliography

- Aizenman, J., Cheung, Y.-W. & Ito, H., 2016. The Interest Rate Effect on Private Saving: Alternative Perspectives. *NBER Working Paper Series*, Volume Working Paper 22872, pp. 1-51.
- Arteta, C., Kose, M. A., Stocker, M. & Taskin, T., 2017. Implications of Negative Interest Rate Policies: An Early Assessment. *Pacific Economic Review*, 23(8), pp. 8-26.
- Bean, C., Broda, C., Ito, T. & Kroszner, R., 2015. Low for Long? Causes and Consequences of Persistently Low Interest Rates. *Geneva Reports on the World Economy*, Volume 17, pp. 1-122.
- Borio, C. & Gambacorta, L., 2017. Monetary policy and bank lending in a low interest rate environment: Diminishing effectiveness. *Journal of Macroeconomics*, Volume 54, pp. 217-231.
- Bottero, M., Minoiu, C. & Peydro, J.-L., 2020. Expansionary Yet Different: Credit Supply and Real Effects of Negative Interest Rate Policy. *ZBW - Leibniz Information Centre for Economics*, pp. 1-65.
- Congressional Research Service, 2020. *Global Economic Effects of Covid-19*, <https://crsreports.congress.gov>: CRS Report.
- Demiralp, S., Eisenschmidt, J. & Vlassopoulos, T., 2019. Negative Interest Rates, Excess Liquidity and Retail Deposits; Banks' Reaction to Unconventional Monetary Policy in the Euro Area. *ECB Working Paper*, Volume No. 2283, pp. 1-64.
- Hannoun, H., 2015. Ultra-low or negative interest rates: what they mean for financial stability and growth. *Eurofi-High-Level Seminar, Bank for International Settlements*, pp. 1-10.
- International Monetary Fund, 2020. *Japan Selected Issues*, <http://www.imf.org>: IMF Country Report No. 20/40.
- Juan-Francisco, A., Nerea Gomez-, F. & Carlos, O., 2019. Effects of Unconventional Monetary Policy on Income and Wealth Distribution: Evidence from United States and Eurozone. *Panaeconomicus*, 66(5), pp. 535-558.
- Mumtaz, H. & Theophilopoulou, A., 2017. The impact of monetary policy on inequality in the UK. An Empirical Analysis. *European Economic Review*, Volume 98, pp. 410-423.
- Nabar, M., 2011. Targets, Interest Rates, and Household Saving in Urban China. *IMF Working Paper*, Volume WP/11/223, pp. 1-29.

OECD, 2020. *Coronavirus: The world economy at risk*, [oecd.org/economic-outlook](https://www.oecd.org/economic-outlook/): OECD Interim Economic Assessment.

OECD, 2020. Coronavirus: The world economy at risk. *OECD Interim Economic Assessment*, pp. 1-18.

Rowley, J. & Slack, F., 2004. Conducting a Literature Review. *Management Research*, 27(6), pp. 31-39.

Taghizadeh-Hesary, F., Yoshino, N. & Shimizu, S., 2019. The impact of monetary and tax policy on income inequality in Japan. *The World Economy*, Volume 43, pp. 2600-2621.

The Financial Times, 2021. Banks given 6 months to prepare for negative interest rates. *FT Adviser*, 4 February.

Tokic, D., 2016. Negative interest rates: causes and consequences. *Journal of Asset Management*, 18(4), pp. 243-254.

UBS, 2020. *UBS Global Real Estate Bubble Index*, www.ubs.com/cio: UBS Switzerland AG.

White House, 2021. *Economic Report of the President*, www.govinfo.gov: The White House & Executive Office of the President, Council of Economic Advisers.

World Bank, 2021. *Global Economic Prospect January 2021*, Washington: World Bank Group.

Yoshino, N., Farhad, T.-H. & Hiroaki, M., 2017. The effectiveness of the negative interest rate policy in Japan. *Credit and Capital Markets*, 50(2), pp. 189-212.