ECONOMIC ANALYSIS

The state of prolonged low interest rates challenges financial stability

Shushanik Papanyan

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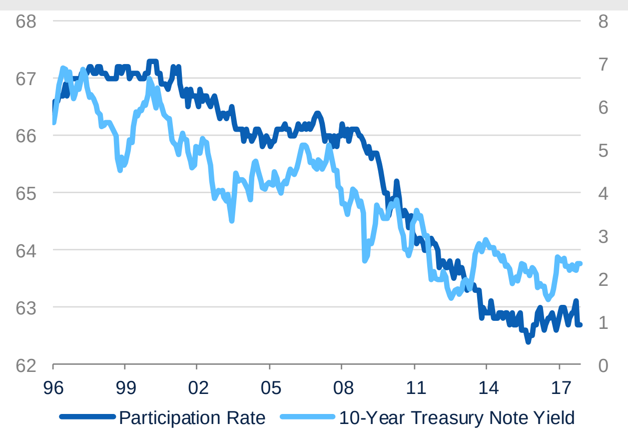
Financial stability is defined by its ability to facilitate economic growth. Yet in the "new normal" economic environment of prolonged moderate growth, low nominal and real interest rates, an aging population, and rising longevity, the economic environment poses risks to financial stability. The low-for-long environment has challenged predominantly the business models and solvency of life-insurers and defined-benefit pension funds. Insurance companies and pension funds play an increasingly important role in financial intermediation and in the transmission of monetary policy. Thus, their ability to adapt to the new economic conditions by revamping their business models will be essential in mitigating medium-term risks to financial stability.

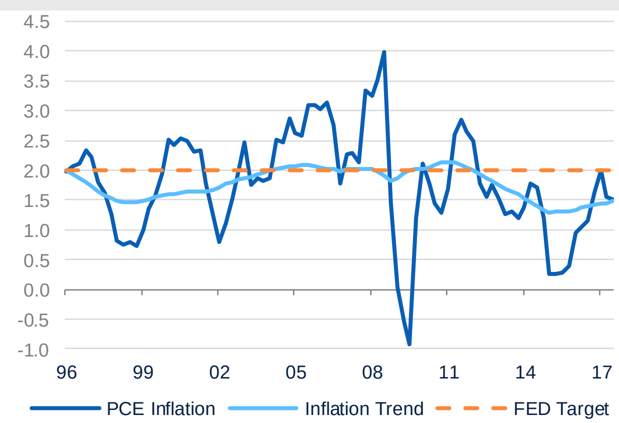
Financial stability is an ever-changing notion that incorporates a wide range of tools and measures evolving over time. It is easier to define financial instability or systemic risk than it is to define financial stability itself. The International Monetary Fund's (IMF) study compares the principal of financial stability to the health of an organism – the dynamism of which occurs along a continuum. Thus, the range of normal stability is broad and multi-dimensional. Its fundamentals entail uncertainty and evolve around elements of infrastructure, institutions, and markets, as well as being interlinked, inter-temporal, and innovative. The all-encompassing definition states that "a financial system is in a range of stability whenever it is capable of facilitating (rather than impeding) the performance of an economy, and of dissipating financial imbalances that arise endogenously or as a result of significant adverse and unanticipated events."[1]

Figure 1. Aging Population and Long-Term Interest Rate (%)



Source: BLS, FRB & BBVA Research

Figure 2. Low Inflation (%)



Source: BEA & BBVA Research

1: Schinasi (2004)

Financial stability entails facilitating economic growth by means of the financial processes of savings and investment, lending and borrowing, liquidity creation and distribution, asset pricing, and wealth accumulation and growth.[2] Yet in the current economic environment, in which U.S. economic conditions have reached their near optimal, healthy growth rate, the roles have swapped: the "new normal" economy is posing risks and challenges to financial stability.

The "new normal" economy, which is the outcome of both technology driven and demographics driven structural changes and of post-Great Recession accommodative policies, has settled on moderate potential growth, low inflationary pressures, and low nominal and real interest rates. The low-for-long economic environment poses challenges to the operational principles of the financial system.

Stability risks to financial institutions

The low interest rate and moderate growth environment together with the demographic shifts of aging and rising longevity are expected to become a medium-term challenge for insurers, pension funds, and certain type of credit institutions. The low for long conditions are expected predominantly to impact the profits and solvency of insurers and pension funds. Those institutions have acquired obligations in a higher growth and higher interest rate environment but will need to re-invest most of their assets at lower rates of return before their obligations terminate.

Another challenge to financial institutions arises due to the changing asset allocation preferences of households in a prolonged moderate growth and low interest rate environment. Longevity and an aging population coupled with a reduced social-safety-net will prompt a further increase in demand for precautionary savings and liquid assets to meet the rising cost of out-of-pocket health expenses. Thus, households are in the process of reallocation of funds from insurers and pension funds into private investment funds. The low rate environment has also put downward pressure on fund management fees, making average size mutual funds and index funds more appealing to households. Households will also continue to increase demand for bank deposits and bonds in their asset allocation.

Life insurers: Life insurers' will face difficulties with their guaranteed payout business model because of negative duration gap. Furthermore, insurance companies will find themselves competing with retail investment firms for household savings. However, it is not clear whether they can withstand the competition against asset managers, since the price elasticity of demand for savings products is high. Thus, insurers will likely face losses due to their inability to increase premiums.

Life insurance products with guaranteed-returns will likely be phased out in the low-for-long economic environment as markets are pricing in greater solvency risks over the medium term. Due to the prolonged low interest rate environment, a possible cyclical downturn - due to the maturity of the current expansion - can have further material impact on the profitability of life insurers and can disturb financial market confidence.

2: King, Brandao-Marques, Eckhold, Lindner, and Murphy (2017)

Pension funds: Defined-benefit pension funds' business models will face the biggest challenges in the prolonged environment of an aging population, rising life-longevity, and low interest rates. Low interest rates mean lower discount rates are applied to pension fund liabilities, thereby increasing the present value of future obligations and widening funding gaps. The U.S. discount rate has been estimated to decline from 6.5% in 2008 to 3.5% in 2016.

To minimize its funding gap while simultaneously minimizing market risk, pension funds will have to match the duration of their bond portfolio to the duration of their liabilities. This liability-driven-investing (LDI) strategy has pension funds shifting their investments towards fixed income products such as high quality long-term corporate bonds and U.S. Treasuries. However, demand for duration has likely turned into a self-fulfilling cycle that further pressures long-term interest rates downwards.

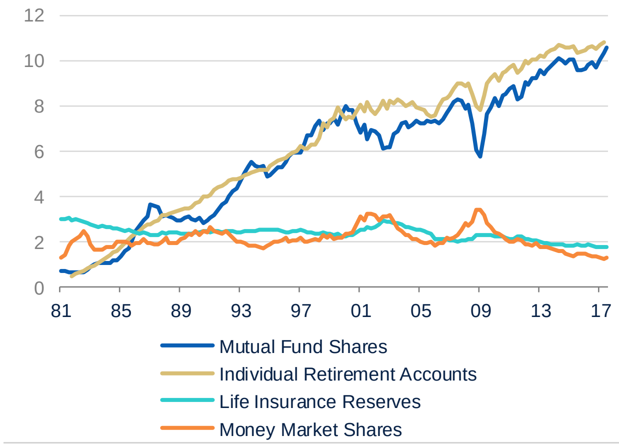
Nevertheless, while many pension funds continue to shift to an LDI strategy, implementation has become more difficult as retirees' life spans are longer. The long vesting period that is typical of defined-benefit plans will press pension funds either to venture into riskier portfolios, including lower quality corporate debt and emerging market debt, or to decrease benefits. A decline in defined-benefit funds' benefits will make these funds less competitive in comparison to defined-contribution plans.

Credit institutions: A theoretical framework suggests that in the low-for-long natural interest rate environment, smaller, deposit-funded and less diversified institutions will struggle to maintain spreads between loans and deposits, thereby reducing net interest income. The struggle could become more intense if the maturity of the economic cycle results in a downturn, prompting an accommodative monetary policy of a lowering of short-term rates to the zero-lower bound. Econometric analysis of Japanese banks' funding costs, market interest rates, and asset return support this theoretical conclusion. Analysis illustrates that net interest margins steadily and gradually have fallen for regional, smaller, domestically oriented, less diversified, and deposit-dependent banks.

The IMF studies find that while surprise monetary easing boosts equity returns in standard economic conditions, prolonged periods of low policy rates result in lower forward rates, are interpreted as adverse news on economic conditions, and have a negative impact on credit institution earnings. Cross-country estimations illustrate that low-for-long environments – defined as time periods in which short term yield is below 1 percent and the nominal yield for the "on-the-run" 10-year bond is lower than the historical policy rate average – result in a decline in average return on equity. When banks are aggregated according to business model, estimations confirm that larger, internationally more diversified, and wholesale funded institutions outperform other types when faced with long periods of a low interest rate environment. The estimations show that in a sustainable low interest rate period, a one standard deviation increase in the size of a bank's balance sheet raises profits by 67% relative to the estimated sample average for that period. Similarly, a one standard deviation increase in the share of deposit funding lowers returns by 14% and a one standard deviation increase in the share of loans in the asset portfolio increases returns by 22% relative to the estimated sample average for that period.[3]

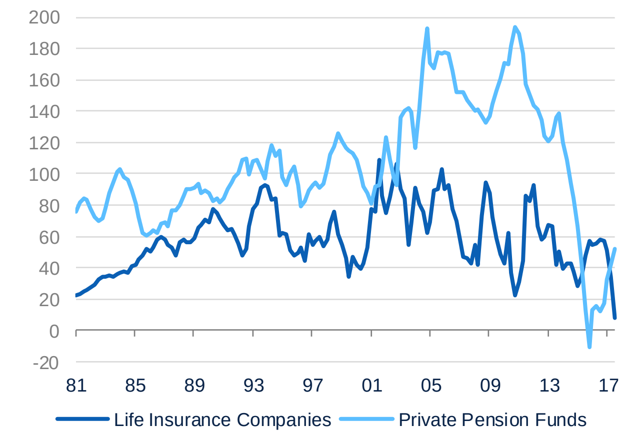
3: International Monetary Fund (2017)

Figure 3. Share of Households Financial Assets (%)



Source: FRB & BBVA Research

Figure 4. Financial Accounts Flows (Bill. $, 2-year moving average)



Source: FRB & BBVA Research

Revamping business models to sustainability

The challenges faced by financial institutions in the prolonged moderate growth and low interest rate environment are not expected to diminish with short-term cyclical corrections in the economy. The challenges are structural and will have to be addressed to mitigate medium-term risks to financial soundness.

Life insurers: The value of life insurance will continue to fall as households are aging and living longer. However, the value of health insurance will rise. Business models that expand into health insurance could become more sustainable. However, despite such extension, insurers might continue to face challenges in the low-growth and low-interest rate environment. Gaining a large market share could become pivotal for life-insurance institutions to endure a low-for-long environment.

Innovation of new products that replicate the life cycle could become profitable as well. It has been illustrated that the value of health insurance peaks at a much older age, while long-term care insurance gradually rises in step with household age.[4] New products that optimize benefits based on the life cycle profile of households – those that offer life insurance, long-term care insurance, and health insurance packaged together - could become a sustainable business model. The existence of such packages would also eliminate households' need for portfolio rebalancing, which is costly.

Pension funds: Defined-contribution plans will become more attractive over time. These plans are also portable and appeal to younger employees who value labor mobility. Over the medium-term, the share of defined-contribution plans will continue to grow within the pension benefits component and could even see accelerated growth. Additionally, a transfer of defined-benefit pension obligation to insurers could be a viable option. Closing out and selling defined-benefit plans to insurers would be the most beneficial option for non-financial institutions, given that regulations facilitate that transaction.[5]

4: Koijen, Van Nieuwerburgh, and Yogo (2016)
5: International Monetary Fund (2017)

Credit institutions: Successful strategic changes to business models could enhance resilience to sustainable long periods of moderate growth and low nominal and real interest rates. For larger credit institutions, this could encompass expanding loan and securities activity into higher growth emerging markets. Meanwhile for smaller institutions, growing loan portfolios in urban centers could make a difference in profitability. Larger credit institutions have also a potential to tap into strengthening cross-product customer connections to expand non-interest income from sales of investment trusts and life insurance products. The ability of institutions to cope with a low-for-long environment would also be enhanced if a portion of funding were sourced from capital markets. However, the major adjustment to sustain profits in the prolonged low-for-long environment for smaller and less diversified credit institutions would likely arise from partial consolidation, from forming financial groups, and from complete consolidation, which would decrease fix operational costs and increase monopolistic power.

Effectiveness of monetary policy to safeguard financial stability

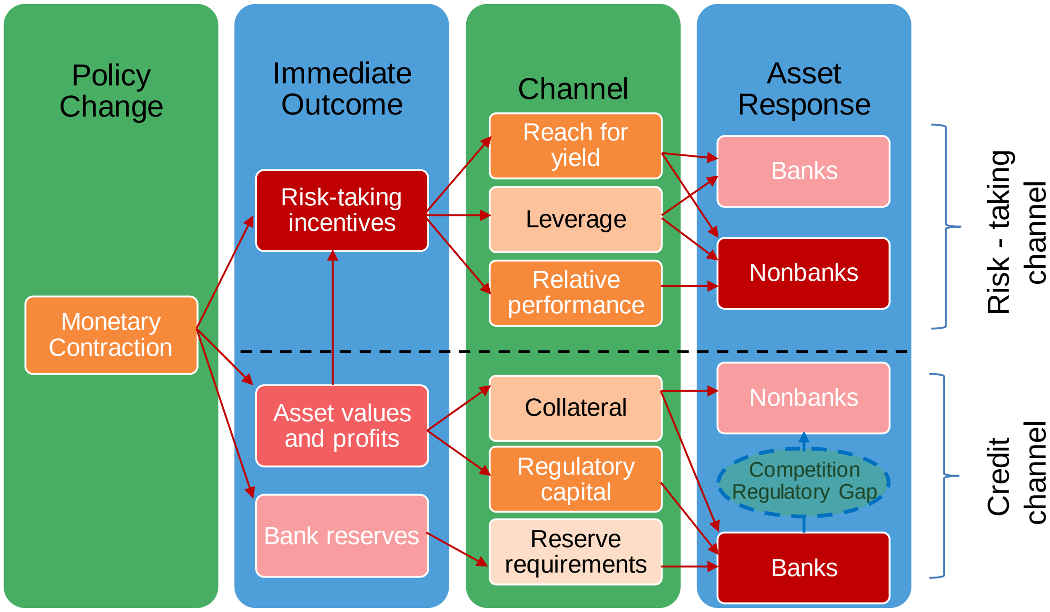
The post-Great Recession adjustments in financial institutions' business models to the new economic environment of moderate growth, low interest rates, strengthened bank regulations, and financial innovation have significantly expanded the role of non-banks such as insurers, pension funds, and asset managers within financial intermediation. The increasing importance of non-banks in the "new economy" has been supported by a strong shift in borrowing preferences from bank lending to bond issuance. However, the rise in non-banks' role in financial intermediation has triggered concerns over the weakening of monetary policy transmission, which is the ability to facilitate economic growth or curb risk taking by means of the traditional channel of bank lending.

Studies indicate that the monetary transmission mechanism has likely weakened due to the regulation gap between banks and non-banks and the ability of banks to securitize their loan portfolio. The changes in financial regulation have decreased risk appetite for banks and have increased the role of non-banks. At the same time, the ability to securitize has decreased banks' holding of liquid assets and made banks less sensitive to cost of funds shocks, but has increased banks' sensitivity to liquidity shocks.[6]

Since the business models are different for different types of non-banks and banks, these institutions are affected differently by moves in bond yields and risk premium. Non-banks' balance sheets are sensitive to monetary policy, but the transmission mechanism differs depending on whether it is channeled through risk-taking or through the credit supply. An empirical cross-country study provides evidence of a stronger aggregate economic effect of monetary policy changes for countries with a larger non-bank sector. The study also finds that in the U.S., the risk-taking channel operates mostly through non-banks – especially insurance companies and pension funds, and non-banks are very responsive to changes in risk appetite and contribute the most to the bond risk premium.[7]

6: Loutskina (2011)
7: International Monetary Fund (2016)

Table 1. Transmission of Monetary Policy through Financial Intermediaries



Source: IMF Staff[8] & BBVA Research
A darker shade signifies a larger response. Red shades and arrows signify an adverse effect or response. A blue arrow signifies that an adverse response from one sector may trigger a positive response from the other.

The increase in the relative importance of non-banks coupled with expansion of the risk-taking channel will likely amplify the monetary policy impact on the real economy, making the economic effect more “rapid and marked.” Thus, the shift in the composition of financial intermediation is to have considerable impact on the ability of monetary policy to safeguard financial stability. Furthermore, the share of non-banks within the system will continue to grow and thus monetary policy actions will have to be continuously retuned to adjust the speed and size of their impact in order to remain efficient. Accordingly, due to the low interest rate environment and potentially weaker traditional monetary policy tools to curb financial risks, regulatory policies and macroprudential rules on financial stability that would also address non-bank financial intermediates may play a vital role.

8: International Monetary Fund (2016)

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