

A Growth Theory of Low Interest Rates

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Abstract

This paper studies a growth theory subject to uninsurable idiosyncratic risk and borrowing constraints. Both elements give rise to financial frictions and operate the interest rate to fall. Unlike the neoclassical model, the interest rate can fall below the growth rate. If the supply of private assets, either stocks and private bonds, is scarce, the inequality $r_t < g_t$ is more likely to hold. Easing financial frictions enable firms to issue more stocks and private bonds, thereby increasing the interest rate while eliminating the fiscal space. The fact that the government can supply a large amount of debt and can run primary deficits is a consequence of serious financial frictions.

The next concern is to explore the theoretical mechanism behind the causal link among interest rates, economic growth, and public debt. We first examine the causal effect from public debt to economic growth. Although the public debt crowds out capital accumulation in the short run, the crowding-in effect or the crowding-out effect may dominate the other in the long run. Behind this finding, the interest rate exerts opposing effects on economic growth. Our next experiment is to investigate the causal effect from the interest rate to economic growth. The low interest rate policy exerts a favorable effect on the economy in the short run but may exert detrimental effects on the long-run economic growth.

The argument on public debt under low interest rates is related closely to the theory of rational bubbles. Rational bubbles can arise if $r_t < g_t$ holds. The notion of rational bubbles provides a rough information on how much public debt is sustained under the balanced budget. The determinants of rational bubbles are the investors' portfolio for debt and equity, the ability of supplying bonds by private firms as well as the growth rate and the return on capital.