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Some Stylized Facts for Investment Strategies

Ki Jeong Kim*

The Bank of Korea, Jung-Gu, Seoul, 136-701, South Korea

Abstract

In this paper, I review some stylized facts for investment strategies relevant for public investors' asset allocation. Through historical analysis, the risk-return profile of bond turns out to be greatly related to current yield level and that of stock turns out to be affected by business cycle. Taking these characteristics factors into account, I estimated the mean, variance and volatility of stocks and bonds. According to my estimates, the investment environment for the upcoming next five years is likely to be very poor. As a result, the working environment for public investor's asset managers is expected to be much worse that during the past three decades.

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Keywords: Stylized Facts; Investment Environment; New Paradigm; Reserve Management; Strategic Asset Allocation

1. Introduction

The global financial crisis brought low interest rates, low growth rates and low inflation; as a result, we are now seeing a transformed investment environment for foreign reserves. Under current conditions, we can no longer expect the high investment returns on stocks and bonds that we have enjoyed for the past 30 years (see Figure 1). Given these new realities, it is essential that we anticipate changes in global fundamentals and international financial market conditions. We must take these changes into account when planning our investment strategies and our asset allocation strategies. The aim of this research is to provide a selected view on some stylized facts of stock and bond markets through historical analysis and on investment strategies related to asset allocation. I will examine the effects of fundamental factors, including interest rates and business cycles, on those returns. Furthermore, I will estimate expected return (mean), volatility (variance), and correlations between the return of stocks and bonds both in the mid-

* Corresponding author. Tel.: +82-2-759-5194; fax: +82-2-759-5210.
*E-mail address:*kjkim@bok.or.kr

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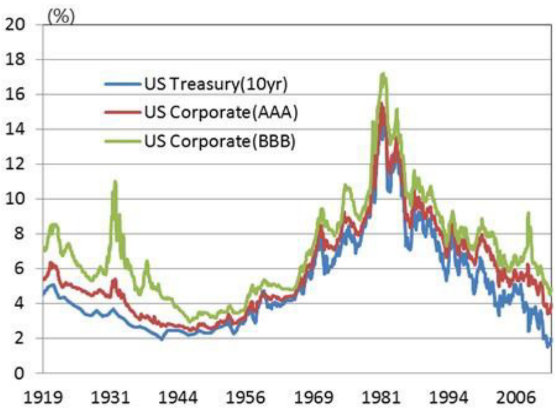
term and in the long-term. Finally, I will consider the implications for foreign reserves management objectives, and asset allocation strategies that central banks should adopt in view of changing conditions.

a.



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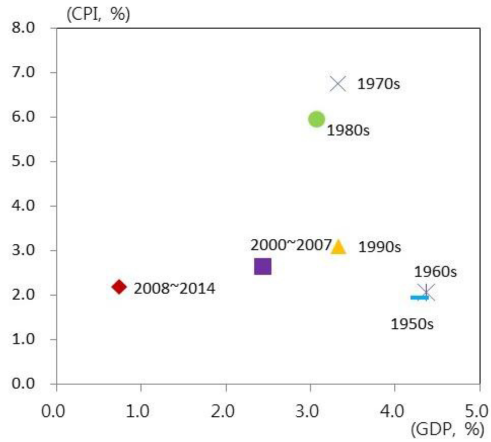

Fig.1. (a) Long-Term Trends in U.S. Treasury and Corporate Bond Yields; (b) Changes in U.S. Economy Regimes.

Note: Blue line represents U.S. Treasury bonds with 10-year maturity; the red line represents Moody′s AAA corporate bonds with 30-year maturity; the green line represents Moody′s BBB corporate bonds with 30-year maturity.
Source: The U.S. Federal Reserve, Bloomberg

2. Stocks and Bonds: A Historical Overview

2.1. Long-Term Correlations Between Stock and Bond Returns

First, if we consider the trends for stock and bond returns, we can find that the return on stocks was much higher than the return on bonds since 1928; over the past 30 years, however, the gap has narrowed greatly. Between 1928 and 2013, the annual average return on stocks based on the S&P 500 was 11.5 percent, more than double the annual average return on U.S. Treasury bonds with 10-year maturity (5.2 percent). However, as stocks were nearly three times more volatile (20.0 percent) than U.S. Treasury bonds (7.8 percent), U.S. Treasury bonds recorded a better performance in terms of the Sharpe ratio (0.66 vs. 0.57).