

An Analysis Summary of Factors Affecting China' Assembled Funds Trust Products' Expected Return Rate

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Abstract

Since China's reform and opening-up policy, China's national wealth has increased a lot, which stimulates the rapid development of China's trust industry. Among them, the assembled funds trust plan attracts a large number of investors for its high returns. In this background, this paper discusses the factors affecting China' assembled funds trust products' expected return rate. This paper will explain the expected return rate of assembled funds trust under nine explanatory variables, including four dummy variables of investing field, namely real estate, industrial & commercial enterprises, basic industries and financial products; two features of assembled funds trust products, which include three factors namely trust period, the trust scale, macro-economic factors; CPI growth rate, M2 growth, benchmark interest rates of the medium- & long-term loan interest rate. The author establishes a multivariate regression model after empirical analysis. According to the empirical results, five explanatory variables including the longer period of the trust, the trust scale, investment field in real estate, CPI growth rate and the benchmark interest rates of the medium- and long-term loan interest rate, have a positive relationship with explained variable, namely the assembled funds trust products' expected return rate. Investing in basic industries, financial products and M2 growth rate over the same period of last year, all these three elements have a negative relationship with assembled funds trust products' expected return rate. While investing in industrial & commercial enterprises, it has no significant influence on the assembled funds trust products' expected return rate.

Keywords

China's Trust Industry, Assembled Funds Trust Plan, Expected Return Rate

1. Introduction

Trust products refer to the financial products or financial services created by trust company or trust operating agency under the principle of trust law for the purpose of commercial profit. From a legal perspective, the elements of trust products are the trust property, the parties of the trust and the trust contract, which form a trust relationship (He Shanshan [1]; Lu Zirui [2]). Song Tingting [3] thought that the core element among them was the trust property. These three elements determine the basic features and functioning advantages of trust products, which make the trust products more competitive. Deng Chao [4] deemed that from the financial point of view, the elements constituting the trust products are period, cash flow, liquidity, divisibility, complexity, etc., which determine, influence or reflect the risks and returns of trust products from different aspects.

According to the functional structure of the trust assets, trust can be divided into investment trust, financing trust and transaction management trust.

1.1. Investment Trust

Investment trust mainly refers to the wealth or asset management trust. According to the risk preferences of clients, trust companies use financial tools such as bonds, stocks, funds and industrial investment, through the operation of the individualized composition to manage the trust property to achieve an effective appreciation. This reflects the purpose of the trust “entrusted by the people, offering financial management”, and it is generally operated in an intensive managing model.

1.2. Financing Trust

Finance trust business designs trust plan to meet the financial needs of investment demand. The trust company raises funds mainly from the specific company or projects which have already been assigned when the trust is established. Financing trust generates credit relationship, which is different from the equity relationship generated by investment trust.

1.3. Transaction Management Trust

Transaction management trust business refers to that trust company, as a trustee, helps their clients to solve the problems of tax planning and business management through the establishment of personal estate trust, real estate trust, nominal holding of shares trust, family trust, wills trust etc. This is a kind of business that mainly takes the advantage of trust system platform by using the trust company as an intermediary to purely provide business management services.

Since 2007, under the influence of the Chinese government’s macro-control and expected factors, the prices of assets in Chinese market such as stocks and real estate gradually reach to a downturn, so the investors’ demand for asset security and preservation is growing continually. In this context, some financial products with high yields and low risks are sought after. Among them, the trust products issued by the trust company for qualified investors are particularly eye-catching, because of their high yield, and investors’ no need to bear any risks or losses. At present, China’s annual weighted average yield rate of trust products is more than 8%, much higher than that of bank deposit rates, bank financial products yield and medium- & long-term bond coupon rate in the same period. Therefore, two questions should be put forward, why is the yield of the trust products relatively high? How to follow the pricing rules? In view of this, the paper establishes a multiple regression model and sets an empirical analysis on factors affecting the yield of assembled funds trust products in order to obtain valuable research results.

2. Theoretical Analysis

The influencing factors of the expected return rate of trust products are divided into two main categories. One is macro factors, especially the macroeconomic policies such as interest rate, the broad money supply quantity (M2), CPI growth rate. The other is the trust products’ own characteristics, including period of trust products, issue size, product investment areas and so on.

2.1. Macro-Economic Factors

Trust industry in the economic environment, as a big branch of financial industry, no doubt will be well affected

by the whole macro economy, and this effect will be global, involving all trust incomes. This paper studies the macroeconomic factors, including interest rates, broad money supply, and inflation rates.

2.1.1. Interest Rates

Yang Chao [5] believed that the interest rate is a very important role in monetary policy, which has a vital relationship with almost all financial assets and financial phenomena including trust product. The interest rate fluctuation is a benchmark for estimating and evaluating the incomes and risks of trust products. The interest rate reflects the cost of fund financing, and it reflects the time value of money, the risk of the market value and the impact of inflation. Deng Xusheng and Xiao Jiwu's [6] study showed that the interest rate fluctuation will affect capital flow, thereby affecting the market expected return rate, capital cost of enterprises and even investment decisions of investors. Higher interest rates will prompt investors to seek higher return projects to compensate the opportunity cost of their own, and when the interest rate becomes lower, the income investors' demand will be reduced. Guo Yuliang [7] thought that the interest rate will influence people's expectations for expected return of investment products, and the changes about expectations will be reflected in the expected return of investment products. When the interest rate rises, the expected return rate of trust products will rise. And when the interest rate falls, trust products can attract sufficient funds without a high expected return rate, and then the expected return rate of trust products will reduce.

2.1.2. The Broad Money Supply

According to the strength of liquidity, money is divided into three levels in China: M0, M1 and M2. M0 is the cash in circulation. M1 is known as the narrow money-M0 plus the demand deposits of the bank, reflecting the real purchasing power. Li Hong and Fu Huan [8] deemed that M2-M1 plus a quasi currency, including the regular deposits, savings deposits and other deposits which reflects not only the real purchasing power, but also the potential purchasing power, known as the broad currency. In the research on investment activities, M2 is more frequently applied. The change of money supply reflects the change of China's monetary policy. Monetary policy consists of expansionary monetary policy and tight monetary policy. Under expansionary monetary policy, the central bank takes measures to improve the rate of money supply growth, and to lower interest rates, in order to stimulate investment, exports and increase of the total demand. But under the tight monetary policy, it is the opposite. Generally, as an important control means of the national monetary policy, the interest rate and money supply are paired with each other to do mutual coordination and promote each other. Under the expansionary monetary policy, the interest rate falls and the money supply rises. But under the tight monetary policy, the interest rate rises and the money supply falls. Changes in money supply will have an impact on economic activities. Zhang Bao [9] believed that the broad money supply rises, the currency and the quasi currency increase and the liquidity enhances will result in more prosperous economy, easier fund support for investment activities and reduced capital cost. On the other hand, when people have more currency, the currency used in investment will increase and accordingly the required fund return will reduce. Moreover, increase of the broad money supply shows that the expansionary monetary policy is implementing, and accordingly the interest rate will drop.

2.1.3. The Consumer Price Index (CPI)

The consumer price index (CPI) mainly reflects the changes in the price level of consumer goods and services purchased by households in general. The changes reflect the degree of inflation or deflation, to a certain extent. Yu Lina [10] deemed that the inflation is a comprehensive and continuous rise in prices. The change of CPI means the reverse change of purchasing power of residents: the higher the CPI, the less the goods and services that can be purchased. When the CPI keeps high, people are not willing to continue holding the currency, which would mean the things they can use the currency to buy become less and less. And more and more people prefer to invest those products which the revenue rate at least exceeds the sum of the inflation rate and time value, so that the cost of capital will not reduce as time goes by. Hence when inflation occurs, the rate of return on investment products needs to be higher than the actual interest rate, to offset the impact of inflation, that is, the rate of return of trust products changes positively with CPI year-on-year growth rate.

2.2. The Characteristics of Assembled Trust Products

The return of trust products is also affected by its own factors, such as the period of trust products, the size of the trust funds and investment field of trust funds. Although the impact is not so profound as that of macroeco-

conomic factors on trust products yield, under the same macroeconomic environment, its own factors differentiate all kinds of trust products' yield, which gave different preferences of investors more choices.

2.2.1. Trust Period

The period of trust products includes a variety of forms, such as short-term (a few months), middle-term (one or two years), and long-term (three or four years, even ten years). The period of different trust products is different, resulting in different expected return. The longer the investment period is, the greater the risk that investors will assume. In the longer term, investors are more likely to encounter other better projects, but they have to give up because of this project. So the opportunity cost that the investors lost needs to be compensated from the trust products. Xu Liyuan [11] found that the longer the period of the investment products is, the greater the possibility of uncertainty events occur. Some political and economic or social events may occur during this period of time, which may cause impact on trust products. If the trust products are fixed-income products, there may be risks of delay or redemption failure. Floating income products are likely to lead to a decline in real income. The more risks that the investors take, the higher returns they will demand. In addition, because China's trust market is not as mature as the developed western countries, the secondary market is even existing. The trust products that the investors buy are difficult to sell, so liquidity is not strong. In order to make up for this, long-term trust products will require a higher expected return. Therefore, the longer the term of the trust products is, the higher expected return the investors will demand, and the higher the expected return of trust products will be.

2.2.2. Issuing Scale

Another characteristic factor of trust products is the issue size of trust products. In theory, the issue size and expected benefits should be in proportional relationship. The larger the issue scale of trust products is, the more extensive the area of investment can be selected. For example, high-yield real estate industry, and the mining industry which has been chased by trust company (Li Zhiue *et al.* [12]; Yu Li *et al.* [13]). Obviously, these two industries are relatively of high profit margins, but the investment of the two sectors requires a lot of funds. So, without considering other political and economic factors, if trust products raise enough funds, they can invest in industries with the best prospects at present, and get more revenues. In addition, the large-scale trust products are more likely to form of capital scale effect. When trust company is managing the trust assets, although the size of the trust assets increases, the cost of managing the trust assets is not necessarily proportional increasing, which reaches to a scale effect of trust funds. The reduce of unit cost leads to the earning rise. Therefore, the expected return of trust products and trust issue size is in positive relationship.

2.2.3. Fields of Investment

The investing field of trust funds includes real estate, basic industries, industrial & commercial enterprises and financial products. The income structure of different investment fields is different; the higher the risk, the higher the income. If the trust funds are invested in higher risk industries, investors will require higher yields to compensate for the risks they bear. So the expected return of trust products is different because of different investment filed. According to the theory of capital asset pricing model, income and risk are related to each other. High risk means high income, while low risk means low income. The real estate industry is a high risk and high income industry, so the trust products of real estate industry investment produce higher income, and higher than the average (Shang Tiancheng *et al.* [14]; Li Quanjun [15]). While risk of the industrial and commercial enterprises and the basis of industrial products is slightly lower, which is almost as the same as the risk of ordinary industrial. Since financial products are invested in financial institutions or existing financial products and the liquidity of investment targets is relatively strong, along with the good cash ability and low level of risk, the return is also low. Wu Juan [16] found that due to the future trend of financial products cannot be accurately predicted and the income is not stable, part of the trust products don't have clear expected return rate. Furthermore, some financial products are structured products, priority beneficiaries have lower expected return rate, and general level the beneficiary does not stipulate the expected return rate, which pulled down the trust products expected return level to some extent.

3. Empirical Analysis

3.1. Selection and Arrangement of Sample Data

First of all, the author collected 15,618 China' assembled fund trust products from Wind Financial Database.

These trust products are founded in 2005 to 2015 and each one of them contains the application fields of the fund, the date of establishment, the actual issue size and the expected return of the trust of these trust products. Second of all, the author collected benchmark interest rates of medium- & long-term loan interest rate (1 to 3 years (inclusive)), CPI year-on-year growth rate and broad currency (M2) growth rate year-on-year from Wind Financial Database. After excluded the samples doesn't contain the actual issue size and the expected return of the trust and match up the benchmark interest rates of medium- & long-term loan interest rate (1 to 3 years (inclusive)), CPI year-on-year growth rate and broad currency (M2) growth rate year-on-year with each trust product we got the samples we study, a total of 82.43 samples obtained.

3.2. Variable Definition

The assembled trust products expected return rate is represented by Y. According to the different interval of subscription amount, the assembled trust scheme will set the diverse expected return rate. In this paper, to the selected samples, we select the lower limit of the expected return rate as the expected return rate of the empirical analysis:

x1 denotes the investment field in assembled funds trust products is the virtual variable on real estate. When the investment field in assembled funds trust products is real estate, we take 1, otherwise 0;

x2 denotes the investment field in assembled funds trust products is the virtual variable on industrial and commercial enterprises. When the investment field in assembled funds trust products is industrial and commercial enterprises, we take 1, otherwise 0;

x3 denotes the investment field in assembled funds trust products is the virtual variable on the basic industry. When the investment field in assembled funds trust products is the basic industry, we take 1, otherwise 0;

x4 denotes the investment field in assembled funds trust products is the virtual variable on financial products. When the investment field in assembled funds trust products is financial products, we take 1, otherwise 0;

x5 denotes the period of assembled funds trust products, or trust duration for short (day);

x6 denotes the total size of the assembled funds trust products, or trust scale for short (10,000 RMB);

x7 denotes CPI growth rate over the same period of last year, published monthly;

x8 denotes benchmark interest rates of medium- & long-term loan interest rate (1 to 3 years (inclusive), and the date will be announced by people's bank of china irregularly;

x9 denotes M2 growth rate over the same period of last year, calculated monthly.

From **Table 1**, we establish a multivariate regression model according to the above variables as follows:

$$Y = a_0 + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4 + a_5x_5 + a_6x_6 + a_7x_7 + a_8x_8 + a_9x_9.$$

3.3. Empirical Hypothesis

Hypothesis 1: The higher benchmark interest rates of the medium- and long-term loan interest rate, the higher collective trust products' expected return rate.

Table 1. Variable name and code.

Variable Property	Variable Code	Variable Name
Explained variable	Y	Assembled funds trust products expected return rate
	x1	Virtual Variable (investment in real estate takes 1, otherwise 0)
	x2	Virtual Variable (investment in industrial and commercial enterprises takes 1, otherwise 0)
	x3	Virtual Variable (investment in basic industry takes 1, otherwise 0)
	x4	Virtual Variable (investment in financial products takes 1, otherwise 0)
Explanatory variable	x5	Trust Period
	x6	Trust Scale
	x7	CPI growth rate over the same period of last year
	x8	Benchmark interest rates of medium- & long-term loan interest rate (1 to 3 years (inclusive))
	x9	M2 growth rate over the same period of last year

Hypothesis 2: The higher M2 growth rate year-on-year, the lower collective trust products' expected return rate.

Hypothesis 3: The higher CPI index year-on-year, the higher collective trust products' expected return rate.

Hypothesis 4: The longer the trust product period, the higher collective trust products' expected return rate.

Hypothesis 5: The greater the collection trust funds, the higher trust products' expected return rate.

3.4. Empirical Analysis

3.4.1. Descriptive Statistical Analysis

The mean, max, min and SD of the samples are shown in [Table 2](#).

From [Table 2](#), it shows that the average return rate is as high as 8.08%, that's one of the reasons why the scale of assembled funds trust plan grows so fast. Meanwhile, due to the big difference between varies categories of assembled funds trust plan, the D-values of max and min have bigger difference. The scale and period of assembled funds trust plan are varied.

To take investment direction of funds as an example, expected return rates in different in investing fields are shown in [Table 3](#).

From [Table 3](#), expected return rate of real estate is the highest, then others industries, industrial & commercial enterprises, infrastructure construction and financial products. Among them, expected return rates of the real estate and other industries are higher than average, while expected return rates of infrastructure construction and financial products are less than average.

3.4.2. Multicollinearity Test

In order to estimate the multicollinearity problem among the explanatory variables, variance inflation factor (VIF) value of each variable is calculated by STATA (see [Table 4](#)).

All VIFs are less than 5, and the average VIF is just 1.94, which means there is no serious multicollinearity problem among the explanatory variables.

3.4.3. Multiple Regression Results

1) Regression Results

Using STATA to multiple regression analysis, the results are shown in [Table 5](#).

Table 2. Descriptive statistics (1).

Variables	Samples	Mean	Max	Min	SD
Y (%)	8243	8.08	25.00	1.20	1.71
x5 (day)	8243	599.09	2921.00	6.00	263.57
x6 (10,000)	8243	15829.10	574000.00	100.00	23952.78
x7	8243	3.10	8.70	-1.80	1.85
x8 (%)	8243	6.18	7.56	4.75	0.47
x9 (%)	8243	15.96	29.74	10.80	4.01

Table 3. Descriptive statistics (2).

Investment field	Sample number	Average expected return (%)	Sample ratio (%)
Real estate	1669	8.63	20.25%
Financial products	239	6.74	2.90%
Industrial & commercial enterprises	2098	7.97	25.45%
Infrastructure construction	1806	7.85	21.91%
Others industries	2431	8.11	29.49%
Total	8243	8.08	100.00%

Table 4. Explanatory variables' VIF.

Variable	VIF	1/VIF
x8	2.32	0.431079
x9	2.02	0.49557
x7	1.6	0.626336
x2	1.53	0.651623
x1	1.51	0.661543
x3	1.49	0.671329
x5	1.12	0.891173
x4	1.08	0.923411
x6	1.03	0.97296
Mean VIF	1.52	

Table 5. Multiple regression analysis results.

Source	SS	Df	MS	Number of obs = 8243 F(9, 8233) = 221.91 Prob > F = 0.0000 R-squared = 0.1952 Adj R-squared = 0.1943 Root MSE = 1.5371		
Model	4718.93338	9	524.325931			
Residual	19452.9144	8233	2.36279781			
Total	24171.8478	8242	2.93276484			
	Coef.	Std. Err.	t	P > t	[95% Conf. Interval]	
Y						
x1	0.64566550	0.05180050	12.460	0.000	0.54412360	0.74720750
x2	0.05075010	0.04814980	1.050	0.292	-0.04363560	0.14513580
x3	-0.23670240	0.04995600	-4.740	0.000	-0.33462880	-0.13877600
x4	-1.16785200	0.10500400	-11.120	0.000	-1.37368600	-0.96201780
x5	0.00115320	0.00006800	16.950	0.000	0.00101990	0.00128660
x6	0.00000594	0.00000072	8.290	0.000	0.00000454	0.00000735
x7	0.04660650	0.01155350	4.030	0.000	0.02395860	0.06925430
x8	0.32260470	0.05455610	5.910	0.000	0.21566090	0.42954850
x9	-0.12015250	0.00600130	-20.020	0.000	-0.13191650	-0.10838850
Constant term	7.01936500	0.38380690	18.290	0.000	6.26700700	7.77172400

According to the regression coefficient, assembled funds trust products' expected return rate model is:

$$Y = 7.01936500 + 0.64566550x_1 + 0.05075010x_2 - 0.23670240x_3 - 1.16785200x_4 + 0.00115320x_5 + 0.00000594x_6 + 0.04660650x_7 + 0.32260470x_8 - 0.12015250x_9.$$

2) Regression results analysis

1) Overall, F value is as high as 221.91, Prob > F = 0.0000 and adjusted $R^2 = 0.1943$, which means these explanatory variables can describe the change ratio of 19.43% in expected return rate of assembled funds trust plan.

2) The variable x2 didn't pass the T test, indicating that assembled funds trust in industrial and commercial enterprises is insufficient to explain the change of the expected return rate. This may be caused by the varies types in industry and commerce enterprise in every industry, so its expected return rate is not changed obviously.

3) Macroscopically, t-values of x7, x8 and x9 show the regression results of explanatory variables comply with the original hypothesis. Among them, x8 affects Y greatly. When x8 increases by 1%, Y grows by 0.32260470%. The variable x7 pass the T test confirm the Hypothesis 3, variable x8 pass the T test confirm the Hypothesis 1 and variable x9 pass the T test confirm the Hypothesis 2.

4) From the aspect of trust characteristics, t-values of x_5 and x_6 indicate the above regression results of explanatory variables comply with the original hypothesis. While x_6 affects explained variables unobviously. When x_6 increases by 10,000, Y grows by 0.00000594. The variable x_5 pass the T test confirm the Hypothesis 4 and variable x_6 pass the T test confirm the Hypothesis 5.

5) Assembled funds trust plans in real estate, basic industries or financial products will make Y changed greatly. Investing real estate will increase Y , while investing basic industries and financial products will decrease Y .

4. Conclusion & Suggestion

According to the research, suggestions are as follows:

1) Trust companies should strengthen the innovation of the products

From empirical models and existing data, China's trust industry mainly depends on the real estate at present as investing real estate will get higher returns. Since 2014, the growth rate in real estate has been declined gradually. The commercial housing prices in second- and third-tier cities have reduced, which affect collective trust products' expected return rate. Therefore, trust companies should take the initiative to innovation, looking for good assets, innovative business models to deal with real estate prices' decline.

2) The trust company should develop actively-managed trust business. Compared with the passively-managed passive business, the profitability of this actively-managed trust business is higher. At the first stage, it has played an important role in the growth of the trust products scale. Zhang Lei [17] thinks that with the supervision laws and regulations becoming much stricter, it's more difficult to do passively-managed passive business. In order to improve the performance of the trust company, actively-managed trust business must be developed actively.

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