

**A Comparative Study of the Correlation
between Stock Return Rate and Inflation Rate
between China and the United States**

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PART 01

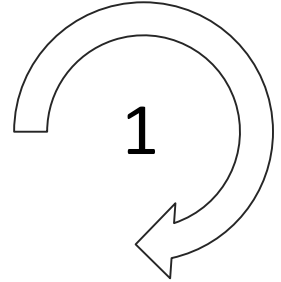


**Topic background
and meaning**

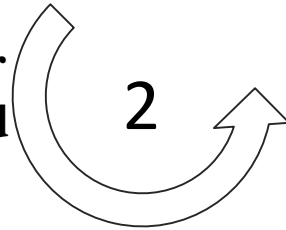
Topic background



The goal of investment is to achieve the preservation and appreciation of assets – inflation.



The "Fisher effect" hypothesis is a theoretical starting point for the study of the relationship between stock nominal returns and inflation rates.

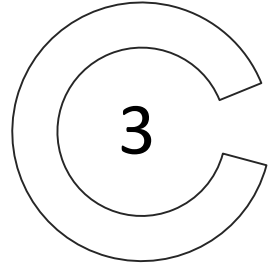


$$R_t = i_t + \pi_t^e$$

Topic background

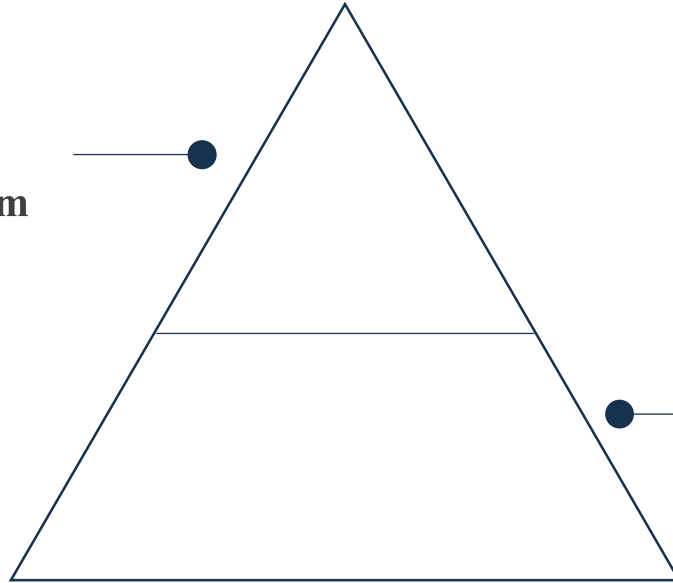


In many articles using Chinese data for testing, the results do not match the hypothesis.



Meaning

Comparing China and the United States to determine whether the actual mismatch with the hypothesis stems from the immaturity of the stock market in China .



Select specific time periods and strategies to verify whether stocks are good asset hedging instruments in China and the US



PART 02



**Research methods
and conclusions**

Correlation coefficient



China: -0.052121



US: -0.013368

Time interval: 1995.01~2018.12

Autoregressive distribution lag model



$$Y_t = \alpha + \sum_{i=1}^p \beta_i Y_{t-i} + \sum_{j=0}^q \gamma_j X_{t-j} + \mu_t.$$

1

Linear equation

2

AIC to choose the best lag period

ARDL of Chinese data

$$\text{SRC} = 0.463 + 0.045 \times \text{SRC}(-1) + 0.148 \times \text{SRC}(-2) - 0.166 \times \text{INFC}.$$

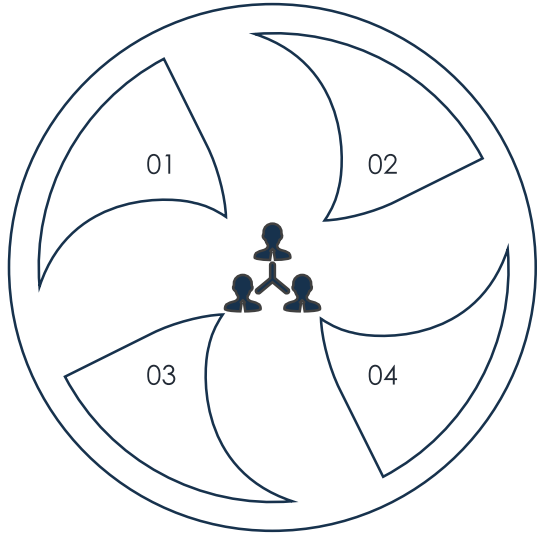
$(t = 2.526267)$

$$R^2 = 0.025447'$$

SRC: stock return rate of china
INFC: inflation rate of china



ARDL of American data



$$SRA = 0.750 + 0.023 \times SRA(-1) - 0.641 \times INFA \dots - 2.142 \times INFA(-4). \\ (t = -2.596)$$

$$R^2 = 0.001554$$

SRA: stock return rate of America
INFA: inflation rate of America

Explore on investment effect

1

Selection basis of time intervals:

Fluctuation in inflation

2

Strategy 1:

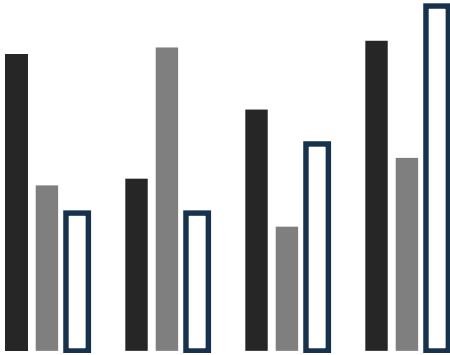
Starting point: buy
ending point: sell

3

Strategy 2(if the strategy 1 fails):

buy: if(return rate of next month) $>$ 1%
sell: if(return rate of next month) $<$ 0

Explore on investment effect



Time 1 of China(2006/03-2007/02):

strategy 1:  (Return can cover the inflation)

Time 2 of China(2010/03-2011/02):

strategy 1:  (Return fails to cover the inflation)

strategy 2: 

Time 1 of US(2004/10-2005/09):

strategy 1: 

strategy 2: 

Time 2 of US(2010/07-2011/06):

strategy 1: 

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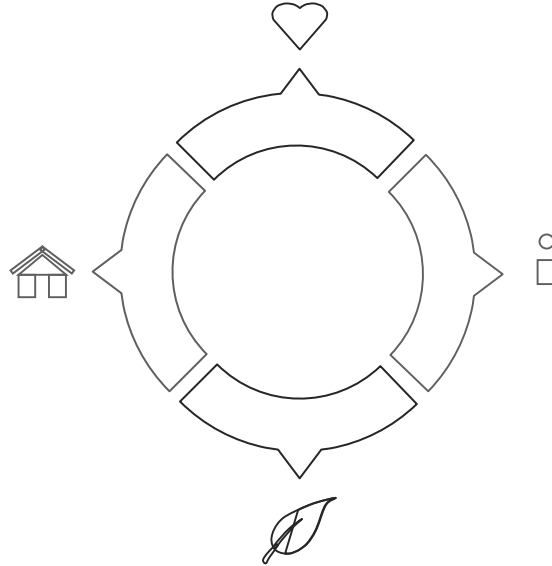
PART 03

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**Innovation and
outlook**

Innovation

**1. Comparison
between China and
the United States**



**2. Exploring stock
investment effects
with specific data
and strategies**

Outlook



Applied nonlinear model



Analysis of the reasons for the negative correlation between two economic variables in various markets



THANKS
