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杨云峰◎著

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序　言

对市场有效性理论的争论和探索极大地丰富了人们对于股票市场的理解。特别是在实证过程中大量违背市场有效性异常现象的发现，促使人们寻求更加符合市场实际的解释，导致许多新的金融理论的创新和发展。因此，对市场异象的研究具有非常重要的理论和实际意义。

大部分股票市场的季节性异象是在已经存在了几百年之久的西方成熟股票市场上被揭示出来的。对于季节性异象的研究不仅丰富了金融学术界对于市场有效性理论的理解，而且对于投资实务也具有明显的指导意义。中国股票市场虽然只发展了短短的二十年，但在我国国民经济中的作用越来越显著，其重要地位已不容忽视。然而由于中国股票市场发展时间较短，与西方成熟的资本市场相比，在法律的体系、监管的制度、市场的规则以及投资者的结构等方面均有显著的差异，因而其季节性市场异象也与美国等发达国家股票市场存在不同的特征。例如在美国股市非常显著的个股收益的季节性异象在中国股市就没有统计上的显著表现。而且中国股票市场自身也存在独特的季节性异象，如"冬播、春生、夏歇、秋抢"季节性市场异象。本文除了应用沪深两市的 A 股和 B 股指数数据进行季节性异象、如周日效应、月份效应和五月卖出效应研究外，还利用了沪深两市所有 A 股的月收益率面板数据，来分析研究中国股票市场上个股预期收益的季节性市场异象。本书的主要工作和结论总结如下：

（1）对于资本市场有效性理论的发展历史及其主要内涵进行了系统的阐述，并对违背市场有效性的股票市场异象进行了详细的分类，对于每一

类的市场异象的含义、与异象相关的指标及其研究文献通过列表进行了说明。其次，对中国股票市场从萌芽到发展壮大的历史进行了回顾，并对其存在的主要问题进行了分析，在此基础上对于中国股票市场的有效性状况进行了评价。特别对于季节性市场异象的概念内涵及其在中国股票市场上的表现进行了分析和探讨。

（2）对于中国股票市场上是否存在股票收益横截面上的季节性异象进行了检验。结果表明，中国上市公司股票的月收益率存在显著的自相关性，其中在一个月的短期内，表现出显著的负自相关性，而在六个月和九个月的中期存在非常显著的正自相关性。但是并不存在美国股市中的个股收益横截面季节性震荡模式。

（3）对于中国股票市场上的"日历效应"季节性异象利用最新的数据进行了检验。从上海股市 A、B 股和深圳股市 A、B 的周日效应和月份效应的实证结果中发现，不同市场的估计结果存在很大的差异。而且即使是同一个市场，在按照涨跌幅限制与否划分不同的阶段，其周日效应也是不同的。深圳 A 股市场无论是在整个样本期间以及 1996 年底施行涨跌幅限制前后，都没有表现出显著的周日效应。而上海 A 股市场在 1992 年施行涨跌停板限制前后表现出不同的周日效应，但是在 1996 年底以后的时间内，与深圳 A 股一样，并未表现出任何显著的周日效应。四个市场中，只有深圳 B 股市场在整个样本期间以及在 1996 底以后体现出显著的星期二效应。这与奉立城（2000）的结论基本上是一致的。从"月份效应"实证估计结果看，上海 A 股市场表现出典型的"一月份效应"，但深圳 A 股市场的"一月份效应"并不显著。而沪深两市的 B 股市场均未发现存在显著的"一月份效应"的证据。

（4）基于流行于欧美国家的"五月卖出，然后离开"的古老股市谚语，考察了中国股票市场是否也存在类似的季节性市场异象。结果发现，沪深股市在 1997 年以前，这种异象并不明显；但在 1997 年以后，每年 11 月初至次年 4 月底（冬）与 5 月初至 10 月底（夏）两个期间的平均收益

存在显著的差异，而且冬（半年）的平均收益显著为正。也就是说，中国股票市场在此期间也存在显著的"五月卖出"效应。为了进一步考察中国股市行业收益的"五月卖出"效应，按照证监会行业划分标准所形成的22个行业在冬和夏（半年）的收益情况被统计出来。结果发现，所有的行业在冬（半年）的平均收益均超过在夏（半年）的平均收益；除了交通运输仓储业、金融保险业、采掘业以及房地产业之外，其他行业在冬和夏的收益均存在统计上的显著差异，尤其是在农林牧渔业、电子业和传播与文化业存在非常显著的差异。通过对所有22个行业的"五月卖出"效应的计量模型估计结果的分析发现，采掘业和金融保险业两个行业是不存在"五月卖出"效应的，而木材家具业、造纸印刷业、电子业、医药生物制品业和社会服务业五个行业在冬（半年）的平均收益显著地超越其在夏（半年）的平均收益，因而这五个行业存在显著的"五月卖出"效应。因此，中国上市公司的不同行业间的"五月卖出"效应是存在非常显著的差异的。

（5）为了验证流行于中国股市的"冬播、春生、夏歇、秋抢"的说法，利用沪深股市冬、夏、春和秋季的数据，进行了统计与计量分析。结果发现这种说法是有统计学依据的，沪深两市的综合指数平均收益按季节从高到低依次为：春季、冬季、夏季和秋季。其中春季、冬季平均收益为正，而秋季的平均收益是负。而利用本书提出的季节模型估计表明，在春季的平均收益显著为正，秋季与春季的平均收益存在高度显著的负差异，而且夏季与春季的平均收益的负差异也比较显著。因此，"冬播、春生、夏歇、秋抢"的说法在一定程度上是一种可行的投资策略。

本书主要的创新点有：

（1）对于中国股票市场所特有的"冬播、春生、夏歇、秋抢"异象，进行了详细的实证分析，使得这种流行的说法有了严谨的统计学依据。提出了检验该异象的计量模型：

$$R_t = \alpha_0 + \alpha_1 W_t + \alpha_2 S_t + \alpha_3 A_t + \varepsilon_t$$

这里，R_t 表示指数在第 t 季的收益率；W_t、S_t 和 A_t 分别代表冬季、夏季和秋季的虚拟变量。

（2）首先对于中国股票市场是否存在个股收益的季节性市场异象进行了验证。研究中使用沪深所有交易 A 股的面板数据对有关异象进行分析，这在以前的文献中是不多见的。

（3）有可能是首次对于中国股票市场是否存在"五月卖出"市场异象进行了实证分析，并对于不同行业在冬（半年）和夏（半年）的平均收益的差异以及行业间的收益差异进行了统计分析。

Preface

The discussion and exploration about efficient market theory have greatly enriched people's understanding of the stock market. Especially during the process of empirical research, large number of anomalies against efficient market theory have been discovered , this prompt people to seek the interpretation more in line with the actual market and lead to many new innovations and development of financial theory. Therefore, the research on the market anomalies is very important theoretically and practically.

Most of the stock market seasonal anomalies were revealed in the mature Western stock markets which has existed for several centuries. The research on seasonal anomalies not only academically enrich the understanding of efficient market theory, but also has obvious practical significance for pracitical investment. Although China stock market has only developed in a short period of two decades, its role is more and more significant in our national economy and its importance can not be ignored. However, due to the shorter period of development, China stock market has significant differences with the Western mature capital markets in the aspects of legal system, market regulation, rules of market and structure of investors, so it has different seasonal market anomalies characteristics with the United States and other developed countries. For example, seasonality in the cross – section of stock return is very significant in U. S. stock market, but it is not statistically significant in China stock market. Moreover, China's stock

market itself, has some unique seasonal market anomalies, such as "seed in winter, grow in spring, rest in summer, rush in fall ". In addition to applying the Shanghai and Shenzhen A - share and B share index data to study the seasonal anomalies, such as the weekday effect, Sell in May and the month effect, the panel data of the monthly return of the Shanghai and Shenzhen A share has also been used to analyze seasonality in the cross - section of stock return in China stock market. The main work and conclusions are summarized as follows:

(1) The development history and main meaning of efficient market theory were systemically described, detailed classification of the market anomalies against the efficient market theory are described through the list of table in which with the market anomalies, related indicators and the research literature are included. Secondly, history of China stock market from the its beginning was reviewed, and its main problems were analyzed on this basis, the market efficiency of the China stock market were evaluated. In particular the concept of seasonal market anomalies was defined and its performance in China stock market was analyzed and discussed.

(2) The existence of the seasonality in the cross - section of stock return in China stock market was tested. The results show that there is a significant autocorrelation on the stock return of China's listed companies. In a short period of one month, there is a significant negative autocorrelation, and there is significant positive autocorrelation in the medium periods of six and nine months. However, seasonality anomaly in the cross - section of stock return is not statistically significant in China stock market like the U. S. market.

(3) The "calendar effect" seasonal anomaly for the China stock market was exmined with the latest data about the A and B shares from the Shanghai and Shenzhen stock markets. From the empirical results, it is found that there is a difference among the two markets. Even within same market, the empirical result

of weekday effect is different with or without price limits. Shenzhen A – share market, whether in the whole sample period or in periods with or without price limits, have not shown a significant weekday effect. The Shanghai A – share market shows different effects before and after the implementation of price limits in 1992, but after the end of 1996, it does not show any significant weekday effect just like Shenzhen A shares. Only the Shenzhen B – share market Among the four markets shows a significant Tuesday effect in the entire sample period and after the end of 1996. This is consistent with the result of Feng Li – Cheng (2000). From the "January effect" empirical estimates, it is discovered that the Shanghai A-share market shows a typical "January effect", but the "January effect" in Shenzhen A-share market is not significant. The the evidence of "January effect" on Shanghai and Shenzhen B-share markets were not found .

(4) Based on the old stock market adage "Sell in May and Go away " which is popular in Europe and the United States, this paper examined whether the Chinese stock market has a similar seasonal market anomaly. It is found that this anomaly is not significant in Shanghai and Shenzhen stock market before 1997; but after 1997 there is statistically significant differences of the average return between the period of early November to the end of April (winter six months) and the period of early May to the end of October (summer six months). The average return is significantly positive in winter six months and is significantly negtive in summer six months. In other words, the China stock market during this period also shows "Sell in May" effect. Furthermore, the "Sell in May" effect among the industries of the Chinese stock market was examined. the average returns in the winter and summer (six months) for 22 industries formed in accordance with the industry standards. Except industries of transportation and storage , finance and insurance, mining and real estate, there are statistically significant differences in the return of other industries between the winter and

3

summer, especially in industries of agriculture, forestry, animal husbandry, fisheries, electronics and communication and culture industry. Empirical analysis result was estimated on the "Sell in May" effect about all 22 industries. The result show that mining industry, finance and insurance industry do not exist "Sell in May" effect. The average return during the winter (six months) is significantly more than that during summer (six months) in five industries of wood and furniture, paper and printing, electronic industry, pharmaceutical and biological products, the social services. So there is significant "May sell" effect in the five industries. Therefore, "Sell in May" effect among different industries of the Chinese listed companies is significantly different.

(5) In order to verify the popular saying "Plant in Winter, Grow in Spring, Rest in Summer, Grab in Fall" about Chinese stock market, this paper statistically and econometrically analyses the return data in four quarters of winter, summer, spring and autumn on the Shanghai and Shenzhen stock markets. The results show that there is a statistical evidence for this saying. The average returns on the Shanghai and Shenzhen composite index by quarter in descending order are spring, winter, summer and autumn. In spring and winter, the average return is positive, while the average return is negative in autumn. The estimates of seasonal model proposed by this paper show that the average return in the spring is significantly positive, there is a significant negative difference between the average return for the fall and spring. , and differences of the average return for spring, summer and negative are more significant. Therefore, to some extent, the saying of "Plant in Winter, Grow in Spring, Rest in Summer, Grab in Fall" is a feasible investment strategy.

The innovations of this paper are:

(1) For the Chinese stock market's unique saying of "Plant in Winter, Grow in Spring, Rest in Summer, Grab in Fall", a detailed empirical analysis

makes this popular saying has rigorous statistical basis. A model about the seasonal anomaly is proposed as following:

$$R_t = \alpha_0 + \alpha_1 W_t + \alpha_2 S_t + \alpha_3 A_t + \varepsilon_t$$

Where R_t represents the quarterly return on the t period, W_t, S_t and A_t are the dummy variables of winter, summer and fall , respectively.

(2) For the first time, seasonal anomaly in the cross – section of stock return is examined in China stock market. Panel data of all the A shares in Shanghai and Shenzhen stock market is used to analyze the anomaly, which is rare in previous literature.

(3) This paper may be the first empirical analysis to exmine the existence of "Sell in May" seasonal anomaly in the Chinese Stock Market. The average return differences for the different industries and inter – industry between the winter (six months) and summer (six months) are analyzed statistically.

目 录/Contents

第 1 章
导　论