



## What's Behind the September Stock Market Blues?

**Wall Street traders know that September is ominous for stocks. Despite the complexity of the market, the reason boils down to something as simple as the post-holiday “blues”.**

For the past 120 years, the Dow Jones Industrial Average return for the month of September – traditionally the month after the U.S. summer school holidays - has been 1 percent lower than any other month of the year. The explanation for this phenomena, as noted by a **Wall Street Journal article**, has been elusive. And, yet, my idea that investors are not so finely attuned to the market because they are disconnected from the market’s ups and downs during the holiday period is not so far-fetched. Assuming, not unreasonably, that investors need down-time in much the same way as everyone else, the question of whether this can actually explain the century-old phenomenon deserves further investigation.

My paper **School Holidays and Stock Market Seasonality** co-authored by Melissa Lin at Erasmus University, Rotterdam and Yuping Shao at the National University of Singapore, examined school holiday data from 47 countries around the world to see if the school holidays affected stock returns regardless of timing. What we found was a striking pattern: stock returns were on average lower across the globe by 1 percent in the months after major school holidays. Looking specifically at the 37 countries in the Northern Hemisphere, we found that 28 were affected by average negative returns for the month of September.

### Back to Work Blues

The “back to work” stock market blues was seen at different times of the year in different geographical regions, for example, in the U.S. states whose schools start back in August (Indiana, Nevada, Oklahoma, Tennessee and Hawaii), returns were lower on average by 28 basis points for the companies headquartered here.

In France, the negative returns were more pronounced after major national holidays compared to regional holidays. Moreover, we use the fact that the French government divides the country up into three regions and imposes staggered holiday-taking in order to avoid tourist congestion. If there is a genuine after-holiday effect, we should see stocks from companies in a particular region fall after the school holidays of that *same* region, but not after other regions’ holidays. And this is exactly what we find. The stock market downturn follows the region-specific holiday calendar.

Finally, the Chinese New Year holiday saw, on average, 2 percent lower market returns in China, Taiwan, Singapore and Hong Kong after this specific holiday compared to other times of the year when we studied data for the time period 1970-2013.

### Bad news day exacerbated

Could it be there was more bad news from companies during or after the holidays? Studying reported earnings data from 1983 to 2012, we found that there was no difference in the percentage of positive earnings news (over 50 percent), negative earnings news (33 percent) and neutral earnings news (10 percent) at any time period of the year. The volume of positive, negative or indifferent news clearly wasn't affecting the stock market returns then.

We concentrated instead on whether the way investors responded to the news played a role. We were able to look at trading data for the entire market and this showed the percentage of institutional trading versus non-institutional investors. We found that during the holidays, institutional buying, selling and short selling around earnings announcements went down by 8 percent, 14 percent and 18 percent respectively compared to other times of the year. Because institutional investors are key to the price discovery process and are more adept at short-selling than non-institutional investors, their slowed activity meant that bad news released during holidays was reflected in prices more slowly, resulting in the after-holiday blues.

Because taking advantage of bad news requires more skills and attention than taking advantage of good news—think about the risks and monitoring involved in short-selling—the fact that this skill and attention was in short supply during the holidays had a significant impact on the market.

### **Attention is a limited resource**

The facts were stacking up: the “after holiday effect” was apparent across different geographical regions; and thin volume during holidays is a global phenomenon in multiple markets, including options markets. What our paper highlights is that although we are living in a hyper-connected world, and markets are overall efficient, human limitations in information processing and in paying attention still have significant marginal impact on markets. Though this phenomenon may weaken over time as human traders are increasingly aided by tireless computers and trading algorithms, we contend that it will not entirely disappear as long as the stock market remains a primarily human activity. After all, even the best traders are human and need a holiday.



**Lily Fang** is Associate Professor of Finance at INSEAD.

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