Appendix A. Alternative Measures of Risk Taking

We consider alternative measures of risk taking. According to the methods of Massa and Simonov (2003), we define the risk measures as the percentage in holdings of more volatile stocks and the percentage in holdings of smaller stocks. The first is related to the volatility of stock return. The most widely accepted measure of risk within financial assets is the volatility of its return. A stock that has a high volatility rating will be considered higher risk because it can quite easily lose any potential returns it has made due to the volatile nature of the stock. Standard deviation is a general statistical measure of volatility. What is being measured is how widely an investment's returns fluctuate over time. Looking over the long term, standard deviation provides strong evidence of the relationship between risk and return. Standard deviation has been a classical portfolio risk measure since Markovitz used it in the 1950s to demonstrate the diversification effect of stocks. Therefore, we define the risk measure as the percentage in holdings of more volatile stocks. In particular, we classify stocks into four groups based on their standard deviation of returns in ascending order. We then regard stocks in the group of the highest standard deviation as the most volatile stocks, and calculate their holding’s percentage.

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However, standard deviation does have some drawbacks that may not suitable to our study: it's not necessarily intuitive and must use a long period to calculate it. Standard deviation is not a "relative" measure; it may not make much sense unless

you compare a stock's standard deviation to that of similar stocks. To calculate standard deviation, we should look over long term history of stock returns that general investors may have difficult to deal with. Because general investors may not easily or may not be able to access long history records of stock returns and people often recall their memories for more recent events and ignore or forget the events that happened long time ago. Thus we suspect that standard deviation may not suitable for our study as a proxy of risk.

The second risk taking measure is related to the market capitalization (size) of stock. It is generally accepted that stock size could be a proxy of risk since Fama and Frence (1992) introduced the stock size as a risk factor into the asset pricing model. Small stocks should be riskier than large stocks. Therefore, because of risk, investors should expect small stocks to generate higher returns than large size stocks. Specifically, we use two different measures: the portfolio's weighted-size and the percentage of holdings in smaller stocks. Similar to the previous method, we classify stocks into four groups based on their size in ascending order and then regard stocks in the group of the smallest size as the smallest stocks. Finally, we calculate their holding's percentage as the measure of the percentage of holdings in smaller stocks.

The coefficient from the regressions and associated *t*-statistic are reported in Table A1. Panel A to C report the coefficients from the regressions by taking the percentage in holdings of more volatile stocks, portfolio's weighted-size, and

percentage in holdings of smaller stocks as dependent variable, respectively. In addition, every first (second) row in the panels reports the coefficient for the purchase period of 3 days following the sale period of 3 successive days (the purchase period of 4 days following the sale period of 4 successive days). The results, in general, show no evidence of the house money effect, and the coefficients are either negative or insignificantly positive.

Appendix B. Robustness Test by Analyzing with the Whole Sample

However our sample selection procedures cause us to exclude trading records of a large number of investors and may lost lots of information we could used. We therefore repeat our analysis for all investors in our data set. The evidence for the house money effect is not much different. As before, there is a strong relation between prior gains and risk taking. These results are shown in Table B1 to Table B10.

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