

The Liquidity Style: Finding Bargains by Seeking Less Popular Stocks

An Interview With Roger Ibbotson

Article Highlights

- Longer-term investors can get a benefit from buying stocks that are traded less, particularly those with low valuations.
- Liquidity is a different investing style than size and value, but is additive to their performance.
- Investors should seek fundamentally strong companies that have not been recognized as being such.

Roger Ibbotson is chairman and CIO of Zebra Capital Management and a professor at the Yale School of Management. We spoke about his studies on the relationship of liquidity to returns. A copy of a recent paper he co-authored on the subject, "Liquidity as an Investment Style," can be downloaded at http://mba.yale.edu/faculty/pdf/ibbotson_liquidity_as_an_investment_style.pdf.

—Charles Rotblut, CFA



Analyst Journal. And the other one is "Liquidity as an Investment Style," which I co-wrote with Zhiwu Chen, Daniel Kim and Wendy Hu. That paper is also accepted by the Financial Analyst Journal, but it is forthcoming; I don't know the publication date.

Charles Rotblut (CR): I'd like to discuss your studies on liquidity as an investment style. Can you explain what liquidity is in terms of stocks and shares trading?

Roger Ibbotson (RI): Liquidity has many different definitions. People think of liquidity as something talked about after the financial crisis, or liquidity in the financial systems or liquidity in trading costs. What we are particularly interested in, though, is how liquidity affects valuation—particularly for longer-term investors. If they're not going to do much trading, investors in fact can get a benefit from buying stocks that are traded less, but have lower valuations, which is what leads to the higher returns.

CR: So you're looking at stocks with less volume then, correct?

RI: Well, there is more than one measure of liquidity, but the research papers I worked on that you mentioned looking at are based on trading volume. But whatever measure you use, it is true that the less liquid stocks have lower valuations and, ultimately, higher returns. You're probably looking at two papers: My paper with Thomas Idzorek and James Xiong ("The Liquidity Style of Mutual Funds"), which was published in the November/December 2012 issue of the Financial

CR: You looked at share turnover, specifically, over a 12-month period, correct?

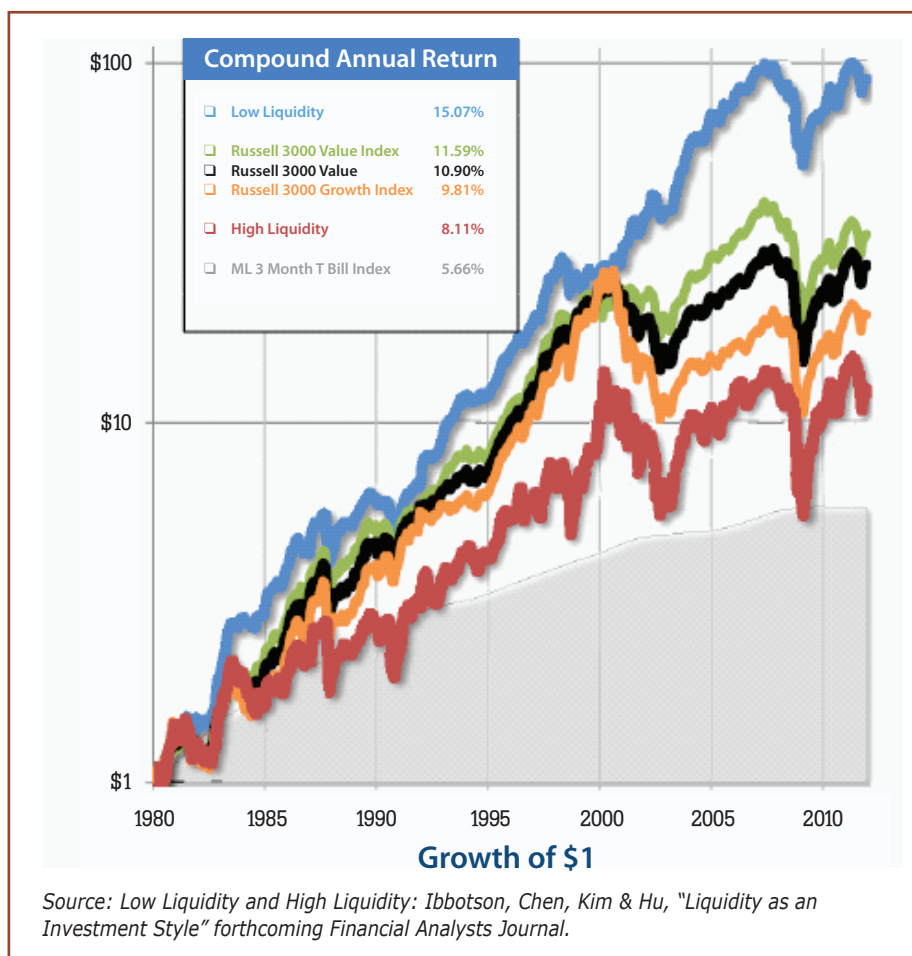
RI: Yes, we did look at turnover over the previous 12 months, and that is certainly one good measure of liquidity. That actually picks up popularity as well as liquidity. You can view the less liquid stocks as the less popular stocks as well. Ultimately, you're basically buying the types of stocks that other people aren't so interested in. In fact, that's how you get your bargains in the market: You buy the types of securities that other people do not want.

CR: When you factored in turnover, were you looking at total shares outstanding or were you looking at the float, which is shares outstanding less the restricted shares?

RI: We were looking at total shares outstanding to calculate turnover: number of shares traded divided by the total number of shares outstanding. Closely held companies, for example, don't have that much float. But they also tend to be less liquid for that reason and they tend to be undervalued as well.

CR: You noted that there are other measures of liquidity, such as the dollar value of the shares traded each month. Do you think there is an advantage of one method over another?

Figure 1. Growth of \$1 Invested Using Liquidity, Value and Growth Investing Styles



RI: We like using turnover as a method; it is a simple, very straightforward method. Whatever method you use, you're going to get the result that stocks that are less liquid have lower valuations and higher returns.

CR: For calculating turnover, you're looking at average volume over the last 12 months, correct?

RI: In those academic papers, yes. It is part of my job at Yale School of Management to publish papers. At Zebra Capital, we also manage money based on buying these less liquid and less popular names. And we actually short the companies that are most liquid and most exciting—the glamorous-type stocks that everybody else is so interested in.

CR: Are you using the 12-month period for that as well or a shorter period?

RI: We tend to use the longer periods. We don't always use 12 months, but we tend to use longer periods to measure liquidity. It turns out that shorter periods are really pairing up with changes in liquidity, and liquidity isn't always going in the same direction. For example, you can have a company where as its liquidity rises, its valuation rises. If you take a short-term measure of liquidity, you may be picking up block trades or something like that and then they would tend to revert back down. So, a short-term measure of liquidity may quickly revert; a longer-term measure has a much slower reversion.

CR: In the paper you mention changes in liquidity for a stock with high levels of turnover, where slowing volume would hurt its price and accelerating liquidity would tend to help the price. Is this where the short-term

factors come more into play?

RI: Yes. In fact, it can work in the opposite direction because the more liquid a stock becomes, the more its valuation rises. Of course, you want to buy before the rise in valuations.

CR: Absolutely. You made an argument in your paper that you view liquidity as being a different investing style than valuation or market capitalization. Could you expand on this?

RI: I don't know if the market itself is a style, but that's one of the big drivers of returns: whether the market is up or down. Beyond that, the two prominent investing styles that have been accepted are size and value. Small-capitalization stocks outperform large-capitalization stocks and value stocks tend to outperform growth stocks. These have been well-established in literature. We show in the paper that liquidity is different than either one of those, but really additive to them. So, if you buy a less liquid value stock, it will have higher returns than if you buy a more liquid value stock. Whether you're talking about a value stock or a growth stock, the less liquid version tends to have the higher returns.

[Editor's note: Figure 1 shows the total return wealth indexes for the liquidity, value, growth and market investing styles.]

CR: Usually that applies across market capitalizations as well, correct? A less liquid large-cap stock will hold up better than a large-cap stock that is actively traded?

RI: Yes, a large-cap, highly actively traded stock will tend to perform less well than a large-cap stock that is more ignored by the market. But I will say that the spreads are bigger as you go to micro caps. As you go to the small micro caps, the return difference between the less liquid and the more liquid is higher.

CR: Do you have a table that describes annualized returns across cap size ranges for different levels of liquidity?

RI: Yes, we have a table showing quartiles of size. [Editor's note: See Figure 2.] In quartile one, which is the top row of the matrix, you can think of those as being micro-cap stocks. You

will see the “liquidity premium,” or the spread between the low liquidity and high liquidity columns, is very high. But you’ll also see a spread that is statistically significant even in the large caps, which would be row 4.

CR: You looked at the 3,500 largest stocks. Do you get similar results with different stock universes?

RI: You see this across the whole market. We have done other studies with a smaller number of stocks: At Zebra Capital, we manage global portfolios, but in the U.S. we usually hold the top-2,000 stocks. You find it across the whole spectrum of stocks. It is true that the differences are bigger with the smaller-cap stocks, but they are still substantial even within the larger-cap stocks.

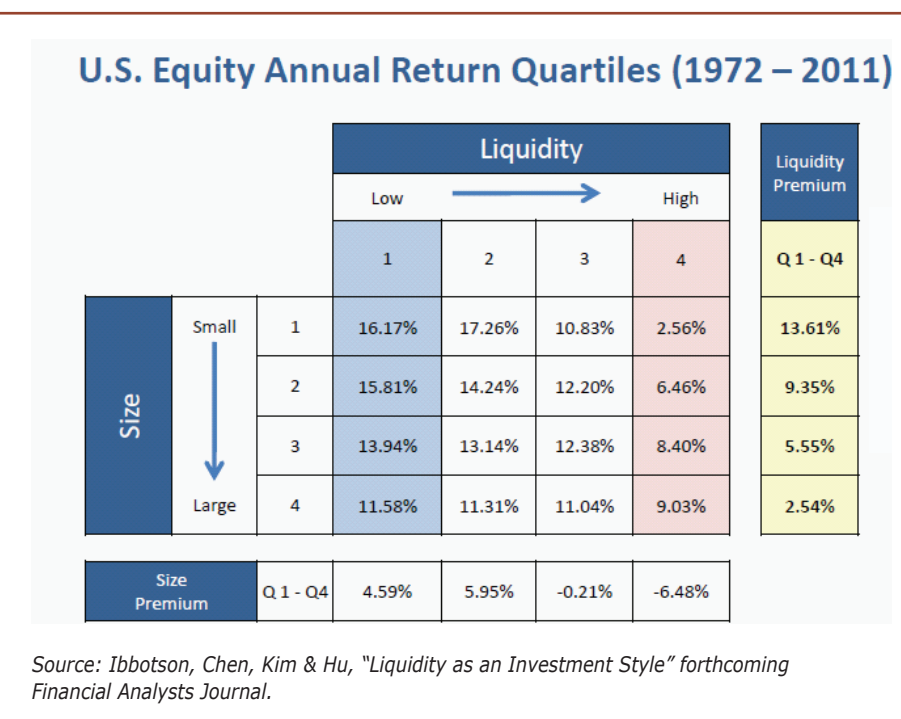
CR: In terms of holding period: If someone is using liquidity as an investing style, is it like any other style where if they see the attribute that makes the stock attractive and as long as the stock stays attractive, they should be willing to stay in it? Or are there signs they should be looking for, like a “liquidity trap”?

RI: Yes, it is true that you will not win every year on a portfolio and certainly not with every stock. Just as with size or value, you do not win every year. It is the same with buying less liquid stocks. These types of stocks would win on average, but there would be times when this strategy would not succeed.

CR: Is there a certain type of market that you’ve noticed is better or worse for less liquid stocks, or is it more of a secular trend?

RI: Well there’s a worse time to try to buy less liquid stocks, which is in bubbles. In bubbles, for example the technology bubble of the late 1990s, people don’t buy on their fundamental values. They buy on excitement. And the stocks that are the most glamorous stocks, whether they have any real business or they just have potential promises of business, those kind of stocks do very well in those kind of markets. So in bubbles, the liquidity strategy definitely underperforms. When bubbles pop, however, that’s when less liquid stocks have the very best performance because

Figure 2. Liquidity Dominates Size as a Predictor of Returns



that’s when valuations get back to more normal levels.

CR: If an individual investor wanted to build a strategy incorporating liquidity, what should he pair it with? Should he be looking at valuation and momentum? Are there certain criteria that pair well with liquidity?

RI: We pair it with value-type measures. You have to pair it with something because you really need to be buying fundamentally strong companies. You want to buy fundamentally strong companies that basically haven’t been recognized as such. So when you’re getting the less liquid stocks, they also are the less popular stocks. If they have strong fundamentals, but are less popular, these stocks tend to be selling at discounts. When the market recognizes more what’s going on, these stocks tend to migrate to becoming more popular. Then, if their fundamentals improve from there, they’ve got a double-whammy: improving fundamentals and the increase in popularity—this often creates very good returns.

CR: I’d like to talk to you about the book that bears your name, the Ibbotson SBBI

Classic Yearbook (which is now published by Morningstar). A lot of people focus on the long-term return data that starts in 1926. Is there a particular reason why that date is used?

RI: I was in the Ph.D. program in the Graduate School of Business at the University of Chicago at the time, which is now called Chicago Booth. I was a Ph.D. student and then a professor there. Lawrence Fisher and James Lorie had put together data on the stock market going back to 1926. While I was working in the investment office at the university, people were always asking when they were going to update their studies. After they asked enough times, I decided that I would undertake that. We did it a little differently than Fisher and Lorie did, but we updated the studies. I was also very aware that there were different types of stock and bond premiums and we wanted to capture all of these premiums. We started in 1926 because that’s when Fisher and Lorie started their studies.

I will say that there is some rationale to that. First of all, the data wasn’t available in detail much before that date. Secondly, we certainly wanted to capture the Great Depression because

if you really want to know what is going on in long-term returns in the stock market, you can't ignore what happened in the 1930s. With that said, we didn't want to start immediately at the Great Depression. We needed to start some time before that.

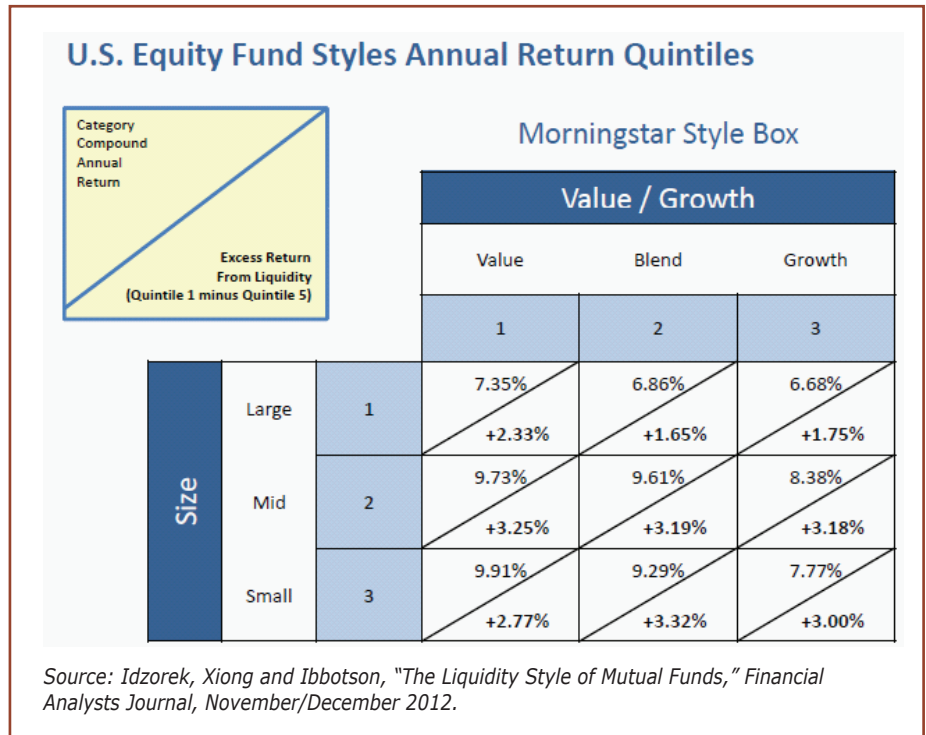
CR: If you picked a different starting date than 1926, you'd end up with a long-term return that is different than the 9.8% for large-cap stocks. But you're arguing that it is important to use that date because it does include the Great Depression, correct?

RI: Yes, if you started after the Great Depression, the return of course would be quite a bit higher. But you definitely want to capture a wide range of events. Now if you look at the period from 1926 on, you're actually capturing two drops in the 1930s: the crash of '29, which carried onto 1932; and then in the late 1930s there was another big drop in the stock market. We also had the drop in 1973 and 1974. We had the drop in the tech bubble in the beginning of this century. And then we had the financial crisis. These are the five big drops in the stock market and they're spread out over a lot of different years. You need a lot of years to capture what is going on.

CR: I know you've researched a lot of long-term data over the years on the market. Do you have any insights or anything you've realized from the data that individual investors should pay attention to?

RI: You want to be a long-term investor. Actually, individuals have a tendency to go in the wrong direction. For example, if you look at the mutual fund flows, individuals got out after the financial crisis, but are only now starting to get back in to the stock market. They didn't get completely out, but they had negative outflows during this whole time. Meanwhile, the stock market more than doubled and totally recovered from the financial crisis, and yet individuals were generally going against the grain and were reluctant to move back in to the market—with full force, anyway. So, I think the key is that, yes, it is true that the stock market has lots of risks, but

Figure 3. Mutual Funds With Relatively Less Liquid Holdings Outperform



if you want to get the returns of the stock market, you have to really stick with it. You can't bail out when times are the toughest.

CR: Is there anything else that I haven't asked you that you think is important to bring up?

RI: There is one table in my paper with Thomas Idzorek and James Xiong "Liquidity Style of Mutual Funds" that looks at the Morningstar style box, which is probably the best summary of what is in this paper. [Editor's note: The data is reproduced in Figure 3.] We show that mutual funds that hold less liquid stocks outperform mutual funds that hold more liquid stocks in every one of those nine cells/categories. And the outperformance tends to be about 2% to 3% a year. This is something that I think individual investors have pretty much immediate access to. If they buy the mutual funds that are holding the less popular and the less liquid stocks, there's a pretty substantial extra return that they can have. Another reason I think this table is so important, other than just the fact that the returns are higher, is that

it refutes the idea that if you're going to buy a less liquid stock then you're going to have higher transaction costs. That table looks at these mutual funds after all the transaction costs. It looks at the mutual funds after all of the fees that mutual funds might charge. So even after all of the transaction costs and fees, there's still this 2% to 3% extra return that you get by buying mutual funds that hold the less liquid holdings.

CR: You're saying that investors are being compensated for the wider spreads between the bid and the ask prices, correct?

RI: Yes. So it's not only true that you have higher gross returns, but you have higher net returns—net of all costs. And it's interesting, like with a lot of styles, the mutual fund managers in the sample were not even aware of what we were categorizing. They're not even aware that they're holding the less liquid stocks; at least they're not purposely trying to do that. We're just dividing them into quintiles so that we can compare the mutual funds that hold the lowest liquidity quintile stocks with the mutual

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strong or improving company performance and future prospects. Investors look for stock price performance better than that of other stocks with the belief that the rising price will attract other investors, who will drive up the price even more.

To construct high price momentum portfolios, Novy-Marx ranked stocks by their performance in the first 11 months of the year preceding the annual portfolio formation. As shown in Table 1, stocks with high price momentum had high excess returns of 0.38%. This was higher than the combined quality growth and value excess return of 0.35%, but the volatility of the high-momentum portfolio was greater, resulting in a lower risk-adjusted information ratio of 0.58%. In contrast, low price momentum had a negative excess return of 0.11% with even greater volatility.

We ranked the non-financial S&P 500 stocks by their 52-week price change and present these stocks in the bottom panel of Table 2. Homebuilder PulteGroup (PHM) leads the list as the housing market is rebounding. Other winners include oil refiners, Internet travel sites and entertainment stocks.

Combining Quality, Value and Momentum

Using the same method for calculating the joint quality growth and value score, Novy-Marx constructed portfolios

that also take price momentum into account. He ranked his stock universe by the price performance for the first 11 months of the year preceding portfolio formation of the test portfolios. The price performance ranking was combined with the gross-profit-to-assets ranking and the price-to-book-value ranking to form a single composite rank or score. The study paper indicates that all three rankings were given equal weighting for the sake of simplicity, although you might be able to improve performance by changing the weights.

The average monthly excess return for these stocks came out to 0.44% and volatility stayed low at 5.7%, resulting in a very high risk-adjusted information ratio of 0.93%—higher than that observed for any other strategy. A dollar invested in July of 1963 in the strategy that combines quality, value and momentum would have grown to \$955 dollars by the end of 2011. Over the same time frame, \$1 invested in T-bills would have grown to \$12.31, while \$1 invested in the market would have grown to \$84.77. All of the individual strategies were able to improve upon market performance, but since they all offer different dimensions to selecting stocks, Novy-Marx shows how investors can benefit from combining these distinct strategies.

Table 3 displays the 30 non-financial S&P 500 stocks with the best combined quality, value and momentum ranking.

It is an interesting and diverse group of companies that look worthy of further analysis.

Conclusion

Novy-Marx offers new dimension to building stock portfolios.

Value measures such as price to book value attempt to identify undervalued stocks, but investors need to use secondary screens to avoid stocks that are cheap for a good reason. Novy-Marx shows how value investors can use gross profit to assets as a quality signal to separate true bargains from value traps. He uses one of Warren Buffett's favorite sayings to illustrate this value-growth trade-off, "It is far better to buy a wonderful business at a fair price than to buy a fair business at a wonderful price."

Growth investors can benefit from using value screens to avoid good companies that are already fully priced. Patience is often required while waiting for the market to recognize the value of a given stock. Combining value with quality growth and price momentum should help to identify attractively priced growth stocks on the move.

Keep in mind that the purpose of these screens is to illustrate with real firms a useful combination of value, growth and momentum analysis. The screens are a mere first step in the stock selection process. ▲

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AAIL Stock Strategies

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funds that hold the highest liquidity quintile stocks. So they're accidentally falling into these categories; they're not trying to do it. If you try to do it, you might actually do even better than they do on this. So we think that particular research paper shows something that is

definitely relevant to individual investors.

CR: *So if you're an individual investor looking for those funds, would it just be a matter of legwork on your part looking at what the top holdings are and then trying to determine which funds hold less liquid stocks and which are going after the more popular stocks?*

RI: Yes, there may be a lot of legwork. We do sub-advise two mutual funds from American Beacon: American Beacon Zebra Global Equity (AZLPX) and American Beacon Zebra Small Cap Equity Fund (AZSPX). So I guess one could get our strategy without going through all of that legwork. ▲

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