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THE JELLY BEAN EFFECT

I have always been a fan of the Jelly Bean Game. You know the one: a glass jar filled with jellies to the brim and a daring sign proclaiming, “Guess the number of jelly beans, win a prize!” Whenever I see one of these in the middle of a crowded mall or tucked inside a carnival tent, I drop everything and start studying the beans. You see, I know every trick in the book when it comes to counting jelly – the volume of the cylindrical jar, the number of beans per unit of volume, the size of the air gaps between each bean, correcting for irregularities of the container, and so forth. I guess you could say the game strikes a chord with my mathematical and analytical side. Or maybe I just eat too many jelly beans.

In 1987, Jack Treynor, a Professor of Finance at the University of Southern California, devised the ultimate bean guessing strategy. Surprisingly, it did not involve any volume formulae. In fact, it required very little information, calculations, or tools beyond a pocket calculator. All he had to do was ask his investment class, about 50 large, to individually estimate the number of beans in the jar. He would then take a simple average of all responses, and that would be his final guess. Presumably, none of the students were expert jelly estimators; many probably had never even heard of the game before that. So it was not a surprise that the guesses ranged wildly from a few hundred to several thousand. But the end results were magnificently all the same: consistently, the class average would be only a handful away from the true value of 850 beans.

I must admit, anyone who can come up with a solution to The Game with that kind of accuracy and reliability is impressive in my book. The theory behind it, which I have here dubbed the “Jelly Bean Effect”, is indeed a curious but powerful one. Though the guesses vary wildly, averaging them tends to reduce this variability. A very high estimation would cancel out a very low estimation, so that the average guess would be closer to the actual value than most of the individual guesses. It turns out, in other words, that two wrongs do actually make a right.

Mr. Market’s Elusive Returns

The market is difficult to beat. Unfortunately, many asset managers tend to trail their benchmarks over long periods of time, and that’s before management fees. Not just in one investment category either, but a spectrum: small cap and all cap; domestic and international; and equities and bonds. How can that be? If Warren Buffett’s iconic caricature of Mr. Market is one of a schizophrenic salesman, how is Mr. Market besting the majority of well educated, rational investors out there? You see, the Jelly Bean Effect does not stop at jelly beans. It applies to everything from guessing the correct weight of a cow, to – you guessed it – the stock market. The push and pull of millions of market

participants, some bullish, some bearish, is diverse enough that the overall estimate of fair value of the market is reasonably close – or at least, better than one might expect. This makes it very challenging for someone to outguess the market, unless they are employing specialized skills or methods.

Capturing the Jelly Bean Effect

The natural conclusion that arises is the stock market is efficient. But we at Sionna would dispute that notion; we think we can, and have in the past, beat Mr. Market over the long run. We believe that as a group we have been able to outperform the broader market and other asset managers by recreating the Jelly Bean Effect in our research process.

Our process begins, as many do, with any one of our team members taking a "deep dive". This process can take anywhere from a few weeks to a few months, depending on the depth of the company and the complexities around it. During this period the analyst will read related documents, interview the management team, speak with outside analysts, have discussions with colleagues, and so forth. The result is a research report that is distributed to everyone on our investment team. This is where the Jelly Bean magic happens.

First, I should point out that we have a sizeable team. Our eight-member team of portfolio managers and analysts work together on all of our funds, which grants us a diversity of opinions and perspectives by which we can tackle investment ideas. Once everyone has read the report, we each arrive at an independent conclusion of the potential idea. We then all gather for a research meeting that begins with each member casting their vote on the investment idea. What follows is a no-holds-barred debate wherein we scrutinize the research put forth by the lead analyst against everyone else's facts, comments, and questions. After some thoughtful discourse, and often some heated dissension, we reveal the results of the vote and give a final weigh-in on whether to proceed with the idea.

In essence, we have created a microcosm of the Jelly Bean Game, but with a few key differences. Most notably, we have an informational head start; we are allowed to measure the jar, the beans, and everything else in between. We then analyze this data to form a fairly educated evaluation as our starting point. We also have the experience that comes from playing the Jelly Bean Game countless times. We learn from past lessons and recognize situations where we can adjust our evaluation. So you see, before we even begin, we are already closer to the true value than the typical market participant. The Jelly Bean Effect is simply a mechanism to aggregate all of this data in a consistent way to produce better results than our individual decisions.

We have observed some distinct benefits in employing this method. We are able to draw upon the experiences, perspectives, and skill sets of a large and diverse group. It also unveils potential issues with the investment idea that were not immediately apparent. The push and pull of eight viewpoints, some for and some against, help us arrive

together at a definitive solution that is on the whole more accurate than our individual propositions. We have excellent individual stock pickers at Sionna, but together we are far better.

In Closing

For any reader that is interested in the topic, we recommend James Surowiecki's book, *The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations.* In it, he describes why a concerted decision-making effort almost always trumps the individual. He also identifies the group qualities that are needed for crowd thinking to be effective. We took a few cues from it ourselves in shaping the team, such as having a diversity of opinions and coming to independent conclusions. We think that the Jelly Bean Effect, as strange and intangible as it is, will continue to improve our decisions for many investments to come.

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