Ten Reasons for Optimism

Do you ever listen to the news and find yourself thinking that the world has gone to the dogs? The roll call of depressing headlines seems endless. But look beyond what the media calls news, and there also are a lot of things going right.

It's true that the world faces challenges in many areas, and the headlines reflect that. Europe has been grappling with a flood of refugees; as of May, the Chinese local A-share market declined by almost 20 percent[1]; and the US is in the middle of a sometimes rancorous election campaign.

More recently, citizens of the United Kingdom voted to leave the European Union, creating significant uncertainty in markets over the long-term implications.

But it's also easy to overlook the significant advances made in raising the living standards of millions, increasing global cooperation, and improving access to healthcare and other services across the world.

Many of the 10 developments cited below don't tend to make the front pages of daily newspapers or the lead items in the TV news, but they're worth keeping in mind on those occasions when you feel overwhelmed by all the grim headlines.

So here's an alternative news bulletin:

1. Over the last 25 years ending May 2016, one dollar invested in a global portfolio of stocks would have grown to more than five and a half dollars.[2]

2. Over the last 25 years, 2 billion people globally have moved out of extreme poverty, according to the latest United Nations Human Development Report.[3]

3. Over the same period, mortality rates among children under the age of 5 have fallen by 53%, from 91 deaths per 1000 to 43 deaths per 1000.[3]

4. Globally, life expectancy has been improving. From 2000 to 2015, according to the World Health Organization, the global increase was 5.0 years, with an even larger increase of 9.4 years in parts of Africa.[4]

5. Global trade has expanded as a proportion of GDP from 20% in 1995 to 30% by 2014, signaling greater global integration.[5]

6. Access to financial services has greatly expanded in developing countries. According to the World Bank, among adults in the poorest 40% of households within developing economies, the share without a bank account fell by 17 percentage points on average between 2011 and 2014.[6]

7. The world's biggest economy, the US, has been recovering. Unemployment has halved in six years from nearly 10% to 5%.[7]

8. The world is exploring new sources of renewable energy. According to the International Energy Agency, in 2014, renewable energy such as wind and solar expanded at its fastest rate to date and accounted for more than 45% of net

additions to world capacity in the power sector.[8]

9. We live in an era of innovation. One report estimates the digital economy now accounts for 22.5% of global economic output.[9]

10. The growing speed and scale of data is increasing global connectedness. According to a report by McKinsey & Company, cross-border bandwidth has grown by a factor of 45 in the past decade, boosting productivity and GDP.[10]

No doubt many of these advances will lead to new business and investment opportunities. Of course, not all will succeed. But the important point is that science and innovation are evolving in ways that may help mankind.

The world is far from perfect. The human race faces challenges. But just as it is important to be realistic and aware of the downside of our condition, we must also recognize the major advances that we are making.

Just as there is reason for caution, there is always room for hope. And keeping those good things in mind can help when you feel overwhelmed by all the bad news.

Rockwood Team Grows – Welcome, Sam Feldbaum, CFP®

The Rockwood team is growing – at the start of June, we welcomed Private Client Advisor Sam Feldbaum. Prior to joining Rockwood Wealth Management, Sam was the head of Financial Planning at Locust Capital Management, where he was responsible for all aspects of the Wealth Planning process. Sam is dedicated to providing individuals and their families with comprehensive and conflict-free financial advice.

Sam is a member of the National Association of Personal Financial Advisors (NAPFA), the Financial Planning Association (FPA), and is a Certified Financial Planner™ (CFP®). He is currently pursuing a Master's Degree in Taxation at Villanova and holds a Bachelor of Arts degree in Economics & Finance from Lafayette College, where he was a member of the varsity soccer team. In his first weeks here, Sam has provided valuable support to existing clients and begun building relationships. With his commitment to providing clients with ethical and thoughtful financial planning services, Sam is a seamless fit with the Rockwood team and our mission of providing a peerless client experience.

Index Reconstitution: The Price of Tracking

Index funds are an innovative solution for investors and provide diversified investments at low fees. On any given day, an investor can observe the performance of indices from providers such as MSCI,[1] S&P,[2] or Russell[3] and that means it's easy to monitor whether or not an index fund manager replicated the index's performance (gross of fees and expenses). However, an index fund manager's strict adherence to an index comes at a cost in the form of reduced discretion around trading.

Most indices revise their list of index constituents periodically (e.g., annually or quarterly), at which time securities may be added or deleted from the index. This process is commonly referred to as index reconstitution. For example, the annual reconstitution of the widely tracked Russell indices occurred on June 24, 2016 (the day after the Brexit vote). Russell index fund managers had to buy additions and sell deletions for the indices they track in order to minimize tracking error[4] relative to the index. Any deviation of the fund from the index, over days or even hours, can result in different returns from the index.

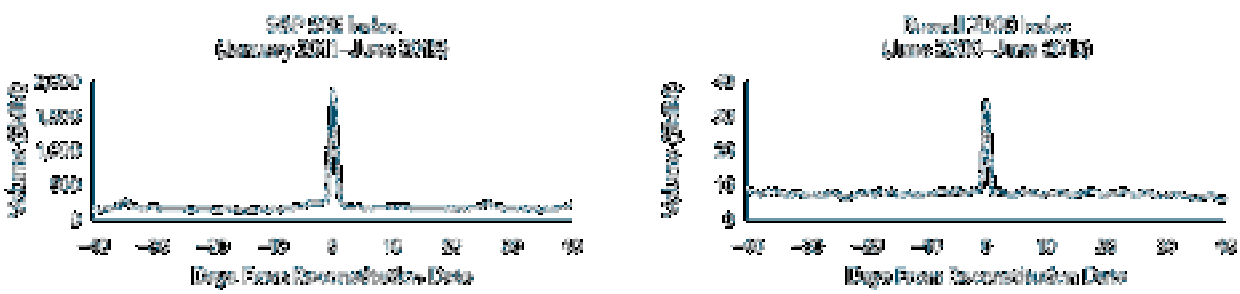
The effect on volume from index rebalance trades is apparent in a huge volume spike on reconstitution day.

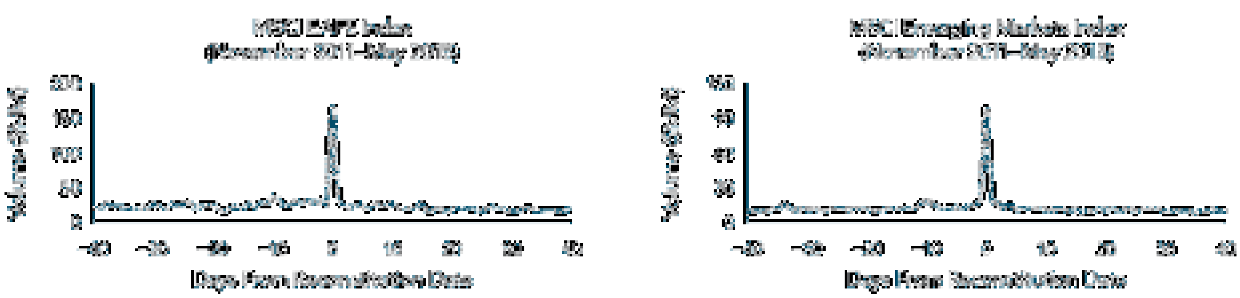
With the annual reconstitution of the Russell indices in recent memory, it is a good opportunity to revisit how index reconstitution events affect trading costs and returns.

Exhibit 1 illustrates average trade volume for additions and deletions in four major indices during the 80-day period surrounding reconstitution. Each of the charts shows a marked increase in trade volume on the effective date of reconstitution relative to the surrounding days. The effect is pervasive across the market capitalization spectrum as well as geographic region.

For each index, this large liquidity demand tends to drive up the prices of securities with greater purchase demand (generally additions to the index) relative to the other securities in the index. It also tends to push down prices of securities with greater sell demand (generally deletions from the index) relative to the other securities in the index. Thus, for an index being tracked by a large amount of assets, the index has generally added securities at higher prices and deleted securities at lower prices than it

Exhibit 1: Equal-Weighted Average Trade Volume for Index Additions and Deletions





would have if no assets had been tracking it. This phenomenon is the result of index managers' demanding liquidity on or around the index reconstitution date.

After the reconstitution of an index, as the liquidity demands of index managers decline, research shows this price effect tends to reverse. That is, additions tend to underperform the index while deletions tend to outperform. As a result, index managers' implicit trading costs can result in a performance drag on the index and, consequently, funds tracking the index.

A simple experiment in delaying reconstitution allows us to estimate how much this price pressure has impacted index performance. Exhibit 2 compares average monthly returns for two sets of Russell indices; one set is rebalanced on the June-end reconstitution date and the other three months later. As shown in the final three columns, delaying rebalancing improved average returns between 0.15% and 0.73% per month from July through September—the three months between the rebalance date of the standard indices and their delayed counterparts. For all calendar months, including October through June when holdings are identical for both rebalancing methods, this amounts to a performance benefit ranging from 0.04% to 0.18% per month, or approximately 0.45% to 2.21% per year.

SUMMARY Index funds may be a good option for investors seeking investments with low fees. However, in an attempt to match the returns of an index, an index fund manager sacrifices trading flexibility. Because of high liquidity demands around index reconstitution dates, index funds may incur high trading costs that do not appear in expense ratios but do affect net returns. The funds' goal of minimizing tracking error may come at the expense of returns. Investors should consider the total costs, both in terms of expense ratio and trading costs, when evaluating investment options.

Exhibit 2: Effect of Delaying Reconstitution Month

	Rebalanced in June			Rebalanced in September			Difference Between Delayed and Actual		
	Russell 1000 Value Index	Russell 2000 Index	Russell 2000 Value Index	Delayed R1V	Delayed R2	Delayed R2V	R1V: Delayed – Actual	R2: Delayed – Actual	R2V: Delayed – Actual
Average Monthly Returns, January 1990–July 2015									
All Months	1.02%	0.99%	1.16%	1.06%	1.15%	1.35%	0.04%	0.15%	0.18%
October–June	1.43%	1.55%	1.70%	1.43%	1.55%	1.70%	0.00%	0.00%	0.00%
July–September	-0.17%	-0.65%	-0.42%	-0.02%	-0.05%	0.31%	0.15%	0.60%	0.73%

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From Ten Reasons for Optimism:
1. As measured by the MSCI A Share Net Dividends Index in CNY.
2. As measured by the MSCI All Country World Index (gross dividends) in USD.
3. "Human Development Report 2015: Work for Human Development," United Nations.
4. "World Health Statistics 2016," World Health Organization.
5. "International Trade Statistics 2015," World Trade Organization.
6. "The Global Findex Database 2014: Measuring Financial Inclusion Around the World," World Bank.
7. US Bureau of Labor Statistics, 15 March 2016.
8. "Renewable Energy Market Report 2015," International Energy Agency.
9. "Digital Disruption: The Growth Multiplier," Accenture and Oxford Economics, February 2016.
10. "Digital Globalization: The New Era of Global Flows," McKinsey and Company, March 2016.

From Index Reconstitution: The Price of Tracking:
1. Morgan Stanley Capital International.
2. Standard & Poor's Index Services Group.
3. FTSE Russell is wholly owned by London Stock Exchange Group.
4. Tracking error is the standard deviation of the return differences between a fund and its benchmark.