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The Trend Is Not Necessarily Your Friend

Introduction

The digital world is awash in cybercrime. It is hard (or perhaps impossible) to truly safeguard networks and digital communication. If your computer network is connected to the internet, it is likely vulnerable to hacking. Examples abound: Hillary Clinton's campaign was hacked; Target was infiltrated and its customers' accounts were compromised; Colin Powell's email was exposed; and Anthem, the large health insurer, had its customers' private information stolen from its network. Given the rise of cybercrime, companies specializing in cyber security are poised to make a lot of money. The key question is how can we, as investors, capitalize on the cybercrime trend? In fact, given the vast array of trends, how can we profit from trend spotting generally?

This paper will examine the challenges of making money from trends: (1) it is difficult to spot trends early; (2) even when a trend is identified, it does not always turn out as predicted; and (3) how do we account for creative destruction in young industries. It will conclude with some suggestions for profitably investing in trends.

It Is Difficult to Spot a Trend Early

In 1975 the digital camera was invented by Steve Sasson, an engineer at Kodak. In 2012 Kodak declared bankruptcy, its demise largely attributable to its failure to appreciate the significance of the digital photography trend. With the benefit of hindsight, it seems ludicrous that Kodak could invent the digital camera and then fall victim to its own creation. However, as a global leader in film, Kodak was concerned about cannibalizing its sizeable and profitable film business with an emerging, unproven technology.[1]

The inertia of the status quo is a powerful impediment to our ability to spot trends. Humans usually imagine the future only slightly different from the present.[2] As an example, consider autonomous cars – we are used to owning and driving our own cars; the idea that we may move to sharing self-driving cars seems fanciful to most of us. Perhaps it is fanciful, but it is difficult to tell fantasy from reality in the early stages of an emerging trend or technology. Early trends and great ideas often seem outlandish near their inception. Examples of this abound: early transformative technologies and trends like travel via train, the telephone, movies, television, catalog shopping, home computers, video games and even the internet were often panned in their early stages. History shows that trends are very hard to spot early.

The Trend Does Not Always Turn Out as Imagined

Notwithstanding the difficulty of early trend spotting, trends are recognized – first by a few, and then more broadly. However, even when a trend is identified, an investor may encounter a pitfall when the trend does not turn out as expected.

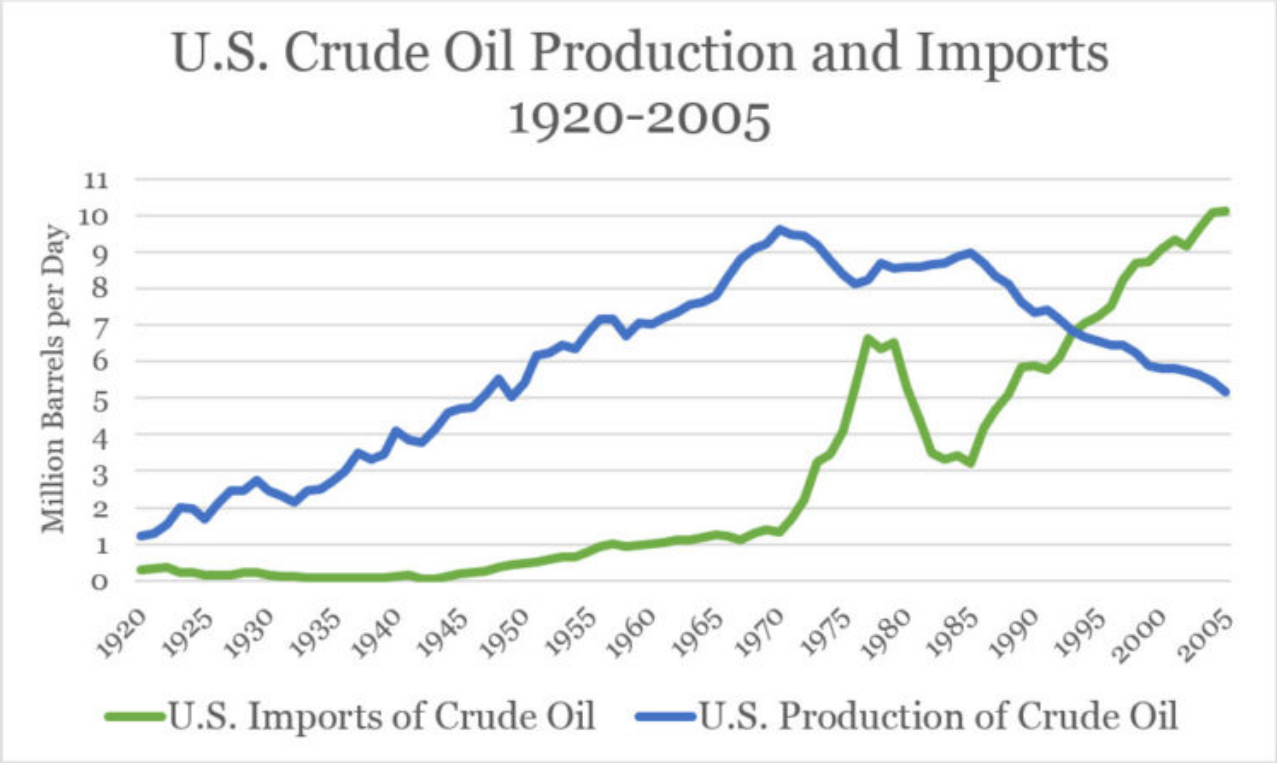
Malthusian Catastrophe

In 1798 the economist Thomas Malthus predicted, based on studies of the trajectory of the growth of the human population compared with the growth of food supply, that the world would fall into famine, disease and war caused by food shortages. His predictions were based on two long-observed, data-driven trends: human population growth tended to be exponential, whereas food supply growth was more linear and was limited by a finite amount of arable land. Fortunately for humanity, Malthus's predictions turned out to be wrong. In the early 19th century, food abundance exploded with agricultural technology advances, improved transportation and reduction of trade barriers. Likewise, population growth slowed as prosperity, education, birth control and a move to a less agrarian society led to a reduction in fertility rates.

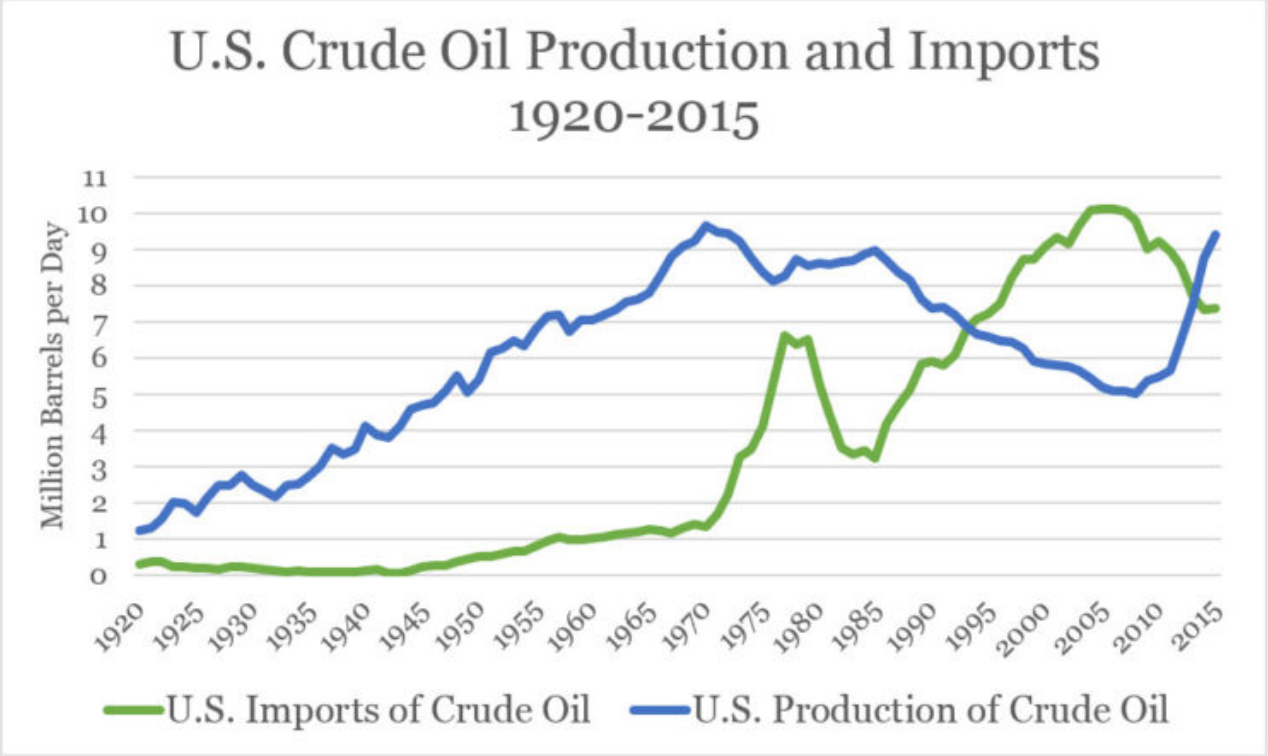
As evidenced by the story of Thomas Malthus, unpredictable occurrences and advances in technology often intercede to disrupt trends. It is nearly impossible to predict major inventions or societal turning points.

U.S. Energy Dependence

For the first half of the 20th century, the U.S. was a dominant producer of oil and imported very little oil. Starting in the early 1970s, two trends emerged: (1) U.S. oil production volumes began a decades-long decline and (2) the rising U.S. needs for oil led to increasing dependence on imported oil. These trends are apparent in the following chart which covers 1920 – 2005:



Since 2005 advances in domestic oil production has skyrocketed due to hydrolic fracturing technology (fracking) and other drilling technology. As a result, there has been a huge decline in oil imports. Thus, the trends displayed in the chart above dramatically reversed themselves, as can be seen in the following chart of oil producting and imports from 1920 – 2015:



The lesson of U.S. oil production and import trends is, similar to the lessons of Thomas Malthus, that technology or other factors can reverse dramatically the course of long-observed trends.

The Rising Sun

In the 1980s and early 1990s Japan's economy surged. Predictions of Japan's world dominance were everywhere. Japanese investors purchased part of Rockefeller center and a number of other iconic U.S. buildings, as well as golf courses and interests in U.S. companies. Business consultants the world over moved to teach western business leaders various Japanese business practices such as lean manufacturing and just-in-time inventory management. It seemed obvious, based on trend, that Japan would overtake the U.S. in terms of GDP and would become THE world economic power within a few decades. Of course, 1989 turned out to be the peak for the Japanese economy and since then Japan has suffered a number of recessions, economic stagnation, deflation and its stock market is still trading below its 1989 peak. It has dropped from the number two economy (in terms of GDP) to number three and sits far behind the U.S. and China.

All Trees do Not Grow to the Sky

An explanation for the growth and petering out of trends, like those described above, is found in a theory referred to as Stein's Law. Herbert Stein was an economist who served as the chief of President Nixon's council of economic advisors (he is also the father of Ben Stein of Ferris Bueller's Day Off and Win Ben Stein's Money fame). Stein's Law states: "If something cannot go on forever, it will stop." While this seems obviously simple, it is true. Stein's law has found possible application in connection with government debt, health care spending increases, the cost of college tuition, trade deficits, growth rates of high growth corporations, and obesity rates, just to name a few. While not a universal physical law, Stein's Law is important to remember when projecting trends out into the future – once a trend become unsustainable, it typically stops.

It Is Difficult to Find a Successful Needle in a Haystack of Competitors

Even if you identify a trend early and are correct about its trajectory, it is still very difficult to profit from trends as companies, especially those in young industries, are subject to the strong forces of creative destruction.

Early Automobile Industry

Imagine that you are alive in 1900. You are a "techie" by 1900 standards as you subscribe to the periodical Horseless Age and believe that the nascent automobile industry has promise. Many disagreed and saw automobiles as practical only for making local deliveries or as toys for the very wealthy. There were few roads, infrastructure and no network of gasoline production and gas stations. Early cars were unreliable and very expensive. City streets were clogged with horses, carriages and manure. In short, there were many reasons to be skeptical of the rise of the automobile. Given the skepticism of the automobile, does your foresight as to the rise of the automobile in America help your investment portfolio? Can you make money off your early identification of the automobile trend? Probably not.

Yet even those who had foresight into the rise of the automobile likely could not profit from early identification of the trend. In 1899 the U.S. produced 3,200 automobiles and the auto industry was ranked 150th in terms of value of product produced. Twenty years later in 1919, 1.6 million cars were produced resulting in the automobile industry ranking second among U.S. industries. During that 20-year time period over 775 automobile firms entered the auto industry and about 600 of them failed or otherwise went out of existence. The average lifespan of a car company in the early 20th century was three to six years. In retrospect it seems obvious to have invested in Ford, Buick or Dodge. In reality, however, it would have been difficult to sift through all the potential automobile companies and pick the winners.

The Internet

The internet is amazing. It is hard to imagine life without it. It is now our main source of information, provides social interaction and continues each year to gain increasing amounts of global commerce. So imagine being back in the mid-1990s when the internet and related technologies were young. Even knowing what you know now, in which companies would you invest? Many of the leading internet companies of the early to mid-1990s did not prosper over time. Examples include Netscape, MySpace, Alta Vista and AOL. In fact, it is hard to name an internet related company from the 1990s that is prosperous today.[3] The chart below identifies the top internet firms in 1995 and compares them to the top firms in 2015 (from Kleiner Perkins):

Note that the only company on both lists is Apple and investing in Apple in 1995 would have been tumultuous, as Apple nearly went out of business in 1997. Again, this illustrates that even those who foresaw the promise of the internet in 1995, would have had a difficult time realizing great investment returns.

Public Internet Company Market Capitalizations – 1995 → 2015...

Top 15 Companies by Market Capitalization = 1995 @ $17 Billion → 2015 @ $2.4 Trillion

Global Public Internet Companies, Ranked by Market Capitalization

As of December, 1995

	Company	Home Country	Market Cap. ($MM)
1	Netscape	USA	$5,415
2	Apple	USA	3,918
3	Axel Springer	Germany	2,317
4	RentPath	USA	1,555
5	Web.com	USA	982
6	PSINet	USA	742
7	Netcom On-Line	USA	399
8	IAC / Interactive	USA	326
9	Copart	USA	325
10	Wavo Corporation	USA	203
11	iStar Internet	Canada	174
12	Firefox Communications	USA	158
13	Storage Computer Corp.	USA	95
14	Live Microsystems	USA	86
15	iLive	USA	57
Total Market Cap of Top 15			$16,752

As of May, 2015

	Company	Home Country	Market Cap. ($MM)
1	Apple	USA	$763,567
2	Google	USA	373,437
3	Alibaba	China	232,755
4	Facebook	USA	226,009
5	Amazon.com	USA	199,139
6	Tencent	China	190,110
7	eBay	USA	72,549
8	Baidu	China	71,581
9	Priceline Group	USA	62,645
10	Salesforce.com	USA	49,173
11	JD.com	China	47,711
12	Yahoo!	USA	40,808
13	Netflix	USA	37,700
14	LinkedIn	USA	24,718
15	Twitter	USA	23,965
Total Market Cap of Top 15			$2,415,867

@KPCB Source: Morgan Stanley, Capital IQ, Bloomberg.
Note: Market capitalizations are as of May 22, 2015 and December 31, 1995, respectively

6

This point can also be seen with the search engine industry. Even if you had a crystal ball and spotted the money making potential of search engines, it would have been difficult to wait and then pick Google as your main investment when it came along in 1998 as it was the 21st search engine to enter the market. Prior search engines you may remember include WebCrawler, Go.com, Lycos, Infoseek, Alta Vista, Excite, Yahoo!, Dogpile, Inktomi, HotBot, and Ask Jeeves. Only a few of these survive today and none ever achieved even a small percentage of what Google attained.

Creative Destruction

The early automobile and internet industries are typical in terms of the creative destruction which tore through their ranks. The phrase "creative destruction" refers to the "incessant product and process innovation by which new production units replace outdated ones."[4] Creative destruction leads to the rise and fall of companies, both in early and mature industries, but with a greater rate in developing industries as innovation rules the day. A deep dive into creative destruction is beyond the scope this paper but it is worth noting that a counterintuitive result of creative destruction is that, over time, individual companies, with rare exception, fail to outperform the overall market.[5] The result of creative destruction is that it is very difficult to pick individual company winners from an overall industry – especially an early industry. Examples abound from the early aircraft industry, computer industry and technology firms.

Creative destruction is a corollary to the observation that trends are difficult to spot early. Once a trend is established it becomes widely known, and once it is widely known there often are many companies and investors competing to take advantage of the trend. At that point, the competition results in higher company valuations and reduces the likelihood of making money off the trend. A number of promising trends that have emerged recently illustrate this: the sharing economy, artificial intelligence, genetic engineering (CRISPR), blockchain technology, cybercrime and autonomous cars, to name a few. As the promise of each of these potential trends becomes established, more companies are competing for dominance. For example, Google has been a major player in developing an autonomous car, but now Uber, Apple, Tesla, GM, Ford and others have entered the ranks. Who will be the winner(s) of the autonomous car war? At this point it is difficult to predict.

The Early Mover Advantage?

A final point about the difficulty of picking winners is that the early mover in an emerging industry is rarely the long-term winner. Pioneering an early industry is a high risk strategy and the advantages of being a first mover are often offset by the disadvantages. Academic research shows that so-called "fast followers" are often more successful than the earlier entrants. As mentioned above, Google was the 21st search engine introduced. Apple was not the first company to introduce an MP3 player, a smartphone or use a mouse to navigate its operating system. Rather, Apple was a fast follower. None

of the first few automobile companies survived. Early, dominant players in cell phones (Motorola, Nokia) have been bested by Apple, Samsung, HTC and others. MySpace, AOL and other early social media sites were later crushed by Facebook, Linkedin and Twitter.

How to Invest in Trends

The prior sections of this paper illustrate that trends are difficult to spot early, often do not turn out as expected and that creative destruction makes picking winners difficult. So, as investors how can we take advantage of trends?

Be Skeptical. First, be skeptical of trends and investment strategies that purport to take advantage of trends and investment in early industries. A healthy dose of skepticism will help you, as an investor, resist the compelling nature of investing in trends. While the lessons of the prior sections may be somewhat dour, ignorance of those lessons will not make you a better investor.

Diversify. As temping as it is to put all your eggs in one basket of one promising company, realize that it is unlikely that with one investment you'll pick a winner in seeking to take advantage of an early trend.

Utilize Venture Capital or Specialty Funds. Unless you have particular information or knowledge that gives you an advantage in an early industry or trend, it is good practice to utilize venture capital funds or specialty managers to identify trends and pick the potential winning companies. Venture capitalists develop the expertise and information networks in order to profitably invest in trends and early industry. Investing through a diversified fund likely will not seem as fun as picking individual winners but likely will greatly increase your chance of having a profitable investment. Unless you have special knowledge or information concerning a trend it is unlikely that your trend spotting will be profitable (other than just luck). This is because once you know of a trend likely it is widely known in the investment community.

Early Movers vs. Fast Followers. In general, it is best to resist the temptation to invest in early movers in emerging industries. It is often more profitable to invest in "fast followers" in a diversified manner.

Don't Fret – You Probably Already Have Exposure. It is likely that given a diversified portfolio of public stocks that you will own companies that are taking advantage of trends. For example, many of the oil and energy majors invested heavily in, and profited from, the rise of fracking. Ownership of Amazon exposes you to its investments in cloud infrastructure. Ownership of Google and Apple provide exposure to the promise of autonomous automobiles. Ownership of Samsung and Panasonic provide investments in emerging battery technology. Most established public companies are constantly scanning the horizons looking for trends that may affect their industries.

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1 *The Innovator's Dilemma* by Clayton Christensen covers the problems of competing against

emerging technologies in depth and is a fantastic read.

2 You may be thinking, but what about science fiction with its fantastical visions of the future? True, but a few key points: (a) many of the projections/ideas from sci-fi are set very far in the future – not so much predictions of the future within any reasonable period of time, (b) sci-fi is of limited popularity – maybe there is an inverse correlation between sci-fi fans and the hold of the status quo on them.

3 Cisco comes to mind.

4 Ricardo J. Caballero, *Creative Destruction Working Paper, MIT Economics.*

5 For example, the Forbes 100 was first created and published in 1917. In 1987 Forbes examined the fate of the 100 companies in its initial list and found that the stocks of only two of the constituents, GE and Kodak, had outperformed the annualized return of the Forbes 100 over time. Interestingly, since 1987 Kodak has gone bankrupt and GE has underperformed the market.