DS 760

Sociotechnical Systems Perspective on the Ethical use of Alternative Data for Investment Information Advantage

Rick W. Lentz

16 September, 2017

Introduction

As with any system, the introduction of new data sources through the adoption of digital technologies presents opportunities and challenges to the sociotechnical system of investing. This paper characterizes alternative data sources, creates a position regarding the adoption of the sources, analyzes an alternative point of view, and responds to intelligently to the view.

What are the Alternative Data Sources?

Point 72, a hedge fund group headed by Steven Cohen, has recently come under fire for use of alternative data [1]. The article debuts new vendors who are curating and collecting data from web scraping, satellite images, credit card transactions, and geolocation patterns. At its core, the change is presenting both legal and ethical challenges.

Web data is any information that is capturable via a web browser and internet connection. That alone is a lot of information. That 'person' with the awesome Facebook profile that you don't know requesting to be your friend, a bank inquiry that shows up on your credit report that you didn't request, software that comes free as a web browser search helper - all software extensions that is designed to collect information about you and many others [2].

Companies can turn around and sell this web-scaped data to a virtually unlimited number of vendors, well outside the jurisdiction of the country where the target resides.

Geolocation data, where you were, when, provides another piece of the puzzle. Enabling features like Google timeline for even a month and allowing another third party service access to this information can give away a significant picture into your pattern of life.

Credit card transactions, coupled with other sources, provide insights well beyond the fact that you spent $283.99 at Costco yesterday. The data tell a story about you as a person, including your interests, what you care about, your beliefs, and likely, how much money you make.

Satellite data and services [3] used to be expensive. These services, including current images, have now become very affordable [4]. Due to commonly accepted use, frequent queries of interest have been turned into services that are available directly from native tools. As someone holding an active FAA commercial drone pilot's license, gathering any remote sensing data can be a very cost effective way to answer a hard analysis question.

A Position Regarding the Adoption of Alternative Data

There is no doubt that alternative data sources can help investment managers reduce portfolio risk. Further, when the benefit is an advantage for hundreds of thousands of people that are not billionaires, it is easy to argue that it would be unethical for leadership not to encourage its use.

The problem is a sociotechnical one, meaning that the rules of the system are the same, independent of the outcome. If someone worth $13B personally profits to the tune of $800M a year by using alternative data under these same rules (and employing 150 analysts), society cries for a call to action.

At the very edge of today's legal boundaries and perhaps in an ethical gray area, the above situation did occur. The article called out the use of commonly available data and attributed the commonly available data to early realization of the demise of Under Armor. Interestingly the article does not attribute Point72's gains to direct and exclusive access to 80M credit card transactions a day [1].

My stance is that if indeed this is true, the use of credit card data pushes the system into new territory. It is trivial to turn credit card transactions into valuable investment signals. Given

current ethical constraints, these data in aggregate could be construed as significant, non-public data - making it off limits to those that adhere and attest to that ethical code.

> One LSE student asked how all this data could help Point72 if everyone had access to the same information. The answer was exclusivity agreements, Mr Granade said: "The great thing about this area is you can arrange deals where you are the only ones who get it."

I argue in support of the investigation into the exclusive access of credit card (transaction data). If we don't restrict side deals for exclusive access to information sources, we allow the further introduction of information asymmetry into our financial system. This will shift the emergent properties of the financial system where the benefits will be concentrated to a few as illustrated in the counterpoints that follow. Also the exclusivity of the access falls outside current ethical constraints leaving state pension funds and similar managers at a disadvantage.

An Alternative View

Use of alternative data further disadvantages those without the resources to effectively leverage it. From a fairness perspective, there have been policy, legal and ethical attempts to make the financial system fair. Anyone with $2,000 and network access is part of the financial system and should have equal opportunity.

Counter to Alternative View

Scale, return on investment, and the public nature of alternative data are significant natural factors against the alternative view. Scale refers to the amount of gain one has relative to the market. With a $200,000 account, a 60 basis point advantage over the market means a $1,200 per year gain over the market. For a $20B account, a 60 basis point advantage over the market is $120M.

Return on investment is the next logical means of assessing a view. The relative nature of an entity either gaining $1,200 or $120 for the same required effort makes the return on investment more attractive for those with significant scale.

The final counterpoint, the public nature of the data, makes any legal, regulatory constraints on data use challenging. The current and historical ethical threshold for non-use of information is both "significant, and nonpublic". Further, the practice of Mosiac Theory is ethically considered to be an important form of analysis.

Conclusion

We covered four alternative sources of data. The point for expanded use of these sources was supported as long as they are not exclusive credit card/transaction data. The sociotechnical view helped recognize the adverse outcome of the emergent property of wealth concentration for the case of exclusive credit card/transaction data. A counterpoint of fairness for the investing public was made. Support for this point was countered based on scale, return, and public availability.

References

[1] https://www.ft.com/content/d86ad460-8802-11e7-bf50-e1c239b45787

[2] https://www.dhs.gov/publication/daily-open-source-infrastructure-report

[3] https://spaceknow.com/