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Securities and Exchange Commission
100 F St. NW
Washington, DC 20549-9303
Rule-comments@sec.gov

Re: File No. S7-12-23
Conflicts of Interest Associated with the Use of Predictive Data Analytics by Broker-Dealers and Investment Advisers

Summary

[1] All opinions are strictly my own and do not necessarily represent those of Georgetown University or anyone else. I am very grateful to Georgetown University for financial support. Over the years I have served as a Visiting Academic Fellow at the NASD (predecessor to FINRA), served on the boards of the EDGX and EDGA stock exchanges, served as Chair of the Nasdaq Economic Advisory Board, and performed consulting work for brokerage firms, stock exchanges, other self-regulatory organizations, government agencies, market makers, industry associations, and law firms. I am the academic director for the FINRA Certified Regulatory and Compliance Professional (CRCP®) program at Georgetown University. I've also visited over 80 stock and derivative exchanges around the world. As a finance professor, I practice what I preach in terms of diversification and own modest and well-diversified holdings in most public companies, including brokers, asset managers, market makers, and exchanges.

- This is a Full Employment Act for compliance professionals.
- The proposed definition of "covered technology" covers literally almost everything a broker-dealer or RIA does.
- Documenting "neutralizing" of conflicts is problematic.
- Eliminating all conflicts of interest is impossible.
- The proposal adds no real benefit beyond Regulation Best Interest.

Introduction

The Commission is joining the current hysteria over so-called artificial intelligence (AI). This "computers are taking over the world" panic seems to recur every few years. In this particular iteration, the SEC appears to be concerned that our robot overlords will use fancy technology to snooker us idiot sheeple investors through gamification as well as other pernicious algorithms.[2]

In brief, the proposals would require broker-dealers and investment advisers to have written policies and procedures to "eliminate or neutralize" the effect of any "covered technology" (e.g., everything a firm does) that would put the interests of the firm ahead of the investor.

From the 30,000-foot level, this sounds good. Eliminating or neutralizing all conflicts of interest sounds great. The devil, as always, is in the details, and there are a lot of devilish details here. This proposal adds little in the way of consumer protection while imposing enormous compliance costs that will be borne by investors.

The proposed definition of "covered technology" covers literally almost everything a broker-dealer does.

The proposal states:

> *"Covered technology means an analytical, technological, or computational function, algorithm, model, correlation matrix, or similar method or process*

[2] Even though this rule seems to follow from the Commission's concern about digital engagement practices, the term gamification only appears twice in the main body of the text and eight times in the footnotes.

that optimizes for, predicts, guides, forecasts, or directs investment-related behaviors or outcomes."

In plain English, almost everything used in the investment process becomes a "covered technology." Every bit of computer software that the firm uses to display a customer account becomes a "covered technology" because it can guide investors. For example, investors use their tax data to help guide their investment strategies. A plain reading of the proposed definition indicates that the software that spits out the required IRS 1099 report would be a covered technology and thus requires oodles of paperwork.

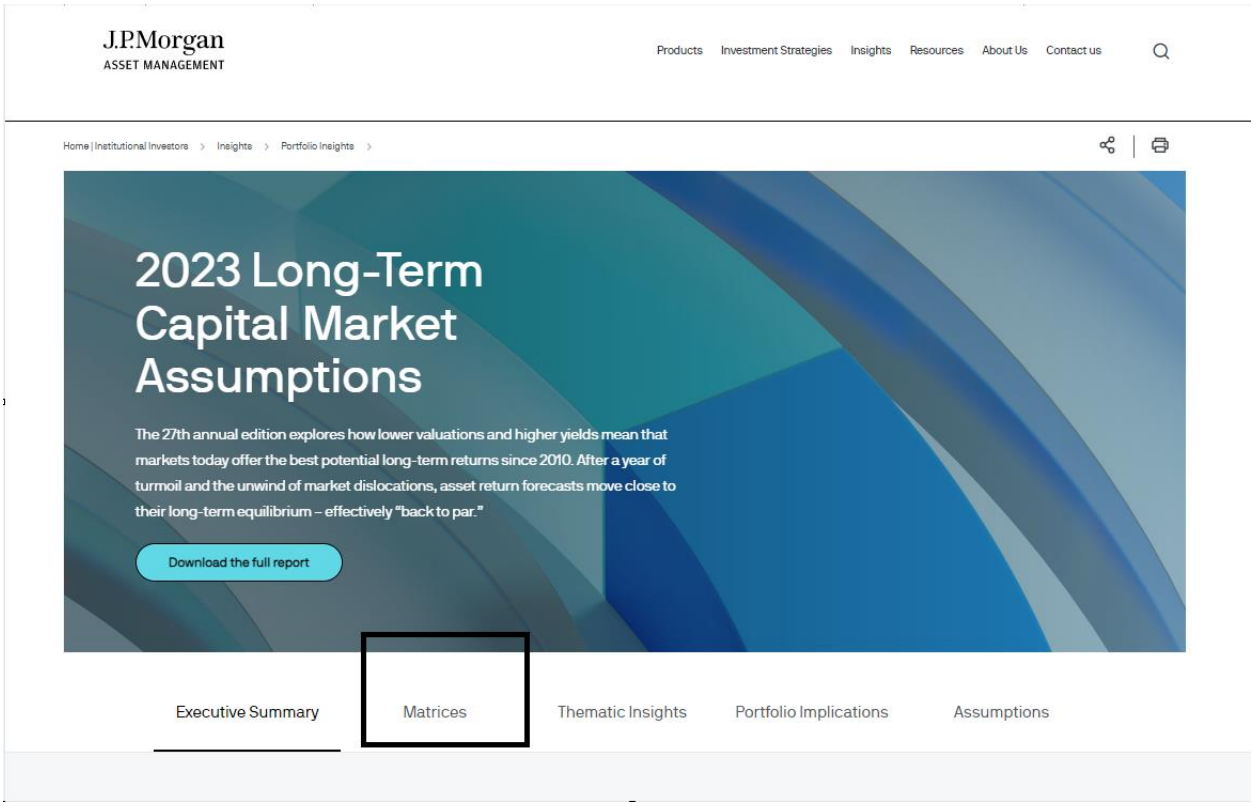
Investors use their periodic statements and confirmation to guide their investment decisions. Thus, any software having to do with the construction, printing, and mailing of the confirmations and account statements would be a covered technology. That means that substantial scarce compliance resources would be squandered in writing, implementing, and enforcing policies and procedures to make sure that the rules are being followed. This will dissipate resources and drive up costs not only for broker-dealers and RIAs, but also for the SEC staff required to surveil and enforce this rule.

Many investors look at past data, such as a chart of stock prices, to help guide their investment decisions. Again, a plain reading of the proposed language makes merely displaying a price chart a "covered technology" that requires the paperwork burdens of the rule.

One of the standard tools of modern finance is portfolio optimization pioneered by Harry Markowitz. The required inputs include the correlations among the various assets in a portfolio. Indeed, it is pretty standard for practitioners in the field to report either historical or forecasted correlation matrices in their capital market assumptions.

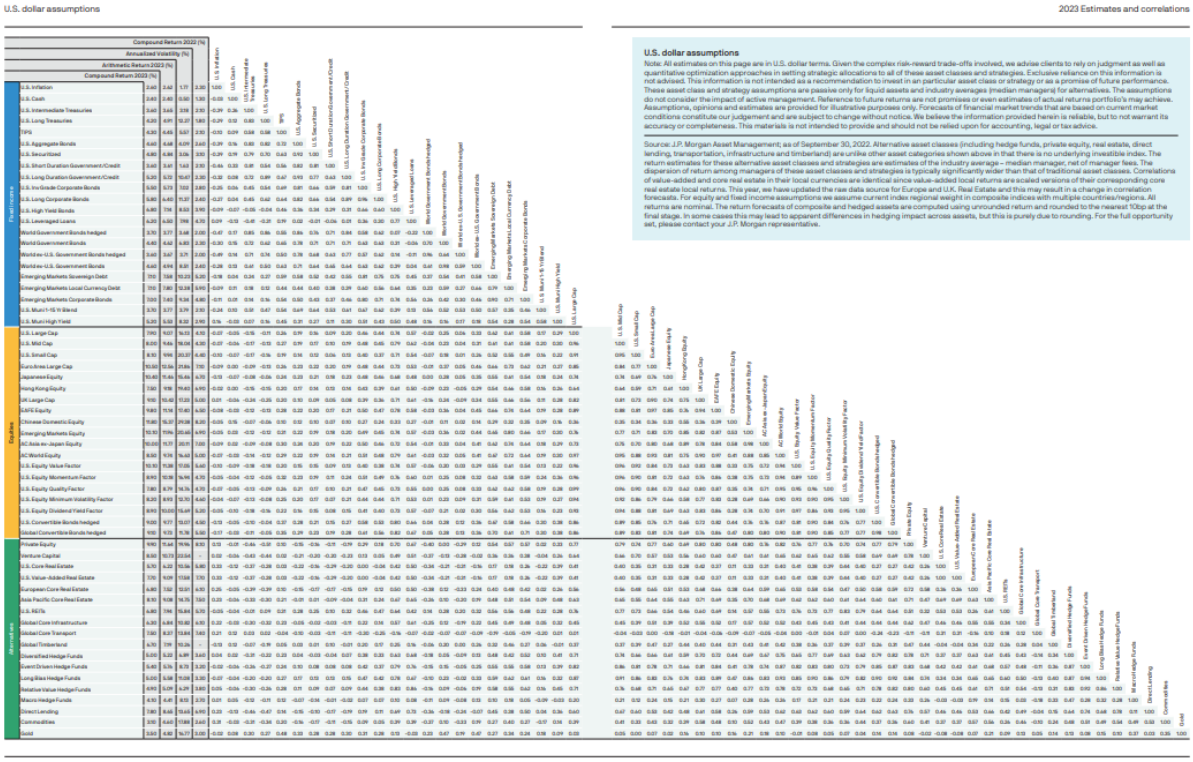
Note the correlation matrices in the following web page:[3]

[3] https://am.jpmorgan.com/us/en/asset-management/institutional/insights/portfolio-insights/ltcma/



Clicking through to the English language version gets you to a very useful matrix:[4]

[4] https://am.jpmorgan.com/content/dam/jpm-am-aem/global/en/insights/portfolio-insights/ltcma/assumptions-currencies/2023/matrix-usd.pdf



This static correlation matrix guides investment behavior and thus would be explicitly covered by the proposed rules. As previously discussed, that means that substantial scarce compliance resources would be squandered writing, implementing, and enforcing policies and procedures to make sure that the rules are being followed. This will dissipate resources and drive up costs not only for broker-dealers and RIAs, but also for the SEC staff required to surveil and enforce this rule.

As described below, the proposed rule filing contains much redundant verbiage. In honor of this dubious tradition, I will include yet another example of a very useful correlation matrix.[5]

[5] https://www.bnymellonwealth.com/content/dam/bnymellonwealth/pdf-library/articles/202310YearCapitalMarketAssumptions.pdf

Expected Correlations

		Equity				Fixed Income										Alternatives				
		U.S. Equity	International Developed Equity	Emerging Equity	Global REIT	U.S. Aggregate	U.S. Treasury	U.S. Treasury Bills	U.S. Investment Grade Credit	U.S. TIPS	U.S. MBS	U.S. Intermediate Municipal	U.S. High Yield	Global Aggregate Ex-US	Emerging Markets Sovereign USD	Emerging Markets Sovereign LC	Absolute Return	Commodities	Energy Infrastructure	U.S. Private Equity	U.S. Core Real Estate
Equity	U.S. Equity	1.00	0.88	0.74	0.83	0.28	-0.05	-0.19	0.52	0.39	0.24	0.26	0.78	0.44	0.64	0.53	0.79	0.47	0.62	0.91	0.39
	International Developed Equity	0.88	1.00	0.92	0.84	0.28	-0.06	-0.13	0.53	0.39	0.22	0.27	0.80	0.57	0.72	0.72	0.82	0.58	0.59	0.81	0.39
	Emerging Equity	0.74	0.92	1.00	0.72	0.26	-0.05	-0.08	0.50	0.37	0.19	0.23	0.73	0.56	0.69	0.76	0.76	0.56	0.52	0.69	0.34
	Global REIT	0.83	0.84	0.72	1.00	0.41	0.10	-0.15	0.63	0.52	0.31	0.39	0.79	0.56	0.72	0.66	0.70	0.48	0.56	0.73	0.45
Fixed Income	U.S. Aggregate	0.28	0.28	0.26	0.41	1.00	0.90	0.17	0.89	0.83	0.91	0.79	0.43	0.71	0.64	0.46	0.13	-0.04	0.09	0.24	0.21
	U.S. Treasury	-0.05	-0.06	-0.05	0.10	0.90	1.00	0.29	0.64	0.71	0.82	0.64	0.05	0.56	0.33	0.24	-0.18	-0.25	-0.21	-0.06	0.10
	U.S. Treasury Bills	-0.19	-0.13	-0.08	-0.15	0.17	0.29	1.00	-0.01	0.03	0.21	0.04	-0.16	0.11	-0.05	0.01	-0.19	-0.16	-0.24	-0.11	-0.04
	U.S. Investment Grade Credit	0.52	0.53	0.50	0.63	0.89	0.64	-0.01	1.00	0.79	0.71	0.77	0.70	0.72	0.82	0.59	0.45	0.16	0.38	0.45	0.25
	U.S. TIPS	0.39	0.39	0.37	0.52	0.83	0.71	0.03	0.79	1.00	0.74	0.68	0.52	0.69	0.64	0.54	0.29	0.24	0.22	0.30	0.22
	U.S. MBS	0.24	0.22	0.19	0.31	0.91	0.82	0.21	0.71	0.74	1.00	0.71	0.33	0.64	0.51	0.36	0.01	-0.03	0.03	0.21	0.18
	U.S. Intermediate Municipal	0.26	0.27	0.23	0.39	0.79	0.64	0.04	0.77	0.68	0.71	1.00	0.47	0.57	0.64	0.41	0.17	-0.01	0.17	0.20	0.18
	U.S. High Yield	0.78	0.80	0.73	0.79	0.43	0.05	-0.16	0.70	0.52	0.33	0.47	1.00	0.54	0.81	0.62	0.74	0.50	0.62	0.71	0.40
	Global Aggregate Ex-US	0.44	0.57	0.56	0.56	0.71	0.56	0.11	0.72	0.69	0.64	0.57	0.54	1.00	0.68	0.80	0.34	0.32	0.23	0.37	0.24
	Emerging Markets Sovereign USD	0.64	0.72	0.69	0.72	0.64	0.33	-0.05	0.82	0.64	0.51	0.64	0.81	0.68	1.00	0.73	0.60	0.38	0.44	0.58	0.32
	Emerging Markets Sovereign LC	0.53	0.72	0.76	0.66	0.46	0.24	0.01	0.59	0.54	0.36	0.41	0.62	0.80	0.73	1.00	0.48	0.45	0.38	0.46	0.26
Alternatives	Absolute Return[1,2]	0.79	0.82	0.76	0.70	0.13	-0.18	-0.19	0.45	0.29	0.01	0.17	0.74	0.34	0.60	0.48	1.00	0.56	0.61	0.73	0.28
	Commodities	0.47	0.58	0.56	0.48	-0.04	-0.25	-0.16	0.16	0.24	-0.03	-0.01	0.50	0.32	0.38	0.45	0.56	1.00	0.49	0.40	0.18
	Energy Infrastructure	0.62	0.59	0.52	0.56	0.09	-0.21	-0.24	0.38	0.22	0.03	0.17	0.62	0.23	0.44	0.38	0.61	0.49	1.00	0.56	0.09
	U.S. Private Equity[1,2]	0.91	0.81	0.69	0.73	0.24	-0.06	-0.11	0.45	0.30	0.21	0.20	0.71	0.37	0.58	0.46	0.73	0.40	0.56	1.00	0.42
	U.S. Core Real Estate[2]	0.39	0.39	0.34	0.45	0.21	0.10	-0.04	0.25	0.22	0.18	0.18	0.40	0.24	0.32	0.26	0.28	0.18	0.09	0.42	1.00

Source: BNY Mellon Investor Solutions. Data as of September 30, 2022.

[1] Consistent with the Representative Index, returns are net of management fees.

[2] The Representative Index is not investable. Returns are based on manager averages. Actual results may vary significantly.

Only a subset of the asset classes is shown in the matrix above. A full correlation matrix is available upon request.

For illustrative purposes only. There can be no assurance that the expected returns listed above will be achieved.

Cracking down on useful tools means fewer useful tools.

It goes almost without saying that if the SEC imposes costly compliance burdens on the providers of useful tools, they will provide fewer useful tools. Things like these correlation matrices are extremely useful to investors such as myself. In coming up with my own capital market assumptions, I like to see what others are doing.

Everything a firm does is in the interest of the firm, especially acting in the best interest of the client.

The proposed rule states:

> *"Conflict of interest exists when a broker or dealer uses a covered technology that takes into consideration an interest of the broker or dealer, or a natural person who is an associated person of a broker or dealer."*[6]

That is breathtakingly broad. Literally every action that a broker-dealer or investment adviser takes is going to "take into consideration an interest." Firms have an interest in running efficient operations, delivering good customer service, and delivering quality products to their customers.

Firms have an interest in complying with laws and regulations, including those which require acting in the best interest of the client. Thus, software meant for regulatory compliance, such as sending out required forms, would be a conflict of interest under this definition.

Since "covered technology" includes just about everything a firm does and everything a firm does takes into consideration an interest, everything the firm does is considered a conflict under the proposed definitions. The Commission needs to seriously rethink these definitions. As the regulation will do little to really protect investors even with better definitions, the SEC should scrap this proposal and redeploy its scarce resources in more important areas.

Conflicting definitions of conflict of interest complicate compliance.

Notice that these definitions of conflict of interest are very different from those in Regulation Best Interest. Regulation Best Interest states:

> *"Conflict of interest means an interest that might incline a broker, dealer, or a natural person who is an associated person of a broker or dealer — consciously or unconsciously—to make a recommendation that is not disinterested."*

[6] Similar language applies to investment advisers: "*Conflict of interest exists when an investment adviser uses a covered technology that takes into consideration an interest of the investment adviser, or a natural person who is a person associated with the investment adviser.*"

Having multiple conflicting definitions of conflict of interest makes the job of compliance – as well as regulatory enforcement - that much more complicated, difficult, and expensive. As one who teaches compliance, I am quite familiar with the kinds of things that cause compliance headaches. Inconsistent definitions like these are the kinds of things that cause time-consuming, and thus expensive, problems for the legitimate firms that are honestly trying to comply with the rules. The bad guys whom the rule is intended thwart don't care and won't bother to comply.

Likewise, there are subtle differences between the definitions in Regulation Best Interest, which covers recommendations to "retail" investors, and the definition of "investor" in this proposal. These will undoubtedly generate much confusion for compliance personnel and many billable hours for attorneys.

Enforcement will be problematic. How does one measure neutralization?

It will be very difficult for compliance personnel as well as SEC enforcement personnel to determine whether a firm is in compliance or not. It will be very difficult to figure out whether a software package has neutralized any conflicts. How do you document that a neural net or generative AI is neutral? That is a very difficult thing to do.

What is likely is that examiners will check the boxes to see whether the required written policies and procedures are in place, along with documents showing that they are being implemented. The documentation must show that firms have gone through the motions of compliance through updating their WSPs (Written Supervisory Procedures), that they are training their employees, and documenting that those employees have been trained. It's one more set of boxes for the supervisors, compliance officers, and examiners to check. The net result will be a lot of needless paperwork that does nothing to benefit customers.

This is not needed in a Regulation Best Interest world.

Regulation Best Interest already requires that recommendations by broker-dealers be in the best interest of retail clients. Likewise, investment advisers already have a fiduciary obligation to their customers. Thus, this proposed rule does little, if

anything at all, to increase the standard of care that financial service firms are required to provide to their retail customers.

If a firm is doing things that entice a customer to do something that is not in their best interest, then that is a recommendation and they are liable under Reg BI. If the current wording in Reg BI doesn't clarify that, then the solution is to amend Reg BI rather than impose this compliance monstrosity.

Complete elimination of all conflicts of interest is impossible.

One major difference between this proposal and Reg BI is the requirement to "eliminate or neutralize" conflicts of interest brought about by covered technology. Note that this goes far beyond the requirements of Regulation Best Interest and the Commission's Interpretation of the Standard of Conduct for Investment Advisers.[7] Those rules generally required only identification, disclosure, and mitigation, but do not require complete elimination. They permit properly informed customers to consent to the conflicts. Indeed, informed voluntary consent is one of the standard approaches to dealing with conflicts of interest.

As discussed above, almost everything a broker-dealer or investment adviser does would be deemed a conflict of interest under the rule. It is impossible to eliminate all conflicts of interest. For example, brokers generally benefit when customers trade. Anything that makes customers likely to trade more, such as providing more in-depth market information, a better user interface, better customer service, or longer trading hours, will benefit the firm. Any attempt to improve the user experience would be banned under a plain reading of this proposal.

There is a better way to address regulatory concerns.

The real policy concern is that firms will do sleazy things with technology to trick investors into acting in ways that are not in their best interest. That is already a violation of Reg BI for brokers or the fiduciary duties of RIAs. The solution is to enforce those rules, not impose these costly and not well thought-out rules.

[7] https://www.sec.gov/files/rules/interp/2019/ia-5248.pdf

The cost estimates leave out the $15.9 million cost to the taxpayer of just creating these SEC rule proposals.

Completely missing from the economic analyses are any estimates of the cost to the taxpayer for the Commission to produce the proposal and to the country to analyze it. This should be included in all major rule proposals going forward. These costs are not insubstantial!

Each rule filing requires a large amount of Commission effort to think about the topic, compose an approach to it, debate it internally within the Commission, present individually to Commissioners, negotiate internally within the Commission, present at an open meeting, vote on it, write statements about why the Commissioners voted the way they did, and then promulgate it on the web site and the Federal Register. Then the comment letters need to be processed, and the process repeated over again for the final rule.

The cost of analyzing the proposals to the country is also substantial. The most expensive government affairs people pore over every detail in preparing their reactions, and their meters are running every minute.

Let me take a stab at this. The length of each proposal is a good proxy for the quantity of resources that go into producing it.[8] If we assume that each page requires the equivalent of 100 hours of average Commission resources at an average all-in cost of $223.48/hour to analyze, debate, draft, and promulgate, then the cost to the taxpayer of these 239 pages of filings is approximately $5.3 million.[9]

Then there will be the cost of promulgating the final rules, if any. As final rule filings are often twice as long as the original filings, the cost of finalizing these rules would add another $10.6 million, bringing the total cost to the SEC alone of $15.9 million. This represents a gross misallocation of resources. It is hard for the badly underfunded SEC to justify higher appropriations when it so badly misallocates what little funding it gets from Congress.[10]

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[8] You may cite this approach as the "Angel methodology."

[9] If one takes the 2023 budget request and divide by the number of FTE requested and assume 2,000 hours of labor per FTE, then the average all-in cost per hour for SEC time is $223.48. This includes not only direct wages, but other expenditures for benefits, overhead, office space, utilities, databases and so forth. Data from https://www.sec.gov/files/fy-2023-congressional-budget-justification-annual-performance-plan_final.pdf

[10] I won't even begin to comment here about the loss of the Commission's reputation with Congress over the dissipation of SEC resources on its fruitless legal battle to defend its arbitrary and capricious refusal to permit a spot-based bitcoin ETF when it permits a futures-based one.

The cost estimates leave out the massive cost of analyzing SEC rule proposals.

The cost to the rest of the country to analyze what the SEC has done is easily many times the cost to the SEC. The SEC's economic analysis does not include the cost of producing the numerous media articles (including law firm summaries), internal debate, conferences, discussions, and preparation of comment letters just to analyze and comment upon the proposals.

It is conservative to estimate that the combined analysis costs are twice what the SEC spent. That brings the analysis cost outside the SEC to $31.8 million, for a total cost the country of $47.7 million just for this rule proposal debate. Actually, implementing anything that is adopted will likely cost much more.

Verbose rule filings are signs of sloppiness, not diligence.

The 239 pages are highly repetitive. They contain the phrase "discussed" or "described" 74 times, usually in reference to other parts of the same documents. I don't know how the Commissioners who have to read these things can stand such mindless repetition. Perhaps the Commission rightfully fears yet still another loss in court and thinks that repeating the same thing over and over again will convince the court that the SEC has done its due diligence. I have more faith in the judges to understand the substance more than the form, and to understand that mindless repetition is a sign of sloppiness and poor management, not diligence.

Respectfully submitted,

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