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Data, Data Everywhere, and None of It of Use: Bringing Pension Fund Data Analysis into the 21st Century

GIAN DI LORETO

“Water, water everywhere, nor any drop to drink.”

—Samuel Taylor Coleridge, “The Rime of the Ancient Mariner”

One of the central paradoxes of the computer age that began in the 1950s—a paradox that grows only deeper in the early years of the 21st century—is that the more data a company has at its command, the less likely the data will be accurate and capable of being put to proper use.

Pension fund data is a good example of this problem: Every time a company acquires another firm, merges, consolidates operations, adds employees, outsources its pension fund administration or merely migrates data from one platform to another, underlying errors and inconsistencies in disparate databases are introduced into the system as a whole, where they become permanently lodged. And, as the sheer amount of data grows, so too do the errors and inconsistencies.

THE FILING CABINET ADVANTAGE

The bigger the company, and the more advanced its computer systems, the greater the likelihood that there are a substantial quantity of systemic errors in its pension data, simply because the likelihood is greater that the company has experienced a large number of data migrations over the years. Are there any companies out there that still maintain their employee information in dusty filing cabinets with corrections to payroll and personnel files made with a bottle of white-out and an IBM Selectric, and “data migrations” accomplished by means of a hand truck? If so, it is entirely possible that these enterprises have the most accurate, accessible, and usable personnel records of all.

The errors in most companies’ databases result in hundreds of billions of dollars of losses annually to American industry, according to one

widely circulated study by the Data Warehousing Institute. Worse, the losses are mostly invisible, unless the underlying errors are attacked systemically: For example, some individual pension fund underpayments are likely to be brought to the attention of fund administrators and subsequently corrected, but—human nature being what it is—overpayments are likely to go unreported and thus undiscovered.

As pension plans become more transparent, the problem of systemic errors only grows—simply because the errors will become that much more visible to individual employees and retirees (while remaining invisible to the company as a whole because of the lack of internal checks and balances on pension fund data) and, unless corrected on a systemic basis, will only serve to decrease morale and increase skepticism about the company’s motives.

However, errors are only one part of the problem—and not necessarily the biggest part. Systemic errors, after all, can demonstrate underlying problems and therefore can be reviewed and corrected systemically. And, of course, non-systemic problems are just as likely to occur in low-tech “filing cabinet” data repositories.

The larger issue is how pension data stores are actually used—or not used. Remember, the whole point of computers was not merely to maintain the status quo—in other words, in a pension context, just to ensure that the correct payments go to the right recipients at the right time and the right address. No, computers were supposed to allow companies to manipulate that data every which way, creating new opportunities and new possibilities for maximizing revenues and stanching losses on both the employee side and the customer side.

A RAPIDLY RECEDING IDEAL

Instead, the sheer amount and inherent unreliability of the data that companies currently possess suggests that effective data manipulation is actually become a less approachable ideal with every passing year.

The current information overload was prophesied in a famous short story by the fiction writer Jorge Luis Borges, “The Library of Babel.” The unimaginably vast repository of the title is, in fact, a “perfect library,” because it contains not only every book ever written in every language known to man, but countless subtle variations of each of these books, differing from the originals by a comma here or a letter there, and, in addition, every book that ever *could be* written, from brilliant masterpieces to unadulterated gibberish, in every language that possibly *could exist* as well as a limitless number of non-languages—in short, every possible combination of letters and punctuation marks in volume-length form.

As Borges describes it, the first reaction of those who discover that the library contains “all books” is “unbounded joy. All men felt themselves the possessors of an intact and secret treasure. There was no personal problem, no world problem, whose eloquent solution did not exist—somewhere in (the library.) ...there was also hope that the fundamental mysteries of mankind ...might be revealed.”

Soon enough, however, “that unbridled hopefulness was succeeded, naturally enough, by a similarly disproportionate depression,” because truth-seekers discovered that “for every rational line or forthright statement there are leagues of senseless cacophony, verbal nonsense, and incoherency.” Worse still, there is no way of locating, or distinguishing, the odd sensible book or sentence from the countless billions of nonsensical ones that surround them.

Though Borges certainly did not intend it at the time of this story’s composition, back in 1941, before the

very first ENIAC had even been constructed, he nonetheless conceived a potent, albeit exaggerated, metaphor for one possible future for computing, one in which there is so much undifferentiated data that it becomes largely, if not entirely, useless.

Yet, in another sense, “The Library of Babel” metaphor severely understates the true nature of the usability problem. After all, the library that Borges describes is a mysterious artifact of unknown origins. The data mess in America’s corporations, on the other hand, has been deliberately created—with the very same computers and tools that, we were promised, would make our lives better, and instead have made them more difficult and more complex.

Further, with every new data migration, not only are new errors created, but so too are new layers of complexity, new levels of cost, and, of course, yet more hollow promises to once again make things work more effectively.

There is no malice behind this mess—merely wishful thinking on the part of companies, overpromising by systems and software vendors, and an enormous lack of foresight on the part of both.

But just as human minds created this tangle, so too can human minds untangle it. However, the key to doing so is not yet another system or software installation. Instead, it is an orientation to data analysis that assumes that substantial quantities of data represent an opportunity, not a problem, and that data can be endlessly manipulable, and not merely endless.

A PERFECT LIBRARY OF PENSION DATA

In pension-fund data integration, at least, this orientation means

creating a process that allows for instantaneous extraction and juxtaposition – a “perfect library” of information that allows users to find and extract only the data they need, and then to review it side by side with other data that instantly makes any problems, and the means for dealing with them, instantaneously obvious. The result? A system that is just as flexible as it is capacious, and just as usable as it is expandable—a system that bridges the gap between computer capabilities and human needs and that proves that, for every problem, “an eloquent solution exists.”

This is only the beginning of creating a new orientation to data usability because, when it comes to pension fund data integration, there is a particular challenge that is not shared by other forms of enterprise-wide data: It is that pension funds are seen by their sponsors as obligations rather than opportunities.

That, in turn, means that one of the central tasks for pension plan administrators going forward is not merely ensuring that data is accurate, and not merely learning how to extract that data more effectively. It is learning how to use pension data in a way that does not merely meet the company’s obligations but actually advances its interests. The company, and data consultant, that can figure out how to do that effectively will truly bring pension data analysis into the 21st century. 🌐

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