INVESTMENT PERSPECTIVE Q4 2017

IS THERE A DRIVER'S MANUAL FOR INVESTMENT DECISIONS?

There's something inherently funny about anachronisms. I still get a smile when my mom refers to a refrigerator as an icebox. I grew out of that one, but still call the toilet a commode. Anachronisms encapsulate history nicely, but obfuscate as well. When we introduced our Market Dashboard in this quarter's webcast, I worried we might have stumbled into an intergenerational disconnect. I realize that by the time my daughters start to drive they will understand 'dashboard' as the heads-up display that informs them of the decisions the car has already made for them—if they can be bothered to glance up from Instagram. "The Lidar intercepted a cyclist crossing at 100 feet and applied 40% braking force," her dashboard will output. Then hopefully, "Your calculus problem set is due tomorrow." But that's precisely not the metaphor we had in mind.

Back in the mists of time—before Google's autonomous vehicles awed us—the concept of a dashboard meant something entirely different. My well worn BMW has four gauges and seven warning lights. It has a cheerful Christmas aura, since two or three orange, yellow and red indicators are usually lit. These used to give me a severe stabbing pain in the left rear pocket. But, out of necessity, I learned to understand the fault codes by looking them up in the sacred text: *BMW E-39 Diagnostic Codes*. Experience has taught me that I can safely ignore most of the codes. The sensors—made of plastic and wire—fail at a much higher frequency than the moving steel parts they monitor. The dashboards of that era were meant to be rough guides that gave *approximate* information. Their goal was to *suggest* where to start the diagnosis. For my and prior generations, the dashboard represented a kind of mosaic puzzle that had to be interpreted.

So the Dashboard that we review in the pages below needs a number of critical caveats that have more in common with the lessons gleaned from reading a 20-year old dash than what your Tesla tells you in hands-off mode. First, our Dashboard was definitely not intended to suggest a grand unified theory of investing—that a given set of inputs automatically implies an optimal investment position. I am doubtful that even deep-learning algorithms will get there. Financial markets have certain mechanical aspects like a car. They process knowable inputs like earnings and interest rates, but they also resemble an evolving organic system—depending on conditions, interactions and catalysts. Things matter because other people think they ought to matter. Humans respond to narratives told by other humans. We affect the experiment just by observing the experiment.

Second, it has to be construed altogether. A single indicator can matter a lot, but it won't be dispositive. The signals individually can corroborate or dis-confirm each other. The interactions between various inputs are more important than the variables on a stand-alone basis. Third, the same indicator in the same position won't mean the same thing twice in a row. Like a car with dead sensors and shorts in the wiring, there are a lot of false positives. The implication is that the indicator is the impetus to do more work. It tells us where to spend our precious research time. Finally, our Dashboard is not intended to replace Valuation as the touchstone of our investment philosophy. It is intended to refine our valuation lens through a deeper understanding of both the fundamental drivers and the market context. Finally, it's critical for the framework to continually learn. Therefore, you should expect us to actively evolve and re-examine its underpinnings.

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