Hiking on short, flat, well-marked paths is not a good way to get in shape for much more challenging hikes. It takes a series of longer hikes to build stamina, elevation gain to build strength, and some poorly marked trails or wilderness areas to build orienteering skills. In fact, it is quite common to train or run drills in order to get in better shape for upcoming challenges.

The notion of what constitutes "challenging", however, is subject to considerable interpretation - especially when it comes to markets. Helpfully, Andrew Lo's new book, *Adaptive Markets: Financial Evolution at the Speed of Thought*, provides a fresh perspective from which to evaluate conditions. The bad news for investors is that there is likely to be some "difficult hiking" ahead. The good news is that Lo's theory provides some useful "exercises" to help prepare for it.

Undoubtedly, the "path" for a lot of investors has been pretty easy for many years. The long, cyclical decline in interest rates beginning in 1982 created an extremely benign environment for credit creation and for the appreciation of risk assets. People who invested or managed assets during this period enjoyed an environment almost bizarrely conducive to their activity. As Bill Gross himself reflected: "You did not, as President Obama averred, 'build that,' you did not create that wave. You rode it."

Despite the rude interruption by the financial crisis in 2008, investors were quick to return to "riding the wave", albeit this time on the liquidity provided by central banks. The widespread regime of accommodative monetary policy sent a strong signal to market participants that the Fed has your back. When stocks go down, the central bankers will come in to save the day. This response to the crisis has been strong enough to encourage investors to continue increasing risk exposures despite an economic backdrop featuring the weakest recovery in post-World War II history.

According to the assessment of Mohamed El-Erian in the *Financial Times*: "Central banks have been big buyers of financial assets during an unusually long period of prolonged reliance on unconventional monetary policies, the market impact of which has been amplified by the predictability of their purchase activities. All this liquidity has floated stocks higher, and kept them there despite an unusual degree of economic and political fluidity. In the process, asset prices have been decoupled from underlying economic and political fundamentals."

This leaves both investors and central bankers in an awkward spot now, however. Although the Fed has started increasing rates and is signaling more to come, the major indexes continued to press higher last quarter. While it is true that much of the gains were driven by a narrow group of large tech firms and that even those stocks lost momentum at the end of the quarter, the "decoupling" process has continued. What does this all mean?

In trying to disentangle the Fed's intent, Albert Edwards provides some useful context. As he notes, "the BIS [Bank of International Settlements] is really very concerned that policy makers are making exactly the same mistakes they did in the run-up to the 2008 financial crisis." While there is no shortage of entities offering advice to central banks, BIS recommendations carry some serious weight because it was one of very few institutions to correctly anticipate the problems of the financial crisis. One can make out more than just a hint of a warning in the comments of Claudio Borio, the Chief Economist at the BIS, when he noted, "The end may come to resemble more closely a financial boom gone wrong, just as the latest recession showed, with a vengeance. A strategy of gradualism is no panacea, as it may encourage further risk-taking."

In other words, the avoidance of pain can cause even greater problems down the road. Lo picks right up on this subject when he describes, "the Adaptive markets perspective suggests that the financial system needs a different gift: the gift of pain". He goes on to describe, "From an evolutionary viewpoint, pain is good. The negative feedback of pain provokes an immediate response ... We withdraw our hand when it touches a hot stove before our systems can be damaged from the burn."

Alternatively, when we don't receive the useful feedback that pain provides, even greater harm can ensue. Lo notes that "There are people born without the ability to feel pain." He describes the case of Steven Pete who has congenital analgesia. As a result of his condition, "Pete has experienced so many injuries to his left knee that his leg may require amputation." In short, pain is a great teacher. It prevents more serious mishaps and increases chances for survival as a result.

It appears as if this is the message the BIS is sending and that the Fed is receiving. Given a long period of declining rates extended by another long period of accommodative monetary policy, investors haven't felt any pain from their exposure to risk and as a result, may be learning the wrong lessons about risk taking. Mohamed El-Erian said as much shortly after the Fed's June meeting in the *Financial Times*:
"More likely, the central bank is now focusing more on excessive risk-taking by investors and traders, including its potential negative impact on the economy down the road."

Insofar as this is the case, it marks a significant shift in policy and one that investors shouldn't treat modestly or incrementally. As Lo describes, "Markets do look efficient under certain circumstances, namely, when investors have had a chance to adapt to existing business conditions, and those conditions remain relatively stable over a long enough period of time. If the previous sentence sounds like fine print of an insurance policy, it should; business conditions often shift violently and 'long enough' depends on a lot of things."

Indeed, Ben Hunt described the apparent change in Fed policy in the terms of a "violent shift in business conditions" in his June 16th message, "If you think that this Fed still has your back, Mr. Investor, the way they had your back in 2009 and 2010 and 2011 and 2012 and 2013 and 2014 and 2015 and 2016 … well, I think you are mistaken. I think Janet Yellen broke up with you this week."

What should investors do with this insight? Hunt recommends a significant shift in direction: "But I think that if your investment mantra is 'don't fight the Fed', you now must have a short bias to both the US equity and bond markets, not the long bias that you've been so well trained and so well rewarded to maintain over the past eight years. This is a sea change in how to navigate a policy-driven market, and it's a sea change I expect to last for years."

As Hunt alludes, this "sea change" will be especially difficult for many investors to navigate and Lo, again, provides insight as to why. As Lo notes, "natural selection carries within itself the seeds of fragility. A species can become so well adapted to an environment through natural selection that it fails to survive a change to that environment." Investors and managers who adapted so well to the belief that the Fed has your back transitioned along the way from being analytical decision makers to just risk takers with their switches turned "on". As such, they are at serious risk of surviving the change.

For valuation-based investors the change is good news because it marks the start of the process of re-linking asset prices to underlying economic fundamentals. It is hard to say how quickly or uniformly this will happen, but it does strongly suggest that valuation will re-emerge as a crucial tool for identifying opportunity and avoiding risk. Further, as Hunt proffers: "What to do when indiscriminate long-the-world doesn't work? What to do when nothing works? Maybe, with apologies to the old Monty Python line, active management isn't quite dead yet. And just at the point of maximum capitulation to the idea that it is. Wouldn't be the first time. In fact, that's kinda how maximum capitulation works."

Hunt's line of thinking is consistent with Lo's theory, but it helps to understand why. As Lo describes, "The Adaptive Markets Hypothesis [AMH] is based on the insight that investors and financial markets behave more like biology than physics, comprising a population of living organisms competing to survive, not a collection of inanimate objects subject to immutable laws of motion. This simple truth has far-reaching implications."

One of those "far-reaching implications" is that the notion that long term investors should always own stocks is not always true. AMH, for example, "implies that market risk isn't always rewarded by market returns. It implies that investing in stocks in the long run may not be a good idea, especially if your savings can be wiped out in the short run."

Lo expounds, "Equities do offer attractive returns over the very long run, but few investors can afford to wait it out. Over more realistic investment horizons, the chances of loss are significantly greater, so investors need to be more proactive about managing their risk." This message is important for older investors who may need to start drawing down funds in the next several years as well as for younger investors who simply can't afford to squander scarce resources. It is a message consistent with Hunt's advice that active management may be required when "nothing works" and is a very different message from what many investors receive from their advisers.

Of course risk management is always important, and here too, AMH provides important insights. Conventional theory and practice state that asset allocation is the go-to method for managing risk. AMH, however, suggests that "The boundaries between asset classes are being blurred" and that as a result, "Managing risk through asset allocation is no longer as effective today as it was during the Great Modulation."

Here again, AMH provides a different perspective on risk management. Rather than relying on assumptions that can stray far from the mark in certain environments, Lo suggests, "Knowing the environment and population dynamics of market participants may be more important than any single factor model." He adds, "And it [AMH] implies that changing business conditions and adaptive responses are often more important drivers of investor behavior and market dynamics than enlightened self-interest - the wisdom of crowds is sometimes overwhelmed by the madness of mobs."

This points to one of the great challenges facing investors and their advisers alike. Because conventional economic/investment theory assumes investors and financial markets behave more like physics than biology, it tends to miss those turning points when "adaptive responses are more important drivers of investor behavior." As a result, following incremental economic data too closely in this environment can produce misleading signals. The more useful signals now are being sent by the "adaptive responses" of central banks to the increased level of risk taking.

The challenge is made even greater by the fact that we so naturally and intuitively associate skill with past performance. In a stable, "normal" environment this makes sense, although luck always plays a part too. Across different environments, however, this practice can be grossly misleading because it also attributes high levels of environmental adaptation to skill. Long term investors are best served by providers and practices that successfully transcend multiple environments and by avoiding those that are over-specialized to particular environments.
Finally, Lo's Adaptive Markets Hypothesis is an exercise in evolution itself in that it is an adaptation to existing theory that seems to more consistently comport with reality. As he explains, "the Efficient Markets Hypothesis isn't wrong - it's just incomplete." And this serves as a terrific lesson for investors too. One does not improve one's skills without effort, development, and growth - and that certainly holds true for investing. Investors and advisers alike who prefer the ease of sticking to a static model may do alright in certain environments, but that just makes them fortunate. Investors and advisers who want to get the most out of their investing over the long term will be well-served by incorporating Lo's AMH into their skillset.

© Arete Asset Management