

Robo-Advisor e dintorni – La digitalizzazione del servizio di consulenza

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Adena Friedman

President at Nasdaq

State of Finance: The Digital Revolution That Is Transforming the World of Money

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In this series, professionals debate the state – and future – of their industry. Read all the posts here and write your own (use #MyIndustry in the body of your post).

Do you know what a fintecher is? That's what the London *Economist* calls people in our industry, the industry in which Nasdaq is a leading player. Yes, *that* Nasdaq, the one you may have thought of as a stock exchange. Financial technology is our core line of work, and when you hear people talk about re-defining the future of Wall Street — actually, the future of the entire world of money — they mean us. We're the fintechers who are innovating technology solutions that anticipate and meet the fast-changing needs of financial services providers everywhere around the globe.

Our exchange business is just one of the solutions we pioneered, the one that provided a centralized technological space in which buyers and sellers can meet and trade in an automated, efficient way. That was an important beginning, and we now power more than 80 exchanges worldwide with our electronic trading and clearing software.

At this moment in financial services, however, the need for technology is increasing at a breathless pace, for if you ask about the state of our industry today, the answer is that we are in the midst of a revolution. Yes, it began some 20 years ago with the internet and electronic trading leveling the playing field for retail investors. Suddenly, they had instant access to the markets at the push of a button. Charles Schwab Corporation completely changed the world of investing — with Ameritrade, Etrade, Fidelity, Scottrade, and others quickly joining the internet revolution.

We at Nasdaq pioneered the means for the revolution when we transformed exchanges from a trading floor littered with paper, to people in funny jackets trading via handhelds, to a distributed network of traders digitally connected to servers in a data room and executing their trades almost at

the speed of light. And for the most part, this electronic trading revolution has played out in the developed nations and across many developing nations worldwide.

Yet it was just the kickoff to game-changing transformations now spreading across the financial services spectrum. At Nasdaq, we are leading the way with both feet: In our exchange role, we're creating new technology solutions that facilitate fair, equal access to the markets, while in our fintech role, we create efficiency, improve decisions, and mitigate risk across the entire financial system.

From Electronic Trading to Electronic Investing

For we are now experiencing the next wave in the fintech revolution, the wave in which the technology doesn't just facilitate trades, and in some cases makes the trading decisions, but in fact the technology makes fundamental investment decisions as well.

You could say that passive investing, with indexed exchange traded funds (ETFs), was the first manifestation of computer-generated stock picking. Most indexes, including the Nasdaq 100, are calculated based on defined rules that are created by people, but then coded such that actual stock choices are generated by computer. Passive investing using index ETFs started with simple models, but those models have now become much more sophisticated. Over the past 10 years, we have seen the emergence of very advanced Smart Beta Index ETFs —among them, Nasdaq's own Dorsey Wright Focus Five Indexes. Dorsey Wright uses a relative-strength methodology, comparing a stock's performance with that of the market as a whole; the inputs are created by humans, but the outputs determining the stocks that comprise the index are entirely computer-driven. With more than \$8 billion in assets under management across the Dorsey Wright index ETFs, \$45 billion across all of Nasdaq's Smart Beta Indexes, and \$365 billion overall across all U.S.-listed Smart Beta ETFs, the electronic investing methodology is clearly resonating with investors.

And now new players — the so-called automated investors or robo-advisors — have entered the market. Firms such as Wealthfront, Personal Capital, and Betterment make asset allocation and investment decisions using a sophisticated model that tracks beta but generates a superior net return based on tax efficiency and minimum fees. Schwab has joined the market with its Intelligent Portfolios, an automated investment advisory service that, as the ad puts it, “doesn't charge advisory fees, commissions or account service fees.” No wonder that in just five years, assets under management across the top 10 automated investors have gone from \$0 to \$9B. It has been reported that even Bank of America Merrill Lynch, the most traditional of the broker models, plans to add automated investing to its suite of tools available to investors.

Will digital investment decisions overcome human judgment for the trillions of dollars invested in the markets today? **My personal view is that there will always be a balance of the human and the machine.** Any time that the scales tip from one to the other, arbitrage opportunities will emerge to move it back into balance. That said, new technologies, big data, and human creativity will continue to advance automated investing in the years to come.

Post-Trade Management

At the other end of the financial spectrum is post-trade processing, which, in the past, was an all-but-forgotten stepchild where innovation was concerned. As in many other industries, however, new regulation is driving the digital revolution to this area as well. Today, regulators worldwide expect banks and brokerages to increase their capital and reduce their risk exposure. Firms around the world are responding by looking for ways to optimize their collateral obligations and capital needs as they connect to more than 100 marketplaces and exchanges worldwide to do their trading. Such a wide scope of global connectivity subjects banks and brokerages to clearing and settlement risk that can last for several days while counterparties are confirmed and payment or securities are transferred. Can they eliminate or reduce that risk by creating instant trade settlement, at least in certain asset classes? They just might have found a way — the blockchain.

You've probably heard of the blockchain in connection with the bitcoin phenomenon — as an online public ledger that automatically and permanently records every bitcoin transaction anywhere in the world. But of course, the technology can be applied to any cryptocurrency, or to the transfer of other investment securities (or other goods, for that matter). Because it instantaneously verifies a buyer's or seller's credit-worthiness and completes the transfer of securities for cash instantly, the blockchain conceptually eliminates the need for central clearing and thereby cuts out the risk and cost of those down days of counterparty confirmation and securities transfer. Can central clearinghouses transform themselves from managers of risk into managers of the blockchain? At the moment, we at Nasdaq are testing the technology with a small segment of the client base in our Nasdaq Private Market area, but as our CEO Bob Greifeld has said, we see the blockchain as "a natural digital evolution for managing physical securities."

Ongoing Disruption

Will the new models for investing and for the blockchain's impact on post-trade risk management be disruptive? Definitely. Yet they are only two among a range of disruptive concepts and technologies entering the financial industry as I write this — crowdfunding, predictive analytics, and numerous other disruptive uses of technology that come into play across the financial sector every day. From Schumpeter's theory that free markets thrive on creative destruction to Clayton Christensen's use of disruptive innovation as a business imperative, we at Nasdaq have learned to think positively about disruption. It is in our DNA; we were created to disrupt; it is what keeps us in

the forefront of innovation. And it's why we fintechers are engaged right now in finding ways to provide and support the digital decision-making revolution that is upon us.

