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The Tech 50

This year's top executives in financial technology stand out for translating innovation into a competitive advantage. **THE 2008 MELTDOWN, ITS REG**ulatory aftermath and residual shocks like the European debt crisis continue to constrain bank profits and capital market activity and cast a pall of austerity over many financial institutions. Yet excitement and optimism reign among the developers and managers of the technologies on which firms and markets increasingly depend.

This enthusiasm is a common thread running through the Tech 50, Institutional Investor's annual ranking of those who lead the financial services industry in technological achievement and innovation. Far from being oblivious to prevailing economic and competitive realities, these executives bear witness to them. Having risen in stature and influence well beyond where they were a generation or even a decade ago, they have a firm grasp of those challenges and bring to bear tools, resources and expertise critical to overcoming them.

"Technology isn't just about automation and efficiency," asserts Goldman Sachs Group chief information officer Steven Scopellite, No. 10 on the list. "We see it as a business enabler, an accelerator, a control point — a source of competitive advantage."

Adds Phupinder Gill (No. 16), CEO of CME Group: "Technology has been the great differentiator for us. Now we are a technology-based company."

Indeed, financial technology has come of age not only as a way to move manual tasks onto machines but also as an engine of profitability. Exchange operators CME, NYSE Euronext (Dominique Cerutti, No. 6), Nasdaq OMX Group (Robert Greifeld, No. 20) and London Stock Exchange Group (Antoine Shagoury, No. 37) all make money selling technology to other markets and are investing in growth opportunities, particularly in derivatives and clearing. Those thriving businesses sustain the No. 3 ranking of Intercontinental-Exchange CEO Jeffrey Sprecher, who says proprietary technology is essential to ICE's ability "to maintain a healthy pace of product development."

Major banks are not skimping on technology. In 2011, Goldman's communications and technology spending increased 9 percent, to \$828 million. At Bank of America Corp. (Catherine Bessant, No. 5), data-processing and communications expenses grew 6 percent last year, to \$4.2 billion. JPMorgan Chase & Co.'s technology, communications and equipment total also rose 6 percent, to \$4.95 billion.

## **COVER STORY**



D.E. Shaw Group

(PNR)

When budgets are tight, the typical mandate is to "do more with less." But thanks to performance gains-whether because of faster chips, programming advances like complex-event processing or cloud computing utilities -technologists have more to work with. JPMorgan's Guy Chiarello points out that core technology costs are no greater than they were before the bank's acquisitions of failed Bear Stearns Cos. and Washington Mutual. Over three years JPMorgan has been able to shift \$1.5 billion from "running the bank" to investing in product development and "new value for our customers," says Chiarello. "That's competitive advantage," he adds.

The top two on the Tech 50, Thomas Secunda and Stephen Scullen III, respectively represent privately It may be all too obvious that, at a quantitative hedge fund firm with the renown of D.E. Shaw Group, "we believe our technology is our edge," as Gaurav Suri puts it. Less remarked upon, or visible to outsiders, is how far ahead of the curve the firm founded in 1988 by computer scientist David Shaw has been. "Today everybody talks about the cloud and big data," notes the 41-year-old Suri, head of information technology and software development since 2011. "We've been using a cloud internally for many years. Our goal is to provide a platform that is as large and scalable as possible."Three years ago Suri and his team constructed a database from the ground up to hold quantities of information "so humongous that traditional, relational databases can't handle it." Overseeing 400 technologists - more than one third of the firm's 1,100 total employees — Suri developed a platform that can deliver a "single version of the truth," ensuring a unified, consistent view of all investment positions across D.E. Shaw, which has \$19.5 billion in assets. His most recent project: exception-driven processing, which automates most investment functions and frees staff to focus on the most critical analytical issues. With an MS in computer science from the University of Illinois, Suri worked at Bell Laboratories before joining D.E. Shaw in 1996 to develop trading systems. He splits his time between its NewYork headquarters and a 600-strong research and technology office in Hyderabad, India.

held Bloomberg and Fidelity Investments, which do not disclose expenditures. They clearly play in the elite financial tech league and set standards to which others aspire.

## "Technology is a source of competitive advantage."

— Steven Scopellite, Goldman Sachs Group

When Bloomberg could not buy technology that met its specifications for data throughput and speed, the firm invented it. "We have unique problems, and only a few know how to solve them, so we often build our own technology," explains Secunda, global head of financial products and services. Bloomberg's 3,000 programmers, he says, "aren't there to support the existing system. They are there to dynamically and aggressively add new functions to our system so that we can continue to maintain the value." Secunda stresses that Bloomberg has a basic mission of serving customers, "and technology is a major part of that."

Scullen says it is much the same at Fidelity, where "we view technology as an investment, as opposed to an expense" and decisions come down to whether it adds value for the customer.

The giants have no exclusivity on focus and relentlessness. Secunda oversees 6,000 people, Scullen 12,000 and BofA's Bessant 100,000-plus, but Lance Uggla of Markit Group takes aim at Bloomberg and other data providers with 2,600; Tyler Moeller of Broadway Technology builds high-performance, multiasset trading systems with 60; and Tyler Kim retooled asset servicer MaplesFS and enabled a new line of bespoke outsourcing and reporting services with a team of fewer than 40.

The Tech 50 ranking was compiled by editors and staff of Institutional Investor, with nominations and input from industry participants and experts. Four primary sets of attributes were evaluated: achievements and contributions over the course of a career; scope and complexity of responsibilities; influence and leadership inside and outside one's organization; and pure technological innovation. Of the 50 entries, 30 return from last year, with their 2011 ranks shown. The rest are designated "PNR" (previously not ranked).

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