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THE WALL STREET JOURNAL.

C-Suite Strategies --- Management Top 250: Standout Banks for Innovation --- Overall, financial services don't score particularly well. But there are pockets of excellence.

By Rick Wartzman and Kelly Tang 953 words 22 February 2022 The Wall Street Journal J R11 English

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In 2009, former Federal Reserve Chairman Paul Volcker quipped that "the most important financial innovation that I have seen the past 20 years is the automatic teller machine." While that may have been good for a laugh, in part because it had a ring of truth, it isn't the case any longer.

Several banks and consumer-finance companies, led by Wells Fargo & Co. and Capital One Financial Corp., more than hold their own in innovation, as gauged by the Drucker Institute's measure of corporate effectiveness. In fact, their innovation scores put them in the top 30 among all 846 firms that we tracked in 2021, ahead of chip maker Nvidia Corp., pharmaceutical giant Eli Lilly & Co. and wireless company Verizon Communications Inc.

This showing reflects how innovation among big banks and certain other financial-services companies has been "rocketing" over the past decade, says Ed White, chief analyst and vice president of intellectual property and innovation research at Clarivate, which provides data on patent and trademark activity for our statistical model.

Our framework, which rests on the teachings of the late management scholar Peter Drucker, serves as the basis of the Management Top 250, an annual ranking produced in partnership with The Wall Street Journal. The 2021 list was published in December.

In all, we examined those 846 large publicly traded firms last year through the lens of 34 indicators in five categories: customer satisfaction, employee engagement and development, innovation, social responsibility and financial strength.

To create our ranking, companies are compared in each of the five areas, in addition to their overall effectiveness -- defined by Mr. Drucker as "doing the right things well" -- through standardized scores with a typical range of 0 to 100 and a mean of 50.

In the innovation category, we adjust our model slightly to look at every company's performance relative to its industry peers. This way, we aren't comparing Apples to Lululemons on R&D expenditures or any of our other innovation indicators.

But for our latest research, we wanted to remove that constraint and see how the 101 companies in the financial sector stack up against all of the companies we cover in absolute, not relative, terms.

As a whole, the sector is weak, with an average innovation score of 48.2. This puts it eighth out of 11 broad industry groups -- a result of some segments, such as thrifts and reinsurance companies, that are quite a bit below average. But there are pockets of excellence.

Wells Fargo led the pack in 2021, with an absolute innovation score of 68.3. The biggest driver of this number was the extremely high rate at which the bank abandoned prior patent applications -- a metric that gives insight into whether a company has a culture of letting go what isn't working and focusing on what's next. Wells Fargo also had a high rate of new patent applications last year.

This combination of shedding the old and embracing the new comes as the company is moving beyond older technologies, such as mobile wallet (where you can digitally store and access credit and debit cards on your smartphone) to concentrate on fresh ways to use **blockchain** and artificial intelligence.

"The innovation strategy is layered over the business strategy," says Chad Bement, lead counsel in Wells Fargo's intellectual property department.

So far, this hasn't translated into more delighted customers. Wells Fargo's customer satisfaction score was just 39.8 in 2021.

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"I think Wells is at a pivot point," says Bob Neuhaus, executive managing director of financial services at JD Power, which supplies the Drucker Institute with customer satisfaction data. In early 2021, he notes, Wells Fargo brought in an experienced executive team from Bank of America Corp. to oversee the revamping of its consumer-facing digital platform.

Capital One, with an absolute innovation score of 62.0 last year, scored particularly high on patent applications, patent abandonment and its number of R&D-related job listings. It has been positioning itself as a **technology** leader for years and has been hiring thousands of software engineers as it shifts its data, applications and IT systems to the cloud.

JPMorgan Chase & Co. notched the next-highest absolute innovation score in the sector, 57.0. It was propelled by its level of patent abandonment but also by generating a lot of patent value -- a metric, developed by Northwestern University's Dimitris Papanikolaou and Stanford's Amit Seru, that assesses the stock market's reaction to announcements of approved patent applications.

Mr. White of Clarivate doesn't expect any of this to slow down. U.S. banks, he says, are pouring resources into **technology** that can support security and authentication, speech recognition, and app-based transactions. All the while, he adds, they are keeping a close eye on a host of nontraditional rivals -- whether it's PayPal Holdings Inc. or a Chinese company such as Alibaba Group Holding Ltd. -- as well as potential disrupters now on the horizon.

The next frontier, Mr. White says, will be the metaverse. "That is a real vector of innovation," he says, adding that **technology** used to purchase tokens as part of a fantasy game today could well be the foundation for money in the bank tomorrow.

(See accompanying illustration -- WSJ Feb. 22, 2022)

Mr. Wartzman is the head of the KH Moon Center for a Functioning Society, a part of the Drucker Institute, and Ms. Tang is the institute's senior director of research. Email them at reports@wsj.com.

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THE WALL STREET JOURNAL.

Business News: BJ's to Shift Cards to Capital One

By AnnaMaria Andriotis 268 words 19 January 2022 The Wall Street Journal J B3

English

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Alliance Data Systems Corp. is losing one of its biggest credit-card accounts: BJ's Wholesale Club Holdings Inc.

The members-only wholesale club is moving its co-branded credit cards to Capital One Financial Corp., according to people familiar with the matter.

The move is a big blow to ADS, which specializes in store credit cards.

BJ's is among its most prized credit-card partnerships, accounting for roughly \$1.5 billion in balances, according to people familiar with the matter.

ADS had an average of \$15.5 billion in balances during the third quarter, according to the company.

BJ's on Tuesday sued ADS in Massachusetts Superior Court, claiming the company is slowing down the process of transferring the existing card accounts. Capital One's name is redacted from the lawsuit.

An ADS spokeswoman said the allegations in the lawsuit are inaccurate.

"Alliance Data has a 30-year track record of delivering the highest level of service and support to our valued brand partners, including operating responsibly and with the utmost integrity," she said.

"We believe we are in full compliance with the terms of our contractual agreement," the spokeswoman added.

More than a million BJ's members have one of the cards, according to the lawsuit.

BJ's contract with ADS is set to expire this year, according to the lawsuit.

In court papers, BJ's said the delay is tied in part to ADS's move to convert its existing **technology** platform, which stores card account information including balances, cycle dates and demographics.

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Ehe New York Times

Business/Financial Desk; SECTB
Banks Slowly Embrace Their Cloud-Based Future

By Lananh Nguyen 1,597 words 3 January 2022 The New York Times NYTF Late Edition - Final 1

English

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Michael W. Lucas made big plans to take a trip around the world in March 2020. He arranged to travel from his home in Detroit to Tokyo, then attend conferences in Hong Kong and Bangalore, India, before making a final stop in Paris.

But on his first attempt to buy plane tickets, this ambitious itinerary -- costing \$2,932.48 -- got the attention of Capital One, which blocked the charges.

"I was both annoyed and pleased that the credit card company caught that someone was booking unusual flights," said Mr. Lucas, a 54-year-old **technology** writer who also is also an author of mystery novels. After calling the bank to explain his plans, the transactions went through smoothly. (The trip, however, was ultimately canceled because of the pandemic.)

Mr. Lucas's fraud alerts were made possible by an invisible force tiptoeing into Wall Street: **cloud computing**. Before moving into the cloud, his bank, Capital One, was limited to tracking fraud using the bandwidth of the servers it owned. Now that it rents capacity from Amazon Web Services, the bank can use **machine learning** to crunch numbers faster -- and on an enormous scale -- to detect anything out of the ordinary.

As Mr. Lucas put it: "The cloud is a fancy word for 'other people's computers."

Banks see huge potential for cloud **technology** to make their systems faster, more nimble and responsive to the needs of their customers. Consumer banks can develop cloud-based tools to quickly introduce new features in mobile banking apps or detect fraud. Lenders can use the cloud to process loan applications and analyze underwriting decisions for everything from mortgages to corporate borrowing. They can use **machine learning** to detect money laundering. When volumes spike in financial markets, traders can use extra computing power to analyze price movements and handle bursts of client activity. Still, the banking industry has been mostly slow to adopt **cloud computing**. Currently, major banks run their own data centers, which house computer servers that process vast troves of customer account data, payment records and trading logs. Running the machines is costly because they require a lot of electricity and also need to be kept in air-conditioned rooms.

While Wall Street leaders have long acknowledged the potential of **cloud computing** to cut costs, they have only allowed their firms to take halting steps. Executives have been hesitant because banks are tightly regulated by governments and any sudden changes involving consumer deposits or privacy aren't possible. They're also concerned that computing over the internet will open the door to cyberattacks. And some firms are held back by old computer systems that are difficult to revamp or retire, making the transition even more tricky.

David M. Solomon, the chief executive of Goldman Sachs, is optimistic about financial-services firms moving into the cloud. However, "it's got to be done with high levels of security and real protection of data and information," Mr. Solomon said in an interview. "That's why you've got to go slowly and you've got to go cautiously," he said.

In North America, banks handle only 12 percent of their tasks on the cloud, but that could double in the next two years, the consulting firm Accenture said in a survey. Jamie Dimon, chief executive of JPMorgan Chase, said the bank needed to adopt new technologies such as artificial intelligence and cloud **technology** "as fast as possible."

Wells Fargo plans to move to data centers owned by Microsoft and Google over several years; Morgan Stanley is also working with Microsoft. Bank of America has saved \$2 billion a year in part by building its own

cloud. Goldman said in November that it would team up with Amazon Web Services to give clients access to mountains of financial data and analytical tools.

Cloud services enable banks to rent data storage and processing power from providers including Amazon, Google or Microsoft, which have their own data centers dotted around the globe. After moving to the cloud, banks can access their data on the internet and use the tech companies' computing capacity when needed, instead of running their own servers year-round.

Seeing a big opportunity to sell **cloud-computing** services to Wall Street, some tech giants have hired former bankers who can use their knowledge of the rules and constraints under which banks operate to pitch the industry.

Scott Mullins, AWS's head of business development for financial services, previously worked at JPMorgan and Nasdaq. Yolande Piazza, vice president for financial services at Google Cloud, is the former chief executive of Citi FinTech, an innovation unit at Citigroup. Bill Borden at Microsoft and Howard Boville at IBM are Bank of America alumni.

Cloud providers are "moving at a much faster development pace when you think of security, compliance and control structures," compared with individual banks, said Mr. Borden, a corporate vice president for worldwide financial services at Microsoft. The cloud, Mr. Borden and the other executives said, enables companies to increase their computer processing capabilities when they need it, which is much cheaper than running servers on their own premises.

But glitches do occur. One week after Goldman teamed up with Amazon, an AWS outage halted webcasts from a conference hosted by the bank that convened chief executives from the biggest U.S. financial firms. The glitch also caused problems for Amazon's Alexa voice assistant, Disney's streaming service and Ticketmaster. AWS and its competitor, Microsoft Azure, both had outages recently.

Banking regulators in the United States, including the Federal Reserve, Federal Deposit Insurance Corporation and Office of the Comptroller of the Currency, have jointly underscored the need for lenders to manage risks and have backup systems in place when they outsource **technology** to cloud providers. The European Banking Authority warned firms about concentration risk, or becoming overly reliant on a single tech company.

The Financial Industry Regulatory Authority, which oversees broker dealers -- firms that engage in trading activity -- has already moved all its **technology** to the cloud. The group previously spent tens of millions of dollars a year to run its own servers but now rents space on AWS servers for a fraction of that amount, said Steven J. Randich, FINRA's chief information officer.

Mr. Randich estimated that without the cloud, FINRA would have had to bear at least \$100 million in expenses to track market movements using its own data centers -- especially as trading volumes have ballooned in recent years.

"We are all in," Mr. Randich said. The use of web-based systems has enabled FINRA to process hundreds of billions of market records, and its surveillance staff to analyze unusual trading activity by pulling data in seconds or minutes, compared with hours earlier. But Mr. Randich added that "there's a way to do it right and there's a way to do it wrong," and the wrong way can expose a company to security breaches.

Capital One is all too aware of the risks. In 2019, it suffered one of the largest-ever thefts of data from a bank after a hacker obtained the personal data of over 100 million people. The bank was fined \$80 million by a regulator and ordered to strengthen its security controls as it moved information-technology operations into the cloud. It also agreed to settle a class-action lawsuit covering 98 million consumers for \$190 million.

"Security of our customer data is of paramount importance, and we invested heavily in our cybersecurity capabilities to defend that," said Mike Eason, Capital One's chief information officer for data and machine learning in Richmond, Va.

Despite the breach, Capital One said it had experienced huge benefits from migrating to the cloud. It shut all eight of its data centers last year and runs its **technology** via AWS. As customers ramped up spending for the holidays, the bank used rented servers to handle a seasonal surge in transactions, without having to pay for all the servers year-round as it did before. It also plans to move most retail call-center operators to work permanently from home.

The new arrangement works well for Rosie Hardy, a call center worker for Capital One in Tampa. In March 2020, with the pandemic raging, Ms. Hardy packed up her tech gear into a big cardboard box and drove home to Gibsonton, Fla. Within an hour, she was back online from her spare bedroom bathed in natural light, fielding calls from the bank's small-business customers.

Ms. Hardy and her colleagues were untethered from phone banks because of a service that routes calls through the cloud, enabling them to work remotely. "You couldn't tell where I was. All I needed was internet access, and I picked up like we never left," Ms. Hardy said.

When Michael W. Lucas used his credit card to spend \$2,932.48 on plane tickets, the charge was deemed unusual and blocked. made it possible. (PHOTOGRAPH BY NICK HAGEN FOR THE NEW YORK TIMES); David Solomon, the chief executive of Goldman Sachs, is optimistic about financial-services firms moving into the cloud, but cautions that "it's got to be done with high levels of security and real protection of data and information." (PHOTOGRAPH BY JEENAH MOON FOR THE NEW YORK TIMES); Capital One is among the banks that have embraced the cloud, but it was fined by regulators and ordered to beef up its risk management. (PHOTOGRAPH BY EMON HASSAN FOR THE NEW YORK TIMES) (B4)

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