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FEATURED Q&A

How Vulnerable Are Mexican Banks to Cyberattacks?



Cyberattacks sucked hundreds of millions of pesos out of Mexican banks, central bank chief Alejandro Díaz de León announced last month. He said banks had not experienced any attacks since May 8, but that added investigations were continuing. // File Photo: Notimex.

Q Mexican banks recently saw an unprecedented level of cyberattacks, central bank chief Alejandro Díaz de León said on May 14. The attacks have included incidents in which thieves siphoned as much as \$20 million out of the country's banks. How prone is Mexico's banking system to such attacks, and what are the system's main vulnerabilities? What more must the country's banks do in order to protect themselves? What actions should Mexican government agencies and lawmakers take to strengthen the country's electronic banking system?

A Melissa Díaz and Paola Sánchez Torres, attorneys at Diaz, Reus & Targ: "According to the World Bank, Mexico is the second largest economy in Latin America. Yet, its cybersecurity programs and technologies are outdated, and the country lacks a cybersecurity culture. These vulnerabilities leave Mexico's banking system very prone to cyberattacks. Both Mexico's banks and the Mexican government must enact immediate measures to prevent future cyberattacks like the recently discovered hacking and transferring of more than \$15 million from Mexican banks such as Banorte to dummy accounts in other banking institutions. Mexico's banks should implement enterprise-wide security policies that take into account all regulatory and enterprise compliance requirements and protect personal data. Once a security policy is in place, banks should enforce their security policy and constantly monitor their network to ensure that any changes to configurations within the network have been approved and are compliant with the policy. Banks should also screen all candidates and employees, and

Continued on page 3

TODAY'S NEWS

POLITICAL

At Least 25 Killed in Eruption of Guatemala's Volcán de Fuego

The death toll following the eruption of the volcano, which is located about 25 miles southwest of Guatemala City, is expected to rise as many people remain missing.

Page 2

ECONOMIC

Mexico Sees Record Level of Remittances

Mexican workers abroad sent home \$2.72 billion in remittances in April, a record for that month and an increase of 17.9 percent over the same month last year.

Page 2

BUSINESS

Petrobras CEO Parente Resigns

The CEO of the Brazilian state-run oil company stepped down, reportedly under pressure from President Michel Temer. Parente was the target of much of the anger stemming from the strike of truckers maddened by high fuel prices.

Page 3



Parente // File Photo: Brazilian Government.

POLITICAL NEWS

At Least 25 Killed in Eruption of Guatemala Volcano

At least 25 people were killed Sunday when Guatemala's Volcán de Fuego, or Volcano of Fire, produced a massive eruption, spewing lava and rocks high into the air and unleashing a massive current of lava and mud that engulfed homes and buried victims in villages near the volcano, local daily newspaper Prensa



Guatemala's Volcán de Fuego violently erupted Sunday just before noon. // Photo: Conred.

Libre reported. The volcano, located about 25 miles southwest of Guatemala City, began erupting just before noon local time. In the afternoon, lava and mud were running down the sides of the volcano through nearby villages, where in addition to the dead, hundreds were injured and several are missing. Guatemala City's La Aurora International Airport was also closed. Ash fell north and east of the volcano, in the municipalities of San Luca, Antigua, Alotenango, Chimaltenango and Zaragoza, Eddy Sánchez, the director of Guatemala's National Institute of Seismology, Volcanology, Meteorology and Hydrology, told local newspaper Diario de Centroamérica. Consuelo Hernández, an area resident, saw lava engulfing a corn field and ran up a hill in order to escape, but she told the office of the National Coordinator for Disaster Reduction, or Conred, that members of her family may have been killed. "Not everyone escaped," she said, covered in ash. "I think they were buried." More than 3,000 people were evacuated from areas surrounding the volcano, the Associated Press reported. Access to

some areas was cut off by rivers of lava, making it impossible for emergency crews to assist in some locations. Rescue operations were suspended at nightfall because conditions were too dangerous for crews to continue.

ECONOMIC NEWS

Mexico Sees Record Level of Remittances in April

Mexico's central bank released data Friday showing workers abroad sent home a record \$2.72 billion in remittances in April, a 17.9 percent increase over the same month last year. Remittances totaled \$9.75 billion between January and April, up from \$8.94 billion sent home during the same period in 2017, a 9 percent increase. Given the stronger Mexican peso, which was up 2.2 percent in April as compared to the same month last year, the value of remittances measured in local currency grew more than 15 percent in April, Goldman Sachs analyst Alberto Ramos said Friday in a research note. "We expect workers' remittances to remain solid in the near

“We expect workers' remittances to remain solid in the near term—given healthy employment growth in the United States.”

— Alberto Ramos

term—given healthy employment growth in the United States," Ramos said. The outlook for the peso could be less certain, however, as market jitters over trade tariffs last week sent the peso to its lowest value against the U.S. dollar in 15 months. Changes to immigration policy in the United States could also influence money flows in months ahead. U.S. President Donald Trump's hash rhetoric on immigration has likely driven up remittances since last year as work-

NEWS BRIEFS

Pope Calls for Renewed Dialogue Amid Violent Crackdowns in Nicaragua

Pope Francis called Sunday for renewed dialogue between opposition leaders and the government in Nicaragua after security forces renewed violent crackdowns on protests last week, Agence France-Presse reported. The calls came on the same day as police ended a siege of a church in the city of Masaya, where opposition leaders and protesters gathered after violent government responses, according to BBC News. Human rights groups say the violence has led to more than 100 deaths since April 18. The protests began when Nicaraguans demonstrated against proposed cuts to the pension system.

Venezuela Releases Dozens of Jailed Activists

Venezuela's government on Friday released dozens of activists in what officials called a goodwill gesture, Agence France-Presse reported. The opposition considered the 39 people freed political prisoners. Those released include Daniel Ceballos, the former mayor of the city of San Cristóbal. Ceballos had been behind bars for four years. After his re-election on May 20 in an election that was denounced in and outside of Venezuela as a sham, President Nicolás Maduro said he would be releasing jailed activists as a conciliatory measure.

Qatar Petroleum Signs Deal to Acquire Interest in Argentina Assets

Qatar Petroleum on Sunday signed an agreement to acquire a 30 percent interest in two of ExxonMobil's affiliates in Argentina, Reuters reported. The deal will give Qatar Petroleum access to oil blocks in the oil- and gas-rich Vaca Muerta shale basin in Argentina's west. The terms of the deal were not disclosed to the press.

ers fear deportation, Banorte analyst Francisco Flores told clients in a research note, Reuters reported. But in the face of near record-low unemployment, the Trump administration is examining ways U.S. industries might hire more immigrant workers on a temporary basis, White House economic advisor Larry Kudlow said Friday.

BUSINESS NEWS

Petrobras CEO Quits Following Trucker's Strike

Pedro Parente on Friday resigned his role as CEO of Brazilian state-run oil firm Petrobras following a crippling truckers' strike and will be replaced on an interim basis by CFO Ivan de Souza Monteiro, The Wall Street Journal reported. Petrobras' board of directors quickly confirmed Monteiro in his new role late Friday, the company said in a statement. Truckers in Brazil went on strike for 10 days over rising fuel costs, which were tied to market conditions under Petrobras' policy. The work stoppage led to nationwide shortages of food and other goods, forcing the government to freeze prices of diesel in order to calm unrest. Much of workers' anger was directed toward Parente. After taking charge in June 2016, Parente returned debt-ridden Petrobras to profits after two years of significant losses. The administration of market-friendly President Michel Temer had kept the company at arm's length until Temer froze fuel prices last week, promising to compensate Petrobras for losses. Some analysts say Temer's move could undermine trust in Petrobras. "The price policy at Petrobras will be questioned from now on," Pedro Paulo Silveira, an analyst for broker Nova Futura, told The Wall Street Journal. In an attempt to calm investors, Temer promised during a televised address Friday that the government would not interfere with prices at Petrobras. Monteiro joined Petrobras in 2015 from Banco do Brazil and remained with the firm when Parente took over in 2016.

FEATURED Q&A / Continued from page 1

should conduct regular mandatory employee training on their security policies. Currently, Mexico does not have a dedicated law that regulates cybersecurity. As such, it is imperative that Mexican lawmakers create effective legislative frameworks that hold entities and their management responsible for poor cybersecurity practices and that allow for the prosecution of individuals responsible for cyberattacks. The Mexican government should incentivize a culture of cyber hygiene with effective communication and participation among participants, such as banks and other financial institutions. If Mexico and its banks do not make critical changes to their cybersecurity culture, the public is likely to lose trust in the Mexican banking system, which could substantially harm the country's economic growth."

A **Jarrett Benavidez, vice president of sales for Central U.S. and Latin America at BeyondTrust:** "After the recent attack on the SPEI platform in Mexico, where multiple banks reported non-authorized transfers of as much as \$20 million, the banking industry has responded by using alternate channels to avoid these transfer 'delays.' The resulting lack of trust of this very important platform will result in the unprecedented resignation of several top-level executives in Mexico, and will surely drive mandatory security requirements to protect this core of the Mexican banking system, rather than allow for nondisclosure and other confidentiality agreements to suffice as protection as before. The vulnerability that allowed for the successful attack on the transfer system was located in middleware, or software that acts as a bridge between an application and a critical system such as a database or operating system. The risk posture of middleware is often overlooked, as the focus of these programs falls on functionality instead of security. They are often developed by third parties and by internal resources that aren't required to

follow security best practices when writing code. Lack of attention to secure coding often makes middleware an easy target for hackers, as it goes into production riddled with security vulnerabilities. Activity between systems is hijacked, and legitimate credentials are stolen, allowing hackers to act as company employees and, in this case, disperse funds, in what appears to be

“**The vulnerability that allowed for the successful attack on the transfer system was located in middleware...**”

— Jarrett Benavidez

a valid transaction. Mexican government agencies should mandate controls that improve security standards of middleware and other software, including secure-coding best practices, vulnerability identification and remediation, as well as management, auditing and recording of all access to critical financial applications. With 80 percent of cyberattacks involving stolen credentials obtained by leveraging vulnerabilities in the IT ecosystem, it is crucial to address the attack chain from beginning to end."

A **Alejandro Buschel, information security professional and founder at ProGloBix:** "Banks around the world are targeted with cyberattacks. The level of investment needed to build, operate and maintain cyber defenses keeps growing, with scarce personnel available to innovate and implement scalable solutions. The complexity of banking systems has grown significantly in the last decade, and it will continue to grow in order to better serve customers, reduce operating costs and increase efficiency. These goals are achievable when cyberse-

Continued on page 4

FEATURED Q&A / Continued from page 3

curity is a fundamental part of the design and operation of systems. Mexico's banking system should operate systems that foster collaboration and sharing of indicators of compromised systems among its members. They should have processes in place to react automatically to certain events. Automation is needed to distribute information and act accordingly. Sophisticated attacks are planned in advance and executed with precision. Cyber defenses should account for this kind of attacker with full awareness of all the critical systems required to operate, visibility of all applications flows, and mechanisms for detecting fraudulent activities. The banking system should be considered as important as critical infrastructure at the national level. Banks should be required to demonstrate adequate security to their regulator by implementing cyber stress tests of all critical applications, both for inter-bank transfers and internal systems. A past history of limited attacks does not imply the future will be the same."

A **Adalberto Palma Gómez, member of the Financial Services Advisor board and president of the Union of Mexican Financial Institutions (UNIFIMEX):** "When it comes to cyberattacks, there are two kinds of financial institutions in the world: those that have already been attacked and those that don't know it yet. Mexico's financial system is no exception. The constant cyberattacks do not constitute the main problem; but rather, it is the increasing sophistication with which they are carried out, as financial transactions are increasingly executed online. Condusef, the local authority that protects financial service users, said that in 2017 there were more than four million cases of cyberfraud and that two of every three client complaints had to do with this growing problem. Even

Condusef itself suffered hacking attempts, impeding it from attending to thousands of client complaints. Recently, electronic payment system SPEI suffered a saturation attack through the Bank of Mexico, impeding operations at certain financial institutions.

“When it comes to cyberattacks, there are two kinds of financial institutions in the world: those that have already been attacked and those that don't know it yet.”

— Adalberto Palma Gómez

The attack exposed the lack of efficient response protocols, and that is what is being worked on today to prevent future failures. In a recent meeting with the National Banking and Securities Commission, the members of UNIFIMEX were informed that the body would soon release rules that will allow a joint reaction between financial institutions and authorities in order to prevent, and in some cases react, with measures appropriate for the problem in order to preserve the health of financial institutions, protect clients and reduce the risk to financial institutions' reputations. The imminent next step for Mexico is the adoption of a framework for national cybersecurity covering all kinds of transactions, and communication between private and public institutions—for which the financial system is the lifeblood—to guarantee the continuation of necessary economic functions that society demands."

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