

*COVID-19 has certainly triggered a shift in consumer behavior which has resulted in people unlearning old methods to acclimatize and adjust to the new world, says V. Chandramouliswaran, Sr. Director, Global Financial Crimes and Customer Protection & Chennai Centre Head.*

**Can you tell us something about the PayPal India Development Centers and the technologies that they are involved with?**

PayPal has three world-class Global Technology Centers in Chennai, Bangalore and Hyderabad which employ over 4000 highly skilled engineers. These are PayPal's largest centers outside of the U.S. and focus on a wide range of technology from AI to Blockchain, thus leading the tech revolution when it comes to money management.

The technology centers house a best-in-class team of software developers, architects, user experience engineers, web developers, data scientists, analysts, program managers, and operations agents, among others. They work across Risk, Payments, Consumer, Merchant, Operations, Data, Data Science, reporting etc. to provide cutting-edge digital payments solutions to our customers worldwide, and are integral to driving our transformation.

We are committed to making a positive difference in the world. Our ability to deliver on our mission of democratizing financial services and capabilities starts from the inside; by building a global team of employees that reflects the communities where we work and live, and the diversity of the customers we serve.

One of our biggest success stories is our commitment towards ensuring consumers a safe and secure payments experience. In our initial days we approached fraud detection much like any other bank would and that meant using traditional technologies, such as logistic regressions. Over the last decade we upped our fraud-fighting game by using more advanced technologies, such as neural networks and Gradient Boosted Trees (GBTs), which one could argue was the second phase of the company's journey which led to significantly higher levels of accuracy.

Most recently we looked advanced AI which included technologies and techniques like deep learning, active learning, and transfer learning. This is where we are in our Risk AI journey. Our accuracy levels have continued to improve, and advanced AI approaches have delivered an accuracy boost of about 10% to 20% over the traditional ML approach to detecting fraud in real time. We continue to invest in our research and data capabilities as this is an evolving space and we need to challenge our scientists to stay ahead of the fraudsters.

**What are the changes you are seeing as a result of the COVID-19 crisis-lockdown? Is there a**

*“ At PayPal, we believe that more than being in the business of payments, we are in the business of trust and hence it is extremely important for us to educate our customers on the safety aspect while transacting digitally. ”*

## **surge in online payments and online payment habits? How is PayPal changing because of that?**

COVID-19 has certainly triggered a shift in consumer behavior which has resulted in people unlearning old methods to acclimatize and adjust to the new world. Due to this shift, the country has witnessed a surge in digital payments, as there is a legitimate need as an outcome of stringent social distancing norms. We expect this trend to continue for the foreseeable future as both consumers and merchants have experienced the convenience transacting digitally.

Given the current scenario, our services have never been more needed and more relevant. We have witnessed an unprecedented demand for our products and services over the past few months with transactions are up 20% year-over-year, and branded transactions up over 43%, more than double pre-COVID levels in January and February. On May 1, we had our largest single day of transactions in our history, larger than last year's transactions on Black Friday or Cyber Monday. We also had a record Q1, adding 10 million net new accounts. But that will pale in comparison to the 15 million to 20 million net new accounts we anticipate adding in Q2. And last, but certainly not least, in April, our revenues grew by 20%.

## **What were the trends in payments before the crisis happened and what are the new long-term trends that we are likely to see?**

Digital payments have seen increased acceptance especially during demonetization, but the pandemic has evolved digital from a nice to have to an essential service. Unlike what was experienced during demonetization when cash came back, this growth is expected to continue. According to a recent survey conducted by Capgemini on financial services consumer behavior, the usage of digital payments in the post COVID-19 period is set to be highest among Indians at 75% followed by China at 63% and Italy at 19%. A noticeable trend is the use of digital by new demographics. At PayPal we call them the silver tech generation and have seen high demand of our services from them.

As people adapt to new modes of life, businesses that enable us to work, study, shop, and interact virtually have skyrocketed to mainstream adoption. Such technologies have been growing and gaining traction slowly for years. They have become essential in the new normal. Technologies like AI and ML will see a lot of demand as they are helping transform everything from data collection and processing in the marketing department to hiring and on-boarding in the HR department. The bouquet of AI, pushed by Machine Learning, computer vision and Internet of Things (IoT), are fast evolving as significant game changing technologies worldwide. Besides technology companies, it is currently being pursued across sectors ranging from manufacturing, agriculture, healthcare, retail, financial services, banking, national defense and security to public utilities. They hold huge potential for business transformation in these sectors.

**We hear a lot about online financial fraud and cybersecurity related issues. How safe is PayPal and at the backend what are the steps you take to ensure its safety?**

Over the past few months, technology has been the mainstay for first responders, governments, and companies of all sizes to ensure a strong ecosystem that allows for business continuity. While we have witnessed the multifold benefits of technology during this time, the spike in remote working has made the security profile of customers even more critical. Since most people are working from home and spending more time on mobile phones and other personal devices, the incidences of fraud are also rising as many of these devices are unprotected. A report released by cybersecurity firm Fortinet reported a 131% increase in viruses targeted towards remote workers (as compared to the same period in 2019).

At PayPal, we believe that more than being in the business of payments, we are in the business of trust and hence it is extremely important for us to educate our customers on the safety aspect while transacting digitally. We protect our customers by the depth and layered security, which means protections that apply on your devices, within the app, on network edge, the right kind of cryptographic infrastructure. A combination of human and machine is the strongest. You want the machine to learn as much as it can on its own accord and we used this model in security, assessing risks, and we are now beginning to use it in infrastructure and customer support. PayPal employs the power of ML algorithms to process transactions and a lot of cutting-edge work is done out of our India Development Centers in Bangalore, Chennai and Hyderabad.

**With hackers also evolving rapidly how are your risk and security measures also evolving to manage such changes?**

Given that digital is the new normal, the focus on security will be extremely critical going forward. Sustainable growth in the sector and for innovations to work will depend on the ability to manage risk for every transaction. This is where emerging technologies like AI and ML will play a key role.

At PayPal, we're constantly encouraging our engineers to constantly push the boundaries of AI and Machine Learning, with applications from risk, marketing, customer service to autonomous infrastructure. We employ a story-driven risk management approach, combined with our expertise in data analytics, to build feasible risk solutions.

We constantly monitor for suspicious account activity to thwart fraudulent transactions, compromised accounts, illegal activity, and violations of our Acceptable Use Policy (AUP).

- Within three-tenths of a second, we assess a transaction based on all of the data we have and in doing so, we have one of the industry's lowest fraud rates of any payments platform.
- Merchants use PayPal's end-to-end risk solutions to manage everything from customer

onboarding to payment authorization to backend risk management.

- Merchants have also taken advantage of our machine learning and device intelligence technology powered by Simility, a PayPal service. This allows us to put more control in the hands of our merchant customers to fight fraud while helping make commerce experiences fast and secure.

We also protect our customers by using layered security

- PayPal's Cyber Defense Centers in the US and Singapore provide 24/7 proactive security monitoring.
- We use automation to help address security incidents faster. More than 80% of our incidents are handled through automation.
- Through our "defense in depth" approach, multiple layers of technical controls are deployed to ensure that systems are kept secure and threats detected and mitigated. We continuously evaluate new tools and technologies to stay ahead of the threats.
- Confidential customer data is encrypted both at-rest and in-transit using strong encryption standards and secure connections. Secure development practices and scanning tools are built into the software development and release process
- Our more than 5000 developers are trained in secure coding practices and we host capture the flag (CTF) and internal bug bounty challenges to further cement their training.

<https://www.pcquest.com/digital-payments-evolve-nice-essential-service/>

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