The Biggest Fintech Revolution in the World

India is growing at 7%, making it the fastest growing major economy in the world, but everyone already knows this. It will be the youngest country with an average age of 29 and contribute to 25% of the global working force by 2020. Some paradigm changing government initiatives like Digital India and Aadhaar are driving the institutionalisation of unorganised markets (~15 million mom-and-pop stores which run on cash) and digitisation of 1.2bn+ people setting India up for some incredible multi-decade growth.

I first read about 'the fintech revolution' in The Economist a few years ago. But we see no greater fintech revolution than what is happening currently in India. According to KPMG and NASSCOM, Indian fintech transaction value is set to increase from US$33 billion in 2016 to US$73 billion in 2020. Let's take a closer look at some of the drivers of this.
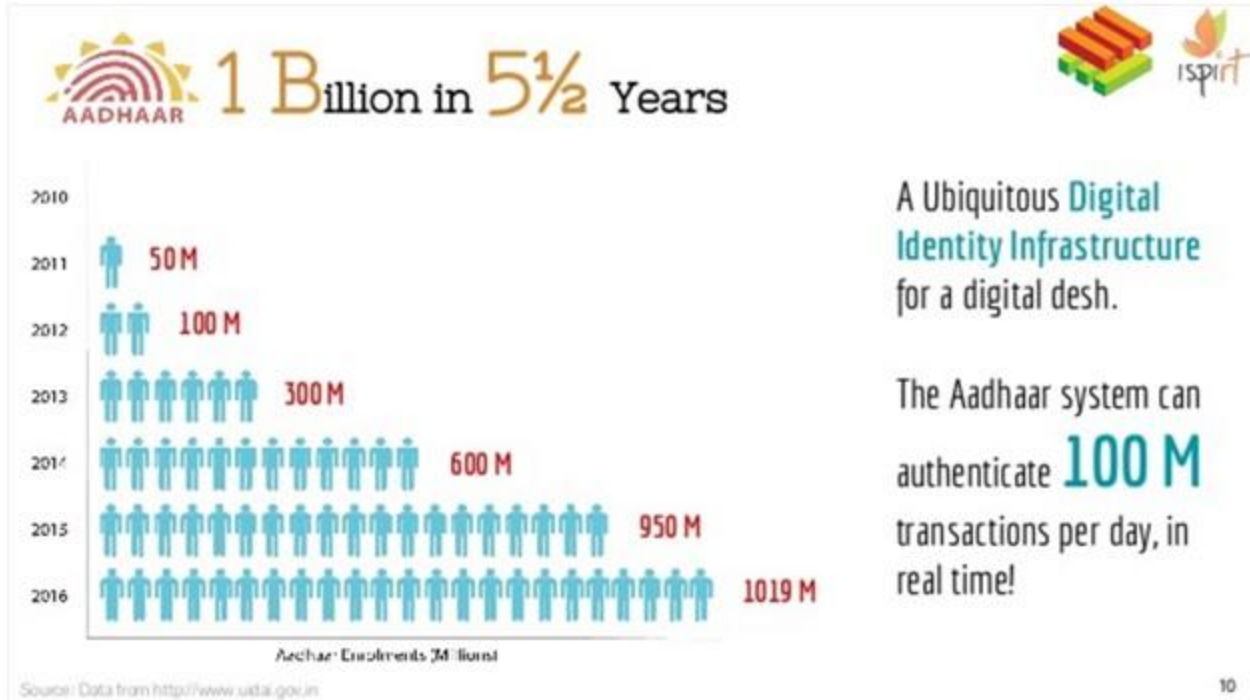
1. National ID Database
2. Bank Accounts for Everybody
3. Rapid growth in Mobile
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National ID Database

"The system in India is the most sophisticated that I've seen. It's the basis for all kinds of connections that involve things like financial transactions. It could be good for the world if this became widely adopted."
-Paul Romer, chief economist at the World Bank

Since implementation in 2009, the Aadhaar act has biometrically identified 1.1bn Indians (~90% of the population) and created a single national database on the cloud. It provides an identity card with a unique lifetime 12-digit code, verified by fingerprints and iris scan. This is a comprehensive authentication tool, which is very effectively tackling the problem of fake and double identities, leakage of payment benefits and tracking real economic activity. Population in some of the most rural, remote areas of India are now on the official system for the first time. Aadhaar is estimated to save the government about $2 billion a year, and this could rise to $7 billion by March 2018, or 0.35 percent of gross domestic product, according to research firm CLSA. This will add considerably more in economic activity and tax revenue in a country where only 2-3% pay tax. See the incredible penetration India has managed in just 6 years. More on Aadhaar here, and the implications here.

A Ubiquitous **Digital Identity Infrastructure** for a digital desh.

The Aadhaar system can authenticate **100 M** transactions per day, in real time!

Bank Accounts for Everybody

In August 2014, PM Modi launched Jan Dhan Yojana, or PMJDY, a financial inclusion initiative to provide a bank account to every single household. It allowed individuals to open a bank account just with their Aadhaar card, resulting in 280m new bank accounts being created. 339m bank accounts are now Aadhaar linked. Social welfare payments which were once cash are now distributed through bank accounts, imposing a major block on corruption and skimming by middlemen. This is a huge step in the move towards a cashless India.

Rapid Growth in Mobile

Individuals can also open a mobile phone account using Aadhaar. Post Act, phone penetration has risen from 40% to now close to 80%. Of ~980m phones in circulation, ~270m are smart phones. Handset makers like Qualcomm, Samsung and locally Micromax are already taking steps towards Aadhaar enabled devices that can take fingerprints and retina scans, which is laying the foundation for authenticated, instant online and presence-less transactions and payments.

The above 3 combined – **J**an Dhan, **A**adhaar and **M**obile aka **JAM Trinity**, form the backbone of fintech growth in India, by having brought people even in the most rural areas into the official system, providing access to banking and financial services (many for the first time), enabling online commerce at a ridiculous pace (see Jio example below), as well as cutting social welfare leakage and corruption (a huge problem), and improving government revenues.

Leveraging the Power of JAM

Jan Dhan, Aadhar & Mobile

1,80,96,130 Guinness World Record for most bank accounts opened in one week

19.72 crore
Bank accounts opened

16.8 crore
Rupay cards issued

28k crore
Cash Deposits

131 crore
Overdraft

An example of what's to come

Reliance, an Indian conglomerate recently launched a new phone plan Jio, using Aadhaar electronic KYC process, reducing the multiday SIM purchase time to minutes. Reportedly 100m new accounts were opened in 3 months, meaning Reliance onboarded a new client every 7 seconds. We believe this is the fastest client acquisition in history.

The India Stack

"This is India's single most important innovation to formalise India's domestic economy through digital services".
-Nandan Nilekani, Co-founder of Infosys and former Chairman of UIDAI

The India Stack is a set of open APIs that allows governments, businesses, startups and developers to utilise an unique digital infrastructure to solve India's hard problems towards presence-less, paperless, and cashless service delivery. It has 4 independent layers which perform 4 basic functions:

- ➢ Presenceless layer – through the use of Aadhaar – can authenticate transactions without being present at point of transaction.
- ➢ Paperless layer – can present documents and history available in secure systems, without having to carry historical documents as proof of identity, creditworthiness, etc.
- ➢ Cashless layer – through Aadhaar linked bank accounts and the unified payments interface (UPI) – individuals can make instant digital payments for goods and services, now using fingerprints.

> ➢ Consent layer – enables an individual to grant one-time access to their relevant information to a potential provider – i.e. show credit history to an alternate bank or non-bank loan provider.

It's essentially a secure online locker, which enables individuals to store all of their personal, financial, credit and health records. With smartphone as the key, this readily available e-KYC and the ability to electronically sign (eSign) transactions, is reducing processes that took days and weeks to minutes. This is happening now. Already, thousands are filing tax returns, accessing loans, applying for jobs and so much more everyday.
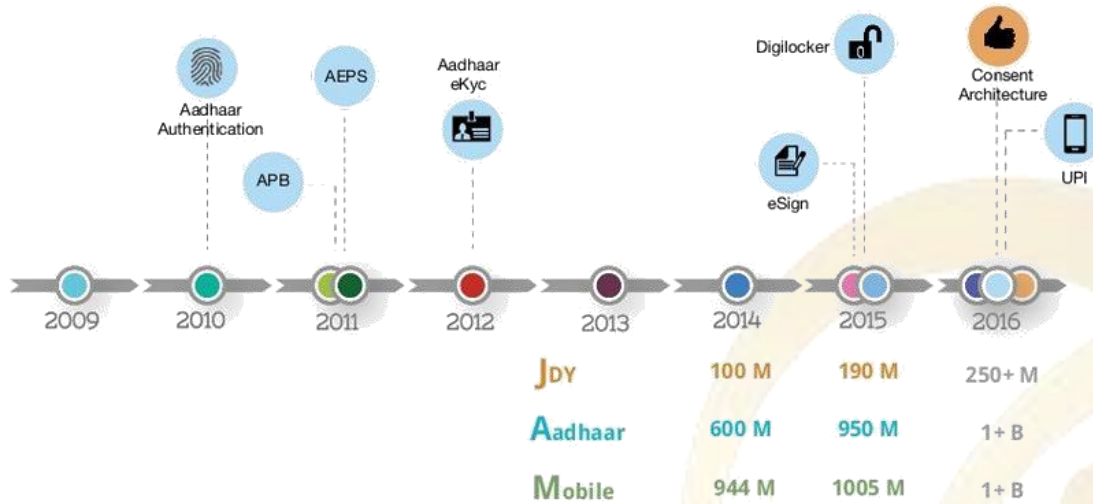
Already spoken about as the world's biggest open API, it is inviting innovation on a massive scale. Can you believe this is the landing page of a government website?

IndiaStack

Technology for 1.2 Billion Indians

Know More **Start Building**

The Evolution of the India Stack - Built on JAM

	2009	2010	2011	2012	2013	2014	2015	2016
JDY						100 M	190 M	250+ M
Aadhaar						600 M	950 M	1+ B
Mobile						944 M	1005 M	1+ B

Source: Ericsson Mobility Report, PMJDY, Aadhaar Web Sites

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New Payments System

The UPI which was launched at the end of 2016, enables secure, real-time transfers from person to person, or person to company. Nothing like this exists in China or the US. And what's more: it's bank and payment provider agnostic, because it's driven by the Indian government.

It allows individuals and businesses to manage money held across multiple accounts at various banks through a single mobile application. This has the potential to make every smart phone holder a mobile ATM or bank. With the new aadhaar enabled smart phones coming out, individuals can now make payments authenticated by fingerprint or retina scan.

This also works on 2G network which means farmers in rural parts of India can access bank accounts, make and receive payments and even access finance for the first time. This is big, as agriculture accounts for 60% of India's workforce, and accounts for about 20% of India's GDP.

Unified Payment Interface

Push & Pull Payments
Payments can be initiated by payer or payee.

Ubiquitous - Bank accounts
Every one with a bank account can send money to any bank account in India!

Virtual Payment Address
No need to disclose account information. Allows account portability, enhances privacy.

Easy Immediate Payments
Real-time posting Funds are not locked!

Validation & Assurance
Real-time validation of the account and balance

Timely Notification
Immediate notifications of the payment made

Minimal Issuer/Acquirer Cost
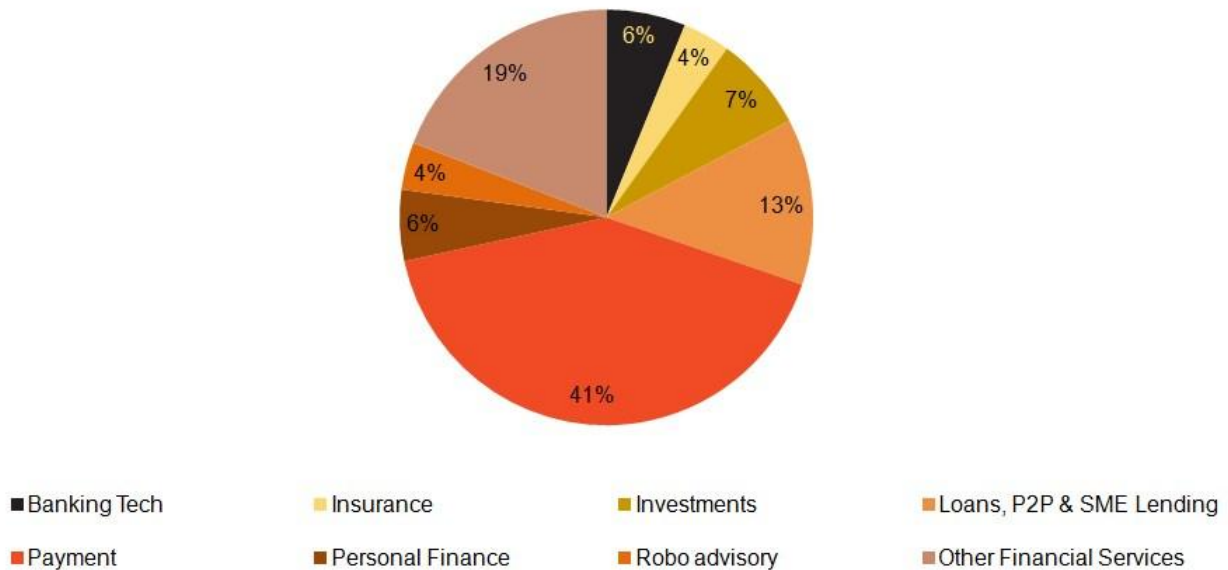Smartphone replaces card and PoS machine!!

Demonetisation

On 8 November 2016, the day that Trump got elected, PM Modi announced the demonetisation of 500 and 1000 Rupee notes. Taking out the 2 biggest notes of legal tender had the effect of rendering an astronomical amount of black, unaccounted money 'useless', while driving consumption onto the digital economy. Sopnendu Mohanty, Chief Fintech Officer of the Monetary Authority of Singapore (MAS) called demonetisation the "Fintech moment for India" While there were major disruptions caused by nationwide cash shortfalls, the Indian economy reported quarterly growth in line with 7%. Onwards and upwards from here.

Opportunity

As we take a look at the fintech industry in India where US$2.5bn has been invested since 2014, payments and p2p lending are currently the biggest sectors. The largest of these has been payment and wallet provider PayTM, which has raised $1bn from the likes of Ant

Financial and Alibaba. The data we were able to capture shows only a small amount of non-bank companies and investments into banking technologies.

- ■ Banking Tech
- ■ Insurance
- ■ Investments
- ■ Loans, P2P & SME Lending
- ■ Payment
- ■ Personal Finance
- ■ Robo advisory
- ■ Other Financial Services

Talking to Sopnendu at Tyro Fintech Hub last month, he mentioned that much of fintech investment is at the customer facing, front-office stack and there is a much bigger opportunity in the middle and backoffice stack, which supports the banking and financial sector.

Australia has a $140 billion sophisticated, competitive and profitable financial sector, with 4 banks which rank in the top 25 safest and most profitable banks in the world. We also have the 4th largest pool of investment fund assets in the world, and the largest in Asia. The World Economic Forum Financial Development Index of 2012 rated Australia as one of the world's best performing financial centres, partly due to the strength in financial intermediation and financial stability. Kevin Nixon, global head of regulation at Deloitte, said Australia could become a world leader in regtech.

The acquisition of Sydney banking technology firm Financial Network Services (FNS) by Indian tech giant Tata Consultancy Services in 2005 is a great example of Australian capability servicing India's growth, and hopefully one that will be replicated many more times. FNS' Bancs core banking software is not only used across 1000's of bank branches in India, but also by 100's of banks across Asia, Europe and Africa.

Most of India's fintechs are centred around Mumbai, the financial capital, and Bangalore, the innovation centre of India. This is one of the reasons we chose Mumbai for our Australia-India TatXpo later this year.
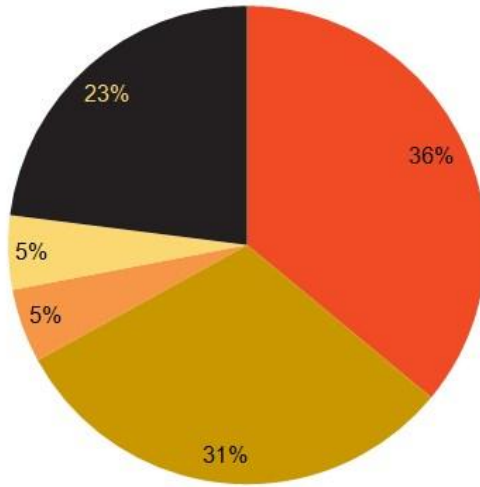
Mumbai ■ Bangalore ■ Chennai ■ Delhi ■ Others