

INTERRUPTIV – FUTURE OF BANKS AND FINTECH – DIGITALLY DISRUPTED OR REINVENTED

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Agenda

- Fintegration – Symbiosis and Integration Banks and Fintech collaboration through Technology and Innovation – (Economist Intelligence Unit)
 - Digital, Mobile, Social Channel layerisation...
 - IoT technology emergence in Financial Services
 - AI, machine intelligence, and robotics will permeate to transform financial services
 - Capital Markets Complexities – collaboration opportunities for Smart Capital Markets
 - Insurance Shared Economies
 - Go-to Alt Financing Marketplaces - diverse themes, risk levels and Capital allocation
 - Social Enterprise and Venture Philanthropy a Fintech's and Bank partnership model
- **Note - Blockchain and Cybersecurity will not be covered in this presentation but as I am progressing with projects in progress in this arena please do speak to me later today if interested in finding out more**

Banks and Fintech—symbiosis

Banks and Fintech firms have more business interests in common than issues that divide them.

EIU research found match between strengths and weaknesses of Fintech and banks

- Fintech companies need customers and banks have customers.
- Fintech companies can access banks customers' through bank's brands and resources
- Fintech companies offerings can be embed in products for customers who want to bank under one roof.
- Fintech can provide for banks ability to move quickly and to innovate using technology.
- Fintech provide opportunities for re-engineering and demising legacy

Smart Fintegration challenge

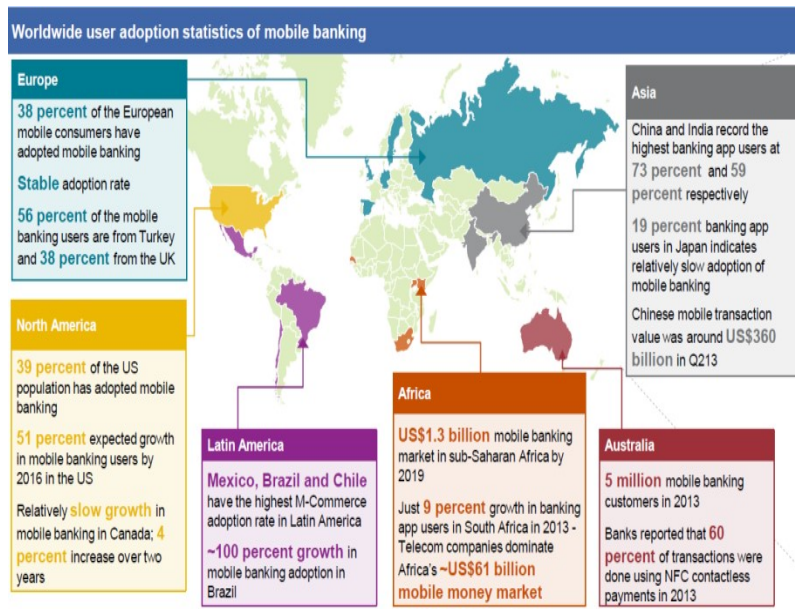
Really smart banks will survive by merging with some really smart Fintechs

- Combining a bank and Fintech is to combine two technologies engage business and technology seamlessly and early
- Ring-fence the new culture and regulatory integration early
 - benefits start-ups –
 - in licensing and regulatory demands from regulators ;
 - embeds risk, regulatory and process-focused cultures quickly
- Require Fintech firms re-prioritise security within common protocols and networks,
- Data integration: Roadmap customers common view into bank brand and Utilisation of flexible cloud or hybrid cloud
- Integration of two enterprise infrastructures: data centers, data networks, network and application architecture, migrating legacy systems to cloud networks.
- Make regulatory integration an early priority: Fintech employees should be on-boarded onto the bank's compliance platform. Mandatory training

Digital, Mobile, Social Channel layerisation...

Mobile Channel Environment

- Mobile is largest banking channel
- Mobile banking encroaching by Telco's - in developing world, eg. Mpesa Vodacom in Africa and South Asia.
- Challenger Banks are formidable competition e.g. Number 26, Fidor, Mondo, Atom etc
- Established Banks are transitioning to own challenger models eg: BBVA and USAA– mobile and branchless



Mobile Banking Services for greater outreach and customer loyalty

- Mobile payments, wallets and security facilitated greater flexibility
- Social media - user experience, to acquire, engage, sell
- Emergent tech – cloud storage, wearables, augmented reality
- Image based smartphone services – remote deposit and photo bill
- Virtual personalised customer service online, video and messaging
- Security and anti-fraud Authentication via biometrics, fingerprints, iris scans, to replace passwords
- Analytics for Personal finance management, risk and rewards
- Blockchain may provide greater interoperability e.g *Ripple partnered with Earthport a blockchain payments platform*



IoT technology emergence in Financial Services

Internet of Things physical objects utilize the Internet backbone to communicate data such as auto insurance telematics and “smart” cities systems

Banking

- IoT improves credit processes to reach new markets from behavioural data generated from biometric sensors.
- Financing Leases of physical items customise solutions from data from sensors monitoring these goods

Investment and wealth management

- Investment managers modelling client IoT “ecosystem” from devices monitoring behaviours to tailor investment decisions to asset allocation
- Algorithms based on behavioural data to auto derive client’s risk tolerance
- Automating portfolio management real-time data flows in portfolios from sensors with cognitive technologies
- Greater differentiation of investment management firms, funds, and pricing strategies.
 - Active managers forced to specialize in a particular strategy based on IOT data gathered
 - Automated managers leverage synthesized IOT data volumes combined with high-frequency trading technologies, in nano seconds

Capital markets

- Algo automated trading application of IoT real-time data flows analytics to evaluate suspected market bubbles.
- Investor Behaviour driven by IOT data could drive new capital pools and reward systems for Crowdfunding and micro-investing significantly shift the way venture capital is sought and shift to social enterprise investing

AI, machine intelligence, and robotics will permeate applications in the financial services to transform the industry

- Financial data from AI:ML structure personalised products to anticipate each user's unique and changing needs.
- Quantum computing power is now available for data mining vast data sets with automated support
- Tech companies -Google, Apple; IBM's Watson, have already developed algorithms that track a user's online habits, creating deeply personal online experiences, searches and robotics to provide services

Use Cases for AI

- **Personal Banking** - Increased customized automation, offering personalized services in real-time at lower costs.
- **Smart wallets and Personal Finance Management** - Monitor and learn users' habits, needs and alert and coach users, to their personal finance behaviours
- **Investment Management Robo-Advisory** – Automated financial advisors and planners assist in financial decisions, personal portfolio, risk and rebalancing,
- **Insurance underwriting AI systems** - Automate underwriting scenario testing data decision making process
- **Lending** - Data-driven AI applications to make better informed lending decision
- **IOT combined with AI/ML** – create Applications, embedded in end-user devices, personal robots, and financial institution servers that customize investment opportunities,
- **AI driven Trusted financial social networks** allow users to find other users willing to pool money to make loans to each other, and to share in investments.
- **New Management Decision-making** – customer answers to machines, rather than to human experts,
- **Reducing Fraud and Fighting Crime** - learn and monitor users' behavioural patterns to identify anomalies and warning signs of fraud attempts

Capital Markets Complexities – opportunities for Fintech Ventures and Financial Services companies to partner to recognise market changes swiftly and react as quickly to the market environment

Chinese Markets - Yuan reserve currency status - China to start direct trading with reserve-currency status at IMF,

- **Opportunities** for Exchange Trading partnerships

Volatility – EFTs, futures, and derivatives products have flooded the market some large investors have been pumping up their returns by selling volatility in a warehoused packed sentiment market impacting in huge market shifts –

- **Opportunities** for greater differentiation in packaged Indices and fund construction and predictive analytics sentiment drivers eg: EToro

Derivatives synthetic credit

- Investors struggling to trade bonds with apparent dearth of liquidity use alternative products to gain or reduce exposure to corporate debt.
 - **Opportunities** for P2P syndicated bonds
- Instruments like credit default swap (CDS) indexes, total return swaps (TRS) and credit index swaptions supposedly more liquid than underlying cash bond market spreads they track has produced another odd dislocation in markets as most indices trade at a negative basis than cash
 - **Opportunities** for hedging using P2P Asset backed securities

Interest Rate Swaps

- Swap spreads historic lows dipped below yields on equivalent U.S. Treasuries, indicating investors are charging less to deal with banks and corporations than with the U.S. government, unusual as U.S. Treasuries represent "risk-free" rate while swap rates have counterparty risk that demand a premium.
- However new financial market rules require interest rate swaps to be run through central clearing houses, stripping them of counterparty risk, leaving minimal funding component and funding costs
- However U.S. Treasuries have gone up due to a host of post-financial crisis rules affect bank balance sheets causing costs to go up.
 - **Opportunities** for Risk based offset products hedged within a Treasury marketplace of mini P2P treasury syndicated instruments

Repos

- Affected by new supplementary leverage ratio regulation requires banks to hold more capital against all their assets, regardless of their riskiness, more expensive for banks to facilitate repo trades, placing more emphasis on quality of the counterparty and leading to ructions in rates.
 - **Opportunities** for Syndicated P2P collateral management

Corporate bond liquidity,

- Trading, in the \$8.1 trillion corporate bond market with new rules more difficult for banks to hold corporate bonds on their balance sheets.
- At the same time, years of low interest rates have encouraged investors to herd to corporate bonds and hold
- Fear of a lack of liquidity could worsen turmoil in the market, especially as US interest rates rise.
 - **Opportunities** to track origination and greater granularity in trading exchanges

Bloomberg

FX financial market global liquidity drought, Investors facing resulting higher costs

- **Opportunities** - split trades into several tranches, timing transactions to match peak turnover, avoid a change of position too close to big events,

Insurance Shared Economy opportunities emerging in Cross fertilization of business models

- R&D creating efficiencies in telematics or self driving cars in device driven analytics
- Underwriting aggregation on commoditised insurance products eg: travel, buildings insurance
- Sharing economies eg, Uber and Airbnb – no ownership, pay as you go, will challenge insurance models
- Insurance P2P linked securitisation of portfolios eg catastrophe bonds with pools of capital providing collateralisation to insurers challenges traditional re-insurance pool
- New entrants such as hedge funds providing new funding models for insurers

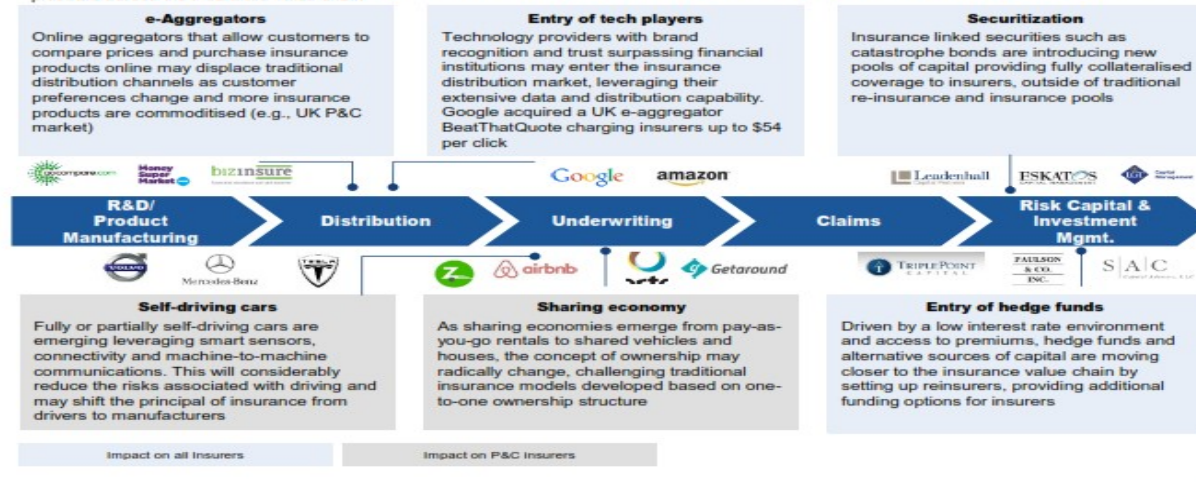
Insurance: Disaggregation of Value Chain

A number of emerging forces will lead to pressure on the insurance industry across the value chain (1 / 2)

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD

Key pressures across the insurance value chain

Advancing technologies, changing customer preferences and the market landscape are enabling a number of innovations and trends, which create pressure across the insurance value chain



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Go-to Alt Financing Marketplaces

- Partnerships with banks can be created at diverse risk levels eg, JP Morgan and OnDeck
 - Student loans, commercial loans; personal finance
- Fintech - Alternative Lending and Financing platforms provide deal flow at different risk levels
- Banks only providing Capital allocation

As greater regulation is reviewed for AltFin platforms greater synergies will be found with banks which are regulated e.g USA Jobs Act/Title III

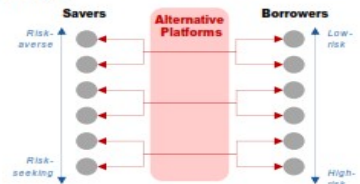
Deposits & Lending: Alternative Models of Lending



Alternative lending platforms leverage P2P models and lean operations to offer seamless services to a broader base of customers

Description of alternative lending models

- Alternative lending institutions have emerged to fill gaps in the traditional lending model. New industry players are emerging across the globe, showcasing a myriad of value propositions and strategies that are challenging traditional business models
- Online and P2P (P2P) lending platforms provide customers low-cost, fast, flexible, and more customer-oriented alternatives to mainstream retail banking that traditional financial institutions once dominated
- While the business models of alternative lenders often differ from one another, most providers directly link borrowers and lenders, employ advanced adjudication methods and streamline processes



Key characteristics of alternative lending platforms



P2P

- Alternative lenders leverage online platforms and legal contracts to provide direct matching of funds between savers and borrowers
- By acting as online marketplaces P2P lenders facing lower funding costs than traditional depository lenders



Alternative adjudication

- Alternative lending platforms assess the creditworthiness of borrowers based on metrics beyond the credit scores used by traditional lenders (e.g., social data)
- Most alternative lenders also refine their risk engine more frequently than traditional lenders to incorporate feedback based on empirical analysis



Lean, automated processes

- Alternative lending platforms are free of legacy processes and technologies, allowing them to onboard and assess borrowers and lenders in a more streamlined fashion
- At most alternative platforms, assessment of borrowers is at least partly automated against predefined rules for fast, transparent processing



Social Enterprise and Venture Philanthropy a Fintech's and Bank partnership model and We can All help to save the planet !

Fintech Fusion - Social Enterprise, Venture Philanthropy - Opportunities

- Investment Managers and clients shift to ETF's , Sustainable funds in Social Enterprise and Impact Investing
- Greater returns on projects with better transparency in the social enterprise and venture philanthropy arena
- Fintech Alternative platforms can provide underlying functionality, analytics and the deal flow for these funds
- National Development banks guarantees local microfinance initiatives underwritten by social funding platforms
- Banks provide capital liquidity on a P2P basis to these projects
- Fintech Blockchain providers can provide the underlying rails and provenance for transactions

Fintech fusion - Social Enterprise, Venture Philanthropy Use Case

- **Blockchain Increasing transparency and openness, while reducing costs..**
- **Smart contracts** triggering payments when certain conditions are met for international charities working in countries to build trust and be used by businesses to fulfil pledges on their charitable contributions.
- **An 'internet of things' which automates philanthropy.** With everyday household appliances like energy meters, fridges, IOT sell spare processing capacity to the blockchain in exchange for money. Using smart contracts to give to charities.
- **Opening up news ways for people to give.** asset ownership in 'sharing economy' as typified by services like ZipCar, Uber and AirBnB. donations of spare physical capacity for charity
- **Social Enterprise funding** – microfinancing loans at different risk appetite levels
- **Alternative Financing and Peer to Peer lending** – syndicated loans for microfinancing,
- **Mobile Money** - linked to mobile banking
- **New Finance products**
 - syndicated hedging for futures and forwards on commodities
 - Exchange traded funds that track social enterprise investments
 - Social bonds and resecuritisation