



HELLENIC

Connect | Educate | Inspire | Secure

Information Security and Digital Payments; thoughts about current trends

Dr. John ILIADIS

CMgr MCMI, CISSP-ISSMP, CISM
(ISC)² Hellenic Chapter, Board Member

- 
- » (ISC)² = International Information Systems Security Certification Consortium, established in 1989
 - » Non-profit consortium of information security industry leaders
 - » Supports security professionals throughout their careers
 - » Global Standard for information security: (ISC)² CBK[®]
 - » Over 150,000 certified professionals; over 170 countries
 - » 260 members in Greece, established in 2015



HELLENIC



COVID-19; security status quo

...here to stay for a long time

- » A state of constant flux; even our home will change [1]
- » Supply chain attacks ballooned by 78% [2]
- » 52% of compliance leaders concerned about third-party risk [3]
- » New regulations to comply with [4], [5], [6], while risk fluctuates
- » Cloud market share over OnPrem ↑ [7], [8], emerging threats [9]
- » Organisations nudge IT personnel towards Cloud certifications like (ISC)² CCSP [10] to confront with emerging threats [11]



HELLENIC



COVID-19, Security and Payments (1)

- » “Cyber risks surpass ... risks that led to the Great Recession in 2008”, US Federal Reserve Chairman Jerome Powell [12]
- » Scientific journals on COVID-19 impact to e-payments [13]
- » “...banks still rely on large co-locations of people ... processing checks ... wire transfer operations”; opportunity to invest in new technologies, processes to make financial institutions more resilient [14]
- » Reluctancy of public to go cashless due to personal data sensitivity [15] diminished after Covid-19 [16]





COVID-19, Security and Payments (2)

- » New vulnerabilities due to COVID-19 [17]:
 - Relaxed measures, e.g. increased contactless limit
 - Increased need for goods lowers consumer diligence
 - Anxiety levels and susceptibility to social engineering
 - Circumstances reduce suspicion of contact from official bodies

- » Digital payment adoption went sky-high, along with pertinent risk; biometrics, tokenization and behavioral analytics expected to counter increased risk [18]





Customer acquisition/churn (1)

- » e-payments customer acquisition/churn rates can be maintained at desired levels [19], depending on:
 - Perceived Usefulness (incl. Security and Convenience) [20], [21]
 - Social Influence (incl. Social Media) [22], [23]
 - Mobility and reachability

- » Risk-averse customers could be nudged into using privacy-intrusive e-payment schemes; type and amount of nudging required: already estimated [24]





Customer acquisition/churn (2)

Balancing act between:

- » *Social Media, Behavioral Economics*
- » *Information Security, Data Privacy*

wrt customer acquisition/churn efforts?



HELLENIC



FinTech vs TechFin?

» FinTech stems from the traditional financial world

- Payments' profit margins still relevant (somewhat?)
- Entry barrier for banks: cost of legacy systems [25]?

» TechFin (e.g. GAFA)

- They are not after payment margins; mostly after:
 - Customer data [26]
 - Customer retention; *"Amazon wants payments in-house so users never leave its app"* [27]
- Not very regulated, yet





TechFins: Is Regulation Ready?

- » TechFins in need of personal data for business development
- » Recent regulatory privacy concerns emerged [4], [5], [6]
- » Increased non-regulatory concerns for privacy
 - Privacy as a comparative advantage towards disrupting payment schemes [28]
 - 60% of InfoSec professionals believe a “strong privacy posture” is important to achieving cyber resilience [29]
- » TechFins lobbying to change regulation [30]





G2P Payments and Biometrics

- » COVID-19 technological side-effects on Biometrics
 - Use of contactless biometrics increased [31]
 - G2P digitilisation using biometrics accelerated, e.g. proof of life to keep the digital payment of a beneficiary going [32]

- » Biometrics begins with a (B)ut...
 - Convenience? ✓ [33]
 - Privacy risks? (stolen data [34], abuse of collected information [35], [36])
 - Security risks? (detective controls for Deep fakes? [37])



Thank you !

j.iliadis {at} isc2-chapter.gr



HELLENIC

References (1/4)

1. [This is what coronavirus will do to our offices and homes](#), BBC News,2020
2. [Internet Security Threat Report](#), Symantec, 2019
3. [Responding to COVID-19: What We are Hearing From Legal and Compliance Leaders](#), Gartner, 2020
4. [Transforming compliance into competitive advantage](#), Oliver Wyman, 2018
5. [New Laws on Data Privacy and Security Are Coming. Is Your Company Ready?](#), HBR, 2019
6. [CSO's ultimate guide to security and privacy laws, regulations, and compliance](#), CSO Online, 2021
7. [The Year that Cloud Service Revenues Finally Dwarfed Enterprise Spending on Data Centers](#), Synergy Research, 2021
8. [The Security and Compliance Benefits of IaaS for Financial Services](#), IDC, April 2021
9. [Cloud \(Mis\)Configuration: What Do You Need to Consider?](#) ,(ISC)² Blog, 2021
10. [\(ISC\)² Annual Report 2020](#)
11. [Cybersecurity Career Pursuers Study](#), (ISC)², 2021



References (2/4)

12. Cyber threats: The Financial Systems' Top Risk, (ISC)² Blog, 2021
13. The Impact of COVID-19 Pandemic on Mobile Payment, International Journal of Bank Marketing, Emerald Publishing, 2021
14. COVID-19 putting a spotlight on banks' payment operations, KPMG Insights, May 2020
15. Why Germany is so slow on the global road toward a cashless society, Handelsblatt, 2019
16. Digital payments deepen the threat of online fraud in Covid era, Financial Times, November 2020
17. 10 ways COVID-19 is impacting Payments, Accenture, 2020
18. How is the COVID-19 pandemic influencing payments innovation? Ernst & Young, October 2020
19. Purva Grover, Arpan Kumar Kar, User engagement for mobile payment service providers – introducing the social media engagement model, Journal of Retailing and Consumer Services, Vol 53, 2020
20. Amoroso, Donald and Pajaree Ackaradejruangsri. "How Consumer Attitudes Improve Repurchase Intention." IJESMA vol.9, no.3 2017



References (3/4)

21. Xiaogang Chen & Shaorui Li, Understanding Continuance Intention of Mobile Payment Services: An Empirical Study, *Journal of Computer Information Systems*, 57:4, 2017
22. Qasim, H., Abu-Shanab, E. Drivers of mobile payment acceptance: The impact of network externalities. *Inf Syst Front* 18, 2016
23. Conrad Murendo, Meike Wollni, Alan De Brauw & Nicholas Mugabi Social Network Effects on Mobile Money Adoption in Uganda, *The Journal of Development Studies*, 2017
24. Kevin K. W. Ho, Eric W. K. See-To & Dickson K. W. Chiu, “Price Tag” of Risk of Using E-Payment Service, *Journal of Internet Commerce*, 19:3, 2020
25. COVID-19 Increases Urgency for Banks to Transform Payment, Accenture, 2020
26. David G.W. Birch, Bye Fintech. Hello Techfin, *Forbes*, June 2021
27. Big Tech takes aim at the low-profit retail-banking industry, *The Economist*, Nov 23rd, 2019
28. David G.W. Birch, Anonymity In Payments? It’s Complicated, *Forbes*, May 2021



References (4/4)

29. Cyber Resilient Organization Report, IBM, 2020
30. Helene Panzarino, FinTech, TechFin and the challenge from BigTech, Executive Education Block, Imperial College Business School
31. Biometrics-backed mobile money and facial recognition markets to grow as everything goes contactless, June 2020
32. Digital finance and inclusion in the time of COVID-19, Food and Agriculture Organisation of the United Nations, 2021
33. COVID, cashless, and convenience: The rise of biometrics, FinTech Magazine, May 2021
34. US government hack stole fingerprints of 5.6 million federal employees, The Guardian, 2015
35. Biometric Data: Increased Security and Risks, Security Magazine, May 2020
36. Biometrics, surveillance and privacy, ERNCIP Thematic Group Applied Biometrics for the Security of Critical Infrastructure, 2016
37. Deepfake and Fake Videos - How to Protect Yourself?, Kaspersky

