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“Technology & Financial Industry”

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Content

1. Why does it take new technology (NT) so much time to disrupt the banking & finance industry?
 - 1.1 Technology
 - 1.2 Management
 - 1.3 Regulation

2. In which areas of banking and finance is the use of NT going to be most successful?
 - 2.1 Technology to manage mass products
 - 2.2 Technology to manage individual wants
 - 2.3 Blockchain will revolutionize banking and FI

3. Conclusion

Why does it take NT so much time to disrupt the banking and finance industry?

Finance / Banking Industry

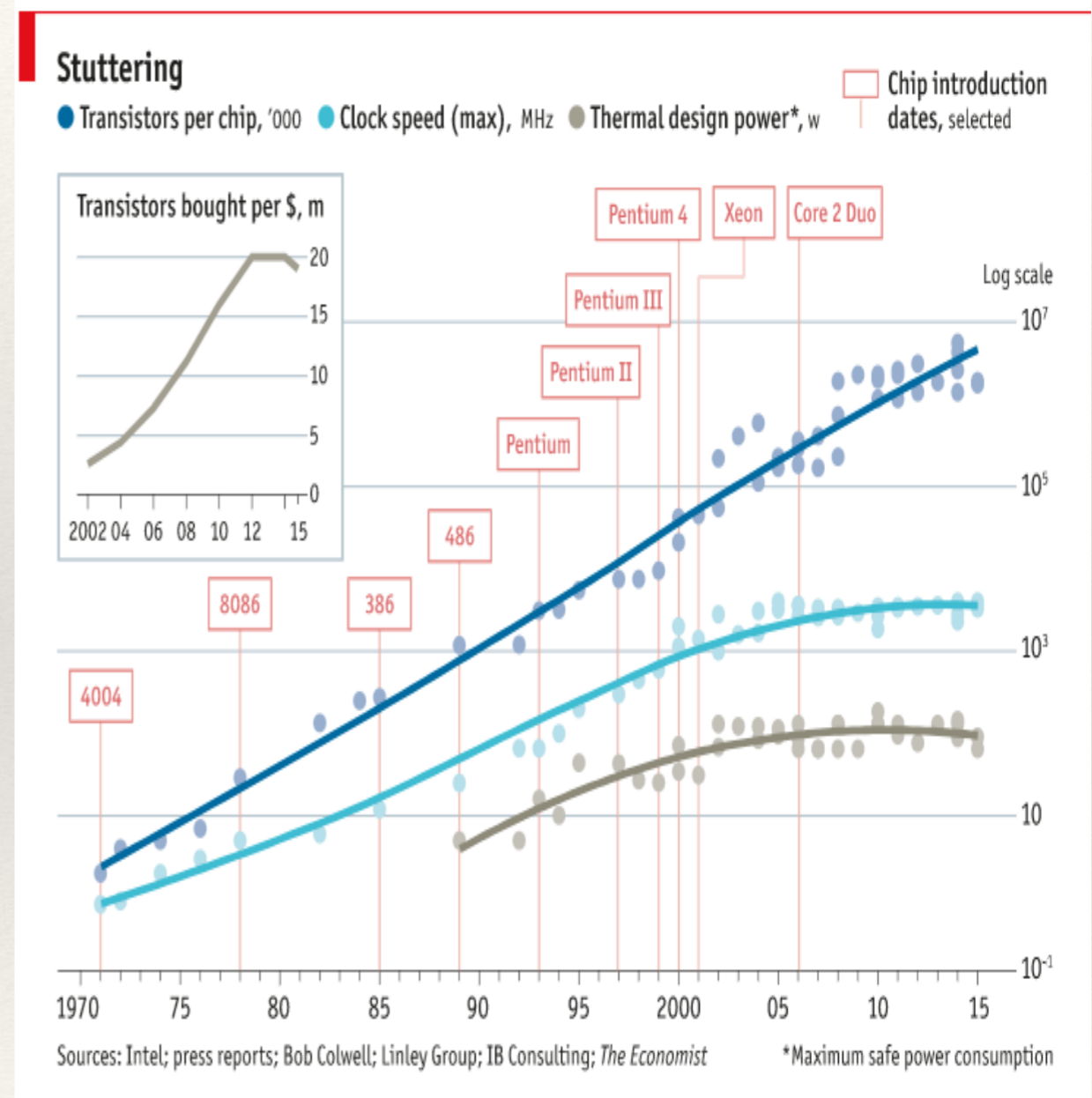
- ❖ Technology Issues
- ❖ Management Issues
- ❖ Regulation Issues



Why does it take NT so much time to disrupt the banking and finance industry?

Technology Issues

- ❖ IT legacy – architecture & system driven
- ❖ Inhouse IT developed inhouse solutions – usually central data-based systems
- ❖ Heterogenous client structure
- ❖ IT security / robustness and “operational risk” / capital requirements
- ❖ Past dependency
- ❖ Exponential growth in IT technology



Why does it take NT so much time to disrupt the banking and finance industry?

Management Issues (i)

- ❖ Management know-how & experience
- ❖ IT & banking a match made in heaven?
 - ❖ CIO - the new C-level function?
 - ❖ Demographics of Senior Management
 - ❖ "If it isn't broken, don't fix it"
- ❖ Regulation, rules & supervision shield the "old" financial system from competition
- ❖ Protect the "License"



Why does it take NT so much time to disrupt the banking and finance industry?

Management Issues (ii)

- ❖ Lack of funds
- ❖ Risk-assessment & risk-taking behaviour
 - ❖ Related **cost-benefit analyses** are often opaque in terms of
 - ❖ Product revenue,
 - ❖ Client acquisition costs,
 - ❖ Geographical expansion, etc.
- ❖ The correct new technology?
 - ❖ “Blockchain” vs. centralized data storage



Why does it take NT so much time to disrupt the banking and finance industry?

Regulation Issues

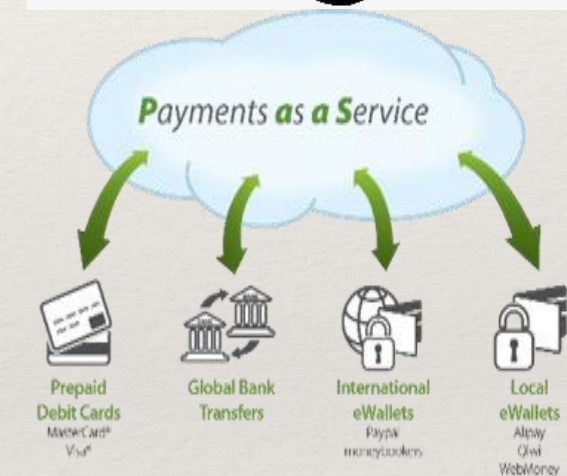
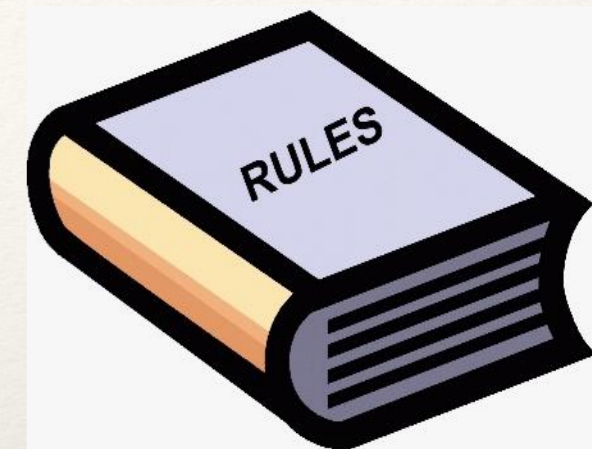
Financial Industry acts in a **regulated market** (incl. IT infrastructure)

- ❖ Protected market
- ❖ Regulatory & reporting costs increased;
 - ❖ Eurozone regulation / AML Directive / Payment Service Directive / etc.
- ❖ NT adoption is slow – NT needs approval / IT system audits

Regulators – who regulates?

- ❖ European Union (EU) – ECB, EBA, ESRB, ESMA, EIOPA – this leads to more supervision, reporting, different IT requirements
- ❖ Malta – MFSA, FIAU
- ❖ Others – FATF, FATCA, OFAC, EU Sanctions

Regulation & supervision impacts the FI profitability



Payment and Payouts under the PaaS model



Why does it take NT so much time to disrupt the banking and finance industry?

Regulation Issues (ii)

Impact of Financial Crises on Public, Legislation and Regulator

- ❖ Crises induced competition changed the
 - ❖ Banking & payment ecosystem (Basel III, PSD, etc.)
 - ❖ Alternative / unregulated financial system emerged
 - ❖ FI's profitability and business models change due to
 - ❖ Ultra-loose monetary policy (QE) and
 - ❖ Regulatory costs (AML / CTF)
- ❖ Crises induced political debates in the EU change the regulatory & supervision landscape
 - ❖ Banking Union *vs.* Nation State / EU Banking Debate far from over
 - ❖ Sustainability / Green Business discussions
 - ❖ "Climate risk is investment risk" (Larry Fink, 14/1/2020)



Why does it take NT so much time to disrupt the banking and finance industry?

There is an amalgamation of reasons why banks have been reluctant to fully embracing the NTs.

However, the **technological revolution** will continue and the financial sector and all its stakeholders have to adapt. If not, the banking and financial industry will be challenged even more, as long as clients have a choice, by the alternative financial providers which have already established themselves.

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In which areas of banking and finance is the use of NT going to be most successful?

❖ Technology to manage mass products

Concept of scalability → “mass application is trump”

Examples:

- ❖ Ongoing development of the **payment ecosystem**
 - ❖ Payment services (national & international) for retail and corporate clients
 - ❖ Financial security exchanges and the related clearing mechanism / systems
 - ❖ Both require a well functioning correspondent banking / financial Institution business
- ❖ Expansion into **digital financial services & data-driven value-added services (SaaS)**

General application to different types of banks:



In which areas of banking and finance is the use of NT going to be most successful?

❖ Technology to manage mass products

Application to different types of banks and banking products:

Technology level of involvement		
Consumer Banking (CB)	Corporate & Investment Banking (C&IB)	Private Banking (PB)
<p>CB has many retail clients which can be slotted into broad categories; offer similar to equal products</p> <ul style="list-style-type: none"> • Loan products – car-, house renovation -, consumption loans, mortgages to clients who live in their own properties • Saving products – standardized savings tools like fixed term deposits, multi-currency based, etc. • Financial Security products - standardized trading of securities incl. ETFs etc. 	<p>C&IB clients might agree to standardized products offered via the intra or internet</p> <ul style="list-style-type: none"> • Loan products <ul style="list-style-type: none"> • Unsec. & sec. working capital • Receivable finance • Investment loans • Cap market solutions • Treasury products of the shelf <ul style="list-style-type: none"> • Market prices quotations • Cash placement tools • Fin. security trading as part of treasury 	<p>PB clients willingness to accept technology depends very much on the clients</p> <ul style="list-style-type: none"> • Less affluent may be moved to standardized product range of PB (upmarket to CB product range) while the • HNW clients will get first hand, tailor-made services and products as long as this is demanded
Provision of industry and macro data as well as data analytics; “SaaS”		

In which areas of banking and finance is the use of NT going to be most successful?

❖ Technology to manage individual wants

Limited scalability → “individual application is trump”

- ❖ Today, a few specialized banks (mostly engaged in PB) and financial service provider (i.e. credit card providers) positioned themselves in this market niche. Competition in PB is growing and will be affected by future **Digital Financial Service** developments.
- ❖ As long as clients and providers will engage in a profitable relationship this approach might well be a sustainable business model.

Examples:

- ❖ Private banking offered with exclusive service levels i.e. concierge services to book flights, hotel, cars, vacations, etc.
- ❖ American Express Centurion Card – “*by invitation only*”



In which areas of banking and finance is the use of NT going to be most successful?

❖ Blockchain will revolutionize banking and FI

Blockchain technology → offer new solutions to the financial industry and beyond

- ❖ Due to the decentral record-keeping with immutable entries on different computers of all parties involved, trust-based financial business will benefit overly when using DLT in the industry (application in the FI is by no means the only application for society)

Examples:

- ❖ Payment as a service
- ❖ Cross border / international business (i.e. Financial Institution business, trade-based finance, etc.)
- ❖ Clearing services related to buying and selling of financial securities
- ❖ **Digital identification** processes will benefit FI!



In which areas of banking and finance is the use of NT going to be most successful?

The **forward looking picture** tries to point out concrete examples for today's banking world.

„Old style banking“ will be confronted with **more capital investments into NT** to remain competitive. This NT investment decision must be strongly linked to the underlying bank strategy.

Such strategy will outline the core offering to their clientele that shall create value for all involved?

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Both answers - to the backward and the forward looking question - indicate that certainty, in terms of planning security for NT investment projects, is not available. Indeed, the **level of uncertainty** has never been higher on all levels and investment decisions of all kinds, incl. NT, must be taken in light of this.

It is a brave new world that requires high quality regulation & supervision and educated, skilled professionals.

