

AI in Finance: Why No C-Suite Executive Can Afford to Ignore It

The Strategic Importance of Artificial Intelligence for Financial Institutions



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For far too long the financial-services industry has operated in an inside-out fashion and relied on the same playbook. In 2020, when the Covid-19 pandemic started to spread around the globe, many market players faced first-hand the importance of client proximity and business efficiency. Therefore, one of the most relevant agenda items for C-suite executives was, and still is, to transform and continually adapt their operating model for a digital world. Ultimately, this results in better client experience, realizes cross-efficiencies within the organization and improves business profitability by market-share growth. By transforming from the current to an ever-changing and modular target state, Artificial Intelligence (AI), specifically Machine Learning and Neural Networks, are seen as essential



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enablers opening lots of automation opportunities for business processes with the highest degree of accuracy and promising results. Fundamentally, the technology behind AI aims to allow computers to mimic human intelligence so that they can learn based on historic data and perform automation and analytical insights.

Financial institutions are well-advised to explore the power of Artificial Intelligence in 2021

There is a broad agreement among numerous trustworthy sources that AI is the next industrial revolution. We can observe in the market that the adoption rate of AI by financial institutions increases much faster as initially anticipated by research organizations and academia. Compared to last year, when

the AI adoption rate spiked around 15% in the U.S., European and Chinese markets, the number for 2021 represents a remarkable increase of up to 30%. This underpins the rising ambition and eagerness of financial organizations to automate their processes across business lines with bottom-line profitability expectations.

Therefore, it is imperative that those financial institutions which have not yet formulated an AI strategy will do so in the very short term. Artificial Intelligence is extremely powerful and key for surviving and thriving in the coming decade; not addressing AI as part of the technical roadmap is a huge strategic risk. Looking back, such moments can be fundamental, reflecting on Kodak, where digital photography was massively underestimated by the global leader, quickly causing chapter 11 in a very short time.

What is Artificial Intelligence and why is it so important?

AI was discussed a long time ago but kicked off in 1956 in New Hampshire. Shortly afterwards, in 1958, Frank Rosenblatt built the first AI application to mimic how the human brain processes visual data so it was able to learn and recognize pictures, which sounds easy for humans but is complex for computers. The coming years carried great hope and expectation along with substantial funding, followed by disappointments, setbacks, loss of funding (known as “AI winter”), re-followed by new approaches, success, and renewed funding.

According to industry research, the global AI market is projected to grow by US\$ 11.16 billion between 2020 and

2024. This underlying data highlights the growth indication and acceptance of AI across the globe. Several large banks in London, New York, Zurich or Frankfurt have started to build up AI practices and/or identify different use cases with already running applications. Nevertheless, the broad adoption in finance, as we can see it the pharmaceutical sector, is yet to come.

But what do we mean by AI?

Today, we understand different things under AI, but in general, we mean developing software, robots or other systems that can act or think like humans. Furthermore, we distinguish between “strong AI” and “weak AI”.

“Strong AI” is what people typically mean when they talk about Artificial Intelligence, because this is what we see in movies or read in books. It is about machines that become self-motivated, have emotions, can dislike someone or something or are even able to love. This futuristic view that AI can solve any sort of problem is currently far-fetched.

On the other hand, we talk of “weak AI”, which is a misleading term but describes realistically what organizations currently can perform. Such Artificial Intelligence beats humans in chess, GO, Jeopardy, and in any other game humans play. Weak AI can write books, compose music (e.g. “Daddy’s Car”) or even create a short Sci-fi movie (Sun-spring). Still, it seems fair to say that neither the song nor the movie would have won a prize in a contest competing with humans.

This type of AI always deals with only one specific problem. Industry examples are automatic text processing, which is very helpful considering financial regulations and the large amount of text to be processed. Artificial Intelligence can recognize on-time unusual behavior of employees (e.g., traders or relationship managers), generate automated financial advice (e.g., in the field of forex hedging) or identify criminal credit card expenses.

While building such AI solutions, the so-called “Machine Learning” is used, which is a category of methods within AI. Machine Learning itself uses data to learn general concepts and afterwards apply them to new data. Un-

derneath the term Machine Learning, there are numerous different quantitative models but whereof none is always the best method. Each problem has its own peculiarities and needs its own sort of AI.

Examples of the methods within Machine Learning include regressions, decision trees, neural networks as well as deep learning algorithms as a specialization. These methods solve tasks such as the aforementioned sorting of images into categories, automatic text recognition or the prediction of events.

Furthermore, there is a distinction between supervised, unsupervised, and semi-supervised Machine Learning whereby each of these methods has advantages and disadvantages. Supervised Machine Learning means that someone “supervises” what the machine is doing by giving the data specific meanings, while unsupervised Machine Learning generates results based on an algorithm to define patterns where no person labelled the data first.

Artificial Intelligence in finance

AI, along with Cloud Computation and/or Big Data, started to become strategically important for any financial institution in the last years. The main reason is the ability to generate better results with AI in analyzing large and/or complex data and patterns than humans, which is very useful when analyzing and predicting any of the many tasks a financial institution does on a day-to-day basis. Examples can be found in most areas, e.g., identifying customers’ needs and preferences for individualized advice, enhanced pattern recognitions for anti-money laundering, trading, investments, payments, to name a few.

For automation and digitalization, AI technology plays another core function – sometimes also called hyperautomation. It enables industries to automate all possible operations, gain intelligent and real-time insights from the data collected and fully automate various tasks independently. Institutions upgrade many of their existing operating systems with Artificial Intelligence to better serve their clients offering instant or new transaction or advisory services. The rationale behind is that AI engines

can be built in a way so that they are able to handle standard non-complex tasks automatically. The benefits are clear: Financial institutions reach more customers 24/7, while those services which the AI engine cannot cover, will remain in human “speciality hands”. This is job-enriching and a benefit for all stakeholders once specialists reduce monotonous work and get higher skills in complex transactions.

Essential questions for board and executive board members

It is clear that Artificial Intelligence is by far too important for any company and cannot be ignored on the strategic roadmap. Board and/or executive board members should, if not yet done, have a clear description on how to cope with AI today and in the future. This strategy needs to cover numerous questions, among them:

- How to shape an organizational culture that believes AI is supporting growth and not killing jobs?
- How to inform and educate the employees?
- What possible marketing initiatives should be envisaged?
- Where are best the areas to adopt AI, what problems can be solved and which new services can be offered through it?
- Which processes can be upgraded to 24/7 banking?
- What technology should be selected and how should it be connected to the existing IT?

We are standing at the beginning of the next industrial revolution, at the point where the curve is getting quickly steeper. Using the momentum to set the right strategy should not be underestimated. LPA as global provider for capital markets and wealth management solutions with leading capabilities in AI, digitalization and advanced analytics, can support its customers in their strategy definition to fast-track the journey and elevate their strategic decisions for value and growth.

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