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Financial Services

Machine Learning Adoption to Fight Financial Crime – Where is Europe Placing Bets Versus US?

"The adoption of machine learning (ML) in fighting financial crime will likely explode as technology solutions become more effective and efficient—driven by work-stream prioritization, product maturity, and refinement of implementation processes." This was the key takeaway from a global survey conducted in 2020, "The Evolving Role of ML in Fighting Financial Crime," conducted by Guidehouse and Compliance Week, in partnership with the International Compliance Association (the full report can be found here.)

While survey responses demonstrated similarities between US and Europe (UK/EU) organisations, our analysis also identified notable differences among participants in both regions. This article examines key areas where European survey responses deviated from those by US or global participants. This should be of particular interest to European organisations wishing to benchmark maturity against both global and European peers.

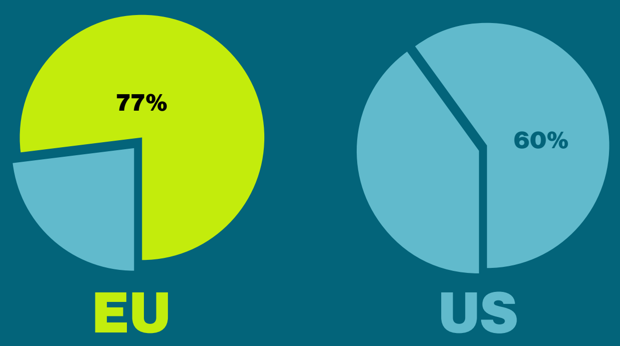
The ML/AI maturity curve—European firms are outpacing US counterparts in the adoption of ML/AI

Somewhat surprisingly, European financial institutions appear to be more enthusiastic to adopt AI and ML as part of their efforts to combat financial crime, compared to their US counterparts. While a slightly higher number (in percentage and absolute terms) of US respondents confirmed they are fully bought-in on AI in financial crime, having several solutions in production, the percentage of firms remains below 8% for both regions. Europe, however, leads the ML discussions at all other stages:

European institutions are further along the ML maturity curve in fighting financial crime

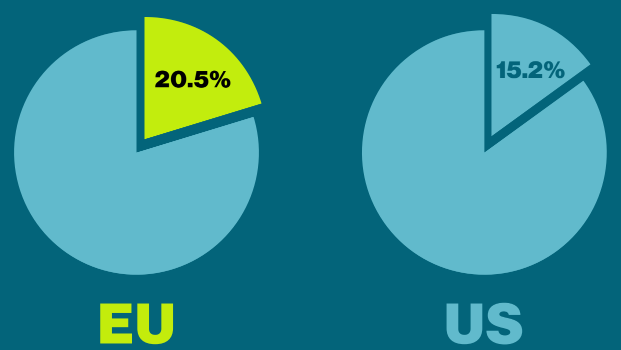
Many more European organizations are actively discussing the use of ML to fight financial crime—77% of participants indicated they are in discussion, in comparison to 60% of their US counterparts.

Figure 1a: Having discussions about machine learning



More telling about Europe's maturity with AI adoption is that approximately 20.5% of EU institutions are in advanced stages of adoption, defined as having one or two implemented solutions and a dedicated budget. US respondents fell short of this mark, with only 15.2% of institutions at advanced stages.

Figure 1b: Implemented solutions and dedicated budget



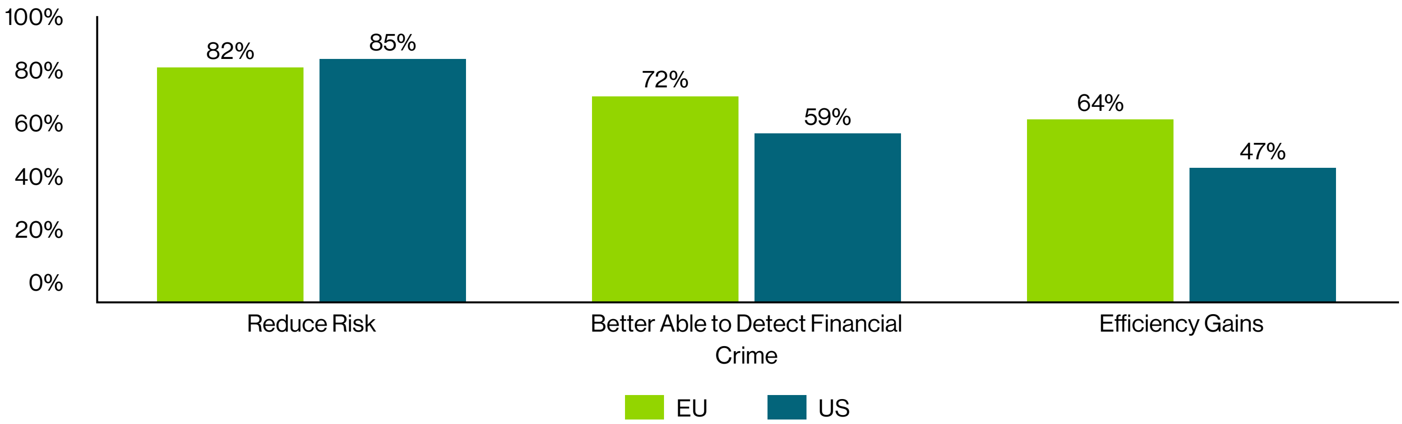
The implementation of ML to fight financial crime should be on an organisation's C-suite agenda, and communicating where your organisation is on the maturity curve versus industry peers is critical. For companies just starting their ML journey, there is a considerable time-lag between a board decision approving the implementation of ML and the full rollout of a new solution. Tim Mueller, Financial Services Segment Technology leader at Guidehouse, estimates that the typical runway for the implementation and fine-tuning of a ML solution is six to 12 months. On a positive note, a reduction of risk can be realized relatively quickly and earlier in the process.

European regulators increasingly recognise the benefits and opportunities of using advanced technology for regulated firms. European regulatory agencies recognize the needs, challenges, and benefits of responsible ML used by financial institutions. Agencies including the UK Financial Conduct Authority (FCA) and German BaFin have recently published principles to guide and promote the responsible use of ML/AI and reduce risk.[1] The European Commission and the European Supervisory Authorities have committed to provide further guidance and clarification at an EU level by 2024 on the application of existing financial market regulations to big data/AI applications.[2] The direction of the UK/EU regulators and supervisory authorities is clear: This shift in mindset provides guardrails for regulated entities to commence or progress their ML journey now.

Top Benefits: European firms are being penalised for inadequate Know Your Customer; KYC is key desired benefit for ML/AI implementation

Financial institutions overwhelmingly indicated the desire to "reduce risk" by deploying AI to fight financial crime, with more than 80% of global survey respondents favouring this option. While the ability to be "better able to detect financial crime" took second place globally, substantially more European respondents (72%) than US respondents (58.8%) identified this as a key expectation. European and US respondents also differed in expectations of "efficiency gains," with 64% of EU respondents indicating this as a key intended benefit versus 47% of US respondents.

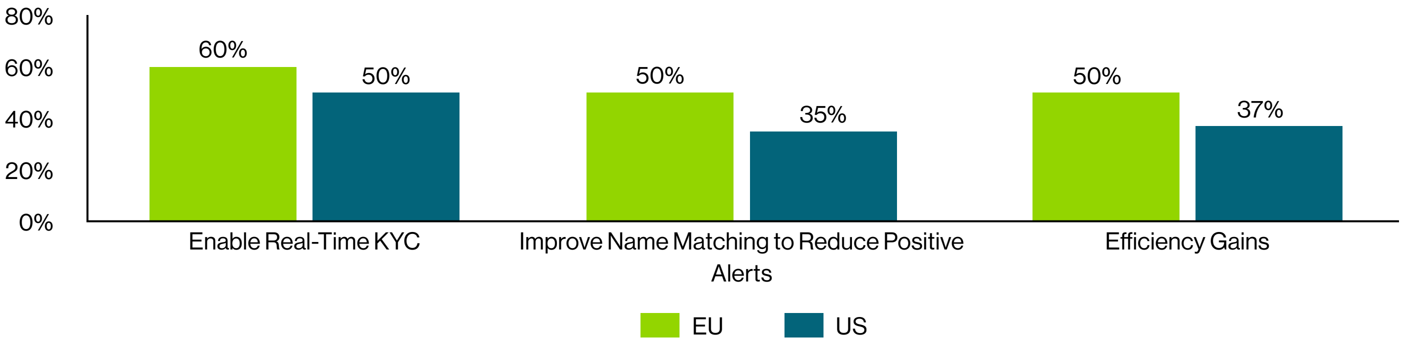
Figure 2: Intended Benefits of Machine Learning – EU v. US



1. Ostmann, F., and Dorobantu C. (2021). *AI in financial services. The Alan Turing Institute*. Available at: https://doi.org/10.5281/zenodo.4916041. BaFin (2021), *Big data and artificial intelligence: New paper published by BaFin to outline principles*. Available at: https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2021/meldung_210615_Prinzipienpapier_BD_KI_en.html.
2. European Commission (2020), *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a Digital Finance Strategy for the EU.* Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0591.

With risk reduction, the ability to detect financial crime, and achieve efficiency gains garnering the top spots for intended benefits, it is not surprising that European respondents overwhelmingly indicated the desire to "enable a real-time and continuous KYC process" as the area they believe the implementation of advanced technology would be most beneficial. While both EU and US respondents recognize ML's ability to drive program effectiveness and efficiency, the focus on KYC differed with 60% of EU respondents versus 50% of US respondents indicating real-time KYC providing maximum benefit.

Figure 3: How Advanced Technology will most benefit fraud prevention – EU v. US



> **"ML is getting applied in the areas of greatest pain for financial institutions. There's the area of greatest pain, and that usually represents the area of greatest potential."**
>
> **Tim Mueller**
> Financial Services Segment
> Technology Leader

While all control elements of a robust Financial Crime Control Framework and Anti-Money Laundering/Counter-terrorism Financing (AML/CTF) Programme are interlinked as pieces of a larger puzzle, the survey responses suggest a critical need to upgrade the efficiency of KYC programs. From customer due diligence (CDD) to customer risk-ranking to enhanced due diligence to managing increased regulatory scrutiny, the demands of KYC are both laborious and time-intensive.

We are seeing the impact of these challenges across the current UK/EU regulatory landscape: A number of key AML-related fines and enforcement actions have penalized European firms over the past 12 to 18 months centred around failures to conduct appropriate customer due diligence. We have seen recent actions including:

Outdated KYC and CDD programs are starting to hit banks in the wallet

UK FCA fined Commerzbank London £37,805,400[3] and brought criminal proceedings against NatWest Plc for alleged money-laundering failures centred around customer due diligence.[4]

The UK Her Majesty Revenue and Customs issued a record fine of £23.8m against MT Global Limited, a money service business.[5]

In Germany, BaFin issued orders to prevent money laundering and terrorist financing against N26 Bank GmbH[6] and Goldman Sachs Bank Europe SE[7], ordering both entities to, amongst others, comply with customer due diligence obligations.

ML/AI: Inhouse built vs. off-the-shelf technology? Which approach is the “better” one for you?

Respondents indicated they believe that advanced technologies can advance financial institutions’ ability to proactively mitigate and manage financial crime risk. So how can firms chart a path to make these changes?

Globally, large FIs are leveraging in-house resources and expertise to build ML technology: 71% are building their own in-house solution, eschewing any “off-the-shelf” technology, and more than half (54%) are training internal staff rather than hiring outside consultants. Mueller explains that “with the larger banks, there’s just a tendency to look inward first,” which may partially be the result of only limited budgets being available.

Mueller is a big proponent of leveraging commercially available products—and so are European financial institutions, it appears: Of firms that have implemented AI as part of their financial crime technology approach, approximately 40% of European institutions implemented “off-the-shelf” technology as a component of their solution, compared to just 21.2% of US respondents.

Ajay Guru, who leads Fraud Technology efforts at Guidehouse, suggests the disparity might be attributed to, “EU regulations and regulators tending to be more prescriptive in their design and expectations. European financial services companies can more confidently leverage compliant, off-the-shelf products, especially those that don’t have in-house development teams. While some customization may be required, these products supply most required capabilities out of the box.”

Given the range of new solutions in the market, institutions looking for an “off-the-shelf” solution should be able to find something that fits their specific needs and requirements. As more European financial services firms implement off-the-shelf solutions, real-life use cases will increase, making the vendor selection process easier.

3. FCA, *FCA fines Commerzbank London £37,805,400 over anti-money laundering failures*. (17 June 2020) Available at: https://www.fca.org.uk/news/press-releases/fca-fines-commerzbank-london-37805400-over-anti-money-laundering-failures.
4. FCA, *FCA starts criminal proceedings against NatWest Plc.* (16 March 2021) Available at: https://www.fca.org.uk/news/press-releases/fca-starts-criminal-proceedings-against-natwest-plc. NatWest Plc pleaded guilty to the criminal proceedings on 7 October 2021. See: https://www.fca.org.uk/news/press-releases/natwest-plc-pleads-guilty-criminal-proceedings.
5. HMRC, *HMRC issues record £23.8m fine for money laundering breaches*. (7 January 2021) Available at: https://www.gov.uk/government/news/hmrc-issues-record-238m-fine-for-money-laundering-breaches.
6. BaFin, N26 Bank GmbH: Order to prevent money laundering and terrorist financing; appointment of a special commissioner. (12 May 2021). Available at: https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Massnahmen/60b_KWG_und_57_GwG/meldung_210512_57_GwG_N26_en.html.
7. BaFin, *Goldman Sachs Bank Europe SE: Order to prevent money laundering and terrorist financing*. (4 February 2021) Available at: https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Massnahmen/60b_KWG_und_57_GwG/meldung_210204_57_gwgG_Goldman_Sachs_en.html.

What are the critical next steps for your organisation?

As the results of the ML survey for European financial services institutions underscore, your organisation should consider the following steps in charting/continuing its ML journey:

1. If the implementation of ML is not yet on top of your organisation's agenda, discussions should be prioritized.

2. While there is no one-fit-for-all answer to determine which areas will drive the biggest improvements, KYC, followed by Sanctions screening and Sanctions and Transaction Monitoring alert handling are key areas to look at.

3. Having a strong in-house technology team is a great foundation, but "off-the-shelf" products can accelerate your organisation's efforts—we believe off-the-shelf solutions will become even more popular in the future.

How can Guidehouse help you?

Our global investigations and compliance (GIC) practice provides holistic services related to KYC/CDD, sanctions screening and transaction monitoring systems at a variety of financial institutions, from global, industry-leading banks, to UK/EU medium-size institutions with a regional footprint. GIC's subject matter experts combined with GIC's data analytics and technology team offer a broad range of solutions and services across the financial crime compliance spectrum. Our GIC team can help you on your ML/AI transformation journey to fight financial crime with the following:

- Assessment of your current AML/CTF and Sanctions programme
- Definition of a ML/AI technology transformation strategy
- Vendor selection process for off-the-shelf products
- Support with the development of in-house solutions
- Implementation and fine-tuning of ML/AI solutions
- Ongoing system testing and tuning

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