# NEW REGULATORY MECHANISMS

Data-driven regulation

Autorité de la concurrence, AMF, Arafer, Arcep, Arjel, CNIL, CRE, CSA

# New regulatory mechanisms – data-driven regulation

The digital environment is characterised by the hyper-fast pace of technological change, which leads to a state of permanent innovation in both usage and business models. The classical regulatory systems in place are becoming obsolete as they struggle to handle an ever-changing environment and an uncertain future.

Any government (hence regulatory) action must therefore be part of a flexible framework, which is what data-driven regulation makes possible. It combines making stakeholders accountable, increasing the regulator's analytical capabilities, and keeping users<sup>1</sup> and civil society informed.

Data-driven regulation serves to complete the regulator's traditional tools. And instead of telling economic stakeholders how to behave, the aim is to create a network of information and incentives to reduce information asymmetries and to broaden the impact of the regulator's actions by mobilising users and their representatives. To be successful, this approach requires a cultural shift and the assignment of newfound responsibilities within the State.

The work done independent authorities have helped to underscore two core objectives attached to data-driven regulation:

- Amplify the regulator's ability to act, notably in a supervisory capacity;
- Enable users to make informed choices and better shepherd the market.

In practice, this requires not only collecting information from regulated players, but also expanding the scope of the data collected, thanks to crowdsourcing tools, simulation-based approaches, sustaining an ecosystem of players that provide testing and measuring tools, comparison engines, etc.

The development of data-driven regulation puts new demands on the regulator in terms of skillsets, tools and the appropriation of new technologies.

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<sup>&</sup>lt;sup>1</sup> i.e. all of the end users of retail market services (consumers, users, businesses, etc.)

Data-driven regulation consists of using the power of information to understand the market and shed light on how it operates in a factual fashion, to then steer it more effectively in the right direction and better protect consumers and their rights in these different markets.

A first type of action is rooted in a supervisory approach. It involves collecting and analysing quantities of information to detect weak signals and systemic problems, to accelerate regulation and make it more efficient, and to ensure regulated players comply with their obligations.

A second type of action consists of giving users and influencers (public sector players, associations, civil society, etc.) a countervailing power thanks to accurate, detailed and personalised information. Through their choices, users can become full-fledged players in the regulation equation by influencing the economic players that supply them. The regulator has an important role to play here: it can inform users' choices and so better shepherd the market. This regulatory influence afforded to users in no way replaces the regulator's role. It can help achieve public policy objectives that are proper to each sector, and defined by public authorities. Economic stakeholders can also use the published information to anticipate users' and influencers' negative reactions, or — knowing that their actions are being observed — alter their behaviour beforehand.

It is critical to emphasise that data-driven regulation serves to complete the State's methods of intervention (commitments, injunctions, etc.) and cannot exist without the involvement of public authorities. It must not be confused with simple transparency, however, notably as government data is being gradually made openly available to the public: first because the regulator's task is to set priorities and shed light on certain parameters in particular. Second, because the regulator's purpose is to standardise certain notions and, if appropriate, to centralise information. And, lastly, because data-driven regulation is rooted in a legal framework: if the aim is not to tell the market's regulated players how to behave, these players must produce information in a standardised and organised fashion and according to parameters set by the regulator.

To allow these changes to happen, the volume and quality of the data available to regulators need to increase, as does the number of sources. One core example involves calling on users to report any problems they encounter and making use of observed information (e.g. quality of the service or communication provided to users), shifting from a logic of consumer complaint to one of empowered citizen. Municipalities have thus developed fix-it type applications that allow residents to report a variety of problems (broken pavement, etc.). When applied to regulation, this type of tool can be very useful for detecting weak signals or directly obtaining information, which helps reduce information asymmetries with regulated players. When applied to government procurement, this tool could also be useful in helping to detect irregularities.

Ultimately, data-driven regulation serves to complete the regulator's traditional tools. Instead of telling economic stakeholders how to behave, the aim is to empower consumers/users to create market incentives. To be successful, this approach requires a cultural shift within the State. It means recognising that the State is not the sole guarantor of the public interest: every stakeholder, every user is given the ability to influence regulation. Added to which, the State is not always in the best position to provide consumers with the relevant information, and it can be more efficient to adopt an approach based on empowerment and overseeing a RegTech ecosystem, in other words one of startups and civil society stakeholders capable of developing information tools.

Several regulators in France have been implementing this approach within their respective sectors over the past several years, each according to their own objectives. These objectives generally fall under the following headings.

### A. Main objectives of data-driven regulation

There can be several objectives underpinning the development of data-driven regulation. Regulators may sometimes seek to meet these objectives – which are detailed below – in a concurrent fashion. And sometimes, on the contrary, one will be developed first before addressing the others.

 Amplify the regulator's capacity to act in its core area of responsibility, notably through better supervision of market players and broader data collection

Data-driven regulation makes it possible, above all, to strengthen the regulator's capacity to act in its core area of responsibility, by increasing its ability to closely monitor market players and their practices, by making it easier for it to detect weak signals, to track the market's evolution in a more fluid fashion and heighten its capacity to react. Moreover, the effects and consistency of regulated players' choices can be monitored by performing a detailed analysis of operators' individual data.

To give an example: in addition to helping monitor the market, the data collected by the Financial Markets Ombudsman, AMF, also help it to supervise the players it is responsible for regulating. In May 2018, AMF created a team dedicated to utilising these data to supervise investment firms (data-driven supervision). In addition to monitoring the quality of the statements used by all AMF departments, this team will develop *ad-hoc* tools for detecting anomalies and assisting supervisors to analyse the operations of companies that fall under their purview. These supervisory tools are also designed to incorporate not only data the regulator receives on a daily basis, but also data generated by regular (monthly or annual) reporting from other entities, as well as other relevant outside data. AMF performs this supervision by collecting and making consistent all of the data obtained from various parties: regulated players themselves (each counterpart to the transactions), but also the platforms.

Beyond that, the regulator may sometimes "hand over" or decentralise a portion of its regulatory work, particularly when it comes to compliance mechanisms. A good example is the financial sector where compliance regulation gives regulated players an incentive to perform a portion of the risk analysis and monitoring, as well as reporting, themselves. In taking this approach, the regulated entity is obliged to incorporate regulatory considerations when designing its processes, and thus made accountable to the regulator.

Other tools, such as GDPR compliance verification, CNIL's handling of data privacy violations, or the dynamic frequency allocation system being tested by Arcep, provide further examples of tools that use more detailed information to achieve more efficient regulation.

 Enabling users to make informed choices, and steering the market in the right direction

One of the regulator's key aims is to install a mechanism for providing detailed information, and so enable all users (economic stakeholders, consumers, businesses, policymakers, local authorities, etc.) to make more informed choices. The regulator wants this tool to engender a heavy dose of transparency, and thereby help guide market stakeholders' choices.

Through monreseaumobile.fr (*My mobile network*), Arcep provides two kinds of information on mobile electronic communications network performance:

- operators' coverage maps, which are designed based on digital simulations;
- quality of service indicators, obtained through the more than one million tests that Arcep performs in the field every year, under real-world conditions.

For the fixed market, Arcep is currently preparing a complete scorecard on national fixed network coverage, all technologies combined, right down to the individual address level. In the meantime, it continues to enhance its cartefibre.arcep.fr site which already provides information on the status of Fibre to the Home (FttH) rollouts, municipality by municipality<sup>2</sup> and building by building.

In addition to users themselves, data-driven regulation policies must nurture data reuse initiatives from the public sector, associations and civil society. An open data policy, and a policy of openness

<sup>&</sup>lt;sup>2</sup> Whenever possible, this information currently makes it possible to view the shared access point's service area.

towards these players are therefore essential. Since the adoption of the Digital Republic Act on 7 October 2016, regulatory authorities and all government administrations in France have been required to make their non-confidential data available to the public at large. To do so, most of them have created open data<sup>3</sup> platforms, and list their data on *data.gouv.fr*.

For Arcep, making the data from these publications available as open data on the French government's open data platform, data.gouv.fr, facilitates the reuse of data and helps start-ups, local authorities and analysts to re-appropriate them.

The Financial Markets Ombudsman, AMF, has also instilled a data access policy, aimed at researchers in particular, based on ad-hoc agreements. One of the first AMF data initiatives for researchers has been in place since 2013, as part of a partnership with France's National Centre for Scientific Research, CNRS (Eurofidai) and the Institut Louis Bachelier (ILB). It creates the ability to feed market order data into a European financial database that is made available to researchers. Other avenues are being explored for expanding access to the data collected by AMF. Through its Household Savings Observatory and its Market Barometer, the regulator is also helping inform opinion-makers about savings-related issues.

Online Gaming Regulatory Authority, ARJEL, publishes quarterly analyses of the online gambling and betting market. These are quarterly activity reports on the three market segments – sports betting, horse racing betting and online poker – through the aggregation, analysis and comparison of supervisory data provided by all of the operators. Although these documents are useful for operators, they nevertheless have an only limited influence on users' choices. It was in large part in a bid to remedy this that ARJEL began publishing communications – that deliver a legal analysis of some of operators' disputed practices – on its website, which could be useful to players and gamblers.

French Energy Regulatory Commission, CRE, has been publishing scorecards on wholesale and retail electricity and natural gas markets on a quarterly basis since 2005. They provide readers, most of whom are industry professionals, a detailed view of outstanding events and trends in these markets, and serve as a reference for the sector. The raw data used to create graphs and indicators are now also available on the CRE website's open data page.

France's Rail and Road Regulatory Authority (Arafer) and CRE hosted a "Datathon" in March 2019 whose aims included the creation of BtoC tools that reuse the two regulators' own data in a relevant way, to foster interactivity with end users who could, first, obtain information that is not currently shared by operators (or not sufficiently accurate) and, second, send information to the regulator (e.g. on malfunctions). This first joint "Energy and Mobility" Datathon thus enabled the two Authorities to:

- gain a new perspective thanks to participants' tremendous technical and creative skills (strong programming, interface and QoE skills) to reappropriate data<sup>4</sup> in innovative tools (web/mobile apps) that support regulators' actions or that benefit end users directly, and this over the course of a single weekend;
- have access to a sizeable outside communication mechanism, to demonstrate the regulator's active commitment to the market's smooth operation to regulated market stakeholders;
- rethink data-driven innovation, notably with a desire to continue to support the projects developed over the weekend of the Datathon, and possibly to repeat the exercise.

French Broadcasting Authority, CSA, also publishes its data and reports, both recurring (market observatories, TV channels' annual reports, formal notices, etc.) and ad-hoc (thematic and general

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<sup>&</sup>lt;sup>3</sup> Including (non-exhaustive list): AMF, Arafer, Arcep, Competition Authority, CNIL, CRE, Hadopi.

<sup>&</sup>lt;sup>4</sup> Open data or data acquired by the regulator and desensitised if necessary (leaks of data protected by trade secrecy) for the duration of the Datathon.

reports). These publications shed light on how the sector operates but also provide, notably quantitative, benchmark measures.

France's Data Protection Authority, CNIL, is also making use of several instruments. Its open data policy<sup>5</sup> contains indicators on key areas of focus for its enforcement, hence privacy protection, activities. The qualitative observations (best and worst practices) made in carrying out its duties help fuel an ongoing series of generic practical<sup>6</sup> recommendations for consumers, entities involved in data processing, solutions providers, etc. CNIL also intends to draw more qualitative value from certain data streams, such as notifications of data breaches, which the GDPR has made mandatory under certain circumstances. This could eventually create the ability to draft a detailed list of vulnerabilities and areas that warrant particular attention.

# B. Expand the scope of the information being collected

As with the process of keeping users and influencers informed, the development of more powerful digital tools, designed to identify weak signals and systemic risks, must go hand in hand with the steady expansion of available data, to afford the regulator a comprehensive approach. Several sources have been identified here.

# 1. Being open to reporting; empowering users to have a hand in regulation

The first type of feedback that can be obtained from users is the "user survey". This solution often provides a more detailed picture of the issues that users are encountering in the sector.

A good example here is Arafer, which introduced "user surveys" to gather more qualitative information on traveller profiles, and what influenced their travel-related choices. Two surveys were thus conducted in 2017 and 2018 with customers of the new freely organised long distance bus services that were put into place pursuant to the "Law on economic growth, activity and equal opportunity," also known as the Macron Act, of August 2015, as well as a survey that is currently underway of TGV/OUIGO (high-speed rail/national rail service) users.

Arcep has also performed user surveys. In 2016, to help guide its data-driven approach to regulation and establish its future priorities, Arcep wanted to query users on their expectations with respect to the information on the telecoms sectors that is available to them, and on their product selection criteria, which revealed a strong need for information on coverage and quality of service. Arcep also regularly polls users (first consumers, and soon enterprises) on their satisfaction with the sector (operators' products and services and the quality of their customer service) as a way to take regular stock of users' concerns.

Obtaining reports from outside sources, notably from users, is an efficient way to develop a more accurate picture of a sector's issues, and to build a body of evidence to underpin regulations, by empowering users to perform a civic gesture.

The "J'alerte l'Arcep" online reporting platform allows any user, whether an individual, a company or a local authority, to alert Arcep to any problem they are having in their relationship with their fixed or mobile operator, their ISP or postal operator. Through this act of reporting, users are given an opportunity to have their personal experience influence market regulation, and so give operators an incentive to improve their services and build out their networks. The platform also offers users personalised advice.

For Arcep, the reporting collected from users provides a more accurate view of what is happening in the real world, allows it to monitor problems users are having in real time, and to identify recurring

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 $<sup>^{5}</sup>$  E.g., on the penalties imposed and the type of failures by supervised organisations that were identified.

<sup>&</sup>lt;sup>6</sup> E.g. recently on voice assistants and privacy by design practices.

issues and sudden surges in reports – all with the aim of becoming more efficient through more targeted action and establishing systemic responses that allow the sector to run more smoothly.

Although Arcep is not responsible for handling individual disputes, "J'alerte l'Arcep" does satisfy a real need amongst users to have a direct response to the problems they are encountering (34,000 reports received in a year). These reports help build a body of evidence for regulation, e.g. contributing to decisions to launch a formal investigation.

In a similar vein, ARJEL created an e-mail address that allows gamblers and betters to report any problems they have identified. The information gathered from these reports has enabled ARJEL to improve its monitoring of licensed operators' activities, and its fight against illegal sites and gambling addiction. ARJEL can thus steer its supervisory and investigative work based on complaints received from gamblers, especially when they pertain to recurring issues. A complaint received from several gamblers on a similar set of facts can lead ARJEL to investigate the operator in question's data retrieval log/archives, to assess the reality of the situation. Should these complaints prove well-founded, ARJEL will then launch an administrative enquiry.

Supplementing the checks performed by its auditors, the CNIL referral channels serve as a set of probes that enable the regulator to obtain information on observed practices and privacy issues, to be able to guide its supervisory, support, etc. activities. The reporting mechanism can, if necessary, focus on certain topics or periods of time in particular: e.g. a dedicated form is made available to the public during election campaigns. These processes can also incorporate outside partners. In its battle against spam, for instance, CNIL strengthened its mechanism by joining forces with the "Signal Spam" (report spam) association – which is in charge of centralising user reports. This has enabled CNIL to have a global overview of the phenomenon, and so to conduct more efficient investigations and repressive policies.

In early 2019, to give every stakeholder the ability to submit a referral to its Dispute Settlement and Sanctions Committee (CoRDiS), energy regulator CRE decided to amend its internal regulation to permit requests to be filed electronically. To this end, it created a platform on its website which — while also redirecting users when appropriate (notably to the national energy mediator) — helps CRE to provide the proper information and documents, in accordance with different situations set out in the Energy Code. This clearly creates a more modern and more fluid referral procedure, which is especially welcomed by lawyers who specialise in the energy sector.

The viewer complaints registered and investigated by broadcasting authority, CSA, are powerful indicators of editorial trends and directions in the audiovisual sector, as much for the regulator as the public. They offer solid reminders of the limits set in the area of audiovisual communication and for protecting different audiences.

Back in 2010, AMF created a public hotline that helps the regulator keep pace with the latest marketing trends, failings in the regulated world and identify financial scams. Based on these data, AMF takes action with its regulated entities, exercises its power to alert the public, performs preventive actions and responds to requests from parliamentary representatives and the media (statistics). Today it is working on a Websapp application (scheduled for release in September 2019) that will allow savers and investors to send a report to the AMF directly with their smartphone.

#### 2. Expand data collection decisions to make them more relevant

To increase data's potential, the quality of the data available to the regulator needs to be gradually improved, along with the frequency with which they are made available.

This is why Arcep is "unbundling" data by requiring operators to publish more complete information. These data are no longer used solely to monitor compliance with regulatory obligations, but also help provide users with information that more closely reflects their actual experience. These data can be completed with others produced by Arcep, then made available to the public.

By the same token, for mechanisms designed to observe weak signals, the volume of available data and the regularity with which they are made available to the public can be increased substantially – a good example being AMF which seeks to collect details on every transaction made by financial market players on a daily basis.

For the rail and road regulatory authority, Arafer, the increased information gathering powers conferred by the Macron Act of August 2015 allowed the Authority to implement regular information gathering campaigns in three sectors (railway, buses, motorways). Given the issues created by information asymmetries between stakeholders, the first general interest application of the data collected by Arafer was the production of benchmark publications in the regulated sectors, to ensure transparency and shed light on public decision-making, notably in the railway sector. Arafer also adopted its open data policy in 2017 (listed on the data.gouv.fr platform), publishing datasets produced by and for its Observatory.

# 3. Build an alliance with the crowd<sup>7</sup>

To maximise the efficiency of its actions, and flesh out the data it produces itself, the regulator can engage in crowdsourcing with a series of outside parties. Arcep adopted this approach with stakeholders such as app developers, user protection associations and players from the transport, property and tourism sectors.

To monitor fixed and mobile telecoms network coverage and quality of service, for instance, Arcep initiated a partner-based approach to help promote open data and increasingly reliable and representative user data. Today, they are focused on two aspects in particular.

On the one hand, Arcep worked on the roadmap for "Mon réseau mobile" whose aim is to enrich the published data, and to open itself up completely to tests being performed by regional actors and to crowdsourcing. To this end, Arcep published "the regulator's toolkit" to enable local authorities and market players conducting their own measurement campaigns to be able to qualify mobile users' quality of experience. In addition, it renewed its call to players involved in online testing — especially those that make use of crowdsourcing — to take part in this work, using transparent and relevant measurement methods.

On the other hand, Arcep is engaged in an innovative co-construction approach to internet quality of service issues. It has thus federated measurement tools designed by ISPs and academia to ensure that these tools are able to satisfy consumers' need for information on Internet quality as fully as possible. The first work done in this area made it possible to establish a Code of Conduct for players involved in testing and measurement, which will be enhanced over time. An "access ID card" API was also created, which will eventually be housed in operators' boxes, and made accessible to those measurement tools that comply with the Code of Conduct, to enable them to obtain details on the environment of the user who is performing the test (access technology used, plan, parallel uses of the connection, etc.).

Arafer, meanwhile, emphasises that knowledge of travel flows could be greatly improved by analysing mobile phones' digital footprint and mobile devices' GPS history (while complying with existing data protection, and particularly data privacy regulations). Given the very high cost of accessing these data held by mobile operators, among others, one option could be partner-based

<sup>7</sup> The idea of "the crowd" refers to the notion of "a creative, connected and mobile community" made up of individuals who have "an unprecedented power to communicate and coordinate," as described by N. Colin and H. Verdier, in *L'âge de la multitude*, Armand Colin, 2012, p. 12. This contains a reference to A. Negri and M. Hardt, the authors of *Empire* and *Multitude*.

solutions between several administrations that are interested in this same information, and could help improve the existing national survey system<sup>8</sup>.

Broadcasting authority CSA also draws on crowdsourcing and collective regulatory initiatives by calling on its agents to volunteer. The regular was thus able to conduct empirical studies on platforms that consisted of observing algorithmic recommendation mechanisms on large samples of users, and relying on automated massive data collection processes.

Another valuable source is the world of academia. Arafer, for instance, turned to the academic sphere with a view to increasing the ways that collected data could be reused, and signed two research contracts with reputed academics and laboratories<sup>9</sup>, as well as a partnership with a Masters programme<sup>10</sup>, which gave it the ability to address a range of topics in various ways, such as analysing the impact that operator mergers have on the market, analysing how the Macron Act's impact on the automotive market's development is affecting how young people travel, or performing a cost/benefit analysis of small railway lines versus the switch to road lines. This approach will continue, and help promote transport economics research that will foster a deeper understanding of the regulated sectors.

In the same vein, CSA formed a partnership with the world of research into societal innovations to gain a better understanding of usage and consumption habits in the digital environment. This type of partnership proves especially worthwhile when engaging in work that combines empirical analyses and theoretical modelling.

Calling on the crowd can also provide a public entity with an opportunity to hone its regulatory tools, and help create common points of reference. Arcep, for instance, published an open dataset on the population in France's overseas territories, which was itself constructed using open data. These data, which Arcep uses to verify mobile operators' coverage, can in fact serve many other purposes, and a partner-based approach would result in more accurate data which is also shared between stakeholders.

Additionally, the regulator can elicit the creation and maturation of "communities" of players around the values that undergird its own regulation. In its "Innovation and Foresight" newsletter No. 6, *La Forme des choix*, CNIL explored digital service design issues through the lens of data protection imperatives. To foster the emergence of more responsible and privacy-compliant interfaces, CNIL wanted to support service designers to build a non-competitive and open source approach to establishing best practices, by creating a dedicated Data & Design platform. Its purpose is to acculturate the GDPR's core principles, disseminate case studies and to provide a forum for dialogue between professionals.

Financial markets regulator AMF formed a partnership with the Signal Spam association to obtain reports from internet users on its sector of activity (2,000 a day!). It is building an artificial intelligence system to be able to make use of this information. Having to deal more and more with societal issues, AMF has chosen to take an interdisciplinary approach to these matters: partnership with the social psychology lab of Aix-Marseille devoted to financial scams, partnership with the Université Paris-Dauphine to prevent exploitative marketing of the elderly. It has also incorporated

<sup>&</sup>lt;sup>8</sup> There is a national transport and travel survey that is conducted every 10 – 15 years by INSEE (the French National Institute for Statistics and Economic Studies) and the Ministry of Transportation, that latest of which was in 2008. But the mobility landscape has evolved a great deal over the past 10 years, with the development of smartphones and new forms of mobility.

<sup>&</sup>lt;sup>9</sup> The first with two researchers from the Université de Montpellier the Université de Nice, the second with CREST, the ENSAE Centre for Research in Economics and Statistics and Polytechnique.

<sup>&</sup>lt;sup>10</sup> M.Sc. (Masters of science) EDCBA Economic decision & cost benefit analysis) from PSE and Ecole des Ponts

the use of behavioural finance by deploying consumer tests on regulatory messages and documents (e.g. bearer bonds for assets management).

# C. Challenges and outlook

The development of data-driven regulation puts new demands on the regulator in terms of skillsets, trading data and adopting new technologies.

# 1. Developing regulators' technical skills

Furthering the development of data-driven regulation requires regulators to develop new technical skills, notably in the area of data analysis and algorithms, but also in storing and managing large volumes of data. Generally speaking, it is vital that the regulator's actions be rooted in precise and substantiated expertise.

The amount of data to be analysed is growing continually, however. Which requires regulators to develop their data analysis skills in areas that include:

- data hosting, storage, management, sharing, dissemination (open data),
- data analysis, notably by hiring several experts, such as data engineers and data scientists.

Arcep, for instance, is currently working on updating its mapping tools, which makes it crucial to have people with the required expertise on board, along with the skillsets needed for ongoing development. Regulators must also have the skills required to analyse and understand the algorithms that are at the heart of a great many technologies and business models. Beyond that, there is a need to develop new kinds of half-IT developer/half-statistician teams to analyse datasets, but also to analyse the algorithms of the service providers that use the data.

Broadcasting authority CSA shares these conclusions, and over the past two years has gradually increased its in-house quantitative analysis capabilities.

This trend of an ever-growing need for technical expertise in data analysis and algorithms is not likely to abate over time, as new requirements are sure to emerge as regulatory systems become more diverse (development, algorithmic, etc.). Added to which, an increased need for new skillsets is synonymous with the need for new logistical means (servers etc.), as well as specific skillsets amongst support team members (data administration, application and information systems maintenance).

### 2. Champion the availability of powerful data processing tools for regulators

Regulators need to have access to powerful tools that enable them to tap into the data's full potential. Sharing tools and common technological building blocks, and possibly co-developing common tools could be encouraged.

# 3. Promoting the use of new, leading edge technologies, notably big data and artificial intelligence

The new digital tools associated with technologies such as artificial intelligence or big data are opening up prospects for making verifications, data processing and the regulator's monitoring processes in general more efficient (saving time, more exhaustive data processing, greater accuracy, etc.).

A good example is the Data Science/Artificial Intelligence (Datalab) excellence hub created within AMF in 2018. Its objective is to respond to the sector-specific issues that have been identified, and to use data to develop solutions for improving the situation. The first projects are focused on monitoring unregulated players: the aim is to combine machine learning methods with Natural Language Processing (NLP) to be able to provide a binary classification of the information received (mailing campaigns) and to detect trends more easily, along with possible large-scale scams. Emerging issues are identified by cross-referencing the different available data streams, then

applying artificial intelligence methods to detect weak signals. Other applications for investigating insider misconduct to improve suspect targeting, among other things, are currently being explored. Datalab also formed a partnership with an R&D lab, and other partnerships will be explored in future (notably with the Banque de France DataLab).

The ability to process these multiple data sources could open up new avenues for regulators, particularly in the area of detecting offences.