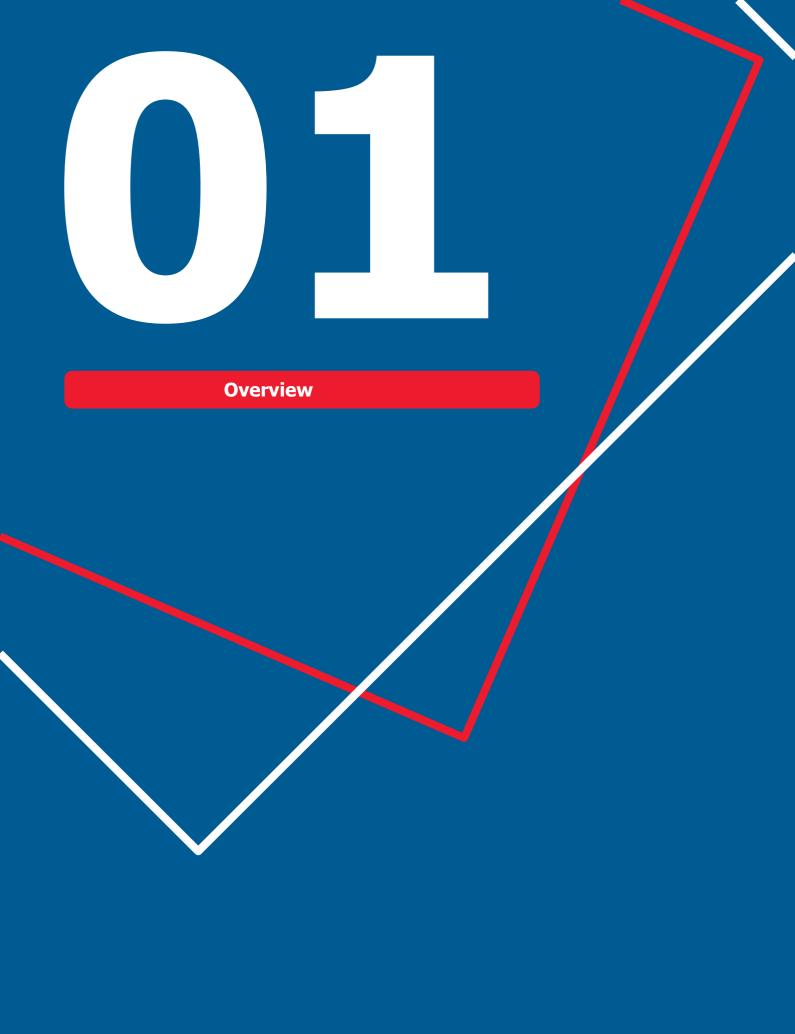
PARITÀ DI ACCESSO Organo di Vigilanza **2021**Annual Report 2020 activities and results **Executive Summary**

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his Report illustrates the activities and the results achieved in 2020 by the Supervisory Board (SB) on Equal Access of the TIM network in the field of protection of the principle of non-discrimination in the provision of wholesale services.

The year 2020 was distinguished by two new elements: the beginning of a process that should gradually lead to the creation of a single access network company and the epidemiological emergency due to the spread of the SARS-CoV-2 coronavirus. The former is a path started by TIM through a corporate separation that led to the creation of FiberCop, to which TIM itself conferred its secondary network infrastructure, thus giving public and private investors the opportunity to participate by means of co-investment; the latter triggered profound economic, social and health upheavals, resulting in an unprecedented global event that emphasized the crucial role and strategic importance of electronic communication networks.

As proven by the force of the events that unfolded in 2020 and that unfortunately are still part of the present, the functionality of an efficient ultra-broadband communication infrastructure for health, education and the business world is a vital factor for the future of the country, and its enhancement is a goal that can no longer be postponed. The dramatic nature of the pandemic has further highlighted the need to rapidly set up, in line with the most advanced countries, all the necessary initiatives for the development of an innovative access network.

In Italy, ultra-broadband connectivity is far more limited than in other countries and there are significant differences between various geographical areas in terms of both penetration and quality. The time is ripe for a systematic intervention to bridge the digital gap and make Italy fully and universally connected, allowing the widespread diffusion of innovative technologies among businesses and individuals.

The entire country is experiencing one of the most difficult times since the end of the Second World War and rapid digitalization nationwide is a key factor in overcoming this very serious crisis.

1. The importance of electronic communication networks and the role of the Supervisory Board in supporting the health emergency

The development and evolution of a full fibre-optic network has long been a top priority, as it is an all-important factor in both generating immediate economic benefits and stimulating future growth.

In 2020, the health crisis made even more evident the urgent need to complete the development of this network nationwide, by making joint efforts efficient through cooperation and co-investment, as well as avoiding duplication of infrastructure deemed uneconomic and also exploiting the benefits of the

regulation set out in the new European Electronic Communications Code.

In this perspective, on 31 August 2020, TIM approved the agreement with KKR Infrastructure and Fastweb to set up FiberCop, the NewCo into which TIM's secondary copper network and the fibre access network developed in the past by FlashFiber, the joint venture owned by TIM (80%) and Fastweb (20%), was conferred. At the same time, a letter of intent was approved with CDP Equity (CDPE) to integrate FiberCop into the broader project of setting up a single national network company.

The context in which the TLC companies were called upon to operate after the outbreak of the pandemic required the adoption of exceptional measures to deal with an unprecedented situation, and the activity of the Supervisory Board also underwent profound changes, with a radical review of objectives and priorities.

In the first place, the Government, with Art. 82 of the so-called 'Cura Italia' decree-law, established provisions for the enhancement and security of electronic communication infrastructures and services.

Secondly, Agcom played a key role in guaranteeing - by means of *ad hoc* emergency regulation - the effective operation of networks and the continuity of services, in view of the considerable increase in remote working, distance learning and, in general, the growing demand for connectivity by users.

With the decision of 18 March 2020, the Authority issued an initial set of interim measures aimed at guaranteeing the operation of public utility services and other initiatives to support the public structures involved in managing the health crisis, the families and the businesses.

For this reason, all operators were asked to implement technical solutions for an immediate increase of at least 30% of the average bandwidth on the fixed network per customer.

In particular, in the period from March to June 2020, TIM increased coverage of its new generation FTTC network by opening more than 5,000 new cabinets to provide ultra-broadband connectivity in 1,500 municipalities located in areas of the country not yet covered by any ultra-broadband network (falling within the so-called "white areas" of the 2016 BUL tenders).

Agcom agreed with the proposals put forward by TIM to reduce the wholesale unit costs of the Ethernet circuits. Furthermore, in the case of availability of new NGA cabinets, the time interval between the announcement to the market of the availability of FTTC services in a certain area of new coverage and the actual opening to marketing of the new services was reduced from 30 to 10 days, until 30 June 2020.

Furthermore, Agcom requested TIM to make every effort to supply, with quicker delivery terms, transport and VLAN equipment needed to enable the increase in bandwidth required by alternative operators, again until the date of 30 June 2020.

In addition, in Agcom communication of 20 April 2020 a request for cooperation was addressed to the Supervisory Board in order to manage the emergency situation through the launch of three specific activities, always til 30 June:

- 1) fortnightly monitoring, in addition to monthly monitoring, of TIM's wholesale service provisioning and assurance activities (using the KPIs set out for in Resolution No. 395/18/CONS);
- 2) weekly monitoring of the provisioning times of transport equipment designed to ensure connectivity between TIM's access network and the proprietary networks of alternative operators, as well as the relevant VLANs;

3) weekly monitoring of FTTC cabinets activated by TIM in white areas and fortnightly monitoring of the relevant work orders by type of processing (activations, migrations, transformations) and by operator (TIM vs. OAO).

The Supervisory Board was strongly engaged in these activities which added to its ordinary work. As far as the monitoring of KPI 395/18/CONS is concerned, the fortnightly analysis of the delivery and assurance indicators was carried out during the critical period of the emergency (April-May-June 2020), in parallel with the monitoring already in place pursuant to the Supervisory Board's annual work plan.

With regard to the provision of transport kits and relative VLANs for VULA and Bitstream NGA services, the analysis of the data on a monthly basis covered a time period that started on 1 January 2020, while the analysis on a weekly basis started from the tenth week (2-8 March 2020) and ended on 30 June 2020.

The monitoring of FTTC cabinets activated in the so-called "white areas" was carried out on the basis of a fortnightly analysis for an observation period starting on 23 March 2020. Following the completion of the work, on 5 August 2020 the Supervisory Board, when approving its "Covid-19 emergency report on the monitoring activity relating to the activation of FTTC Cabinets in white areas", adopted a recommendation addressed to the Authority in which it was suggested to maintain the reduction to ten days of the notice period for the opening of FTTC Cabinets to the market, even after 30 June 2020 deadline, due to the advantages of such a measure in terms of speeding up the adoption of ultra-broadband services.

With Resolution no. 333/20/CONS, the Authority made further use of the Supervisory Board, extending its scope to the transmission part of the network and, in particular, to the area related to network circuits. Agacom established that, also in this new area, the monitoring activity of the Supervisory Board could be carried out ex officio or upon report of third parties, and reserved the right to resort to its collaboration also for the simplification of the reporting regarding network circuits, similarly to what has been the case in recent years on particular issues on the access market.

2. Monitoring of the "Commitments" pursuant to Resolution no. 718/08/CONS and operator complains

Monitoring of TIM's "Commitments" continued during 2020.

As part of Set of Commitments no. 2, on 20 October TIM presented the MBO 2020 short-term incentive plan for Chief Operations Office personnel.

Regarding Commitments no. 3, in July the first experimental check was conducted on two KPIs (one for delivery and one for assurance) aimed at assessing the feasibility, consistency and effectiveness of the protocol for verifying the calculation of the indicators. In December, the second verification session was held, involving other delivery and assurance indicators.

In relation to Set of Commitments no. 4, the Supervisory Board continued to monitor equivalence of treatment on the basis of the new KPIs defined by the Authority in Resolution no. 395/18/CONS. The

survey data for all indicators updated and made available by TIM were examined every month and any deviation, even temporary, between the performance of TIM Retail and that of the OAOs with the same KPIs was analysed.

Pursuant to Resolution No. 348/19/CONS, as of 8 August 2019 TIM is no longer an operator with Significant Market Power (SPM) in the municipality of Milan, therefore it is no longer subject to regulatory equivalence obligations in this area and the KPIs shown in this report are calculated net of the municipality of Milan.

On 27 July 2017, the Authority adopted Resolution No. 321/17/CONS by which it required TIM to allow OAOs to perform certain provisioning and assurance activities in an "unbundled" manner.

From 2020 this provision became fully operational, not only for assurance but also for delivery, on the main types of services (LLU, SLU, FTTC).

As a result of this resolution, unbundled trouble tickets and work orders with additional services no longer fall within the scope of the equivalence of treatment, as they are managed independently by the alternative operators.

In the context of Set Commitments Nos. 5 and 6, the Supervisory Board continued its verification activities, ensuring that the reports on quarterly programmes and final accounts were published in due time.

In 2020, no new complains were received from alternative operators, but the Supervisory Board continued to deal with investigations started previously.

Noteworthy was the activity carried out within the framework of the OdV-Wind Tre-TIM technical roundtable set up to deal with the problems concerning the failure in post-provisioning and in assurance of VULA C services. Thanks to the activities of the Supervisory Board, it was possible to identify a particular testing procedure shared by the operators which, once implemented, proved to ensure a substantial decrease in the failure rate in the days immediately following the activation of the service. With this role, the Supervisory Board continued in 2020 to monitor the implementation of the testing procedure as defined between the parties, as well as analysing and verifying the effectiveness of the measures implemented by TIM to reduce the FTTC network failure rate.

3. The contribution of the Supervisory Board to Communications Authority activities

In 2020, the close cooperation between the Supervisory Board and Agcom continued in several areas; this fruitful cooperation is now in its fourth year, thanks to the changes introduced in 2016 in the Supervisory Board's Operating Rules.

In particular, Agcom made use of the Supervisory Board to elaborate on and deepen some important methodological aspects of analysis and verification.

As regards the analysis of the impact of unbundling of provisioning and maintenance activities pursuant

to Resolution 321/17/CONS on KPI 395, it should be noted that in the case additional services are requested by OAO, the System company designated by the OAO is responsible for the entire service, relieving TIM of SLAs and penalties and therefore such wholesale orders are excluded from the calculation of KPI 395.

The use of unbundling with additional services by the OAOs therefore highlights two phenomena of major importance:

- the limited degree of comparability of TIM Retail's volumes with those of the OAOs (for the services subject to unbundling);
- the more significant presence in the standard Trouble Ticket process of OAOs managed by TIM of complex faults that could not be resolved by the System Company itself (e.g. cable faults, which are multi-customer and cannot be unbundled) and which require resolution times that were considerably longer than average (in fact OAOs that as a general rule use System Companies to unbundle TTs request TIM to address complex TT).

As far as the identification of KPOs (Key Performance Objectives) is concerned, thanks to the support of Prof. Giovanni Pica, lecturer in Economics at the Università della Svizzera Italiana, the Supervisory Board has presented the Authority a document illustrating the operating procedures for the application of the method for defining KPOs based on the multivariate linear regression algorithm to KPIs pursuant to Resolution 395/18/CONS. This makes possible, for each non-discrimination indicator, to identify any statistically significant deviations between the performance of TIM Retail and the performance of the OAOs that could be caused by unequal treatment.

The optimisation of TIM's network, which will be marked by a significant reduction in the number of active local exchanges (so-called decommissioning), will be of particular importance in the next few years. In this regard, the Authority has requested the support of the Supervisory Board, pursuant to art. 15 bis of the SB Regulation, in order to implement monitoring of the trend of NGA coverage and migration parameters (art. 50, paragraph 6, of Resolution no. 348/19/CONS). In December 2020, the Supervisory Board, on the request of the Authority, provided its technical support to verify the coverage and NGA migration requirements (FTTx+FWA) for the first batch of 62 local exchanges for which TIM had submitted a request for decommissioning.

Still on behalf of the Authority, the Supervisory Board continued to monitor indicators to assess the quality of the NetMap network database made available by TIM wholesale to all operators for issuing work orders. Four KPIs were analysed on a monthly basis, which account for the level of completeness of the database, as well as the speed at which TIM updates it.

With regard to the implementation of Agcom Resolution no. 396/18/CONS, on 22 January 2020, the Supervisory Board carried out a field audit on the implementation of the encryption of certain Customer information in those systems employed in the assurance process.

Active supervisory activity in support of the Authority was also of particular relevance. This included the cycle of checks carried out at TIM Wholesale operating units to ascertain the correct management of work orders falling within areas closed to commercialization as they are served by cabinet equipment (ONU and MSAN) without the necessary network resources on the FTTCab equipment. In particular, four TIM local units were audited in 2020: Lombardia Centro Est; Campania and Basilicata; Lazio and Friuli Venezia Giulia.

With regard to the activity of analysing and verifying the impact of process digitalisation, the Supervisory

Board continued the monthly monitoring carried out on the basis of the document "Elaborazione proposte di digitalizzazione dei processi" (Preparation of proposals for process digitalisation). In particular, both the degree of use of the digital channel and the advantage deriving from the digitalisation of processes on the management of work orders, in terms of reduction of delivery times and reduction of waste deriving from customer rejection, were assessed.

4. International events.

In July 2020, the Supervisory Board organised the event entitled "Analisi internazionale comparata dei modelli di separazione della rete di accesso" (International comparative analysis of access network separation models), which was attended by, among others, Antonio Nicita, Eugenio Bruti Liberati, Francesco Vatalaro and Michele Polo.

The seminar featured the presentation and discussion of the results of the comparative study on the unbundling, equivalence and supervision models of the fixed access network in the main industrialised countries, commissioned by the Supervisory Board to Cullen International with the aim of providing an updated international benchmark against which to compare the Italian model.

The event aroused much interest, bringing out the need to verify the consequences of structural separation in the countries where it has been applied. Therefore, in September 2020, the Supervisory Board commissioned Cullen International to carry out a further study in order to update the analysis to 2020 and extend it to five other European countries (Germany, France, Spain, the Netherlands and Portugal), as well as an in-depth study by Mr Massimiliano Trovato on the countries that have adopted structural separation (Australia and New Zealand).

5. The outlook for 2021.

In 2021, the Supervisory Board will be committed to ensuring the continuity of its supervisory activities on non discrimination and in support of the Communications Authority.

The activity will be carried out in continuity along four main lines:

- Supervision of the services offered by TIM Wholesale to operators in the processes of delivery and assurance of regulated network services (analysis of KPI 395/18/CONS and relative KPOs, KPI evolution, NetMap KPI analysis, rationalisation of rejection causes);
- Active supervision and inspections at TIM operating units (checks on management of saturated ONUs, checks on requirements for decommissioning local exchanges, tests on new IT releases);
- 3) Supervision of the transparency of information offered to the market (technical plans for network access quality, technical plans for network access development);
- 4) Supervision of network quality (observatory on FTTC network maintenance).

Glossary

AGCOM	Communications Authority	NGN	Next Generation Network
BTS	Bitstream	OAO	Other Authorised Operators
ВТ	British Telecom	OA	Open Access
CPS	Carrier Pre-Selection	OLT	Optical Line Termination
CS	Carrier Selection	ONT	Optical Network Termination
FTTB	Fiber To The Building	SA	Shared Access
FTTC	Fiber To The Cabinet	SB	Supervisory Board
FTTH	Fiber To The Home	S/HDSL	Single-Pair High-Speed Digital Subscriber Line
FTTN	Fiber To The Node	SLA	Service Level Agreement
FTTP	Fiber To The Premises	SLU	Sub-Loop Unbundling
FWA	Fixed Wireless Access	SMP	Significant Market Power
GPON	Gigabit Passive Optical Network	TT	Trouble Ticket
LLU	Local Loop Unbundling	VLAN	Virtual Local Area Network
NGA	Next Generation Access	·	