PARITA DI ACCESSO

ORGANO DI VIGILANZA

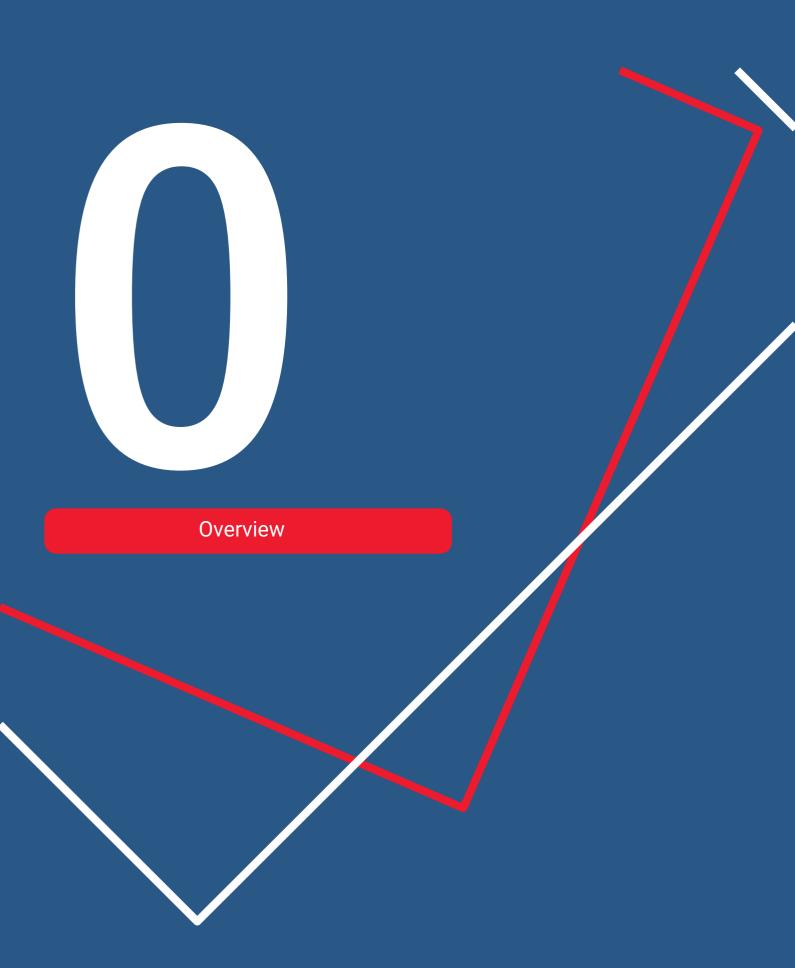
2022 Annual Report

2021 activities and results

TIM

Annual Report

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he year under consideration in this Report, which was still affected by the SARS-CoV-2 epidemiological emergency, witnessed the continuation of the debate on the corporate separation of TIM's secondary access network and on the related co-investment project FiberCop. The Communications Authority (AGCom) is therefore carrying out two important regulatory proceedings, the results of which will also have an impact on the future role and commitment of the Supervisory Board.

In relation to the first proceeding, regarding the voluntary legal unbundling of TIM's fixed access network notified to the Authority on 2 September 2020 - a proposal formulated pursuant to Article 50-ter of the Code and initiated by Resolution No. 637/20/CONS - in July 2021 Agcom **published the outcomes of the public consultation called in November 2020**, whose outcomes were assessed and will be fundamental in preparing the final proceedings for the coordinated analysis of the markets for fixed network access services. During the public consultation (the results of which were made available in Resolution No. 253/21/CONS), several Operators commented on the future activities of the Supervisory Board, proposing, for example, the opportunity for the Board to broaden its scope to include also the access services provided by FiberCop.

This assessment regarding the definition of the scope of the Supervisory Board's competence expressed by the market has found **various symmetries and correspondences** also in the second important proceeding conducted by Agcom during 2021, i.e. the analysis of TIM's Undertakings relating to its coinvestment offer in very high-speed networks.

Pending the conclusion of the preliminary analysis procedure of the markets for fixed network access services, which also includes the assessment of the voluntary legal separation project of the fixed access network referred to in Del. 637/20/CONS, TIM on January 29, 2021 submitted to the Authority, pursuant to Article 76 of the European Electronic Communications Code, its **own co-investment proposal**, which provides for the construction of a new "point-to-point" fibre-optic infrastructure, in a secondary access network, a proposal that envisages the construction of a new very high-capacity network with the co-ownership of the infrastructure (i.e. long-term risk sharing) through co-financing

Being the first case in Europe, the Authority's analysis was particularly rigorous, and among the objections raised by Agcom regarding the first version of TIM's Commitments was the absence - even in the context of the co-investment carried out by the newly formed FiberCop - of a structure such as the Supervisory Board, an **entity independent of TIM and FiberCop**, designed to assist the Authority in monitoring compliance with the proposed undertakings. In response to these considerations, TIM responded positively to the Authority's requests and agreed to assign supervision of the co-investment offer and the related undertakings to an independent body.

The final commitment proposal submitted by TIM provides that the activities of this body, its composition, governance, and mandate will be defined by the Authority, in agreement with TIM, taking into account the evolution of the regulatory framework on non-discrimination and equivalence (including the provisions introduced by Resolution No. 718/08/CONS), **upon the outcome of the coordinated analysis of access markets** initiated by the Authority with Resolution No. 637/20/CONS. The role of the current SB in the new regulatory scenario should therefore also be assessed

As the Supervisory Board already highlighted in the past, opening up to the market through co-investment certainly does not undermine the grounds for the supervision of the network, on the part of a dedicated entity, as long as TIM has control of the new company.

Annual Report 2022

5

There has also been no shortage of legislative measures relating to the access network and, more generally, the TLC market. In particular, in 2021, **Directive no. 2018/1972 on the European Electronic Communications Code was implemented**. With Legislative Decree No. 207 of 8 November 2021, in fact, the Government introduced this important piece of legislation into the national legal system, thus updating the sector's regulations on the basis of the deep technological innovations of the last few years, combining the traditional objectives of promoting competition with that of spreading high-quality connectivity, an aspect directly connected to the promotion of investments in modern infrastructures. Although it does not translate into a specific provision within the delegated decree, Recital 207 of the EECC (i.e. the possibility of providing, within the voluntarily Undertakings, **also for the appointment of a 'monitoring trustee'**, a sort of 'guarantor' appointed to monitor such obligations) is a formal acknowledgement of the functional usefulness of the Italian Supervisory Body's model, also and above all in light of the renewed and central importance attributed to the undertakings in the structure of the new Electronic Communications Code.

The discussion, however, on the future of the network has also found space in the international debate. Within the EU framework dedicated to the Digital Decade 2020-2030, the EU Commission launched in 2021 the Digital Compass, the strategy that sets out the targets and fundamental principles by which it will implement the digital transformation. In order to translate the EU's digital ambitions for 2030 into real terms, the Commission proposed a Digital Compass designed around a number of cornerstones, including a far-reaching policy for the creation of sustainable, secure and first-rate digital infrastructures.

In this international context, in May 2021, the Supervisory Board presented the **results of three studies**, **commissioned to Cullen International and Dr. Massimiliano Trovato**, researcher at the Istituto Bruno Leoni and IREF, concerning the comparative analysis of the separation and Equivalence models of the fixed network in the main industrialised countries, with the aim of providing an updated international benchmark towards which the current Italian separation model could be analysed.

In February 2021 the Supervisory Board **approved the 2021 Plan of Activities**, within which numerous tasks entrusted by the Authority were included, following a now consolidated trend of reciprocal collaboration with the Authority.

In this regard, the Supervisory Board continued to represent a useful reference model of public-private covigilance, in a consolidated multi year experience that has proven to be efficient and highly functional. Because of its 'proximity to the proof', which enables it to support the regulatory Authority in a critical area for the development of competition in fixed-network-based markets, the Supervisory Board can continue to carry out its task on the basis of the skills and the acquired technical experience, for a competitive telecommunication market and for the benefit of both business and consumers.

The decision of the national Authority (AGCom) to use the technical support provided by the Supervisory Board in its monitoring and verification activities, more intensely since 2016, has considerably broadened the scope of the Supervisory Board's action, setting out its new role, which is not merely the supervision of the compliance with the sector rules, but the contribution to the drafting of new principals, adherent to the new emerging technologies and services available.

For this reason, as in previous years, the 2021 Plan of Activities also incorporated the 2021 annual work plan defined by Agcom, which was divided into three areas of activity

- ordinary activities arising from the 718/08/CONS undertakings;
- support activities requested by Agcom, pursuant to Article 15-bis of the Supervisory Board Regulation;
- supervisory activities identified by the Supervisory Board.

Supervision of the 718/08/CONS undertakings

In 2021, the Supervisory Board continued to develop the supervisory activities related to the undertakings ex Resolutions No. 718/08/CONS and No. 395/18/CONS.

In relation to Group of Undertakings No. 2 (Establishment of a new incentive system and a code of conduct for Open Access and Wholesale function personnel) during the Supervisory Board meeting of 21 July 2021 Tim presented the short-term MBO 2021 incentive system for TIM managers (Executives and Managers identified on the basis of the complexity of the position held).

Within the same scope of Undertakings, the attention of the Supervisory Board remained constant with regard to the satisfaction index expressed by Wholesale operators concerning the quality of the services offered by Tim in the Delivery and Assurance processes. In this context, Tim has reported to the Supervisory Board on two occasions (February and December 2021) the results of the surveys carried out periodically to reveal the trend of the Customer Satisfaction Index.

In relation to Group of Undertakings No. 4 (Guarantees of transparency of the monitoring system), the Supervisory Board conducted monitoring of equal treatment based on the new KPIs defined by the Authority with Resolution No. 395/18/CONS. In particular, the data collected for all indicators, updated and made available on a monthly basis by TIM, were analysed, and any deviation, even temporary, between the performance of TIM Retail and that of the OAOs was analysed, carrying out specific focuses to ascertain the origin of the deviations detected.

In particular, with regard to Group of Undertakings no. 5 (Guarantees of transparency of Technical Plans for the Quality of the Fixed Access Network), in addition to carrying out an analysis of the relevant documentation, verifying the timely publication of reports on schedules and final balances, the Supervisory Board at its meeting on 25 May 2021, approved, pursuant to art. 18 of its Regulation, a report to be sent to AGCom and to TIM concerning the advisability of updating the contents of the Access Network Quality Technical Plans. The concept is to supplement them with information on preventive maintenance and desaturation interventions concerning the FTTC access network for the elements and component parts not included in the current reports (OLT, primary fibre, ONU, secondary copper network). The report (AS01/21), approved by Decision No. 9/2021, was sent to the Authority and to TIM. The indications suggested by the Supervisory Board were implemented by TIM, which updated the documents relating to the 2022 Technical Plan on Access Network Quality and the Q1 Programme at the beginning of 2022.

Within the scope of Group of Undertakings no. 6 (Guarantees of Transparency of Technical Plans for the Development of the Fixed Access Network), the Supervisory Board continued to verify the documents published, concerning both annual and quarterly programmes and final reports.

Annual Report 2022

Support activities requested by Agcom

The close cooperation between the Supervisory Board and AGCom continued in 2021, not only within the scope of the supervision of the commitments set forth in Resolution no. 718/08/CONS but, above all, through specific study and analysis activities requested by the Authority, as provided for in Resolution no. 623/15/ CONS.

In connection precisely with the relationship of cooperation between the Supervisory Board and Agcom, the Supervisory Board, on mandate from the Authority, conducted numerous support activities concerning various areas, including:

- a) the decommissioning of local exchanges;
- b) the verification of the correct calculation of non-discrimination Key Performance Indicators (KPIs);
- c) the application of a new methodology for calculating KPOs (Key Performance Objectives);
- d) the adjustment of the KPI-nd to take into account the impact due to disaggregation;
- e) the simplification of the indicator system;
- f) the verification of darkening of Assurance data (Resolution 396/18/CONS);
- g) the quality standards of network databases;
- h) the de-saturation of the ONU equipment of the FTTC network.

With regard to the Supervisory Board's support in the verification activities for the "decommissioning" process of local exchanges, on 15 January 2021 the Office took part in the second verification session chaired by AGCom aimed at verifying the coverage requirements prescribed by Resolution no. 348/19/CONS for those exchanges, within the first batch of 62 for which TIM has declared its intention to proceed with decommissioning, that also require the residual use of FWA technology to achieve 100% of the required NGA coverage.

During 2021, three sessions were carried out to verify the correct calculation of the non-discrimination **KPIs** in each of which two different ex 395/18/CONS indicators from the previous sessions were examined for a total of six KPIs. The KPIs were chosen on the basis of the greater significance of the service and the KPI itself. In addition to the consistency of the reported volumes, the correctness of the perimeter and the calculation algorithm were also verified in each audit.

During the first quarter of the year, activities were conducted to **test the application to KPI 395/18/CONS** of the methodology based on multivariate linear regression for the definition of KPOs, as requested by the Authority at the end of 2020. With reference to this issue, in September 2021 the Supervisory Board issued the technical report "Application to KPI Del. 395/18/CONS of the KPO-nd methodology based on multivariate linear regression" describing the results of the application of the methodology proposed by Prof. Giovanni Pica, Full Professor of the Faculty of Economic Sciences of the University of Italian Switzerland, and transmitting the study to AGCom.

Also in September 2021, the Supervisory Board approved the report 'Proposal to review the KPI- nd system referred to in Resolution 395/18/CONS to take into account the impact of process disaggregation. The document, after analysing the impacts on the KPI-nd 395/18/CONS due to the introduction of the possibility of the Provisioning and Assurance processes disaggregation and to the passage from processing to DAC to processing to SLA of ULL and SLU services, proposes some corrective actions to take into account the new context.

Regarding the **simplification of the system of indicators relating to regulated access**, the Supervisory Board made available to the Authority in November 2021 an updated version of the document "Proposal for the simplification of KPIs applied to regulated access" already sent to the Authority on 19 September 2019. The document analyses the KPIs applied to regulated access, proposing the elimination of KPIs that are obsolete, that overlap with those defined in Resolution No. 395/18/CONS or are inapplicable because they are based on the Old Equivalence Model.

8 Overview

With reference to Reslution n. 396/18/CONS, in February 2021 the Supervisory Board drew up and forwarded to AGCom a report on the supervisory activity, with the results of the verifications carried out, on TIM's Assurance systems, on the methodologies for encrypting sensitive customer information.

In the meantime, the **analysis of the quality standards of the NetMap network database** continued in compliance with the provisions of Supervisory Board Decision no. 9/2019.

In particular, the Supervisory Board continued monitoring by adding to the four KPIs already in use in previous years a fifth specific indicator to monitor the **level of accuracy of the geo-location** of the more than 33 million addresses in NetMap. This KPI makes it possible to check the effectiveness of actions to improve the quality of the database in relation to the exact location of the addresses of customer premises, an essential element in determining the type and quality level of the services provided. The analysis produced monthly reports on the performance of the five indicators made available to the authority on a monthly basis.

Active supervisory activity in support of the Authority also continued during 2021. This included the cycle of on-site inspections, carried out at TIM territorial operating premises, to confirm the correct management of work orders falling within those areas closed to commercial use because served by saturated NGN equipment (ONU and MSAN) of the FTTCab network. In particular, during the year, four more TIM territorial units (FOL - Field Operations Line) were audited: Naples; Lombardy Northwest, Emilia West and Rome, with a total of 315 apparatus and 1,622 work orders examined.

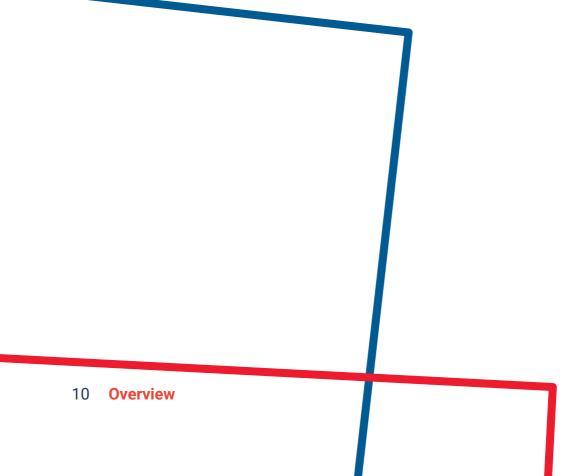


Supervisory activities promoted by the Supervisory Board

During 2021, the TIM-WIND TRE technical roundtable continued, chaired by the Supervisory Board and established following the "S01/2017" proceeding so as to reduce the reporting rate of faults (TdS) on the FTTC lines utilized by Wind Tre, which had at that time reported excessive values of line faults for its customers. In particular, network monitoring continued following the improvements implemented by TIM, thanks to which the nationwide Reporting Rate was brought back to the value around 21%.

In addition, following the agreement between TIM and WIND TRE on the implementation of the IVR testing procedure, aimed at limiting the post-delivery failure rate of services on active lines on the FTTC network, upon the request of the parties, the Supervisory Board continued to conduct monitoring of the two KPIs established by the technical table (post-delivery failure rate and test execution rate in terms of the ratio of tests performed and requested tests).

On the basis of the elements that have emerged from the above-mentioned activities, the Supervisory Board established a permanent observatory on the quality of the FTTC network for verifying the maintenance and, if possible, the improvement of the quality of connectivity services on the hybrid fibre-copper network platform offered by TIM to operators. The Observatory aims to be operational in the course of 2022, with the task of monitoring the annual plan of preventive maintenance and desaturation activities prepared by TIM for the FTTC network, verifying its implementation and measuring its effectiveness by observing it over time with appropriate quality indicators.



The outlook for 2022

In the year 2022, the Supervisory Board will be committed to ensuring the compliance with the Commitments and to support the Communications Authority.

The activities will continue focusing on the following four main principals:

2

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Supervision of the performance offered by TIM Wholesale to operators in the Delivery and Assurance processes of regulated network services (KPI 395/18/CONS and related KPO analysis, KPI evolution, KPI NetMap analysis);

TIM operating divisions inspection and supervision (checks on the management of saturated NGN nodes, verification of requirements for decommissioning local exchanges, tests on new IT releases);

Transparency of information supervision (technical plans for access network quality, technical plans for access network development);

Network quality supervision (observatory on FTTC network maintenance).

Glossary

AGCM	Competition and Market Authority
Agcom	Communications Regulatory Authority
AOA	Access Operations Area
DAC	Expected Delivery Date
DSLAM	Digital Subscriber Line Access Multiplexer
EAB	Equality of Access Board
EAO	Equality of Access Office
Eol	Equivalence of Input
EoO	Equivalence of Output
ERA	Equivalence and Regulatory Affairs
FTTB	Fiber To The Building
FTTCab	Fiber To The Cabinet
FTTH	Fiber To The Home
FTTN	Fiber To The Node
FTTP	Fiber To The Premises
GPON	Gigabit Passive Optical Network
IOG	Independent Oversight Group
KPI	Key Performance Indicator

КРО	Key Performance Objective
LA	Active Line
LNA	Non-Active Line
МВО	Management By Objectives
NGAN	Next Generation Access Network
NCD	New Delivery Chain
NGN	Next Generation Network
NME	New Equivalence Model
NPD	New Delivery Process
NWS	National Wholesale Services
OA	Open Access
OAO	Other Authorised Operators
ODF	Optical Distribution Frame
ODN	Optical Distribution Network
OdV	Supervisory Board
OLT	Optical Line Termination
ΟΝΤ	Optical Network Termination
OR	Reference offer

ΟΤΑ	Office of the Telecommunications Adjudicator
ОТВ	Optical Termination Box

