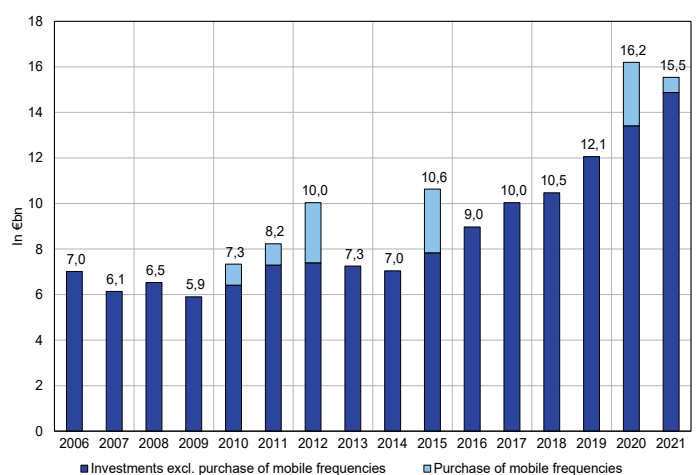


Competition in the French Electronic Communications Market

Arthur Dozias

- Historically operated by public or private monopolies, electronic communications networks were gradually opened up to competition across Europe from the 1990s onwards. In order to coordinate this process and ensure that incumbent monopolies do not abuse their position to disadvantage new entrants, a regulatory framework was established in each European country. In France, the regulatory framework was expanded in the early 2010s to prepare for the rollout of new fibre optic networks so as to maintain the competitive dynamics in place.
- As of 2022, four major fixed and mobile operators share the highly competitive French consumer electronic communications market. This intense competition is reflected in prices that are among the lowest in Europe. Furthermore, operators have been making significant investments (€14.9bn in 2021, excluding mobile licences) that have surged over the past few years, despite stable revenues (41% of turnover in 2021 versus 26% in 1998), due to the rollout of fibre optics in fixed networks. The investments made by these operators are some of the most robust on a European level.
- Competition is not as intense in the business market, despite its essential role in ensuring the digitalisation and competitiveness of companies. In 2022, just one operator held a vast majority of the market share. One of the regulator's priorities is to increase the competition of this market which is structurally slower to develop given major barriers to switching operators.
- Opening telecoms networks up to competition has broadly been a success in France and Europe. This has not prevented incumbent European operators from maintaining a significant foothold in new networks: in late 2021, Orange retained over 56% of fibre optic fixed access deployments in France.

**Investments by telecoms operators
in France, 2006-2021**



Source: *The Electronic Communications, Postal and Print Media Distribution Regulatory Authority (ARCEP)*.

1. The progression of competition in the French electronic communications¹ market

1.1 An asymmetric regulation of fixed networks granting market access to new entrants

Fixed telecoms networks (*i.e.* telephony and internet access) share certain features with natural monopolies, akin to other network industries (*e.g.* electricity, gas, postal services). Infrastructure creates major economies of scale, which make having a sole player responsible for their management more beneficial. For many years and across the globe, telecoms service provision was entrusted to public or private monopolies. In the 1980s, monopolies were challenged, deemed sub-optimal due to rent-seeking and a lack of incentive to innovate compared to an at least partially competitive environment. This paved the way to liberalisation across Europe.

The French State, through the Directorate-General for Telecommunications and subsequently France Télécom,² held a monopoly until 1 January 1998 when the market was opened up to competition. The French Telecommunications Regulatory Authority (ART) was established in 1997 to coordinate and support this process. ART, which later became the Electronic Communications, Postal and Print Media Distribution Regulatory Authority (ARCEP), is an independent administrative authority responsible for ensuring the regulation of the telecoms sector on behalf of the French State.

In fixed networks, after driving up service-based competition, new entrants gradually developed their own infrastructures in certain sections of the network (see Box 1). Initially they enjoyed access to France Télécom's³ incumbent copper network from 2001 onwards. With time, alternative players

became increasingly independent⁴ to compete against the incumbent, an indication of a shift towards infrastructure-based competition. From a regulatory standpoint, the development of competition and advancements in technology and applications resulted in a progressive drop in the number of markets regulated by ARCEP over the years.⁵

Starting in the mid-2000s, the sector saw a number of mergers between operators.⁶ Driving this move was the commercial pressures on converging fixed and mobile services to draw in more customers. The convergence of these services did not necessarily result in reduced competition, as it actually encouraged players historically operating in a single segment (fixed or mobile) to introduce new offerings, enter new market segments⁷ and diversify their services for the benefit of consumers.

In the 2010s, the large-scale rollout of fibre optic networks commenced within a legal framework defined upstream to promote investment (unlike the unbundling of the incumbent's copper network which was decided post-rollout). This framework established a principle of sharing the terminal part of fibre optic networks.⁸ Any operator providing fibre optic access to a subscriber (*i.e.* the infrastructure operator) must provide access (in return for payment and under the conditions laid down by ARCEP) to operators that wish to sell an internet access service to the subscriber (commercial operators). This mechanism works similarly to that adopted in the unbundling of the copper network, with Orange acting as the sole infrastructure operator. The commercial competitive balance in the copper network has therefore not been disrupted as a result of the rollout of new fibre optic

(1) Also referred to as "telecommunications" or "telecoms".

(2) France Télécom was renamed Orange in 2013.

(3) This was done to market the asymmetric digital subscriber line (ADSL) technology that combines telephony with internet access.

(4) Alternative operators increasingly used unbundling rather than bitstream to rent, at a rate set by the regulator, access to the incumbent's copper network and offer telecoms services to users. With unbundling, alternative operators access the local loop (*i.e.* the section of the network located between the user and the first level of the incumbent's equipment) and install their own equipment. For bitstream, alternative operators also rent the incumbent's equipment. As a result they pay a higher rental rate but have lower investment costs.

(5) For example, the retail fixed market and the wholesale SMS call termination market are no longer regulated. <https://www.arcep.fr/la-regulation/tableau-synthetique-des-analyses-de-marches.html> (in French only).

(6) The 2007 takeovers of (i) Club Internet by Neuf Cegetel, (ii) Neuf Cegetel by SFR and (iii) Numericable by Completel illustrate this trend.

(7) For example, Free's entry into the mobile market in the early 2010s in addition to its presence in the fixed market.

(8) Article L. 34-8-3 of the Postal and Electronic Communications Code.

Box 1: Theoretical methods for opening up to competition

Opening network infrastructures up to competition can be coordinated in a number of ways. Regarding service-based competition, entrants (competitors) rely on the incumbent's infrastructure, such as renting it to provide their services to consumers. The access conditions (rate-related or technical in nature) are laid down by the regulator. In cases of infrastructure-based competition, entrants roll out their own infrastructure.

In the long term, infrastructure-based competition can enable competition to exist between players with minimal government intervention. However, given the investments required, it could take time for competition to develop, which may even lead to inefficiencies (e.g. the wholesale duplication of infrastructure). Concerning service-based competition, new entrants stay dependent on both (i) the incumbent, who maintains control of the infrastructure, and (ii) the regulator, who determines the access conditions. Nevertheless, introducing service-based competition is quicker, giving new entrants the opportunity to test new services at a lower cost, and can act as a transitional phase for developing infrastructure-based competition.

Between these two diametrically opposed methods, and depending on the sections of the infrastructure effectively shared or opened up to competition, there are in practice many intermediate situations. This is the case for example in France with the rollout of fibre optic networks, which are shared at various levels in different geographic areas, mainly based on population density. By comparison, the rail sector is more driven by service-based competition, with just one rail network. To prevent discriminatory conduct, the Transport Regulatory Authority ensures and oversees the network's fair access and use.

networks.⁹ From a technical standpoint, Orange maintains a strong foothold across the networks, carrying out 56% of the rollout of fixed fibre optic access – equivalent to €16.5m – in late 2021.¹⁰

1.2 The 2012 market entry of Free and the mobile market's transformation

Unlike fixed telecoms, mobile telecoms have never been a state monopoly in France. In 1987, Société française de radiotéléphone (SFR) competed with France Télécom over first- and second-generation mobile communications (1G and 2G), with Bouygues Telecom entering the fray in 1994. This competitive dynamic was primarily attributed to the low cost of rolling out the local radio loop which brought subscribers of mobile plans onto the network of their operator. It was considerably less costly than a fixed wired local loop. It is inexpensive to duplicate mobile infrastructure (antennas) and maintain viable competition among several mobile infrastructure operators. The main barrier to entry faced by new entrants is obtaining the required frequency bands for mobile service provision. Frequency bands are

owned by the French State, who allocates them under operating licences so as to structure infrastructure-based competition. These licences were originally shared between three operators (Orange, SFR and Bouygues), but a fourth licence was granted to Free in 2012 to remedy the fragile and sluggish infrastructure-based competition between the existing operators.

Before Free's market entry, the mobile market suffered from high rents and prices. It was developmentally lagging, with mobile services penetration below the European average. Anticompetitive conduct was also present in the market. In 2005, the operators Orange France, SFR and Bouygues were fined¹¹ €534m for engaging in cartel conduct (exchange of strategic information relating to new subscriptions and cancellations, collusion on market shares).

Since 2005, however, there have also been so-called "virtual" mobile operators such as Virgin Mobile and La Poste Mobile, who rent the infrastructure owned by traditional operators and establish service-based competition. They offer cheap phone plans, often commitment-free, that stand out from other

(9) ARCEP (13 July 2022), *Bilan et perspectives de la régulation des marchés fixes en France* (in French only).

(10) ARCEP (8 September 2022), *Observatoire haut et très débit : abonnements et déploiements* (in French only).

(11) Competition Council (now known as the Competition Authority), Decision 05-D-65 of 30 November 2005.

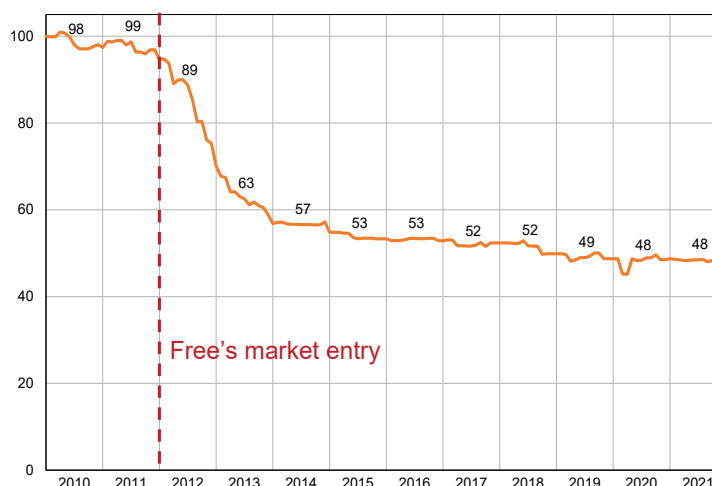
traditional operators by generally targeting niche markets with specific needs not met by the services offered by major operators, such as data-free plans, a young-consumer focus, and offerings centred on music and multimedia content. Even so, these virtual mobile operators, who continue to be dependent on traditional operators, have not been able to shift the structural balance in place in the mobile market.

In 2012, the entry of Free in the mobile market – already present in the fixed network segment – shook up the market structure. Free developed an aggressive strategy centred on contract-free plans at prices significantly lower than those set by its competitors. Thanks to this strategy Free managed to quickly increase its subscriber numbers to the detriment of other mobile operators. At 31 December 2014, Free had 10 million mobile customers and

held 15% of the market.¹² To coincide with this new market entry, Free signed a roaming contract – the terms of which were laid down by ARCEP – giving it access to Orange’s network and consequently national 2G and 3G coverage starting from March 2011. With this contract, Free met the conditions necessary to launch its mobile services in 2012.

Consumers reaped major benefits from Free’s market entry,¹³ enjoying price drops and a wider range of offerings and services.¹⁴ This shift in the competitive equilibrium forced the three incumbents (Orange, Bouygues Telecom and SFR) to review their services, notably by forming low-cost and commitment-free subsidiaries (RED by SFR, Orange’s Sosh and Bouygues’ B&You). According to ARCEP, prices in the mobile market fell by approximately 45% between 2011 and 2016 (see Chart 1).

Chart 1: Change in mobile service prices in France (base 100 in January 2010)



Source: ARCEP.

Note: The price index for mobile services reflects, for a given communications service, the change in service prices excluding the direct impact of the change in the volume of services consumed and any changes in the customer base.

(12) Free – Iliad Group (12 March 2015), *Communiqué de presse des résultats 2014* (in French only).

(13) In 2014, the UFC-Que Choisir federal consumers union estimated that Free Mobile’s market entry added €6.83bn in purchasing power over two years. The average subscription bill amount dropped 30% to €16.9 versus €24.1 at end-2011. iGeneration (29 April 2014), *L’impact de Free Mobile sur le marché des télécoms mesuré par l’UFC-Que Choisir* (in French only).

(14) M. Bourreau, S. Yutec, F. Verboven (2021), “Market Entry, Fighting Brands, and Tacit Collusion: Evidence from the French Mobile Telecommunications Market”, *American Economic Review*. M. Berne, P. Vialle, J. Whalley (2019), “An Analysis of the Disruptive Impact of the Entry of Free Mobile Into the French Mobile Telecommunications Market”, Northumbria University Research Portal.

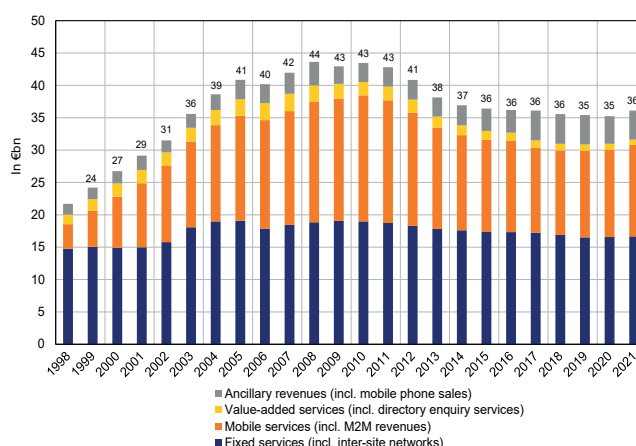
2. Stronger competition in the consumer market than the business market

The revenues of operators in the retail market doubled in the 2000s, driven by additional revenues generated from mobile services (see Chart 2). Starting in the 2010s, revenues fell under the impact of lower prices resulting from Free's market entry, plateauing for several years around the €36bn mark. In 2021, operator revenues picked up again (growing 2.5%) for the first time in several years thanks to the post-pandemic rebound of mobile services and the upward trend in fibre optic subscriptions beginning in 2020.

2.1 A consumer market dominated by four highly competitive operators

Various developments – opening up the market to competition, Free's market entry, consumer interest in unique offerings – occurred alongside a convergence¹⁵ of fixed and mobile services provided by operators, whether through internal development¹⁶ or takeovers.¹⁷ Between 2009 and 2014, the telecoms market doubled from two operators (Orange and SFR) to four so-called “converged” operators (*i.e.* offering both fixed and mobile services). An operator's presence in both sides

Chart 2: Change in operator revenues in France in the retail market



Source: ARCEP.

Note: 2017 saw a break in the series following an accounting standard change.

of the market generates economies of scale through the sharing of certain infrastructures. In 2021, the level of competition in the consumer retail market was generally satisfactory, with balanced market shares across the fixed and mobile segments (see Table 1). The emergence of fibre optics did not affect these shares.¹⁸

Table 1: Main indicators of the four largest telecoms operators in France

2021 indicator	Orange France	SFR (Altice France)	Bouygues Telecom	Free (Iliad France)
Turnover in France ^a	€18.1bn	€10.7bn	€7.3bn	€5.2bn
Turnover growth rate (versus 2020)	-2.0%	+1.4%	+12.7% ^b	+3.8%
No. of fixed service subscribers (% of total)	12.3m (40%)	6.7m (22%)	4.4m (15%)	6.9m (23%)
No. of fixed FttH service subscribers ^c (% of total)	5.9m (37%)	4.0m ^d (25%)	2.3m (14%)	3.8m (24%)
No. of mobile service subscribers ^e (% of total)	20.0m (29%)	19.6m (29%)	14.8m (22%)	13.6m (20%)

a. Turnover includes market revenue between operators (*e.g.* interconnections, wholesale).

b. Excluding the acquisition of several virtual operators, the organic turnover growth rate of Bouygues Telecom is 5%.

c. FttH: Fibre to the Home. The concept differs from FttB (Fibre to the Building), where the last few metres of the cable can be made of copper (VDSL) or coaxial cable (DOCSIS).

d. The SFR figure for its fibre optic subscribers is greater than its FttH subscriber figure since it includes FttB and 4G Box customers.

e. The number of mobile service subscribers is the number of mobile plans taken out under a contract in France (excluding MVNOs, M2M and prepaid offerings).

Source: Annual operator results, DG Trésor calculations.

Note: The figures do not necessarily reflect those published by ARCEP in its analyses as the scopes used may differ slightly.

(15) A converged operator is one that provides both fixed and mobile offerings to consumers.

(16) Bouygues Telecom, formerly operating only in the mobile services market, diversified into the fixed services market, and Free, a provider of fixed services, acquired a licence to develop mobile services.

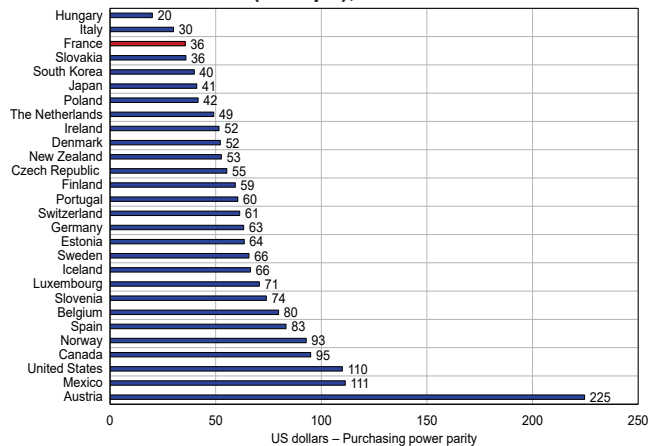
(17) SFR, a mobile operator, merged with Numericable, a fixed operator, in 2014.

(18) ARCEP (13 July 2022), *op. cit.*

2.2 Strikingly low prices for consumers

Bolstering competition within the telecoms market worked out well for consumers, who benefited from a drastic fall in telecom service prices (see Chart 1). Between 1998 and 2021, declining telecoms service prices contributed –1 percentage point to the cumulative change in the consumer price index, half of which was attributed to the two-year period following Free’s entry onto the mobile market. France today has one of the lowest price rates in Europe and worldwide in both the mobile¹⁹ and fixed markets (see Chart 3). In 2021, prices stabilised thanks to users who paid more after switching to fibre optics or 5G to ensure faster speeds and additional services provided by operators not present across all areas. Subscribers spent an average of €33.20 per month in 2021 (up 0.9% versus 2020)²⁰ for their fixed internet subscription (high-speed or very high-speed plans), which may also include, depending on the plan, access to the internet, a landline and audiovisual services (e.g. triple play services). For mobile services, the average monthly bill for a mobile plan is €15.70 per month (up 2.7% versus 2020).

Chart 3: Prices of very high-speed fixed plans (1 Gbps), 2019

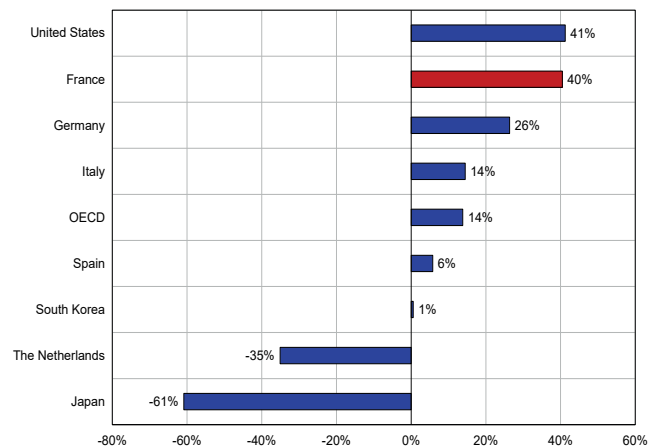


Source: OECD Digital Economy Outlook 2020.

2.3 High levels of investment

Since 2014, a high and increasing level of investment has been made by telecoms operators in the fixed and mobile sectors totalling €15bn (excluding mobile licences) in 2021, compared to €7bn in 2014 (see Chart on page 1). Concerns about reduced investment following Free’s entry into the mobile market in 2012 proved to be unfounded. In 2020, these investments accounted for just over 5.5% of total investment by businesses (excluding agriculture and financial services), while the telecoms sector represented only 2.6% of the value added of these businesses.²¹ France is one of the countries experiencing the most investment growth between the ten-year period of 2009 to 2018 (see Chart 4). This growth is mainly attributed to a sharp increase in fixed services investment, with mobile services investment remaining stable. Rollouts in the fixed very high-speed local loops, and particularly fibre optic lines, are the main expense for operators. This growth reflects the success of the High-Speed Broadband Plan (PFTHD) – the French State’s strategy to support the rollout of fibre optics – and the investment capacity of operators despite stable revenues in a highly competitive market, with low prices and a narrowing profit margin rate.

Chart 4: Change in investments in a selection of countries, 2009-2018



Source: OECD Telecommunications Database, DG Trésor calculations. Change in euros at current prices.

(19) European Commission (February 2022), “Mobile and Fixed Broadband Prices in Europe 2020”.

(20) ARCEP (15 December 2022), *Marché des communications électroniques en France – Année 2021 – Résultats définitifs* (in French only).

(21) Source: INSEE, ESANE 2020, year 2020.

2.4 Weaker competition in the business market

The telecoms market serving businesses accounted for a quarter of revenues in electronic communications services in 2021 (€8.1bn). The priority focus in this market is service quality, particularly the guarantees expected in relation to speeds, continuity of service and the maximum time to re-establish a connection after a breakdown.

In 2021, fixed services represented 71% (€5.7bn) of revenues from services provided to businesses.²² There are two types of offerings:

- The professional services to which small businesses subscribe are similar to the consumer services, and combine internet access and telephone services. In 2021, small businesses spent on average €96 per month for such services.
- The services to which medium-sized and large businesses subscribe address specific needs in terms of their features, performance and service quality. In 2021, medium-sized and large businesses spent an average of €335 per month on internet access: one single business may subscribe to several access packages depending on the size and number of sites it has. Telephone service plans are generally marketed separately from internet access packages.

Mobile services available to businesses are similar to consumer services. In 2021, the average bill for a business plan (€16.20 per month) was approaching the cost of a bill for a consumer plan (€15.70 per month).

While competition is robust in the consumer market, the business market is more rigid and less competitive. Businesses still face many obstacles when switching operators: comprehensibility of services offered by operators; costs – whether actual or perceived – resulting from the switch; concerns about business shutdown during the migration period; misunderstandings relating to the services offered by operators; contractual practices that hinder the switch (e.g. tacit renewal,

rigid contract termination procedures). Orange also holds significant market shares in the retail and wholesale markets (over 50% at end-2021).²³

More intense competition between operators in this market segment would encourage the digitalisation of SMEs and result in productivity gains, also helping to make the economy more resilient.²⁴

To intensify competition in the fixed services market, ARCEP has for several years demonstrated a willingness²⁵ to develop the wholesale market. This is to be achieved by pushing for a broader service range, with differentiated levels of quality and more affordable subscriptions that meet the various needs of businesses and the operators providing them in the retail market. In late 2020, ARCEP also renewed²⁶ Orange's obligations to accede to the requests for reasonable access to its network in order to develop the wholesale market and step up the uptake of fibre optics among businesses. In June 2022, ARCEP also conducted a public consultation to expand telephone number portability (fixed and mobile) in the business market within a few years. Portability is vital for users to reduce their transfer costs and also to ramp up competition among operators.

While the business market is still considerably concentrated, the competitive situation seems to be changing. In late 2020, Bouygues set itself the goal of doubling its market share in the fixed business segment by 2026. In March 2021, Free announced its first business services offering.²⁷

The Competition Authority also ensures that competition law is respected in the business market. In 2015, the authority fined²⁸ Orange €350m for anticompetitive conduct – involving discriminatory and exclusionary practices – over a span of almost ten years in business markets. The operator was also required to comply with various enforcement orders.²⁹ These abuses have been hampering the development of competition in the business market since the early 2000s.

(22) ARCEP (16 December 2021), *Les services de communications électroniques : le marché entreprises – Année 2020*.

(23) ARCEP (13 July 2022), *op. cit.*

(24) R. Faquet and V. Malardé (2020), "Digitalisation in France's business sector", *Tresor-Economics* No. 271.

(25) ARCEP (6 February 2020), *Régulation des marchés fixes - Projet d'évolution de la régulation pour 2020-2023* (in French only).

(26) ARCEP (17 December 2020), *Régulation des marchés fixes* (in French only).

(27) *Le Monde* (24 March 2021), *Free prêt à bousculer le marché des télécoms d'entreprise* (in French only).

(28) Competition Authority (17 December 2015), *Decision 15-D-20*.

(29) Introduction of a system within 18 months to guarantee the provision to operators of information relating to the copper local loop under the same rules and conditions as those provided to its own sales and marketing divisions; cessation of loyalty rebates and exclusivity allowances.

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Agnès Bénassy-Quéré

Editor in chief:

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tresor-eco@dgtrésor.gouv.fr

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