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Annex A to Decision No 64 of 19 June 2019

Toll charging system concerning the Single Concession Agreement ANAS S.p.A. – Raccordo Autostradale Valle d'Aosta S.p.A.

CONTENTS

Part 1

1. General principles

1.1 The charging System is based on the *"price cap method, with determination of the productivity factor X every five years for each concession"*, pursuant to Article 37 (2) (g) of Decree-Law No 201/2011, converted, with amendments, into Article 1 (1) of Law No 214 of 22 December 2011, as further amended by Article 16 (1) of Decree-Law No 109 of 28 September 2018, converted, with amendments, into Law No 130 of 16 November 2018.

1.2 The charging System established by the Transport Regulation Authority (hereinafter: Authority) is characterised as follows:

a) five-year regulatory period;

b) differentiation of activities between:

b.1) activities which are directly subject to charging regulation;

b.2) activities which are not directly subject to charging regulation, but are relevant for the purpose of allocating the extra profitability from the performance of ancillary activities (cf. paragraph 3.1.b);

B.3) activities which are not relevant for the charging system;

c) identification of the methods for determination of toll charges, through:

c.1) identification of the perimeter of the concessionaire's eligible costs and related evaluation;

c.2) identification of the initial maximum charging level, to be determined *ex ante* by using the references and criteria specified below, in relation to each charge component and to the associated estimated traffic volumes;

c.3) application of the "*price cap method, with determination of the productivity factor X every five years for each concession*", as established by the Authority (cf. paragraph 20), for the operational charge component;

d) effective safeguard system, in line with the approach of the model based on the price-cap method, aimed at directly transferring, in terms of reduced charges, any increased revenues that may result from final traffic volumes that are overly beyond the (potentially underestimated) traffic forecasts;

e) comprehensive penalty/premium system for the quality of the services offered, aimed at providing to the grantor of the concession, at least within pre-defined thematic areas, the possibility of identifying the indicators and the related quality targets, monitoring their achievement, assessing the motorway concessionaire's performance, and consequently immediately applying a penalty/premium system with a direct effect on the user charges;

f) automatic system of charge adjustment associated with actual degree of implementation of investments and supplemented by applicable penalties if the delay in making the investments is attributable to the concessionaire;

g) accounting separation obligations for the concessionaire and provision of related regulatory accounting system.

2. Definitions

2.1 **Concession period**: duration of the concession as provided for by the convention, which serves as a basis for drawing up Business Plan and Regulatory Financial Plan.

2.2 **Regulatory period**: a five-year period, at the end of which both the Business Plan and Regulatory Financial Plan are updated, in compliance with the principles and criteria set out in this document, also with regard to the revision of price cap parameters (including costs - which are better defined in paragraph 5.5 - that are referred to base year, traffic forecasts and the productivity factor X) and the WACC.

2.3 **Previous charging system**: charging system provided for by the concession agreement in force on the date of publication of this charging System on the Authority's website.

2.4 **Base year:** last financial year for which approved financial statements are available, drafted according to statutory requirements and certified by an external audit firm, on the basis of which the concessionaire may draw up the regulatory accounting data.

2.5 **Bridge Year**: year between base year and first year of the regulatory period, during which the concessionaire fulfils the requirements concerning the preparation and submission to the grantor of the concession and to the Transport Regulation Authority of the proposal for revision of the Business Plan and of the Financial Regulatory Plan.

2.6 **Price cap**: method used to determine and update charges, that identifies an upper constraint to the dynamics of the "operational charge" component (as defined in paragraph 5.2), for each year of the regulatory period, and a realignment thereof, by applying the productivity factor X_t.

2.7 **Overall rate of recovery of production efficiency X***: overall productivity recovery rate established for the concession every five years by the Authority, as derived from evidence of the econometric model referred to in paragraph 2.11.

2.8 **Productivity factor X_t**: percentage factor of annual adjustment (according to price cap formula) of the operational charge component that is attributed to each regulatory period (and, where appropriate, variable within the same period), as derived from X* value.

2.9 **Reversible assets**: assets to be transferred free of charge to the grantor of the concession upon expiry of the concession, that are depreciated in each year on the basis of their residual use, taking into account the duration of the concession.

2.10 **Non-reversible asset**: assets - largely consisting of goods such as buildings, vehicles, furniture, office furniture, office equipment - which cannot be transferred free of charge to the grantor of the concession upon expiration of the concession period and are depreciated in each year on the basis of their residual use, taking into account their life span and residual value, if any.

2.11 **Stochastic frontier efficiency model**: model adopted by the Authority to identify - on the basis of benchmarking analyses built on the historical dataset of national motorway concessionaires - the efficient costs thereof as a function of technical and economic variables, including the length (km) of the operated motorway sections. This model, that was first used in ART Decision No 70/2016 on the optimal concession size in terms of network, has been later applied by the Authority to determine the productivity factor X every five years, as of Decision No 119/2017.

2.12 **Additional charges**: any specific charges to be paid by the concessionaire to the State or other entities as previously identified, in accordance with pre-determined procedures and timing, which result from legal requirements or contractual obligations related to the concession of the motorway sections in question.

2.13 **Regulatory Financial Plan (RFP)**: unified financial and regulatory planning model which is drawn up by the concessionaire in accordance with the format adopted by the Authority (Annex - Table 1), to be attached to the concession scheme and annually updated for verification of compliance of the charging System adopted.

2.14 **Notional items**: positive or negative notional charge components, which are targeted at ensuring gradual price changes, also for the purpose of avoiding imbalances in the system, including lack of coordination of the cash flows generated by motorway operation and financing needs for realisation of new investments.

2.15 **Revenue sharing**: safeguard system, based on the deviations of estimated traffic volumes from the relevant final values, aimed at limiting the realization by the concessionaire of increased revenues resulting from underestimating the traffic volumes indicated in the RFP.

2.16 **Takeover value**: compensation borne by the incoming concessionaire for investments concerning approved works that have been already executed by the concessionaire and have not been yet amortized upon expiry of the concession. The compensation shall be equal to the cost actually borne, net of depreciation, of the reversible assets as resulting from the financial statements on the date of the year in which the concession expires, and net of necessary changes made for regulatory purposes.

2.17 **Works executed or in progress**: for charging purposes, the works approved by the grantor of the concession are considered to be executed or in progress where, on the date of publication of this charging System on the Authority's website, they are: (i) already executed, (ii) in progress, as the contract for awarding of the works has already been concluded or, if earlier, works have been already delivered.

2.18 **Works to be executed**: for charging purposes, the works approved by the grantor of the concession are considered to be executed where, on the date of publication of this charging System on the Authority's website, they are: (i) works to be carried out, for which no awarding contract has been concluded yet or, if earlier, works have not been delivered yet, or (ii) subject to new agreements.

3. Identification of relevant activities

3.1 For the purpose of regulating the charging system, the activities of the concessionaire are divided into:

a) **Motorway activities**: activities related to design, construction, operation, ordinary and extraordinary maintenance of motorway sections intended for road traffic, as covered by the concession;

b) **Ancillary activities**: activities linked to the commercial exploitation of motorway areas and related appurtenances of the sections covered by the concession, that are not pertinent to road traffic,

including (i) fuel and lubricant distribution services and commercial and catering services in rest areas, (ii) ducts; (iii) road signs and information boards; (iv) technology and information services;

c) **Non-relevant activities**: activities other than those referred to under (a) and (b).

3.2 The toll charging System relates to motorway activities only, without prejudice to the takeover of extra-profits from ancillary activities, as referred to under paragraph 11.2.

4. Purpose of toll charging System and application of price cap method

4.1 The toll charging system is aimed at ensuring:

a) annual dynamics of the "operational charge" component as per paragraph 5.2 which is based on the application of the price cap method and is consistent with the achievement of the productivity recovery target;

b) that, with reference to the concession period, the concessionaire achieves, in accordance with the cost-orientation principle as recognised by the grantor of the concession on the basis of the principles and criteria laid down by the Authority (cf. Part 2), a return on invested capital equal to the pre-tax rate of return referred to under paragraph 16 and 17[1], with respect to investments:

- made on (reversible) assets covered by concession, including the takeover value actually paid. The takeover value, subject to the assessments of the grantor of the concession, may be reduced by:
  (i) pre-established reserves for late investments, as provided for in the convention;
  (ii) "debt of notional items", allocated to the provisions for risks and charges, consisting of toll revenues exceeding the costs allowed as remuneration by the grantor of the concession;
- made on the concessionaire's (non-reversible) operating assets, where relevant and efficient.

4.2 The correct application of the charging System is checked by the Authority annually in the exercise of its responsibilities, in accordance with the provisions of article 37 (2) (c) of Decree-Law No 201/2011. In particular, after transmission of the Regulatory Financial Plan by the grantor of the concession, the Authority verifies the following:

a) correct application of the price cap method, referred to under paragraph 18, to the "operational charge" component as per paragraph 5.2;

b) equivalence of discounted value of expected toll revenues, related to the "construction charge" component, and of expected eligible costs related to investments, obtained by discounting the relevant amounts at the nominal rate of return on capital as referred under paragraph 16.6 (b);

c) congruity of any notional items, referred to under paragraph 25 and zeroing of the relevant overall amount, obtained by discounting the relevant amounts at the nominal rate of return on capital as provided for under paragraph 16.6 (b);

d) compliance with the principles and criteria for eligibility referred to in Part 2.

[1] To assess profitability, the concessionaire, depending on the option chosen (see paragraph 12.3), may refer to one of the following values of the rate of return on invested capital (WACC or IRR):
- real rate, in case of option for revalued net invested capital (NIC);
- nominal rate, in case of option for accounting net invested capital (NIC).

5. Average unit charge

5.1 The **average unit charge** is the average unit price, expressed in euro per vehicle*km, of the tolls charged by the concessionaire on the different classes of vehicles and types of motorway sections, weighted by traffic volumes.

5.2 The average unit charge is the sum of two separate components:

a) **"Operational charge" component** ($\boldsymbol{T_G}$): in compliance with the charge dynamics under paragraph 18, including the productivity gain from efficiency, it is aimed at allowing the recovery of: (i) operating costs, including those for ordinary maintenance and use, averaged on a five-year basis, of the provision for cyclical maintenance of the motorway infrastructure, as estimated with reference to the base year for each regulatory period, as well as of incremental operating costs associated with new investments and new laws and regulations; (ii) capital costs (depreciation and return on invested capital) related to the operating assets for concession management, which are not reversible upon expiry of the concession;

b) **"Construction charge" component ($\boldsymbol{T_K}$)**: aimed at allowing the recovery of capital costs (depreciation and return on capital) related to those assets which are reversible upon expiry of the concession, including takeover value to be paid to the outgoing concessionaire as referred to in paragraph 2.16, the cost of works executed in connection with the investment plans covered by the concession, including planned extraordinary maintenance.

This average unit charge, for each year t of the concession period, can be represented as follows:

$$T_t = T_{G,t} + T_{K,t}$$

5.3 Where the concession agreement, or any amendments thereof, provide for the payment of additional charges as referred to in paragraph 2.12, the average unit charge shall be supplemented by a **charge component for additional charges ($\boldsymbol{T_{OI,t}}$)**, aimed at recovering these charges, by identifying an annual fee that is not subject to the price cap dynamics.
The average unit charge, possibly supplemented by the above component (hereinafter: "**integrated average unit charge")** is as follows:

$$T'_t = T_t + T_{OI,t}$$

5.4 For the purpose of charge modulation, the following relationship must be satisfied for the integrated average unit charge T'_t for year *t*:

$$T'_t = \frac{\sum_{i=1}^{n} p_i^t q_i^t}{\sum_{i=1}^{n} q_i^t}$$

with p_i^t and q_i^t as kilometre charges and kilometres relating to vehicles belonging to the *i-th* of *n* elementary charging classes in year *t*, respectively.

5.5 For the correct calculation, for each year of the charging period, of the charging components referred to under paragraph 5.2 and 5.3:

- the level of operational costs C_G (to apply within the charging formula under paragraph 18 below and in relation to the base year) is determined according to the following formula:

$$C_G = (C_o - E_{aa}) + C_{a,nr} + C_{rc,nr}$$

- the level of construction costs C_K is determined as follows:

$$C_K = C_{a,r} + C_{rc,rA} + C_{rc,rP}$$

with:

C_o operating costs as referred to in paragraph 5.2 (a);

E_{aa} extra profits from ancillary activities, as specified in paragraph 10.4;

$C_{a,nr}$ depreciation costs related to the operating assets for the concession management, which are not reversible upon its expiry;

$C_{rc,nr}$ costs related to the return on capital pertaining to the operating assets for the concession management which are not reversible upon its expiry.

$C_{a,r}$ depreciation costs related to reversible assets upon expiry of the concession;

$C_{rc,r}$ cost related to the return on capital concerning the NIC of works executed or in progress as referred to under paragraph 2.17;

$C_{rc,rP}$ cost related to the return on capital concerning the NIC of works to be executed as referred to paragraph 2.18.

- the level of costs for any additional charges C_{OI} is determined as annual share of the additional charges referred to in paragraph 2.12.

The above cost components are defined in Part 2.

5.6 The integrated average unit charge, separately for each of the charge components referred to in paragraphs 5.2 and 5.3, is estimated *ex ante*, on an annual basis and for each regulatory period, in accordance with paragraphs 18, 21 ad 22.

5.7 For the purposes of determining the charge components referred to herein, the analytic method used for traffic forecasts shall be characterised by transparency and reproducibility. Further, it shall be such to allow the entities entitled thereto to make simulation, sensitivity and risk analyses.

5.8 The above forecasts are updated at the end of each regulatory period.

6. Modulation of charges

6.1 Based on the average unit charge referred to in paragraph 5, for each year of the concession period, the concessionaire, in compliance with existing legislation and at equal total revenue, as estimated on the basis of the charge, determines the tolls for the different classes of vehicles and types of the motorway section. The modulation of the charge according to class of vehicle, to be applied with regard to its environmental impact, is determined in accordance with relevant legislation.

6.2 The concessionaire may be authorized by the grantor of the concession to apply further modulation of charges in addition to those referred to under paragraph 6.1, still at equal total revenue, as estimated on the basis of the charge, that may include, but are not limited to:

a) different and/or more segmented classification of vehicles, also gradually overriding the “axle-gauge” principle, as provided for by inter-ministerial decree no. 2691 of 19 December 1990;
b) classification of motorway sections based on assessment criteria concerning predominant use, incidence of construction and/or maintenance costs, traffic level;

c) breakdown by time slots (e.g.: peak/off-peak hours);
d) daily differentiation (e.g.: working days/holidays);
e) type of freight traffic (e.g.: modal/intermodal);
f) reductions for frequent users.

6.3 Without prejudice to the application of the relation described under paragraph 0 concerning the integrated average unit charge, the charge modulation shall be governed by the principles of transparency, equity and non-discrimination.

6.4 The Authority verifies in advance the compliance of charge modulation, and any following changes thereof, with the charging System described herein.

7. Further charge variations

7.1 Where provided for by relevant legislation, the grantor of the concession may introduce upward or downward adjustments in the integrated average unit charge referred to in paragraph 5 above.

7.2 If the grantor of the concession intends to apply this option, the overall charging levels defined by the concessionaire - including any changes under paragraph 7.1 - in addition to ensuring full compliance with the criteria contained in the relevant legal provisions, are subject to the compliance with the following principles, in accordance with Article 37 (2) (a) of Legislative Decree No 201/2011:

a) management production efficiency, including strict compliance with the purposes of the charging system, as defined in paragraph 4.1 and in compliance with paragraph 5;
b) cost containment for users, businesses and consumers;
c) transparency, equity and non-discrimination of users.

7.3 Any income resulting from the variations referred to in paragraph 7.1 may in no way contribute to the concessionaire's profitability.

7.4 The Authority verifies the compliance of the charge variations referred to in paragraph 7.1 prior to their application by the concessionaire, and of any changes thereof, with the charging System described herein.

8. Additional charges

8.1 The charge, that is determined in accordance with the preceding paragraphs 5, 6 and 7, shall be supplemented as follows:

a) any payment that the concessionaire is required to pay to qualified entities, namely:
   a.1) annual fee within the meaning of Article 1 (1020) of Law No 296 of 27 December 2006, set at 2,40 % of net toll revenue;
   a.2) additional fee referred to in Article 19 (9-b*)* of Decree-Law No 78/2009, converted into Law No 102/2009, as supplemented by Article 15 (4) of Decree-Law No 78/2010, converted into Law No 122/2010;
   a.3) taxes and any other charges required by law;
b) additional charges payable by OTM for road infrastructure upgrading referred to in Article 34 (2) of Legislative Decree No 285 of 30 April 1992.

Part 2

9. General criteria for eligibility of costs

9.1 The eligibility of operating and capital costs for charging purposes, as regulated by this charging system, is subject to the following general criteria:

a) **relevance:** costs and other negative economic components shall be considered eligible if, and to the extent that, they are related to motorway activities and additional activities referred to under paragraph 3.1 (a) and (b);

b) **proportionality:** costs and other negative economic components are considered eligible if, and to the extent that, it is verified that they are proportional for pre-established purposes. The proportionality is assessed on a case-by-case basis, with respect to planned targets, historical patterns and impact of multiannual commitments in the concession period;

c) **accrual basis:** costs and other negative economic components are eligible if they are related to the relevant accrual period;

d) **allocation to income statement:** operating costs and other negative economic components are eligible if, and to the extent that, they are allocated to the income statement of the relevant accrual period, without prejudice to the specific eligibility criteria illustrated below;

e) **separation:** the different elements included in the individual cost items shall be reported separately;

f) **comparable values:** the values reported in the analytic accounting sheets referred to in Part 4 shall be comparable with the items included in the Regulatory Financial Plan;

g) **verifiable data:** the costs indicated in the analytic accounting, referred to in Part 4, shall be verifiable through reconciliation with the data resulting from general accounting and financial statements.

10. Eligibility criteria of operating costs

10.1 For the allocation and eligibility of operating costs, with reference to the concessionaire's financial statements, there shall be taken into consideration the costs that are attributable to items 6, 7, 8, 9, 11 and 14 (except for the charges under paragraph 8.1) referred to in Article 2425 of the Civil Code, or similar items in case of adoption of IAS/IFRS international accounting standards or in case of direct management of the concession by local authorities.

10.2 Likewise eligible are the provisions for cyclical maintenance of the motorway infrastructure, based on the average amount thereof in the five years preceding the bridge year.

10.3 In addition to the costs that are attributable to the activities referred to in paragraph 3.1 (c) above, the costs specified here below are non-eligible costs for regulatory purposes and under no circumstances may they be considered within the perimeter of operating costs:

a) financial charges;

b) taxes, except for regional tax on productive activities (*Imposta Regionale sulle Attività Produttive - IRAP*) on labour cost and local taxes;

c) provisions of any kind;

d) value adjustments in respect of tangible and intangible assets;

e) extraordinary charges, i.e. charges which, in the light of the criterion of relevance, are not attributable to the ordinary production process of motorway activities as referred to under paragraph 3.1 (a);

f) charges of any kind arising from non-compliance with rules and regulations.

10.4 The eligibility of operating costs pertaining to any additional charges is assessed by the Authority based on the specific nature and purpose of these costs, with particular regard to the principles of management production efficiency, including in relation to the optimal management areas defined by Authority's Decision No 70/2016.

11. Treatment of margins from commercial activities

11.1 The amount of operating costs, with reference to the initial level of the operational charge component, is calculated after deduction of the extra profits arising from the ancillary activities referred to under paragraph 3.1 (b).

11.2 The extra profit is determined by the difference, minus a reasonable profit, which is approximated to the rate of return on invested capital under paragraph 16, between the following economic components that are valued at the base year:

a) revenues arising from such activities;

b) sum of operating costs and any depreciation allocated to the same activities, that are eligible under the criteria set out herein.

12. Net invested capital (NIC)

12.1 The net invested capital (NIC) is given by the amounts of the following tangible and intangible fixed assets, net of depreciation, provided they are recognised by the grantor of the concession upon the assessments referred to in paragraph 32.2 (d):

a) **non-reversible assets**, related to initial allocation or acquired during the concession, as quantified as at the 1st of January of the base year of each regulatory period, provided they are necessary for motorway operation;

b) **reversible assets**, related to investments made in the concession period, quantified as at the 1st pf January of each year of the regulatory period, including the takeover value that has been already paid.

The NIC related to these assets is in turn divided into two categories:

i. NIC of the works executed or in progress referred to in paragraph 2.17, to which the safeguard system under paragraph 17 applies, that ensures the internal rate of return provided for by the previous charging System;

ii. NIC of the works to be executed referred to in paragraph 2.18, to which the rate of return referred to in paragraph 16 applies.

12.2 Subject to the conditions laid down in this Part, in order to determine the net invested capital, eligible for charging purposes, with reference to the entire concession period, are the costs that may be charged to items B-I (1. formation expenses; 2. development costs; 3. industrial patent rights and rights of use of intellectual property; 4. concessions, licenses, trade-marks and similar rights; 6. fixed assets

under construction and advances; 7. other) and B-II (1. land and buildings; 2. plant and machinery; 3. industrial and commercial equipment; 4. other assets; 5. assets under construction and advances) of article 2424 of the Civil Code, or similar items in case of adoption of IAS/IFRS international accounting standards, after deduction of any residual value upon expiry of the concession or at the end of the useful life.

12.3 For the purpose of including in the reversible assets those without physical substance, eligible for charging purposes are:

a) rights accrued against specific obligations for the performance of construction, expansion, upgrading and enhancement services of the motorway infrastructure, net of any current value of the construction services to be rendered in the future;

b) rights acquired by third parties, against costs incurred for taking over the concession.

12.4 As regards the valuation of the assets to be attributed to the NIC at the base year, it is possible to alternatively opt:

a) for net current value (revalued NIC), expressed on the basis of the revaluation index referred to in paragraph 12.7;

a) for net book value (accounting NIC).

12.5 The choice between the two options referred to in paragraph 12.4, that is made for the first regulatory period of application of this charging System on the basis of the concession, shall be binding for the following regulatory periods, too.

12.6 The option for revalued NIC is associated with the actual rate of return on capital referred to in paragraph 16.6 (a); vice versa, the option for accounting NIC is associated with the nominal rate of return on capital referred to in paragraph 16.6 (b).

12.7 In case it is opted for revalued NIC, the following revaluation indices are used:

a) deflator of gross fixed investments to enhance non-reversible assets at the beginning of each concession period;

b) planned inflation rate referred to under paragraph 19 to enhance assets within each regulatory period.

13. Eligibility criteria of investments

13.1 With reference to the whole regulatory period, eligible for charging purposes are the following investments which are made/contributed and entered into the financial statements:

a) investments in reversible assets covered by the concession, including the activities for planned extraordinary maintenance, as quantified in the Financial Regulatory Plan;

b) investments in non-reversible assets, which are strictly necessary for motorway activities, as quantified in the Financial Regulatory Plan;

c) further investments in reversible assets, which are included in addendums to the concession agreement, as agreed upon with the grantor of the concession.

13.2 The following eligibility criteria shall apply to the components here below:

a) fixed financial assets are not recognised;

b) for the value of goodwill to be recognised (item B.I (5) of Article 2424 of Civil Code), it is necessary that the company, whose assets are *inter alia* made up of motorway infrastructures, has been purchased for consideration, or by transfer operations, either merger or demerger. For the purpose of its quantification, the positive difference between (i) cost incurred for acquisition and (ii) current value of assets and liabilities as at the date of completion of the extraordinary transaction or purchase is entered as goodwill;

c) expenses for research and development, as well as industrial patent rights and intellectual works are recognised only for the part which can be referred to commitments deriving from the concession, provided they are approved by the grantor;

d) costs for concessions, licences and trademarks are recognised only if they are related to items directly pertaining to motorway activities;

e) non-reversible tangible assets are recognised only if they are related to expenses that are necessary for the operation of motorway activities, provided they are approved by the grantor.

f) fixed assets and work in progress are eligible for remuneration depending on the respective degree of completion;

g) design and planning costs as defined on the basis of demand are recognised only after approval of the detailed design.

13.3 The eligibility of deferred costs pertaining to any additional charges is assessed by the Authority on the basis of the nature and purpose of such costs, with particular regard to the principles of management production efficiency, including in relation to the optimal management areas as defined by the Authority's Decision No 70/2016.

14. Principles for quantification of investments in reversible assets

14.1 As regards the quantification of investments in reversible assets, that are eligible for charging purposes, the following principles shall apply:

a) investment should be enhanced consistently with the "Guidelines for valuation of investments in public works in the areas covered by the Ministry of Infrastructure and Transport" as adopted by ministerial decree no. 300/2017;

b) investment costs resulting from detailed design, that is determined net of any public contributions and assessed on account of proportionality and reasonableness of the proposed technical and economic solutions, represent, without prejudice to any cost differences provided for by the grantor upon approval of the final design, the reference value for the concessionaire, in order to identify the maximum eligible expenditure;

c) for each investment, where the final expenditure is higher than the value resulting from detailed design, the extra cost is considered as eligible only if it is due to eligible design changes pursuant to article 106 of legislative decree No 50 of 18 April 2016. The evidence of existing supporting circumstances is borne by the concessionaire, while the grantor verifies, on a case-by-case basis, that such circumstances are true;

d) with regard to the approval of the final design by the grantor, for the sole purpose of eligibility of the expenditure, the amount indicated in the detailed design shall remain binding, with the exception of the changes provided for by the grantor pursuant to the law.

15. Criteria for determination of capital costs for charging purposes

15.1 The following capital costs are recognised for charging purposes:

a) cost of capital repayments related to direct investments in motorway activities, according to the related depreciation expenses;
b) cost of return on invested capital.

15.2 For the purpose of determining the cost of capital, the following criteria shall apply:

a) depreciation of reversible assets is recognised, alternatively:

i. by financial method, in relation to the residual period of the concession, taking into account any residual value at the expiry thereof;
ii. by using differentiated depreciation rates, that are systematically applied in each year, to be calculated on the total investment made, and are determined in each case on the basis of the Business Plan of the concession;
iii. on the basis of economic and technical rates that are established in accordance with the principles laid down in the Civil Code, taking into account the useful life of the assets and any residual value at the end of the concession (only for assets whose useful life, by reason of their nature, does not extend beyond the expiry date of the concession);

b) depreciation of non-reversible assets is recognised on the basis of economic and technical rates established in accordance with the principles of the Civil Code, taking into account useful life and any residual value upon expiry of the concession.

15.3 Cost related to the return on capital is equal to the rate of return on invested capital referred to under paragraphs 16 and 17, respectively multiplied by the relevant net invested capital, net of the related depreciation allowance. Return on net invested capital, net invested capital and related depreciation allowance are expressed in line with the arrangements provided for by the grantor under paragraph 4.1. Therefore, a real pre-tax return corresponds to enhancement of (nominal) net invested capital and related (nominal) depreciation at revalued values; conversely, a nominal pre-tax return corresponds to enhancement of net invested capital and related depreciation at not revalued values.

15.4 Costs of amortization and return on capital pertaining to additional charges are determined in compliance with financial neutrality.

16. Rate of return on invested capital

16.1 The rate of return due to the concessionaire on the NIC of works to be executed, referred to in paragraph 2.18, as well as on non-reversible assets, is determined according to the method based on the weighted average cost of the capital (equity and debt capital), and is given by the following formula:

$$R = g \cdot \frac{R_d\,(1 - t)}{1 - T} + (1 - g) \cdot \frac{R_e}{1 - T}$$

with:

R_d cost of debt;

R_e cost of equity;

g % of financial debt (gearing);

(1 - g) % of equity;

t tax shield, i.e. corporate income tax (IRES) rate;

T income tax rate, i.e. IRES+IRAP (corporate income tax + regional tax on productive activities);

R nominal pre-tax Weighted Average Cost of Capital (**WACC**), i.e. rate of return on capital (before tax); this rate is converted into real terms by applying the Fisher formula:

$$R_{real} = \frac{1 + R}{1 + \bar{P}} - 1$$

with:

P arithmetic average of planned inflation rates for each year of the regulatory period as resulting from the last available Government's Economic and Financial Planning Document.

16.2 The cost of equity is determined according to the Capital Asset Pricing Model (CAPM) formula , that is:

$$R_e = rfr + \beta_e \cdot erp$$

with

R_e cost of equity;

rfr risk-free rate;

β_e equity beta (measure of non-diversifiable systematic risk of equity);

erp equity risk premium.

16.3 The average cost of debt is what would be paid by a company based on market conditions to obtain financing. This indicator has two components, risk-free rate and debt risk premium, which takes account of the default risk and is associated to corporate rating, based on the following relation:

$$R_d = rfr + dp$$

with:

R_d cost of debt;

rfr risk-free rate;

dp debt premium.

16.4 WACC variables are differentiated into endogenous and exogenous to the motorway sector, i.e. variables that depend wholly or partly from the financial and economic choices of the companies operating in the sector and variables which do not depend on these choices, but rather on the dynamics of national and international markets.
Included in the first category are financial structure, debt-risk premium, *beta* coefficient, whereas the second category includes risk-free rate, equity risk premium and tax rate. Actually, risk-free rate and

tax rate result from cost of public debt and from tax policies of the national government, whereas market premium is derived from the overall performance of the market in which the company operates.

16.5 For the quantification of the above variables, the following criteria shall apply:

a) financial structure (gearing)
The main indicator of the financial structure, used for WACC calculation, is gearing that measures the ratio of financial debt to total financing sources. The gearing of the sector is evaluated on the basis of the average of the last five years of Italian motorway concessionaires.
The value of *gearing g* is **0.44**.

b) cost of debt
The cost of debt in the sector is determined on the basis of the ratio of financial costs to financial debt of motorway concessionaires. The reference period considered is five years; account is taken of the average gross financial debt of the period with reference to financial debts, excluding intra-group entries and relations with partners. With regard to financial costs, the income statement item "interest income and other financial charges" is considered, with reference to the financial debt under examination. The cost of debt is given by the sum of risk-free rate and debt premium (the latter up to a maximum of 2%), as shown in the formula referred to in paragraph 16.3. The cost of debt R_d is **4.87%**.

c) *beta* coefficient (β), as a measure of systematic risk
Beta coefficient measures systematic, non-diversifiable risk of a company operating in a given market.
This value is determined through a comparative analysis of so-called comparables, i.e. *beta* coefficients of other comparable companies or industries.
Having identified the *beta equities*, they have been netted of the specific financial leverage (*delevering*) in favour of a notional leverage measure, so as to take into account an efficient financial structure. For this purpose, the *beta assets* (β_a) of each company considered were derived by using the delevering standard methodology referred to in the following formula:

$$\beta^i{}_a = \frac{\beta^i{}_e}{\left(1 + (1 - t^i)\, {D^i}/{E^i}\right)}$$

with:

$\beta^i{}_a$ *beta* asset of i-th company;
$\beta^i{}_e$ *beta* equity of i-th company;
t^i corporate tax rate of i-th company (tax shield);
${D^i}/{E^i}$ financial leverage of i-th company.

The industry *beta* asset β_a is given by the arithmetic mean of *beta* assets of each comparable company. In order to apply the notional leverage, the industry *beta* assets were then *'re-levered'* so as to obtain the *beta equity* β_e to be attributed to the motorway industry.
The re-levering is carried out based on D/E ratio defined with the notional parameters related to the motorway sector, according to the following formula:

$$\beta_e = \beta_a * [1 + (1 - t) * \left(\frac{D}{E}\right)]$$

The *beta equity* so calculated is **0.59**.

d) risk-free rate (rfr)
The risk-free rate (rfr) is given by the arithmetic mean of daily gross returns of the ten-year BTP (long-term Italian Treasury bond), as collected by the Bank of Italy with reference, for each regulatory period, to the last twelve months available.
The risk-free rate is at the time of writing is **2.87%**.

e) equity risk premium (erp) - increased market performance compared to risk-free rate
The equity risk premium (*erp*) is the premium, compared to the return on a risk-free activity, of an investment in the stock market. The Authority confirms an *erp* value of 5.5%.

f) tax rates (t, T)
With reference to the impact of taxation, two parameters, t and T, are considered:
- t is the tax shield and is represented by the corporate income tax (IRES) rate;
- T is the overall tax rate for companies resulting from the sum of IRES and IRAP, that are available under the existing legislation.

At present: t = **24 %** and T = **28.82 %**.

16.6 The application of the above parameters (with values estimated as at 6 June 2019) determines the following values of the rate of return on invested capital, that apply to the first regulatory period of application of this charging System:

a) Real WACC R_r: **6.03%**;

b) Nominal WACC R: **7.09%**.

16.7 By the 15th of September each year, the Authority updates and notifies the rate of return on invested capital to be applied in the update or revision procedures referred to in Article 43 of legislative decree No 201/2011.

17. Safeguard system for works executed or in progress

17.1 The capital remuneration due to the concessionaire on the NIC of the works executed or in progress referred to in paragraph 2.17 is determined on the basis of the internal rate of return of motorway activities referred to in paragraph 3.1 (a), arising from the application of the previous charging system, before financial charges and taxes (IRR).

17.2 IRR is the discount rate which makes the net present value of the estimated annual cash flows equal to zero, between the 1st of January 2020 and the expiry of the concession, as determined according to the following table:

Item	Rif.	Reference Business Plan unified template[2]	2019	2020	…	Year of concession expiry
Initial value of reversible fixed assets (net of any value of construction services to be rendered in the future)	a	(3.8) and/or (3.12)	X (negative figures)			
Cash flows	b	(1.13)		X	X	X
Financial charges	c	(2.30) through (2.36)		X	X	X
Taxes	d	(2.41)		X	X	X
Cash flows from ancillary activities	e	(2.2) net of the relevant share of costs, (2.6) through (2.17)		X	X	X
Cash flows from non-relevant assets	f	(2.3) and (2.4) net of the relevant share of costs, (2.6) through (2.17)		X	X	X
Cash flows from changes in net operating working capital	g	(1.5)		X	X	X
Final value of reversible fixed assets	h	(3.8) and/or (3.12)				X
Total	**a+b+c+d - (e+f+g) + h**		**X**	**X**	**X**	**X**

17.3 IRR and data reported in the above table refer to the last Business Plan approved by the grantor, as appropriately updated to take into account (i) degree of actual implementation of investments and possible re-scheduling thereof, and (ii) any notional items accrued.

[2] Reference included in the unified financial plan template approved by inter-ministerial decree of 15 April 1997.

Part 3

18. Dynamics of operational charge component

18.1 The annual estimate of the operational charge component shall not exceed the value resulting from the following dynamics according to the price cap formula:

$$T_{G,t+1} \leq T_{G,t} \cdot \left(1 + \hat{P}_{t+1} - X_t\right)$$

with:

$T_{G,+1}$ level of operational charge component, as pre-determined by reference to year t + 1; in particular, for $t = 0$ in relation to each regulatory period (i.e. year corresponding to the bridge year), it is assumed:

$$T_{G,t} = \frac{C_{G,ap}}{V_{m,1-5}}$$

with:

$C_{G,ap}$ level of operating costs with reference to bridge year, defined as:

$$C_{G,ap} = C_{G,ab} \cdot \left(1 + P_{ap}\right)$$

with:

P_{ap} planned inflation rate for bridge year, as resulting from the last available Economic and Financial Document (DEF);

$C_{G,ab}$ level of operating costs with reference to base year;

$V_{m,1-5}$ average annual traffic volume, that can be calculated as the arithmetic mean of the traffic volumes estimated *ex ante* for each year of the regulatory period, as indicated in the Regulatory Financial Plan;

$T_{G,}$ level of operational charge component in force in year *t*;

$\hat{P}_{t+1}$ planned inflation rate for year $t + 1$, as determined according to this paragraph;

X_{t+1} annual productivity factor, referred to under paragraph 20.

18.2 For the application of the indications under paragraph 5.2, where the relevant conditions are met, the operational charge component $T_{G,t+1}$ referred to in paragraph 18.1 shall be understood to include the sub-component $T_{i,G,t+1}$, which is linked to the incremental costs referred to each year of the regulatory period, as estimated *ex ante*. Once consolidated into the charge component $T_{G,t+1}$, this sub-component follows its dynamics for the following years until the end of the regulatory period.

In particular, it is assumed:

$$T_{i,G,t+1} = \frac{\Delta C_{i,G,k,t+1} + \Delta C_{i,G,v,t+1}}{V_{m,(t+1)-5}}$$

with:

$\Delta C_{i,G,k,t+1}$ annual incremental level of operating costs, relating to assets which entered into operation in year t; in line with the system outlined in paragraph 21 with regard to capital

costs, the incremental operating costs linked to the entry into operation of new investments can be calculated as from the year following that of entry into operation;

$\Delta C_{i,G,v,t+1}$ incremental level of operating costs, relating to the entry into force of new laws and regulations in year *t*;

$V_{m,(t+1)-5}$ average annual traffic volume, which can be calculated as the arithmetic mean of the traffic volumes estimated *ex ante* for each year, between: (i) year $t+1$ concerning the first inclusion of the above incremental costs in the charge; (ii) last year of the regulatory period.

For $t = 0$ in relation to each regulatory period (i.e. the year corresponding to the bridge year), for the above sub-component it is assumed:

$$T_{i,G,t} = \frac{\Delta C_{i,G,k,ap} + \Delta C_{i,G,v,ap}}{V_{m,1-5}}$$

with:

$\Delta C_{i,G,k,ap}$ incremental level of operating costs, estimated in the bridge year compared to the base year, relating to assets which entered into operation during the bridge year;

$\Delta C_{i,G,v,ap}$ incremental level of operating costs, estimated in the bridge year compared to the base year, relating to the entry into force of new laws and regulations;

$V_{m,1-5}$ average annual traffic volume, that can be calculated as the arithmetic mean of the traffic volumes estimated *ex ante* for each year of the regulatory period, as indicated in the Regulatory Financial Plan.

19. Planned inflation rate

19.1 With reference to the formula for charge updating under paragraph 18, the variable $\hat{P}_{t+1}$ corresponds to the planned inflation rate for the year of application of the charge, as resulting from the last available Economic and Financial Document at the beginning of each regulatory period.

19.2 Where the available data do not cover the entire life of each regulatory period, reference can be made to the data of the last available year, to be used as an estimate for the remaining years of the regulatory period.

20. Targeted productivity gain from improved efficiency

20.1 With regard to the charge updating formula referred to in paragraph 18, X_t is the productivity factor (i.e. coefficient of annual productivity gain), to be determined for the concession every five years, in accordance with the provisions of Article 37 (2) (g) of Decree-Law No. 201/2011.

20.2 In order to calculate the productivity factor X_t, the Authority preliminarily quantifies - on the basis of benchmark analyses on efficient costs based on the concessionaires' historical data, in accordance with the method of analysis under ART Decision No. 70/2016 - the targeted recovery of production efficiency (X^*), if any, in terms of overall percentage. Based on the latter value, the Authority determines the annual productivity factor X_t, resulting from the following relation:

$$\prod_{t=1}^{5}(1 - X_t) = 1 - X^* \qquad X_t > 0, \forall t$$

For the concession at issue, the value of the overall rate of production efficiency recovery X^* is **10.05%**, while the productivity factor X_t to be applied in the price cap formula is **2.10%**.

20.3 For the purpose of drawing up the Regulatory Financial Plan, the annual productivity factor X_t is applied as from the 1st of January 2020, as provided for in paragraph 32.1 and for the following five years, without prejudice to the relevant update at the end of the regulatory period.

20.4 Without prejudice to the value of the overall recovery percentage X^*, the grantor may define, upon first application, a different allocation of the productivity factor X_t compared to the five-year allocation provided for in the formula referred to in paragraph 20.2, when one of the following conditions is met:

a) structural inefficiency deriving from total length*km of the motorway sections covered by the concession below the minimum threshold defined by Authority's Decision No 70/2016;

b) existing constraints, based on clear, objective and documented evidence, to efficiency measures, that do not ensure the achievement of the targeted recovery of production efficiency X^* indicated in paragraph 20.2;

c) impairment, despite the adoption of objective and documented efficiency measures, of the requirements of financial soundness as provided for by article 11 (5) of Law No 498 of 23 December 1992.

In this regard, the grantor submits its decisions to the Authority, in order to allow the Authority to assess their impact on the charging System, with particular reference to the principles set out in paragraph 7.2.

20.5 Without prejudice to the provisions of paragraph 20.6, the criteria and methodologies referred to in paragraph 20.2 are applied to the following regulatory periods, by carrying out new estimates based on the dataset as updated with the latest available figures, including on the basis of the analytic accounting sheets referred to in Part 4, according to the same formula. The relevant values will be updated accordingly in the Business Plan and in the Regulatory Financial Plan.

20.6 Where the last regulatory period, as a result of the overall period of the concession, consists of a number of years *n* of less than 5, the grantor of the concession, having consulted with the Authority, may distribute the overall percentage of X^* recovery, as determined for the previous five years, based on the following formula:

$$\prod_{t=1}^{5+n}(1 - X_t) = 1 - X^* \qquad X_t \geq 0, \forall t$$

21. Dynamics of construction charge component

21.1 In the case of adoption of an accounting measure for the NIC, the annual estimate of the construction charge component is based on the following formula:

$$T_{K,t+1} = \frac{C_{a,r,(t+1)} + C_{rc,rA,(t+1)} + C_{rc,rP,(t+1)} + PF_{K,t+1}}{V_{t+1}}$$

with:

$C_{a,r,(t+1)}$ depreciation costs, referred to year $t+1$, related to reversible assets at the end of the concession, as set out in the Regulatory Financial Plan, that are determined in accordance with the provisions of paragraph 15.2 (a);

$C_{rc,rA,(t+1)}$ costs related to the return on capital, referred to year $t+1$, related to the NIC of the works executed or in progress referred to in paragraph 2.17, as set out in the Regulatory Financial Plan, that are determined in accordance with the provisions of paragraph 15.3;

$C_{rc,rP,(t+1)}$ costs related to the return on capital, referred to year $t+1$, related to the NIC of the works to be executed referred to in paragraph 2.18, as set out in the Regulatory Financial Plan, that are determined in accordance with the provisions of paragraph 15.3;

$PF_{K,t+1}$ (positive or negative) notional items referred to in paragraph 2.14, as defined *ex ante,* so as to ensure gradual price changes in the concession period, in compliance with the principle of financial neutrality;

V_{t+1} traffic volumes as per *ex ante* forecasts, referred to year $t+1$, as set out in the Regulatory Financial Plan.

The level of the component $C_{a,r,(t+1)}$ is the cost of depreciation, that is referred to reversible assets at the end of the concession and is subject to one or more methodologies referred to under paragraph 15.2 (a), determined as at the 1st of January of year $t+1$.

The level of the components $C_{rc,rA,(t+1)}$ and $C_{rc,rP,(t+1)}$ derives from the application of the relevant criteria (described in paragraph 15) to the regulatory net invested capital, as calculated as at the 1st of January of each year, as follows:

$$C_{rc,rA,(t+1)} = CIN_{rA,(t+1)} \cdot TIR$$

$$C_{rc,rP,(t+1)} = CIN_{rP,(t+1)} \cdot R$$

with:

$CIN_{rA,(t+1)}$ NIC value of works executed or in progress as referred to under 2.17, as at the 1st of January of year $t+1$, determined on the basis of the indications below;

TIR internal rate of return referred to under 17.2;

$CIN_{rP,(t+1)}$ NIC value of works to be executed as referred to under 2.18, as at the 1st of January of year $t+1$, determined on the basis of the indications below;

R nominal rate of return on invested capital (WACC) referred to under 16.6 (b).

The dynamics of net invested capital in the concession period is generally determined as follows:

$$CIN_{(t+1)} = \left(CIN_t - C_{a,t} + I_t\right)$$

with:

$CIN_{(t+1)}$ value of net invested capital as at the 1st of January of year $t+1$;

CIN_t value of net invested capital as at the 1st of January of year t;

$C_{a,t}$ depreciation expense, referred to year t, related to net invested capital, as at the 1st of January of the same year t and as entered in the Regulatory Financial Plan; the annual

investment share planned for year *t* does not determine any depreciation in the same year;

I_t planned annual investment for year *t*, with reference to the works covered by investment plans, as indicated in the Regulatory Financial Plan, that are allowed according to the criteria under paragraph 12.3;

The value of CIN_t as at the 1st of January 2020 corresponds to the value of approved works that have been already executed and not yet amortized on that date, on the basis of the classification under 2.17 and 2.18.

21.2 The annual estimate of the construction charge component, in the case of option for revalued NIC, is based on the same formula as set out in paragraph 21.1, subject to the adjustments specified below.

The level of the components $C_{rc,rA,(t+1)}$ and $C_{rc,rP,(t+1)}$ is determined as follows:

$$C_{rc,rA,(t+1)} = CIN_{rA,(t+1)} \cdot TIR_r$$

$$C_{rc,rP,(t+1)} = CIN_{rP,(t+1)} \cdot R_r$$

with

TIR_r internal rate of return referred to in paragraph 17.2, converted into real terms by applying the same formula provided for under 16.1 for *R* rate;

R_r real rate of return on invested capital (WACC) as referred to under 16.6 (a).

The dynamics of net invested capital over the concession period is determined as follows:

$$CIN_{(t+1)} = \left(CIN_t - C_{a,t} + I_t\right) \cdot \left(1 + \hat{P}_t\right)$$

with

$\hat{P}_t$ planned inflation rate related to year t, that is determined in the manner set out in paragraph 19.

22. Dynamics of charge component for additional charges

22.1 The annual estimate of the charge component for additional charges is the value resulting from the following dynamics:

$$T_{OI,t+1} = \frac{C_{OI,t+1}}{V_{t+1}}$$

with:

$T_{OI,t+1}$ level of charge component for additional charges, pre-determined with reference to year $t + 1$;

$C_{OI,t+1}$ annual share of costs associated with additional charges, that is related to year $t + 1$, as defined in paragraph 5.5;

V_{t+1} traffic volumes planned *ex ante* and referred to year $t + 1$, as indicated in the Regulatory Financial Plan.

22.2 Any additional charge component related to the plural management of motorway sections is subject, in the context of the annual monitoring referred to in paragraph 28, to the same charge adjustment system, that is associated with the implementation of investments, as the construction charge component referred to in paragraph 25.

23. Adjustment of average unit charge

23.1 The average unit charge referred to in paragraph 5.2, which is determined *ex ante* in accordance with the procedures under paragraphs 18 and 21, is annually adjusted as a result of the annual monitoring referred to in paragraph 28, on quality of services and implementation of investments, as follows:

$$T^*_{t+1} = T^*_{G,t+1} + T^*_{K,t+1}$$

with:

$$T^*_{G,t+1} = T_{G,t+1} \cdot (1 - \Delta T_{G,t+1}) \cdot (1 + Q_t) \qquad T^*_{K,t+1} = T_{K,t+1} + \Delta T_{K,t+1}$$

where:

$T_{G^*,+1}$ level of operational charge component referred to in paragraph 18, as calculated in year *t* and actually applicable by the concessionaire for year $t + 1$;

$T_{G,+1}$ level of operational charge component, as determined upon conclusion of the concession agreement with reference to year $t + 1$;

$\Delta T_{G,t+1}$ additional operational charge component resulting from any not incurred operating costs, estimated *ex ante* and pertaining to planned investments and to non-implementation or late implementation of new laws and regulations;

Q_t positive or negative coefficient of adjustment of operational charge component, calculated in year *t* and deriving from the application of the reward/penalty systems referred to in paragraph 24, with reference to the assessment of service quality;

$T_{K^*,+1}$ level of construction charge component calculated in year *t* and actually applicable by the concessionaire for year $t + 1$;

$T_{K,+1}$ level of construction charge component referred to in paragraph 21, as determined upon conclusion of the concession agreement with reference to year $t + 1$;

$\Delta T_{K,+1}$ level of (positive or negative) additional construction charge component, calculated in year *t* and related to the application of:

- the system referred to in paragraph 25, with respect to the implementation of investments, which takes into account the share of investments actually made compared to those planned, and any related penalties;
- any necessary variations of notional items referred to in paragraph 26, aimed at ensuring, in accordance with the principle of financial neutrality, gradual price changes over the concession period.

23.2 In order to take account of the provisions under paragraph 5.3, the adjustment of the integrated average unit charge derives from the application of the following formula:

$$T^{*\prime}_{t+1} = T^*_{t+1} + T_{OI,t+1}$$

with

$T_{OI,t+1}$ level of charge component for additional charges, referred to in paragraph 22.1.

24. Reward/penalty systems for assessment of service quality

24.1 With regard to the charge updating formula referred to in paragraph 23, variable Q_t is the positive or negative coefficient of adjustment of the operational charge component $T_{G,t+1}$ to be applied for year t + 1, as calculated in year t.

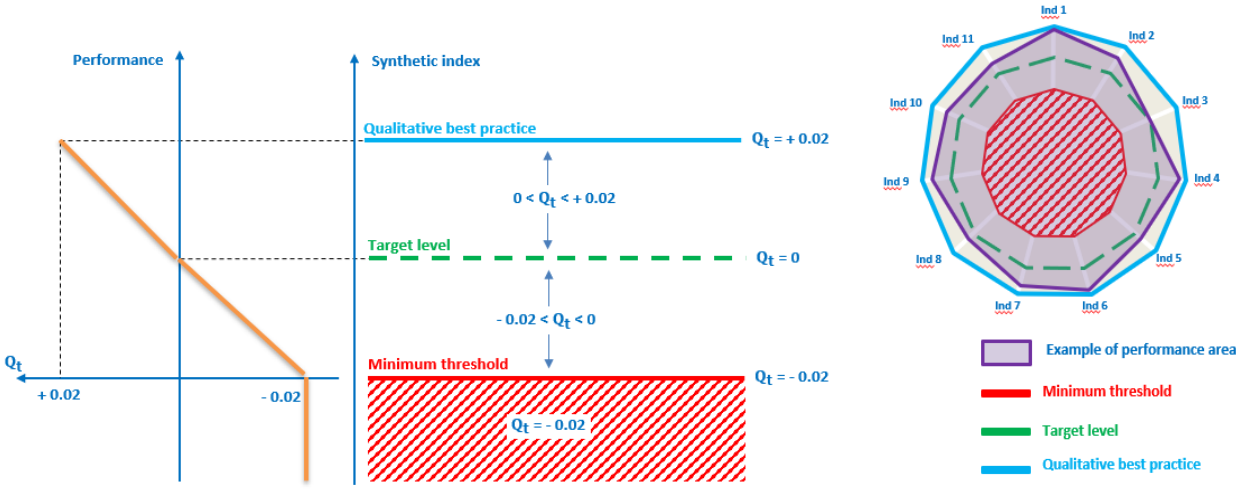
24.2 The reward/penalty system is based on a panel of indicators, as described in the following paragraphs.

24.3 The price change associated with variable Q_t shall fall within the following lower and upper limits:

$$min\ (Q_t) = -0.02$$

$$MAX\ (Q_t) = +0.02$$

24.4 The reward/penalty system and associated quality standards are showed in the following figure concerning the synthetic index which is calculated as a weighted average of all *j-th* factors (cf. paragraph 24.8).



24.5 With reference to the above figure, three different quality levels (hereinafter, quality thresholds) are defined for each *j-th* factor (Iq_j):

- minimum threshold ($Iq_{Minimum\ threshold,\ j}$): threshold where the reward/penalty system assumes a minimum value of min(Q_t) = - 0.02.
  This threshold shall be determined by the grantor of the concession on the basis of the minimum quality standards for *j-th* factor, which in no case may be lower than the corresponding values observed in the past. The threshold is aimed at discouraging the concessionaire to assume performance levels falling below the minimum standards that are required and acceptable to users;

- target level ($Iq_{target,\ j}$): threshold identifying the frontier where the reward/penalty system is reversed and does not impact on the charge.

This threshold shall be determined by the grantor of the concession on the basis of the average quality standards which are required for *j-th* factor;

- qualitative *best practice* ($Iq_{Best\ practice,\ j}$): threshold identifying the maximum frontier where the quality-related price change assumes the maximum value MAX (Q_t) = + 0.02. This threshold shall either be determined by the grantor of the concession on the basis of the highest quality standards for *j-th* factor that may be identified on the international motorway market, or shall be equal to 100% for indicators defined on a percentage basis.

  The threshold is therefore aimed at achieving performance representing optimal levels of reference for the motorway sector; for such achievement the motorway concessionaire receives an additional reward over the price change that is determined with the price cap system.

24.6 The quality thresholds shall be established by the grantor of the concession, with reference to each regulatory period - *ex ante* and on an annual basis – by taking into account the above-mentioned principles, without prejudice to:

- the provision by the grantor of the concession of an initial transitional period that is aimed at preliminary identifying and objectively measuring the different levels of quality indicators, with a maximum duration of 24 months;
- the existence of any state of emergency, resulting from relevant specific measures taken by the competent bodies, concerning the sections managed by the concessionaire in defining quality thresholds.

24.7 The grantor of the concession shall annually verify the achievement of the target indicators over the regulatory period, by applying the following approach:

- each performance dimension shall be assigned by the grantor of the concession a weight Pq_j, with $\sum_j Pq_j=1$;
- should all dimensions Iq_j not fall one by one above the minimum threshold, the concessionaire shall be subject to penalties through a price adjustment based on the application of the 2% upper limit of the operational charge component;
- if all dimensions Iq_j are above the minimum threshold and, at the same time, not all of them are above the "target level", for each *j-th* factor the following inequality shall be complied with:

$$-0{,}02 \leq Q_{t,\,j} \leq 0$$

  where the value of $Q_{t,j}$ is determined based on the positioning of Iq_j between $Iq_{\text{Minimum threshold, j}}$ and $Iq_{\text{target, j}}$, by linear interpolation;

- if all dimensions Iq_j are above the target level, for each *j-th* factor the following inequality shall be complied with:

$$0 \leq Q_{t,\,j} \leq +0{,}02$$

  where $Q_{t,\,j}$ value is determined based on the positioning of Iq_j between $Iq_{\text{target, j}}$ and $Iq_{\text{Best practice, j}}$, by linear interpolation.

24.8 For the total price change linked to the quality of the synthetic indicator, the following equation shall apply:

$$Q_t = \sum_{j=1}^{no.\ indicators} P_{q,j} \cdot Q_{t,j}$$

24.9 The quality monitoring system shall provide for the identification, by the grantor of the concession, of at least one *j-th* factor for each of the following thematic areas:

- average travelling speed of traffic flow;
- available infrastructures (construction sites, particularly in peak hours and holiday periods);
- traffic flow at toll stations (e.g. availability of automatic toll booths and efficiency of automatic toll collection with DSRC, i.e. Telepass system);
- road surface conditions (defects);
- dynamic update of information on variable message signs[3];
- provision of appropriate rest areas (as compared to the total area) for road haulage vehicles[4];
- use of *Intelligent Transportation Systems* (ITS), including to secure greater efficiency of logistics and optimise the use of infrastructure by light and heavy vehicles;
- available connectivity services (radio-mobile) and radio coverage on motorway network, that are interoperable, open and in line with advanced and consolidated telecom technologies;
- use of automatic systems for structural monitoring of infrastructures (in particular, overpasses, retaining walls, embankments and motorway tunnels);
- use of free-flow technologies for motorway toll collection evolving towards interoperable solutions at Community level;
- customer satisfaction as to the levels of overall service and specific service for areas of interest as defined by the grantor of the concession;
- use of roadside safety barriers on account of their compliance with current technical regulations;
- use of noise barriers, for implementation of the environmental Noise Action Plan provided for by Law No 447 of 26 October 1995 and following implementing decrees.

24.10 The concessionaire shall report at least annually to the grantor of the concession and to the Transport Regulation Authority on the results of the monitoring and on the data collection methods.

25. Charge adjustment related to realised investments

25.1 With regard to the charge adjustment formula referred to in paragraph 23.1, the component $\Delta T_{K,(t+1)}$ consists of two sub-components, as follows:

$$\Delta T_{K,(t+1)} = \Delta T_{I,K,(t+1)} + H_{K,(t+1)}$$

The sub-components meet different objectives:

- the first sub-component ($\Delta T_{I,K,(t+1)}$) is related to the amount of unrealised investments and is calculated as follows:

[3] This information shall comply with the minimum standards required by Regulations (EU) No. 885/2013 and (EU) No. 886/2013. In this respect the Transport Regulation Authority performs the function of an independent national body referred to, respectively, in articles 8 and 9 of the a.m. Regulations.

[4] Thematic area identified also with regard to article 24 (1a) of Road Code, as introduced by Law No 120 of 29 July 2010 (Official Gazette No 175 of 29 July 2010).

$$\Delta T_{I,K,(t+1)} = -(1 - \alpha_t) \cdot T_{K,(t+1)}$$

with

$$\alpha_t = \sum_{a=1}^{t} (I_{R,a}) \,/\, \sum_{a=1}^{t} (I_{P,a})$$

with:

$T_{K,+1}$ level of charge construction component, as determined at the time of conclusion of the concession agreement with reference to year $t + 1$;

α_t share of actually realised investments, accumulated up to year t, compared to the amount of planned investments in the same period;

$I_{R,a}$ amount of eligible costs for charging purposes, for year $t + 1$, relating to actually realised investments, including any takeover value paid to the outgoing concessionaire, or costs of approved works that have been already executed and not yet amortized upon expiry of the previous concession period, net of pre-established reserves for late investments;

$I_{P,a}$ amount of eligible costs for charging purposes, for year $t + 1$, relating to planned investments upon conclusion of the concession agreement, including any takeover value paid to the outgoing concessionaire, or costs for approved works that have been already executed and not yet amortized upon expiry of the previous concession period, net of pre-established reserve for late investments;

- the second sub-component ($H_{K,(t+1)}$) is the applicable penalty where the delay in making the investments is attributable to the concessionaire, in order to discourage the postponement of investments, without prejudice to the penalty systems provided for in the concession agreement, which can go as far as its withdrawal, and shall be determined as follows:

$$H_{K,(t+1)} = -(\gamma_t \cdot R) \cdot \left|\Delta T_{I,K,(t+1)}\right|$$

with:

γ_t share of unrealised investments due to the concessionaire's liability, accumulated up to year t, compared to total unrealised investments in the same period;

R_c rate of return on invested capital (WACC), as determined in accordance with the provisions of paragraph 16.

26. Notional items

26.1 It is possible to provide *ex ante*, for each year of the concession period, for the inclusion of the notional items referred to in paragraph 2.14, so as to anticipate or postpone the calculation of eligible costs with respect to the year of actual accrual, provided that the principle of economic and financial neutrality within the concession period referred to under paragraph 4.2 (c) is complied with. These *ex ante* notional items are included in the formula referred to in paragraph 21.

26.2 In order to ensure that economic and financial neutrality is maintained, the level of notional items, for the years from t + 1 to the end of the concession period, shall be recalculated annually on the basis of

the systems of annual adjustment of the construction charge component. The component $\Delta T_{K,(t+1)}$under paragraph 25 shall be further adjusted as a result of this recalculation.

27. System for containment of increased revenues through revenue sharing

27.1 Starting from the regulatory period following the first regulatory period of application of this charging system, if the variation in the final traffic volumes resulting at the end of the past regulatory period is positive and above a pre-determined threshold of $+2\%$, a percentage (increasing from 50 % to 100 % with the increasing deviation from $+2\%$ to $+10\%$) of the annual average amount of increased revenues, which is attributable to the traffic volume exceeding the threshold, shall be entered as a deduction of the eligible costs allowed at the base year for the following regulatory period or, for the last regulatory period, allowed as a decrease of the takeover value, if any.

27.2 This increased revenue will be calculated as the difference between:

- revenue, net of the charges referred to in paragraph 8, derived from the charge in force in each year, as applied to actual final traffic volumes;
- revenue, net of the charges referred to in paragraph 8, derived from the charge in force in each year, as applied to *ex ante* planned traffic volumes plus 2% (threshold revenue).

27.3 For regulatory periods following the first regulatory period of application of this charging System, in order to correctly determine the operating costs, due account shall be taken of the revenue sharing system provided for in paragraph 27.1.

28. Annual monitoring of quality and investment

28.1 Based on the final and pre-final data available as at 30 September each year, the concessionaire shall provide to the grantor of the concession, and send to the Transport Regulation Authority for information, the proposed annual charge update, including any necessary information to determine the additional charge components ($\Delta T_{G,t+1}$ e $\Delta T_{K,t+1}$) referred to under paragraph 23, with the relevant proposed update of the Regulatory Financial Plan.

28.2 By 31 October each year the grantor of the concession carries out the necessary checks concerning:

a) coefficients referred to in paragraph 24;

b) α_t and Υ_t coefficients referred to in paragraph 25;

c) re-calculation of notional items referred to in paragraph 26.

The results of these checks are communicated to the concessionaire and to the Authority.

28.3 Within the following fifteen days, the concessionaire shall provide for any ensuing update of the Regulatory Financial Plan, and send it to the grantor of the concession and to the Authority.

28.4 Within fifteen days of receipt of the documentation referred to in paragraph 28.3, the Authority shall provide comments to the grantor of the concession concerning the issues within its remit.

29. Charging principles and criteria for the extension of management beyond expiry of the concession

29.1 If seamless takeover of a new concessionaire is not possible upon expiry of the concession, in the context of the conventional provisions concerning the obligation to continue the ordinary management of the infrastructure and without prejudice to specific provisions that could regulate the quantification of any net benefits in the period between expiry date of the concession and effective takeover date, the outgoing concessionaire shall refer to the following charging regulation criteria:

a) the dynamics of the management charge component is determined by carrying over the charge in force at the expiry of the concession, increased annually, starting from the 1st of January of the following year, based on the planned inflation rate as under paragraph 19;

b) the dynamics of the construction charge component is determined annually, on the basis of the provisions of paragraph 21, except for notional items, without prejudice to its immediate interruption upon full amortization of any net invested capital. In this regard:

(i) amortization is recognized to the extent of an annual share equal to the average share of the last three years of the concession;

(ii) the applicable rate of return is the rate made available by the Authority for the last year of validity of the concession.

Part 4

30. Accounting separation obligations

30.1 From the first year of application of this charging System, the concessionaire, by adopting the cost criteria defined in Part 2, is required to allocate the income statement and balance sheet items, consistently with the financial statements:

a) to each motorway section, as identified in the scope of the concession;

b) to each activity as defined under paragraph 3, specifying ordinary and extraordinary maintenance activities, as well as transactions with related parties.

30.2 The motorway section-activity pair is the basic unit of reference for the concessionaire for the purpose of fulfilling the accounting separation obligations.

30.3 For regulatory accounting purposes, the above-mentioned income statement and balance sheet items may be relevant:

a) directly and exclusively for a specific activity and motorway section;

b) for a number of motorway sections and/or activities, in this case to be allocated on the basis of specific drivers;

c) for all motorway sections and activities (including overhead expenses), in this case to be allocated on the basis of aggregate drivers.

30.4 The concessionaire provides for direct and exclusive allocation of the income statement and balance sheet items which, based on documentary evidence, can be allocated objectively and exclusively to specific activities or motorway sections.

30.5 For income statement and balance sheet items which are relevant for a number of motorway sections and/or activities, the allocation to each of them should be made as objectively and analytically as possible, based on drivers chosen on the basis of their adequacy to measure the consumption of resources or allocation of assets in the context of a specific activity or section. The drivers used shall be described in the explanatory notes to regulatory accounting.

30.6 As a general rule and in the absence of other equally transparent and objective criteria, the pro-rata allocation per each section shall be based on one or more of the following parameters:

- recorded traffic volume;
- transit;
- length (km);
- structural and altitude-related features of motorway infrastructure;
- degree of obsolescence of motorway infrastructure and related facilities.

30.7 The income statement and balance sheet items which are attributable to the overall motorway sections and activities of the concessionaire, and those that cannot be otherwise assigned to the different activities and/or motorway sections on the basis of relevant and objective drivers, are allocated to the different activities and/or motorway sections in proportion to the quantities that have been previously allocated directly and on a pro-rata basis.

31. Information obligations to the grantor of the concession and to the Authority

31.1 Without prejudice to the exercise of its competences as to the data that may not be available, the Authority, starting from the first year of application of this charging System, verifies the accounting separation obligations referred to in paragraph 30 and carries out the general monitoring under its remit on the basis of the analytic accounting sheets prepared by each concessionaire in the context of the Information System of the General Directorate for surveillance of motorway concessions of the Ministry of Infrastructure and Transport.

31.2 The concessionaire is in any case required to draw up and deliver annually the Regulatory Financial Plan, in compliance with the format adopted by the Authority (Annex - Table 1).

Part 5

32. Application of the charging System

32.1 The charging System shall apply with effect from the 1st of January 2020.

32.2 For the purpose of the application of article 43 of legislative decree No 201/2011, with particular reference to the verification of the application of the criteria for charge determination, the grantor of the concession shall forward to the Authority:

a) an updated Business Plan, drawn up by the concessionaire on the basis of the previously applied charging system, according to the procedures described in paragraph 17.3, for the period until the expiry of the concession;

b) the calculation, by the concessionaire, of the internal rate of return referred to in paragraph 17.2, based on available final and pre-final data;

c) a new Business Plan and Regulatory Financial Plan, drawn up by the concessionaire on the basis of this charging System, with 2018 base year, for the period from the 1st of January 2020 until the expiry of the concession;

d) its assessments on the documentation referred to under a), b) and c).

The activities referred to under a) and b) take also into account any previous regulatory periods for which the updating of the Business Plan has not been completed.

32.3 The Authority issues its opinion within 30 days of receipt of the documentation referred to in paragraph 32.2, without prejudice to any further inquiries.

ATTACHMENT

Table 1 Regulatory Financial Plan format

				P1 - First regulatory period					P2		P5		P6 - Sixth regulatory period				
		Base Year	*Bridge Year*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*24*	*25*	*26*	*27*	*28*	*29*	*30*
Expected traffic volumes (000 vehicles/km)	T*																
Annual average traffic volumes per regulatory period (000 vehicles/km)	**T**																
OPERATIONAL CHARGE COMPONENT (TEUR)																	
Eligible total operating costs (including ancillary activities)	**A**																
Use of provisions for renewal	**A'**																
Incremental operating costs from investment	**A''**																
Incremental operating costs from new laws and regulations	**A'''**																
Revenues from ancillary activities (as a deduction)	B																
Total net operating costs allowed	**C=A+A'-B**																
Non reversible ingangible fixed assets as at 1/1	D																
Annual technical and economic depreciation	E'																
Annual remuneration	E''																
Total eligible capital costs	**F=E'+E''**																
Total costs pertaining to operational charge component	**H=C+F**																
Charge component of unitary operation	**I**																
Charge component of incremental unitary operation	**I'**																
CONSTRUCTION CHARGE COMPONENT (TEUR)																	
NIC reversible assets "ante"																	
Works executed and not amortized upon entry into force of charging system	J																
Reversible intangible fixed assets as at 1/1	K																
Work in progress as at 1/1	L																
Residual value at end of concession	M																
Total net invested capital for construction	N=J+K+L-M																
NIC reversible assets "post"																	
Works executed and not amortized upon entry into force of charging system	J^i																
Reversible intangible fixed assets as at 1/1	K^i																
Work in progress as at 1/1	L^i																
Residual value at end of concession	M^i																
Total net invested capital for construction	$N^i=J^i+K^i+L^i-M^i$																
Annual financial amortization overall NIC	O																
Annual remuneration NIC "ante"	P																
Annual remuneration NIC "post"	P^i																
Total costs pertaining to construction charge component	**$Q=O+P+P^i$**																
Charge component of unitary construction	**R=Q/T***																
Annual notional items	**S**																
COMPONENT FOR CONCESSION FEES (TEUR)																	
Annual cost for concession charge 1	U1																
Annual cost for concession charge 2	U2																
Total costs pertaining to charge component for concession fees	**U=U2**																
Charge component for unitary concession fees	**V=U/T***																
AVERAGE UNIT CHARGE - REVENUE - COST																	
Average unit charge (with any notional items)	**W**																
Expected traffic revenue	**Y=W·T***																
Total expected costs	**Z=H+Q+U**																
ANALYSIS OF CASH FLOWS																	
Net present value: expected traffic revenues	-																
Net present value: total expected costs	-																
Net present value: notional items	-																