NEW WAYS
FOR HIGHWAY
CONCESSIONS IN BRAZIL

SEPTEMBER / 2018
A NATIONAL PRIORITY

Brazil urgently needs to solve the serious problems that are impeding the development of its road infrastructure. This need and the two decades of experience in highway management accredits the Board of Directors of ABCR and its associates to recommend ways and solutions for the sector, which is fulfilled in this document to provide aid to new Brazilian governing authorities and parliamentarians.

The numbers reinforce this legitimacy. Since 1995, the sector has invested approximately R$180 billion in improvements and in the operations of concessions under its management, a road network that was originally 600 km, now reaches 20,264 km, of which 9,235 km are federal roads. The best and safest highways in the country are those conceded to the private sector, according to standard research, conducted annually, by the National Transportation Confederation.

Brazilian society already understands that, given the fiscal difficulties of government, the only alternative to advance improvements to the Brazilian infrastructure, is the participation of private capital, either through concession programs or via PPP. A legitimate and intelligent solution, capable of generating advances for the country’s logistics.

But, if there is unanimity in relation to these points, why does little happen? Why the country remains at the mercy of corporatist and mistaken visions? Why are the highway concession programs not a permanent policy of the state, ceasing to be a political and circumstantial tool used by governments?

The fact is that, technically, we are regressing in logistics infrastructure. Therefore, we need to accept that the private sector is the partner to reverse this dramatic picture, for the development of safer and more efficient highways. Otherwise, we will continue to incur losses, of life and economic, on the roads of this country.

It’s high time we had a long-term vision of progress for the highway concession program. Concession is not privatization or construction, it’s providing a service for the user. Therefore, it’s essential to create a favorable and attractive environment for local and international investors.

The wish of the Board of Directors of ABCR is that the recommendations of this study will transform into important subsidies for the public and private sectors, to unite in the reconstruction of the country’s road infrastructure.

Brazil needs to grow again urgently and sustainably. For this, the highway concession program should be a national priority.

César Borges  
CEO ABCR
# INDEX

## EXECUTIVE SUMMARY ................................................................. 9

I. CHALLENGES .................................................................................. 9

II. RECOMMENDATIONS ....................................................................... 13

1. INTRODUCTION ............................................................................ 17

2. ECONOMIC CONTEXT: PROBLEMS AND DIRECTION .................... 19
   - ABCR Index .................................................................................. 21

3. INFRASTRUCTURE, GEARING OF GROWTH .................................. 23
   3.1 LACK OF INFRASTRUCTURE COMPROMISES THE FUTURE .......... 23
   3.2 THE PROBLEM OF ROAD INFRASTRUCTURE ............................. 26

4. NEW WAYS FOR HIGHWAY CONCESSIONS IN BRAZIL .................. 31
   4.1 RESOLVE THE PRESENT, POINT TO THE FUTURE .................... 31
      - Current issues faced by concessionaires ................................. 32
   4.2 CHALLENGES AND INSTITUTIONAL PROPOSALS .................... 34
      4.2.1 Lack of prestige and paralysis of regulatory agencies .......... 34
      4.2.2 Necessary adjustments between execution and control ........ 36
      4.2.3 Improving decision-making and governance ....................... 38
   4.3 CHALLENGES AND PROPOSALS FOR REGULATION AND LEGAL CERTAINTY ... 40
4.4 CHALLENGES AND PROPOSALS FOR IMPLEMENTATION OF ENTERPRISES ...

4.4.1 Long-term planning and selection of enterprises ............................................. 42

4.4.2 Financing and attraction of private initiative .................................................. 44
- Use of debentures ........................................................................................................... 44
- Mechanisms to circumvent exchange rate risks ......................................................... 45
- Maintenance of the operation of BNDES ..................................................................... 45
- Operations of Project Finance ....................................................................................... 46

4.4.3 Efficient modeling of enterprises ......................................................................... 46
- Viability studies, consistent and participatory .............................................................. 46
- Tenders that enable the effective execution of the contract ......................................... 49
- The role of the Business Plan and its importance in the concession proposal ............... 51
- Attractiveness of concession contracts: risk allocation, balance and settlement of disputes .................................................................................................................. 54
- New ANTT guidelines present in the RIS edict ............................................................ 58

4.4.4 Specific proposals for contract improvements ..................................................... 60
- Productivity factor ......................................................................................................... 60
- Discount or increase of rebalancing ............................................................................. 60
- Contractual sanctions, substitution and TACs ............................................................. 62
- Risks of demand and extraordinary macroeconomic variations .................................. 62
- Return of concessions .................................................................................................. 63
- Exercise of Police Power: evasion, weighing and control of speed ............................ 64

APPENDIX ....................................................................................................................... 65

I. HISTORY OF FEDERAL AND STATE CONCESSIONS ................................................. 65
II. INTERNATIONAL EXPERIENCES .............................................................................. 71
III. HIGHWAY CONCESSION STATISTICS .................................................................... 74
This summary abridges ABCR’s proposals for Brazil to advance in its Highway Concessions program. Political and strategic challenges have been addressed initially, to share a basic agenda of understanding, without which it would be very difficult to develop the infrastructure needed for the country’s future. At the end, specific recommendations with regard to implementation and support have been summarized.

ABCR believes that the solution to the current economic and institutional deadlock, capable of unlocking investments, needs to focus on some essential fronts: the strengthening of institutions, the creation of a favorable environment for development, belief in the model of concessions and the improvement of existing mechanisms.

This initiative is in line with ABCR’s institutional purpose of establishing an open, ethical and transparent space for dialogue between the private market and the country’s future leaders.

I. CHALLENGES

■ URGENCY. There’s a lack of clarity and consensus with regard to the importance of infrastructure investments in Brazil.

This is the first item on the agenda. The concession programs are an essential part of a set of actions to bring about the resumption of investments and recovery of the economy. The seriousness of the situation requires urgent referral towards these actions. Due to the direct impact of infrastructure works throughout the production chain and principally due, to the enormous costs associated with the lack of adequate infrastructure for the needs of the country. Even with the obviousness of this, the agenda has not advanced.

Public resources are lacking, even for highway maintenance, and despite this, for a number of reasons, there has been no tenders of highway concessions at federal level, in the last three years¹. However, throughout this period, the states have made advances with their programs. The success of the concession programs represents a possible solution to address the bottlenecks of national infrastructure in the short and medium term.

It’s necessary for everyone to understand the gravity of the situation and to work with a sense of urgency and political will. Noting, however, that sense of urgency does not mean the absence of careful planning.

■ IMPORTANCE OF HIGHWAYS. The highway modal is strategic and will continue being the main method of transportation of cargo and people in the country.

Recent studies by the Planning and Logistics Company - EPL (“National Logistics Plan”) and Fundação Dom Cabral (“Diagnosis and Projections for Transport Logistics Infrastructure in Brazil”), assuming that all current new railway projects are completed, indicate that the road modal will still be predominant in freight transport in the next 20 years.

The importance of road transport implies that it’s urgent to invest in the expansion and quality of the existing network, which has not received enough investment even for its maintenance.

Evidence of this lack of investment is that in the period from 2009 to 2017 the road network grew by only 0.45%, while the fleet of trucks grew by 34.26% and automobiles by 53.22% (“CNT Transport annual 2018”).

¹This year, is due to be the tender of Rodovia de Integração do Sul - RIS (BR-101/290/386/448-RS).
To create a development-friendly environment, it’s necessary to organize public management so that it can deal with the challenges of planning and executing investments. This challenge also involves the proficiency of the public sector to effectively manage the public-private relationship. “The budgeting system and the institutional configuration of infrastructure planning and regulation must be modified to overcome the inefficiencies of fragmented decision-making processes and the exchange of political favors”².

The efficient management of infrastructure development implies re-establishing the centrality of the administration of the sector, with institutional clarity and defined interlocutors, in order to overcome vagueness and uncertainties regarding the institutional role of government agencies and to solve the problems that led to the dismantling of the planning of the sector.

The initiative to create the Investment Partnership Program - PPI, with the aim of stimulating private participation in investments and resolving problems with governance, appeared to signal a strengthening of the decision-making process - albeit through the creation of one more step of decision-making – instead of strengthening and qualifying the Ministry of Transport as the political decision-making power, and ANTT as the regulatory power. However, the advances hoped for did not occur and therefore, the lack of alignment between the public administrative bodies, remains.

Due to its complexity, long maturation and the need for large resources, deficiencies in transport sector planning tend to increase the investments necessary, override priorities and waste logistical opportunities and connections between modals.

In recent years, the country has gone through different plans and programs (PAC, PAC2, PIL, PIL2, Advance), none of them with a minimally planned execution.

Recently, the Planning and Logistics Company S / A (EPL) - now subordinate to the PPI Secretariat - has released the National Logistics Plan (PNL). Although it’s a study that is still being developed, it is an improvement over the previous plans, for dealing with the different modalities in an integrated way and presenting simulations of the reduction of costs associated to different investment scenarios.

However, the vision of PNL is still medium-term (until 2025) and does not consider state infrastructure that is highly representative and integrated with federal infrastructure. PNL should also consider the influence of passenger vehicles, which account for about 40% of traffic on the roads.

Infrastructure planning must be stable, independent of political swings, in order to ensure the efficient use of public resources and attract the most qualified private investors.

REGULATORY AGENCIES. Believe in the model and ensure the assignment of institutional roles.

The creation of independent regulatory agencies in Brazilian law had as its rationale: (i) technical and systemic regulation, to the detriment of political and ad hoc regulations; (ii) focus expertise and knowledge to optimize decisions and (iii) focus state activity on the regulatory side, rather than the direct (business) performance of the state.

However, the instruments used for the agencies to achieve their purposes - independence, administrative and budgetary autonomy, and technical authority vis-à-vis the market and regulated agents - have been relativized and reduced.

In the case of ANTT, an aggravating problem is the invasion of its regulatory competencies by the control body (TCU). This is not a problem of the incompetence of the agency, as it has been alleged, but mainly of the institutional imbalance that inhibits the agency’s technicians in the face of the immense powers of the control body to supervise and sanction at any moment. Among other measures, it’s necessary to establish due protection to the public manager acting in good faith.

Most of the problems of the regulatory agencies are addressed in measures proposed under PL 6621/16 (General Law of Regulatory Agencies).

CONTROL. The necessity of equilibrium between execution and control.

Controlling the concession contracts contributes to the enhancement of regulatory activity and its stability, impacting on models and concessions that can work better for the accomplishment of their greater purpose, which is to take care of the impending social needs of users with a well-functioning infrastructure.

However, the control exercised over the final activity of the agencies must be of a cooperative and supplementary nature, at the risk of confusing the supervision of the control body with the regulation of the sector itself. By exceeding these limits, instead of functioning as a regulatory improvement agency, the control body could further exacerbate the scenario of legal uncertainty, one of the main obstacles to the development of infrastructure.

The success of the concessions program depends on a more dynamic relationship between public and private, which must be followed by shifting from a predominantly process-oriented control to a more results-focused control. As part of its regulatory enhancement role, the control body should be careful not to create incentives for regulator inhibition and inertia.
Since the 1990s, three stages of the federal highway concession program have been completed, as well as several state programs (SP, PR, RJ, RS, BA, ES, PE, MG and MT). Throughout this period, different concession models were adopted, with changes that sought, in part, to remedy problems detected in previous stages, but which, unfortunately, seem to have created new and serious difficulties.

For the accomplishment of competent tenders, requirements must be observed like: basic projects which are well elaborated; balanced and consistent risk matrices; appropriate treatment of environmental licenses and expropriations; quality and transparency of EVTEA’s (Technical, Economic and Environmental Feasibility Studies); effective public consultation; realistic Capex and Opex budgets; qualification requirements of bidders and Business Plan; concern for the integrity and consistency of toll charges in the country and effective analysis of the feasibility of the proposals.

Choosing the bidder by the sole criterion of the lowest tariff, has led to disparities in tariffs applied all around Brazil, which causes a lack of understanding among users and lack of uniformity in quality among the different highway systems. Further homogenization of existing tariffs can be achieved through the adoption of other criteria for selecting partners, like for example, the “Ônus da Outorga” (Concession Fees) model, coupled with mechanisms that revert such resources to highway users.

The concession contract is a complex instrument, governed by a specific law (Federal Law No. 8,987/95), whose peculiarities require management assumptions which are different from those based in traditional public works, governed by Law 8,666/93 or other related legislation.

They should have clear wording, with a more precise definition of their risks, of the factors that affect the execution of the contract and the calculation of marginal cash flow, in order to reduce legal uncertainty. It’s also necessary that the contracts be prepared in order to face the inevitable changes in the scenario that will occur during their term. Adjustments of this nature should be understood as normal in a long-term relationship, in which, if not frequently, changes in onus and bonuses will be possible.

The issue of contract management should be emphasized. Public managers have been reluctant to take actions that could generate gains for society, by restraint of the action of the control body or simply by technical incapacity. In this sense, the contract must be able to offer effective legal beacons for its management and adequate allocation of risks, an indispensable condition for attracting private capital and guarantee a public-private relationship based on trust and cooperation.
II. RECOMMENDATIONS

1) INSTITUTIONAL RECOMMENDATIONS:

- **Strengthening of Regulatory Agencies and the exercise of their legal powers.** Support the approval of the main measures proposed under PL 6621/2016 to ensure technically sound, transparent regulatory agencies with financial autonomy and political independence, as well as qualified professionals who can fully exercise their powers (see page 34).

- **Restoration of the balance between management and control of public administration.** To better define the decision-making spaces, including and especially of the control bodies, as well as the guarantee of the enforcement of the provisions of Law n. 13,665/2018, known as the Legal Security Law, through its application at the time of operation of the control bodies (see page 36).

- **Centralized decision making.** Overcoming the institutional immobilism of the Highways sector, by articulating actions within the government, and reaffirming the role of the Ministry of Transport at the federal level and the Transport Secretariats at state level in guiding and boosting the sector (see page 38).

2) REGULATORY RECOMMENDATIONS:

- **Enhancement of regulation and legal certainty in the highway sector.** Establish uniform, clear and adequately prescribed administrative procedures in Law, specifying deadlines defined for decision making by the Public Administration and transitional rules for regulatory changes. Adopt legal and contractual mechanisms to control conflicts of competencies, to avoid contradictory decisions and guarantee their legal certainty. It’s also necessary the unrestricted obligation to perform a regulatory impact analysis prior to the edition of any standard, so that it’s balanced, in its practical outcomes, proportionality and adequacy before its actual adoption. Finally, to make effective the mechanisms of transparency, social participation, communication and dialogue, especially in the period before the exercise of the normative, supervisory and sanctioning functions (see page 40).

- ** Improvement of the decision-making process and governance measures.** Define clearly the competence of each agency and agent involved in the concession, without overlapping, in addition to seeking the implementation of mechanism of articulation between entities and, as far as possible, the only door, for the relationship with the individual. Accurate standards of contractual governance between the Public Authorities and the concessionaire should be adopted (see page 38).
3) RECOMMENDATIONS FOR THE IMPLEMENTATION OF ENTERPRISES

- **Integrated Planning.** As a requirement to define good enterprises, there must be short-term (24 months), medium-term (5 years) and long-term planning (up to 30 years), with careful analysis of socioeconomic impacts, considering the specificities of traffic, the regional characteristics and the needs of each highway system. Long-term planning should be a priority in relation to specific infrastructure projects, considering investment programs and coordination between government agencies (such as PPI, PNL or federal, state or municipal PPP programs and concessions). There should always be sufficient time for the preparation of substantiated feasibility studies, accountable basic projects, the obtaining of the corresponding environmental licenses and anticipated expropriations, etc. (see page 42).

- **No interruption of the current PPI schedule.** It’s important to ensure the continuity of the procedures for the modeling of the 9 federal highways already classified as priorities within the institutional framework of PPI, adapting the modeling to the considerations indicated in this agenda of recommendations (see page 43).

- **Financing of enterprises.** Expand the sources and forms of financing and, at the same time, equate the risks of the contract to increase its attractiveness and financeability. Expanding debenture relief for the sector, promoting project finance operations, and mitigating financial risks such as currency risk may prove to be effective tools to attract both domestic and foreign capital (see page 44).

- **Consistent, consequent and participatory feasibility studies.** Adopt the best practices in the EVTEA (Technical, Economic and Environmental Feasibility Studies), not allowing “adaptations” to fit the economic expectations of the contracting authority. Existing limitations in the structuring of projects of enterprises, should be overcome due to the restrictions on contracting engineering projects (Law 8666/93), as well as creating more efficient mechanisms for appraisal and review of the studies by the interested parties and by the community itself, notably in the initial phases of modeling (see page 46).

- **Bidding processes that favor effective contractual execution.** To redeem the role of each competitor’s Business Plan and the technical qualification of the bidders, as well as to favor the model of “Ônus da Outorga” (Concession Fees) as a criterion of judgement, coupled with mechanisms that revert such resources to highway users. It’s also necessary to accelerate the environmental licensing procedure before bidding - the acquisition of the preliminary environmental license and, where possible, the installation license (see page 49).

- **Allocation of contract risks.** They must be distributed in a clear and objective way between government and the concessionaire, predefined in the concession contract based on rational criteria. Risks that are outside the concessionaire’s control or the control of any of the parties, cannot be attributed exclusively to the concessionaire. It’s necessary to forecast clear economic limits (both for bidding and for contract execution) for risks whose quantification cannot be scaled in advance, like, for example, costs of environmental conditioning, expropriations (appropriation by the state), removal of interferences and relocation of inhabitants (see page 54).
• **Economic-financial rebalancing procedures.** Understand their normality in long-term contracts, subject to changes so that they continue to meet the public interest that guided the contracting. Marginal Cash Flow criterion should only be used for new investments and the recomposition of the Internal Rate of Return of the proposal for alterations in the initial arrangement of the concession. It’s also necessary to adopt contractual mechanisms to ensure responsiveness and timeliness in the analysis of requests for rebalancing, as well as the single and concomitant consideration of all events of imbalance (see page 55).

• **Use of alternative dispute resolution mechanisms.** This involves the adoption of a closed arbitration clause (provision of the essential conditions of arbitration in the concession contract, in order to avoid disputes at times of controversy) and the establishment of permanent and amicable contractual mechanisms for conflict resolution, such as the provision of *dispute boards* (boards of independent experts for the assessment of technical issues) or mediation (see page 57).

• **Amicable return of concessions.** Realize the amicable return of concessions expressly provided for by Law 13,448/2017, through the preparation and publication of the decree that will regulate its procedure. Also, regulating the methodology for calculating the indemnities related to the investments already made, for the cases provided for in Law No. 13,448/2017. (see page 63).

• **Other important improvements in contractual discipline.** Such as elimination of inaccuracies as to the productivity factor, incorporating the sharing of demand risk and unusual macroeconomic variations, and regulating the process of return of concessions (see page 60).

The recommendations of this document are basically aimed at the future of the sector (“New Ways for Highway Concessions in Brazil”). But in the internal discussions to elaborate the work, it was evident the need to highlight some current issues faced by the concessionaires in the management of their contracts. We have included a summary of these issues and proposed solutions in Box 2, page 32 (“Current issues faced by concessionaires”).
1 INTRODUCTION

The paved national road network - federal and state - is 212,886 km, according to the National Transportation Confederation (CNT)³, and through it circulates most of the freight transported in the country. According to recent studies by the Planning and Logistics Company (EPL)⁴ and Fundação Dom Cabral (FDC)⁵, even with the completion of all current projects of new railroads, studies indicate that the road modal will still be predominant in the transport of freight, in the next 20 years⁶.

The importance of road transport implies that, in addition to new projects, it’s urgent to invest in the expansion of the quality of the existing network, which has not received sufficient investments even for its maintenance. The existing discrepancy impedes the expansion of the economy.

To unlock investments in highways, it’s essential to attract domestic and international private capital, not only because of the resource constraints faced by the public coffers, but also to improve the efficiency of operations. However, private capital has many alternative options to allocate its resources, both in Brazil and abroad. It is necessary to create attractiveness through good projects, supported by quality long-term planning, regulatory stability and legal certainty.

The present work is the result of an evaluation that, at the same time that Brazil has urgency to attract private investments, it also presents great potential. The key to turning this potential into reality is to overcome the following challenges:

I. Restore an environment conducive to investment, ranging from macroeconomic stability to stability of regulations and legal certainty;
II. Restore trust and stability in the relationship between public and private;
III. Strengthen the institutional, regulatory and negotiating bases of this relationship, improving current resources and processes.

Understanding the importance of investments in highways to the country, ABCR presents in this document proposals to improve the system of Highway Concessions, with a view to expanding the road network and its quality at federal and state levels.

The document is organized into four sections, including this brief introduction.

Section 2 presents observations on the economic situation and the challenges to materialize an environment of stability and economic growth. Section 3 describes some critical aspects of the current infrastructure framework, with a focus on the road modal.

Section 4 summarizes the proposals advocated by ABCR to create a favorable environment for concessions through strengthening the institutions and the improvement of existing resources.

In addition, the document also contains three Appendices:

i. Brief historical description of federal and state highway concession programs;
ii. Reference to international experiences of countries using concession models; and
iii. Statistics of highway concessions.

⁴National Logistics Plan (PNL), published by EPL.
⁵“Diagnosis and Projections for Transport Logistics Infrastructure in Brazil”, by Fundação Dom Cabral, July/2018.
⁶See section 3 of this paper, page 23.
The recovery of the Brazilian economy, especially after the greatest economic crisis since the 1930s, will depend substantially on the implementation of an economic agenda focused on ensuring macroeconomic stability, investment expansion and efficiency gains.

The losses in the Brazilian economy were significant in recent years. GDP declined by around 7% between 2014 and 2016, investments fell by almost 30% between 2014 and 2017, and job losses totaled about 3 million, with the construction sector accounting for 35% of this amount. The ABCR index also followed the context of recent economic deterioration, presenting considerable falls in the period, especially in the flow of heavy vehicles as illustrated in the box at the end of this Section (page 21).

The fiscal situation remains a major challenge. In addition to the high indebtedness of the public sector, the accounts are in the red, with expenses above income, even excluding interest expenses. For compliance with fiscal goals and regulations, the government has substantially reduced discretionary spending (which is where it can act, even though it represents only 10% of the budget). In this category, the recurrent variable adjustment has been public investments.

The fiscal situation has also prevented the implementation of the necessary investment for the maintenance of the current infrastructure. Investments close to 2.5% of GDP would be necessary to maintain the existing capital stock, a percentage above 2% that was registered in the last 20 years. It should be noted that this percentage is less than half the average BRICS investment in the period, not counting China.

In a recent study by the IMF, focusing on Latin America, it is pointed out that investments in infrastructure quality not only increase economic growth but also enhance overall investment, thus creating significant economic benefits to society.

For the country to increase its investment rate, however, it’s necessary that it equates its fiscal situation, reducing public dissaving. The reduction of drainage from domestic savings to government financing will allow greater availability of resources to finance investments, a necessary engine for the country to grow, generate employment and distribute wealth through society.

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NEED FOR PRIVATE CAPITAL TO COMPLEMENT PUBLIC INVESTMENT

In this context, the evolution of investments in infrastructure depends on the participation of private capital. Its presence should not only compensate for the lack of public resources, but also bring efficiency in the realization and management of these investments and projects, contributing to economic growth. However, the shift in mentality towards private capital is still necessary, as some sectors of government (and society) still view the private sector and profit with suspicion.

Private resources exist mainly in international markets, where low interest rates in developed countries, make investment opportunities attractive in developing countries.

The private investor needs stable regulations and legal certainty, especially with regard to clear and objective forms of dispute settlement in which the government is a part. The clearer the regulations and security in relation to their compliance, the greater the interest, and competition between investors. Consequently, this benefits society in terms of quantity, quality of service and price.

Countries with fragile institutions that do not offer guarantees to the private sector, when they do attract investment, pay much more for the services rendered, because of the greater risks and uncertainties inherent in ventures.

Thus, the challenge of establishing conditions to attract domestic and international private capital presupposes the assuming of an agenda of understanding and respect with investors.

PROBLEMS OF MANAGEMENT, PLANNING AND FINANCING

In turn, ensuring more amicable conditions towards private capital also means promoting improvements in management and planning. In 2017, the World Bank released a report⁹ which “suggests that more fundamental changes in the institutional configuration of Brazil’s infrastructure and budget planning and regulation will be necessary to overcome the inefficiencies resulting from fragmented decision-making processes and the exchange of political favors”.

Likewise, adequate credit lines should be provided for the financing of enterprises, either through development banks or the creation of favorable conditions in the private credit market. Among other points discussed in Section 4 of this report, the expansion of different financing modalities, such as Project Finance – financing, with the cash flow generated by the enterprise as a guarantee is essential to attract private initiative to the sector.

For Brazil to emerge from this trap of low investment in infrastructure, the present study will submit proposals that, in essence, view the attraction of private capital as the outlet for the execution of relevant investment projects, focused on transport infrastructure.

Although, the country already has an important history with highway concessions, experience shows that, given the urgent need for improvement in the country’s transportation infrastructure, this model needs to be improved and expanded at both the federal and state levels.

The ABCR activity index was created in 2002, based on the partnership of the Brazilian Association of Highway Concessionaires (ABCR) and Tendências Integrated Consulting. The objective of the indicator is to measure the flow of vehicles from privately-run toll highways. The index has been shown to be an important instrument for measuring the performance of the Brazilian economy. Its dynamism has close relationship with the activity of important sectors, such as industry, commerce and services.

**FIG 1. ABCR INDEX: THE THERMOMETER OF THE ECONOMY**

*Source: ABCR, 2018.*
3 INFRASTRUCTURE, THE GEARING OF GROWTH

3.1 LACK OF INFRASTRUCTURE COMPROMISES THE FUTURE

The wealth of a nation depends on its ability to produce and consume goods and services. In this context, an efficient transport infrastructure is the central element in the maximization of this capacity.

As summarized below, which relates the GDP per capita of 80 countries with their respective positions in the ranking of infrastructure development, there is no economically developed country that does not have strong infrastructure.

**FIG. 2 - Relationship between infrastructure and GDP per capita**


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INVESTMENTS IN INFRASTRUCTURE DRIVE GROWTH

Investment in any type of infrastructure - transportation, communication, energy or sanitation - impacts employment and income levels directly and indirectly, either by hiring labor in the sector itself or by efficiency and productivity gains in other sectors, which in turn represent costs reduction and creation of conditions for new enterprises¹¹, creating a virtuous circle, of the promotion of economic development.

BRAZIL INVESTS LITTLE

In the last 20 years, Brazil invested, on average, 2% of GDP in infrastructure. In 2017, the country recorded its worst historical rate, investing only 1.4% of GDP. As a result, the current stock of infrastructure has declined. In 2016, the value of all physical infrastructure assets in relation to GDP was 12.1%, substantially lower than that observed for example in 1984 - 21.4%¹³.

According to a World Bank report¹⁴, the amount invested is much less than what’s needed to just keep in good condition the current stock of infrastructure, available in the national territory. The report shows that the maintenance of the Brazilian infrastructure stock would require an annual average investment of 2.4% of GDP.

In the case of highways, according to the CNT Transport Annual 2018, the growth of the road network between 2009-2017 was only 0.45%. But during this period the fleet of trucks grew 34.26% (from 2.026 million to 2.72 million) and automobiles grew 53.22% (from 34,536 million to 52,916 million). The discrepancy in these figures is a very disturbing statistic with regard to the situation on Brazil’s road network in the coming years.

For comparison purposes, Latin American countries invest between 2.4 and 3.2% of their GDP in infrastructure. Chile, for example, invested more than 4% of GDP in basic structure in the last decade, while Brazil did not reach an average of 2.5% in the period¹⁵.

BRAZIL OCCUPIES 73RD PLACE IN THE RANKING OF INFRASTRUCTURE

According to the World Economic Forum, in 2017, Brazil, the 8th ranked economy in the world, was considered the 73rd ranked country in infrastructure, in a ranking of 137 countries¹⁶. When comparing only the quality of highways, the Brazilian position falls to 103rd. Such positions are incompatible with the size of the Brazilian economy and, especially, with its public revenue, as shown in the table below.

### TABLE 1. Infrastructure and income indicators in Latin America (selected countries)

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<td>Chile</td>
<td>24º</td>
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<td>22.63%</td>
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<td>Ecuador</td>
<td>29º</td>
<td>72º</td>
<td>62º</td>
<td>32.00%</td>
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<td>Panama</td>
<td>49º</td>
<td>37º</td>
<td>72º</td>
<td>20.75%</td>
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<td>Mexico</td>
<td>52º</td>
<td>62º</td>
<td>15º</td>
<td>24.82%</td>
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<tr>
<td>Trinidad &amp; Tobago</td>
<td>66º</td>
<td>59º</td>
<td>106º</td>
<td>23.34%</td>
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<tr>
<td>Uruguay</td>
<td>95º</td>
<td>45º</td>
<td>75º</td>
<td>29.55%</td>
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<td>Argentina</td>
<td>96º</td>
<td>81º</td>
<td>21º</td>
<td>34.07%</td>
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<td>Brazil</td>
<td>103º</td>
<td>73º</td>
<td>8º</td>
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<td>Peru</td>
<td>108º</td>
<td>86º</td>
<td>49º</td>
<td>18.22%</td>
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<td>Colômbia</td>
<td>110º</td>
<td>87º</td>
<td>39º</td>
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<tr>
<td>Costa Rica</td>
<td>123º</td>
<td>65º</td>
<td>73º</td>
<td>13.95%</td>
</tr>
</tbody>
</table>

Source: World Economic Forum\(^1\) e IMF\(^2\).

Note: Data on general government revenues in 2017 for Chile, Costa Rica, Ecuador and Panama are estimates by the IMF. Produced by: Tendências.

In relation to BRICS, the situation of Brazil is no different: Russia (35\(^{th}\)), India (66th), China (46\(^{th}\)) and South Africa (61\(^{st}\)) have infrastructure significantly superior than Brazil’s.

In addition to low historical investment, Brazil also suffers from a drop in investment levels in more recent periods. The following graphs show the contributions in land transport infrastructure and total infrastructure in the country between 1980 and 2015, indicating that private investment was not promoted enough to meet the fall in public investment.

Naturally, if nothing is done about it, in view of the fact that the country does not even invest the necessary resources to maintain its current infrastructure, the situation of the Brazilian transport infrastructure is likely to worsen significantly in the coming years.

\(^{1}\)The concept of general government involves the three spheres of government - central, state and municipal - except for the Central Bank and indirect administrative bodies, such as state enterprises.


3.2 THE PROBLEM OF ROAD INFRASTRUCTURE

THE IMPORTANCE OF HIGHWAYS IN THE TRANSPORT MATRIX

At least 60 years ago, highways were chosen as the main means of national transportation. The boom occurred with JK in the “Plano de Metas” and was reinforced both at the time of the military government and during the 1990s, when highway concession initiatives began.

Research and studies have evidenced the fundamental role of highways both in the present and in the future of Brazil. For example, the National Logistics Plan (PNL)²¹ and a recent study published by Fundação Dom Cabral (FDC) show that there are no predictions of a significant change in the participation of the road modal in the national transport matrix.

According to the work of the FDC²², if a series of works and investments are carried out up to 2035, the modal division will be little changed. Roads will continue to focus approximately 50% of freight transport, compared to the current 52.7%, while rail transport, for example, will show a slight increase in its share, going from 27.2% to 30.5%, in 2035.

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²¹The Planning and Logistics Company is responsible for the National Logistics Plan (PNL), which suggests the necessary undertakings to optimize the logistics infrastructure by the year 2025.
²²FDC’s work (see footnote 5), among other points, comprises a more extensive paved road network (195.2 thousand km) than that provided for in the National Logistics Plan (PNL), close to the amount reported by the Ministry of Transport, Ports and Aviation. For this reason, the FDC forecasts were adopted in this document. See data from the Ministry of Transport at: http://www.transportes.gov.br/component/content/article.html?id=5341. Accessed on: 18/7/2018.
It’s important to highlight that, despite the small decrease in the share of road transport, due to the absolute increase in the demand for freight transport, the amount of cargo transported on highways will increase from 0.724 trillion TKU\textsuperscript{23} to 0.98, - a 35% increase in a transport system that’s already saturated, which requires even more investments in expanding and increasing the existing network capacity.

### TABLE 2 - Modal division of cargo transport production

<table>
<thead>
<tr>
<th>MODAL</th>
<th>2015 TRILLION TKU</th>
<th>2015 %</th>
<th>2025 TRILLION TKU</th>
<th>2025 %</th>
<th>2035 TRILLION TKU</th>
<th>2035 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>0.724</td>
<td>52.7%</td>
<td>0.847</td>
<td>50.1%</td>
<td>0.98</td>
<td>50.3%</td>
</tr>
<tr>
<td>Railway</td>
<td>0.373</td>
<td>27.2%</td>
<td>0.527</td>
<td>31.2%</td>
<td>0.594</td>
<td>30.5%</td>
</tr>
<tr>
<td>Waterway*</td>
<td>0.232</td>
<td>16.9%</td>
<td>0.273</td>
<td>16.1%</td>
<td>0.314</td>
<td>16.1%</td>
</tr>
<tr>
<td>Pipeline</td>
<td>0.044</td>
<td>3.2%</td>
<td>0.044</td>
<td>2.6%</td>
<td>0.061</td>
<td>3.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1.373</strong></td>
<td><strong>52.7%</strong></td>
<td><strong>1.691</strong></td>
<td><strong>50.1%</strong></td>
<td><strong>1.949</strong></td>
<td><strong>50.3%</strong></td>
</tr>
</tbody>
</table>

\textsuperscript{23}TKU refers to tonnes to utilised kilometers, which comprises the sum of cargo volumes in tonnes multiplied by the length of the respective journeys in kilometers.

Source: Fundação Dom Cabral. See footnote 5.

*Waterway transport includes the river and cabotage modalities.

An interesting observation to be considered in the manner of cargo distribution is the influence of the transport of iron ore, made specifically by means of railway or pipeline (the use of trucks only occurs in the exploration environment). If the modal split did not include iron ore, the current burden of the road modal would increase from 52.7% to 70%. And the railway mode would be reduced from 27.2% to 8%.
THE LOW COVERAGE AND QUALITY OF THE NATIONAL NETWORK

Despite this prominence of the road network, Brazil still has very low density of paved roads when compared to other countries, as shown in the figure below.

FIG. 4 - Density of the paved road network by country. (values in km / 1000 km²)

Source: National Transportation Confederation (CNT) with data of Sistema Nacional de Viação - SNV (National Road System) and of Central Intelligence Agency (CIA).

It should be noted, however, that the quality of the road network in Brazil reflects very different realities. About half of the country’s autoestradas are concentrated in the state of São Paulo, without doubt the region of Brazil with the best road infrastructure. The São Paulo network has 23 km per 1,000 km² of territorial area, which puts it in prominence in relation to other developed states or countries. In the state of California, for example, the density is 16 km per 1,000 km², and in France 21 km²⁴.

²⁴Autoestrada is one of the terms used to denote any asphalted road, with at least two lanes in each direction and ideally - but not always - without intersections or impediments such as traffic lights or humps (in the United States it would be called interstate, freeway or expressway; in the UK it would be motorway and in Germany it would be Autobahn). “Road Infrastructure in Brazil: Where Do We Go?”, Bain & Company (2016).
THE QUALITY OF ROAD INFRASTRUCTURE

In addition to the low national density of the road network, the country also faces the problem of the poor quality of services offered by existing highways. According to the World Bank\(^\text{25}\), about 44% of the road network faces some type of deficiency, such as the need for renovation, expansion or paving.

The FDC\(^\text{26}\) study shows similar results to those of the World Bank, 45.3% of road traffic is on highways with low service levels (service levels D, E and F)\(^\text{27}\). There is no prospect of an improvement in this situation, which tends to worsen over time, given the growth projected for traffic and the constant need to maintain and adapt the roads which exist already. The figure below shows the FDC projection for traffic distribution by service level (categories A to F) up to 2025.

![Figure 5 - Distribution of traffic on the road network by level of service](image)

Source: Fundação Dom Cabral\(^\text{28}\).

THE EVALUATION OF CONCESSION HIGHWAYS

Highways conceded to the private sector are better evaluated than those managed by the public sector. According to data from the National Transportation Confederation\(^\text{29}\), in 2017, all 19 of Brazil’s best highways were under a concession regime, with a rate of approval by users much higher than that of public highways. On conceded highways, 74% of users rated the quality as optimum / good, 23% as regular and 3% as poor / very bad. On public highways, the rates are, respectively, 27%, 39% and 34%.

According to the World Bank\(^\text{30}\), more than 40% of road inefficiencies are found in the southeast of Brazil, the region with the highest traffic of goods and people.

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\(^{26}\)FDC (2018), see footnote 5.
\(^{27}\)The service levels are calculated by the ratio between the volume of traffic and road capacity installed in each road segment. According to the HCM 2010 manual, the service is classified into 6 levels:
- A (Free Flow) - Concentration greatly reduced. Comfort and convenience: optimum;
- B (Stable flow) - Reduced concentration. Comfort and convenience: good;
- C (steady flow) - Average concentration. Comfort and convenience: regular;
- D (Near unstable flow) - High concentration. Comfort and convenience: poor;
- E (Unstable flow) - Extremely high concentration. Comfort and convenience: very bad;
- F (forced flow) - Very high concentration. Comfort and convenience: unacceptable.
\(^{28}\)FDC (2018), footnote 5.
\(^{29}\)See CNT Highway Survey Issue (2017).
The congestion of the network and poor design of projects are the main causes of this scenario, responsible for substantial numbers of accidents and deaths on Brazilian highways.

In addition to the formidable problem of injuries and deaths, the poor quality of roads also brings with it significant economic losses. It limits the growth of sectors that depend on smooth transport flows to expand, increases logistics costs throughout the country and compromises the competitiveness of the national economy, always with negative consequences for economic development.

In monetary terms, the investment gap on highways is also large. Between 2006 and 2015, transport investment in Brazil was close to US$ 118 billion (2015 prices), and would require, for the next 10 years, US$ 352 billion\(^{31}\). This would mean an increase of 198% at the historical levels of the decade, or in other words, US $ 234 billion.

**LONG-TERM PLANNING AND PRIVATE PARTICIPATION**

Despite the evident need for greater investments in road infrastructure, it is easy to conclude that, in an environment of slow economic recovery and intense fiscal restraint, the necessary resources will not come from public coffers.

Therefore, it is imperative that private initiative is involved in road investments, contributing actively to the development of the sector.

At the same time that Brazil has an urgent need to attract private investment, it also shows great potential for this. However, turning this potential into reality means overcoming challenges such as: (a) restoring a favorable environment for investment, addressing both macroeconomic stability and the stability of regulations, and promoting legal certainty; (b) restore trust and stability in the relationship between the public and private sectors; and (c) strengthen the institutional, regulatory and negotiating bases of this relationship, with improvement of the current mechanisms and processes.

The country cannot wait for solutions that are announced as innovative, but that have already been limited in the past and that, above all, compromise the future. “Brazil requires long-term planning, with structural projects assumed and protected by society and inserted in a state agenda for infrastructure. But the plans must combine to improve the efficiency of the road network consistently with the planned restructuring of the current multimodal transport matrix. It is critical to create a secure and reliable private investment environment in partnership with the public sector that connects now and tomorrow. Otherwise, we will always have a country without logistic fluency and without competitiveness.”\(^{32}\)

Considering the importance of investments in highways in Brazil and the consequent need to plan and attract private initiative, ABCR presents in the next section of this paper its proposals to improve the country’s highway concession system for the purposes of expanding and qualifying the national road network at both the federal and state levels.


\(^{32}\)Prof. Paulo Tarso Vilela de Resende. See footnote 13.
Besides being able to resolve the present, there is a need to ponder the future and draw new ways for partnerships between government and private initiative in the highway segment. For new concessions and above all to unlock the urgent investments in the sector, ABCR suggests objective and clear proposals for the perfection of processes and procedures inherent to the concession of highways in three major fronts:

I. Reaffirm the institutional role and promote coordination between government actors;
II. Improve regulations and legal certainty;
III. Focus on effective implementation of ventures, from the planning stage through modelling and contractual execution.

4.1 RESOLVE THE PRESENT, POINT TO THE FUTURE

The recommendations in this document are basically aimed at the future of the sector (“New Ways for Highway Concessions in Brazil”). But in the internal discussions to elaborate the document, the need to highlight some current issues faced by concessionaires in the management of their contracts became evident.

We have included a summary of these issues and proposals for solutions at the beginning of this section (Box 2, below- “Current issues faced by Concessionaires”).

One special case is the importance of dealing with the concession of the third stage of the federal program, that was severely affected by the economic crisis that followed the tenders (see Appendix 1, page 65). It’s an infrastructure greater in length than the new concessions presently on the agenda of the federal government. The prospecting of concessions for new highway sections, have to be treated at least with the same priority as the consideration of issues that have still to be solved in the present concessions.

To think of the future signifies obviously to look at the present and from this learn the necessary lessons.
### BOX 2 - Current issues faced by concessionaires

<table>
<thead>
<tr>
<th>PRINCIPAL PROBLEMS FACED BY CONCESSIONAIRES</th>
<th>PROPOSED SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silence or delays in public administration to provide answers to the demands of concessionaires.</td>
<td>Adoption of peremptory deadlines for decision making by the public administration in the modelling and execution of concession contracts.</td>
</tr>
<tr>
<td>Distrust in relation to the claims to rebalance the concession contract’s economic &amp; financial terms.</td>
<td>Overcome the distrust via the implementation of transparent dialogue channels for the interaction of the interested parties (Regulatory Agencies, Control Bodies and concessionaires) with the intent of discussing and defining clear parameters for the evaluation of rebalancing litigations.</td>
</tr>
<tr>
<td>Deterioration of the financial situation of the concession contract due to temporal discrepancy between the occurrence of the event that causes the imbalance and the time it takes to rebalance.</td>
<td>Guarantee the responsiveness and timeliness in the analysis of requests for rebalancing, as well as the possibility of suspension of investments (Except emergencies) until the question is rebalanced.</td>
</tr>
<tr>
<td>Partial rebalancing practice, without consideration of all events that have an impact on the economic-financial equation of the contract, and automatic application of discounts that do not consider the integrality of the events that generated contractual changes.</td>
<td>To promote the obligatoriness of a single, complete and timely recomposition for all events associated with the period under discussion.</td>
</tr>
<tr>
<td>Unwarranted accountability of the concessionaire for non-manageable risks (obstacles in the obtaining of environmental and work licenses, expropriation risks).</td>
<td>Recognition of the inability to manage these risks, preventing that the concessionaires suffer negative economic consequences (sanctions and discounts) due to their occurrence.</td>
</tr>
<tr>
<td>Lack of consideration of macro-economic circumstances and their impact on the concession.</td>
<td>Recognition of the extraordinary character of the macroeconomic situation with the renegotiation of investments in order to guarantee the continuity of the concession.</td>
</tr>
<tr>
<td>Use of Factor D(^{33}) in a binary fashion (fulfilled/ not fulfilled), considering partial fulfillment (Investment by the concessionaires).</td>
<td>Adjustment of the application of the Factor D to consider mechanisms that allow for the proportional and progressive measurement of the fulfillment of investments.</td>
</tr>
</tbody>
</table>

\(^{33}\)The Factor D is a pre-established mechanism in the concession contract that aims at maintaining the financial and economic balance in the case of nonexecution of work and services provided for in the concession, in accordance to the performance parameters, estimating its impact on cash flow. This way, in case the works or services are not performed, the impact of this nonexecution will be removed from the tariff. This factor does not constitute a type of penalty. For more information about Factor D we see item 4.4.4.2 (Page 60).
<table>
<thead>
<tr>
<th>PRINCIPAL PROBLEMS FACED BY CONCESSIONAIRES</th>
<th>PROPOSED SOLUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edition of laws and arbitrary and contradictory decision making with no purpose that provoke negative economic effects on the concession (example, exemption of tolls for suspended axis.)</td>
<td>Effective application and obligatory analysis of the impact of regulations to improve the quality of the decisions that alter rights including legislative alterations (PLs) and administrative decisions.</td>
</tr>
<tr>
<td>Automatic application of sanctions unrelated to the purpose for which they were established.</td>
<td>Improve the application of sanctions and establish their economic value, avoiding that they become unrelated to the purpose of the concession.</td>
</tr>
<tr>
<td>Negative economic impact due to the lack of police power on the part of the state when overseeing the weighing of vehicles, traffic evasion and speed control.</td>
<td>Recognition of the economic consequences of the inefficient police power in the sphere of the concession (analogue to “fato do principe”: an administrative order that may affect the process).</td>
</tr>
<tr>
<td>Non-completion of the financing terms announced by the BNDES.</td>
<td>Adoption of measures to unlock the financing commitments and correct the effects of delays.</td>
</tr>
<tr>
<td>Arbitrary and/or delayed decision making on the part of public administrators causing negative economic impact on the existing contracts and legal uncertainty for the sector, inhibiting the attraction of investors, financers and restricting option in the insurance market.</td>
<td>Administration of existing contracts without unilateral or decisions contrary to those agreed on in the contract. If necessary, these decisions should be accompanied by a timely quantification of the economic impact and of the consequent re-composition of the equilibrium, observing the contractual period for answers and resolution of conflicts.</td>
</tr>
<tr>
<td>Concessions that no longer are economically viable due to macroeconomic crisis (specially the third stage of the federal concession program).</td>
<td>Regulation and implementation of the friendly return of the concession as foreseen in Law nº 13.448/2017, besides defining the methodology to calculate the indemnity relative to the investments already made.</td>
</tr>
<tr>
<td>Uncertainties as to the destination of concessions which are close to the end of the contractual period and with regard to eventual existing liabilities.</td>
<td>Clear indication of compliance with the existing agreements and the calculation of the indemnities due in the event of termination of the concession by the advent of the expiration of the contractual term.</td>
</tr>
</tbody>
</table>
The lack of institutional alignment between the administration bodies responsible for the conduction of the administrative processes of highway concessions, not only makes the management of existing concessions difficult, but also makes a mess of the progress of new concessions, that are not completed. The large number of state actors requires intense coordination of activity and competences and not always facilitates the efficient process of enterprise and investment.

The regulatory agencies responsible for promoting and leading are facing paralysis in their activities, whether due to the systematic questioning of their award decisions and accountability decisions of their servants, be it due to political interference in their activity, or be it due to the lack of economic and human resources they have to face their institutional duties.

The situation is made worse by the difficulty of dialogue and understanding between the bodies and entities responsible for the external control of their initiatives, notably Ministério Público (Public Prosecutor’s Office) and Court of Auditors (and specifically the Auditors Tribunal de Contas da União - TCU [Federal Audit Court]), whose actions contribute, whose actions contribute to what has been called “a blackout of pens” which presently is being faced by highway infrastructure, substantially harming the conduction of the contracts.

These three institutional challenges will be covered below.

4.2 CHALLENGES AND INSTITUTIONAL PROPOSALS

In the last decades, a model in which the state intervention in the economy and attainment of public interests is concentrated in indirect state regulation by the independent regulatory agencies has gained strength. This model gambles on technical regulation, as a fundament for economic rationality and sectorial knowledge, seeking exemption from oscillations and political interference.

The creation of independent regulatory agencies under Brazilian law, was therefore logical to, (i) prioritize technical and systemic regulation over political and one-off regulations; (ii) concentrate expertise and knowledge in order to optimize decisions and (iii) centralize state activities on regulatory issues, instead of guaranteeing the satisfaction of political interests with the direct intervention (corporate) of the state.

However, the legal instruments adopted so that the agencies can reach these objectives – the political independence from the government to which the agencies are attached, their administrative and budget autonomy, and their technical authority over the market and the agents they regulate – are being relativized and reduced.

The financial autonomy of the agencies has been victim of budget contingencies that suffocate their financial management, specially intensified in virtue of the present fiscal crisis. Equally, the instruments dedicated to guaranteeing the political independence of the managers of the agencies (notably the mandate and assumption of excellence for the exercise of the function) were weakened by nominations that do not meet the technical specialization of the regulated sector or the nomination of interim managers of agencies not covered with a guarantee of a fixed mandate.³⁴

Besides this, the regulatory agencies that should exercise an independent role directed at the public interest, do not always act impartially in relation to the different interests involved with the expected technical neutrality which tends to increase the country’s risk.

The lack of autonomy and rising liability of the regulatory agency personnel by control bodies, such as, the Audit Court, also has made the agencies little responsive, a process that
affects not only the state highway regulators, but also the ANTT.

Finally, with respect to the technical qualities of the agencies, the evasion of experienced and qualified technicians from the agencies and the difficulties and disincentives suffered by these professionals in the performance of their duties has made timely execution of regulatory activities difficult or affected their quality. To face this diagnosis, we present the following proposals to overcome the situation:

### PROPOSALS FOR THE STRENGTHENING OF REGULATORY AGENCIES AND EXERCISE OF THEIR FULL LEGAL COMPETENCES:

- Guarantee technically apt, transparent, independent and autonomous regulatory agencies.
- Support the principal measures proposed in PL 6621/2016. Notedly:
  
a. Assure the administrative and financial autonomy of the agencies, preventing budget contingencies that suffocate financial management. In the case of federal agencies, it is the case of making them sectorial bodies of the budget and planning system, and the federal financial administration, enabling the direct negotiation of their budget with Planning and determine which part of the income from overseeing fees should remain in accounts linked to the agency and not be directed to a joint treasury account.

b. Strengthen the administrative autonomy of the agencies in order to permit them to have the competency of requesting directly to Planning (i) authority to hold public service exams, (ii) provide positions approved by law and iii) make changes in the composition of its personnel and career plans.

c. Promote the political independence of the agencies, preventing political nominations and favor technical excellence in its managers, by means of (i) the proposal of new rules for nominations that prevent merely political nominations by prohibiting the indications of State Ministers, Municipal Secretaries, Statutory Directors of political parties and people with a legislative mandate at any entity of the federation, even those on leave from their positions, extended to blood relatives or similar up to the third degree and (ii) preventing the indication of people who do not have the desired technical expertise required for the position (requirement of a minimum time of professional experience).

d. Assure the technical capacity of the servants of the agencies, in order to reinforce the authority and prevent strategies to disqualify or diminish their institutional role.

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³⁴FGV ran research in 2016 with 140 directors of regulatory agencies and concluded that 34% came from ministries and other government bodies. Only 6% had a career in the private sector. Nearly one third were affiliated to political parties, which is prohibited in many countries See: https://economia.estadao.com.br/noticias/geral,dominadas-por-indicacoes-politicas-agencias-tem-11-vagas-na-prateleira,70002279777. Accessed on: 06/06/2018. Should note, however, that in the case of ANTT, for over four years the agency has not had an interim manager.
4.2.2 NECESSARY ADJUSTMENTS BETWEEN EXECUTION AND CONTROL

Constitutionally, the Audit Court has the incumbency of promoting the overseeing of the legality, legitimacy and the economy of direct and indirect administrative acts. More than judicial competence for the overseeing, the Audit Courts have a fundamental institutional role of the development of infrastructure on a national, regional and local level. It’s a given that its position as the controlling entity has the purpose of the perfecting of regulatory activity, which should have repercussions in models of concessions that work better, fulfilling their intended need, which is to meet the foremost needs of the user, for infrastructure that works well.

However, should it not observe the judicial and constitutional limits of control and technical-juridical assumptions that should guide the overseeing of partnership contracts, the controller might exacerbate the scenario of judicial uncertainty. In this hypothesis, control signifies an obstacle to the development of infrastructure rather than functioning as an agent for regulatory perfection.

What we see in today’s scenario is that the Audit Courts and, specifically the Tribunal de Contas da União - TCU (Federal Audit Court) in an effort to fulfill their role as an efficient and diligent controller, ended up widening their scope beyond mere auditing of the conformity and legality of the enterprises, starting to question the merits and convenience, results and performance. Not infrequently their decisions determine the alteration of fundamental points in the modelling of the enterprise or the execution of the contracts, substituting actions – or deliberations – or the executive entities and the contractual regulation itself. In disapproving choices contrary to their understanding or “penalizing” technical mistakes and imprecisions, putting the responsibility on complete links in the decision-making chain on some regulatory agencies, with the presumption of guilt of these agents, the Audit Courts end up constituting a disincentive to the activity of the agencies and their agents.

These interferences, not only (i) bring judicial uncertainty with regards to the conduction of the processes by the government (ii) question the distribution of competences established by constitution and (iii) normally have the effect of delaying or abandoning relevant projects for the infrastructure sector.

The Audit Courts themselves are engaged in an effort to revise their role and recognize the impact of their activity on the projects they analyze. The Normative Instruction 81/2018 of the Federal Audit Court, for example, that talks about the overseeing of privatization in the federal government has the intention of giving more certainty and foresight to the analysis procedures of the body, as well as reducing the bureaucracy and its completion by means of an effective hierarchy in the overseeing (principle of significance).

Even so, there is a long road ahead to reach effective harmony between the requirements of executive activity and that of control. The recent process of analysis and approval of the highway concession, Rodovia de Integração do Sul (RIS), in the federal sphere, and the divergences that were made evident between the Federal Audit Court, ANTT, and the government illustrates the standoff between the different institutional forces and the consequences on the execution of investments in infrastructure (see Box 4 - New directives of the ANTT for concession of highways and new edict for the concession of highway integration of the south (RIS), page 58) At state level, the activity of Audit Courts show the same lack of understanding and comprehension between the executive entities and control, harming the unlocking of the concessions of state highways.

It is recognized that the functioning at the same time of an overseer oriented to the
improvement of regulations and as that of a controller sensitive to the unlocking of infrastructure through the successful implementation of a concession program is a challenge. But unlocking highway concession projects, and reacquiring confidence in their completion requires finding an institutional equilibrium point.

The reestablishment of the right balance between management and control of the public administration is a necessary condition for the full exercise of each of the institutional competencies of the agents involved and, in a certain way, depends on the recognition of the role of each of the agents, with the creation of space for open, ethical, and transparent dialogue. For this to happen some directives must be observed:

(a) The success of the program of federal concessions depends on a more dynamic relation between the private and the public and should follow the dislocation from control predominately directed to processes, to control more focused-on results;

(b) In its role to perfect regulation, the Federal Audit Court should concern itself in not creating incentives for inhibition and inertia of the regulator, besides fostering governance of the Regulatory Agency that doesn't permit paralysis of decisions that can cause stops in execution, lack of equilibrium and, specially, not meeting the needs of the user;

(c) The controls should have as a premise the protection of the public manager and the regulator that acts in good faith for the promotion of national infrastructure, avoiding, personally punishing public agents whose acts only reflect the purpose of fulfilling their institutional mission of materializing the concession program.

The proposals shown below intend to guarantee decision making and activity space between the executive and control spheres, so that each one can develop fully within the limits constitutionally established for their activities.

**PROPOSALS TO REESTABLISH EQUILIBRIUM BETWEEN MANAGEMENT AND CONTROL IN PUBLIC ADMINISTRATION:**

- Reestablish equilibrium between management and control in public administration by means of improving the demarcation of decision areas.

- Clarify the constitutional rule that only budget and finances control receives determinations and that operational control only admits recommendations (for independent regulatory agencies, control is limited to non-core activity, not its core activity).

- Support the implementation of advances formalized by law 13,665/2018 by means of its application at the moment of action on the part of the control bodies, notably (i) the consideration of practical consequences of the control decisions, along with a demonstration of the need and adequacy; (ii) the obligation to point out judicial and administrative consequences of decisions that invalidate administrative acts and also the means for their regularization, (iii) the consideration of obstacles and real difficulties for the manager and (iv) a stipulation of a transition period for decision that innovate the present interpretive scenario.
The fragmentation of competencies between the different state actors in the administration frequently makes decisions regarding the formulation of public policy, studies, modelling, control and realization of concession bidding, to be taken by entities isolated from the other stages of the project, with frequent loss of quality and time for the enterprise.

In the federal sphere, for example, the Ministry of Transport, Ports and Civil Aviation (MTPA), The National Agency for Land Transport (ANTT) and the Department for Transport Infrastructure (DNIT), perform relevant roles in the concession of highways. More recently the Planning and Logistic Company (EPL), the PPI (Program for Partnerships and Investments), the Ministry of Planning, and the Office of the Chief of Staff, are now working on the planning and design of ventures in the sector. In the states of the federation, even though the competencies may be more concentrated, there are also difficulties in coordinating and overcoming bureaucratic obstacles in the planning and implementation of projects.

A clear example of this lack of articulation was what happened to provisional executive acts 700/2015 and 800/2016, that lost their effectiveness and were not converted to law by congress, in view of the absence of coordination and government effort to see them prosper. These initiatives had the potential to benefit the sector, since they could solve critical problems stemming from bureaucratic procedures or the profound alteration in the macroeconomic conditions of the concession services. They tried, in synthesis, to make the enterprises that had been impacted by the crisis financially and economically sustainable.

The absence of articulation or integration between government entities provokes, not only slow approval of projects, but also the lack of relevant knowledge for their structuring. The consequences translate to the postponement of the highway concession program and the devolution of existing concessions or the paralysis of projects in the making.

There is a need, therefore, to assure the effectiveness of decisions taken by the competent entities.
institutions. This depends on, besides other provisions, the reduction in bureaucracy, the elimination of overlapping of decision competencies, and the simplification of procedures and complex acts, in order to avoid revisions and contradictions as they are forwarded.

This begins equally by affirming the centrality of decisions, or be it, by attributing a preponderant role of one state entity over the other, with respect to the decisions they coordinate, guide and boost the sector in an articulated and proactive manner. This leading and dynamic role should be again captained by the Ministry of Transports on a national level, and by the secretariats of transport at state level.

In view of this institutional picture, the following solutions are proposed.

**PROPOSALS TO IMPROVE THE DECISION PROCESS AND GOVERNANCE MEASURES:**

- Promote the necessary centrality of decisions returning the leadership to the Ministry of Transports at a federal level and the secretariats of transport at state level.
- Guarantee that there is a clear definition of competencies in each body and agent involved in the concession, without overlapping, based on the law and laid out in the concession contract.
- In the case that more than one entity is involved with a specific venture or relationship with an individual, promote articulation between the entities, and where possible, one channel of communication with the individual.
- For interdisciplinary matters or those that necessarily involve the manifestation of a series of distinct entities, adopt the procedure of “Conference of Services”, a meeting of bodies and competent entities for timely and concentrated decisions, for which it’s obligatory for distinct bodies and entities to act in conjunction, avoiding paralysis or contradictory decisions. In the case, notably, of licenses and environmental conditions, and previous government authorization of the endeavor among others.
- Adopt precise standards of contract governance between the Public Sector and the Concessionaire.
4.3 CHALLENGES AND PROPOSALS FOR REGULATION AND LEGAL CERTAINTY

Legal certainty involves, not only a prediction of clear and univocal rules on the concession of highways, but also, the absence of disturbance in their application, good faith on the part of those involved and the stability of the rules, all essential aspects for long term investments. It also contemplates, the interaction of the concessionaires with the entities that regulate their actions and the exact and precise definition of the function of the individual. The guarantee of predictability of the regulations and reduction in uncertainties is essential for the dynamics of the sector.

The elevation of legal certainty and efficiency in the creation and application of public rights assumes, neutralizing the distorting factors of public judicial decisions, among which ³⁷: (i) The high degree of indetermination of large parts of public norms; (ii) the relative uncertainty inherent in Law, as to the real content of each norm; (iii) the tendency of superficiality in the judgement of complex public judicial matters; (iv) the difficulty on the part of public authority to obtain the voluntary and rapid fulfillment of obligations by third parties, contributing to the ineffectiveness of public policy; (v) the instability of public judicial acts, with the potential risk of later invalidation; (vi) the indirect negative effects due to delays, costs and postponement of the fulfillment of obligations; (vi) the authoritarian edition of norms; (vii) the arbitrariness, contradiction, thoughtlessness or obscurity in the exercise of regulatory activities in the sector; and (viii) the taking of technical decisions by entities that do not have the necessary knowledge to deliberate correctly with respect to the issue being treated.

A recent example of the prevalence of arbitrariness and irrationality with regards to judicial certainty, has to do with gratuity in tolls for empty trucks (that drive with elevated axis) on federal, state and municipal roads, across the country, be they concessions or not. These gratuities that were included in MP 833/2018 in the trucking law (Law no 13,103/2015), are strictly political and do not suit either logic or the content of the concession contracts.

The proliferation of litigations and controversies in the area of highway concessions granted during the past years, along with the paralysis of projects in the sector are examples that illustrate the damage generated by regulatory uncertainty. In the highway sector, as in all the infrastructure sector, the present moment seems to have enhanced these distortions, given the growing mistrust and lack of understanding between the actors in the public and private sectors. One specific aspect to be considered is with respect to the slowness or silence of the administration in regards to urgent issues taken to it. Public decisions are indispensable to the development of activities of collective interest, enjoyment of public benefits and the full satisfaction of rights. Thus, it is crucial to equate the problem of delays in administrative decisions and propose judicial solutions to minimize their effects.

On a national level, there are disciplinary proposals for administrative silence, an example is PLS 129/2017, that intends to alter the federal law on administrative process to foresee responsibility and positive effects of administrative silence. Although the proposal can be perfected ³⁸, it is possible to improve the

³⁷SUNDFELD, Carlos Ari. MARQUES NETO, Floriano de Azevedo. Contratações Públicas e Seu Controle. 2013: Malheiros, p. 278.

³⁸We understand that PLS 129/2017 does not appear to be the best alternative to confer effects on administrative silence in our judicial system. Firstly, its writeup proposal contradicts the recent law 13.655/18, since the justified delay could lead to making the public agent liable. Secondly, the constitutive effect of administrative silence is not clearly assured, yielding simply the remittance of the requests to an authority of higher rank. More so, the writeup leaves out cases in which the decision is already up to the heads of the administration, such as the college of the regulatory agency.
functioning of public institutions with direct effects on development and the prevision of administrative silence, which in certain cases, generates positive effects.

The challenge of promoting legal certainty and concession regulation for highways is clear and urgent in order to give back the legal – regulatory stability to the long-term agreements celebrated between the public and private sectors, generating legal certainty, and contributing to the perception of an attractive and predictable environment for future concessionaires and investors.

We propose the following measures for this:

**PROPOSALS FOR THE IMPROVEMENT IN THE QUALITY OF REGULATION AND LEGAL CERTAINTY IN THE HIGHWAY SECTOR:**

- Ensure the definition and provision of administrative procedures which are uniform, clear, and adequate considered in law and in material covering of highway concessions.

- Specify defined deadlines and peremptory items for decision making by public administration in the course of modelling and executing concession contracts, giving positive effects to administrative silence in the case of voluntary administrative procedures initiated to applications and observing the validation norms foreseen for the administrative act.

- Adopt legal and contractual mechanisms for control of conflict and competencies

- Apply in an effective manner the precepts of the law of judicial certainty for innovation (law 13.655/18), with respect to the observance of rules for responsible decisions (notedly the consideration of concrete impacts of regulation, demonstration of their need and adequacy, reasonability of the sanction regulation, and obligation of transitory regime for new interpretations, etc.).

- Adopt in an unrestricted form obligatorily analysis of regulatory impact, in order to perfect the quality of decisions that alter rights, including legislative alterations (PLs) and administrative decisions.

- Improve the mechanisms for transparency and social participation such as mechanism to reduce uncertainty in the regulatory process and, more specifically increase and make more effective the utilization of mechanisms for participation of individuals in the elaboration of regulations notedly giving material content to mechanisms of public consultation, public hearings and participative meetings.

- Increase and make the mechanisms for communication, dialogue and consensus more effective in the realm of concessions that precede the exercise of normative, overseeing and sanctioning functions.
4.4 CHALLENGES AND PROPOSALS FOR THE IMPLEMENTATION OF ENTERPRISES

4.4.1 LONG TERM PLANNING AND SELECTION OF ENTERPRISES

Infrastructure expansion projects are essential for economic growth. Due to their complexity, long maturity periods and because they demand huge investments, the absence of long term planning in the transport sector tends to make the investments inefficient, defer priorities, and waste logistic and connectivity opportunities between the modals.

The reduced capacity for medium and long-term planning has been evidenced by the frequent frustration in reaching objective and the established deadlines, postponement of investments, changes in routes, and finally in the selection of projects that are not necessarily priorities for the country. The lack of coordination between the different parts of government, already mentioned, contributes to making long term planning difficult, and also, to not consider the practical aspects that impact their effective viability, such as financing, logistics, inter-modality, environment, growth vectors, and long-term tendencies. Finally, the absence of uniform requirements and risks foreseen in the concessions, even within a specific federal entity, generates much lack of similarity between the arrangements and existing contracts and prevents the establishment of uniform practices for the country as a whole.

We have seen various attempts to make effective long-term planning for the transport sector in Brazil. In the federal sphere, the most recent attempts were linked to the creation of structures dedicated exactly to the integration of projects and the prioritization of infrastructure needs: The National Logistics Plan (PLN) and the Investment Partnership Program (PPI). At state level, we also have seen the implementation of programs that were intended to plan and organize state concession initiatives, as was the case of The Highway Concession Program of the state of São Paulo.

The PPI bets on the coordination and concentration of efforts to unlock partnerships with the private sector, in order to increase and strengthen the execution of public enterprises in infrastructure. It hopes, in this manner, to create a receptive ambient to potential investors in projects qualified as priority, guaranteeing the expansion of public infrastructure. The program also counts on the Planning and Logistic Company (EPL) for the elaboration of studies in the area of infrastructure and logistics with the mission of gathering information, analyzing data, composing an overview to be utilized to conduct these investments and the expected concessions. The EPL is responsible for the National Logistic Plan (PNL), that foresees which enterprises are necessary to optimize the logistics infrastructure through to 2025. It has the main objective of identifying and proposing, as a base for the diagnoses of transport infrastructure, solutions that are an incentive to the reduction of costs, improvement in service levels and seeking equilibrium for the transport matrix with the use of different integrated transport modals on the regional road network.

There are also some planning trials in the state sphere such as the State Logistics and Transport Plan (PELT), The PELTs were elaborated by some states. Such as Paraná and Rio Grande do Sul, and show diagnoses and bottlenecks in the infrastructure sector, as well as proposals for works to bring competitiveness and development to the states. These plans are healthy attempts to planning and development of infrastructure, despite their decentralizing character, and not necessarily being aligned with the movements at federal level.

These initiatives represent efforts and praiseworthy advances for effective planning and coordination of initiatives.
There are also consistent measures to be adopted to avoid colliding initiatives both in the federal sphere and between the union and the states of the federation. These are:

PROPOSALS FOR THE EFFECTIVE AND INTEGRATED PLANNING OF THE TRANSPORT SECTOR:

- Consolidate long-term planning with a 30-year horizon, as a state and not a government project, to be followed independent of political oscillations or elective mandates.
- The planning should be done in an integrated manner, adequately conciliating short-term plans (24 months), medium (5 years) and long-term (30 years), based on careful analysis of the socio-economic impacts, taking into consideration the specificities of regional traffic characteristics of each highway system.
- Prioritize projects that are included in long-term planning in detriment to isolated infrastructure projects, that have not been articulated with other projects or do not appear to be structured. The priority in enterprises must consider its inclusion in reflective investment programs and the coordination between the different government instances (such as for example, the PPI, PNL or federal, state, or municipal PPP and concession programs.
- Adopt a coherent and harmonious evaluation of enterprises, with careful analysis of the socio-economic impact of the intervention, to perfect the decision making and generate a rational and efficient use of resources.
- Consider the specificities of traffic, regional characteristics and needs of each highway system as well as their consequences on the structuring of the enterprise, to establish a hierarchy of formats adapted to the reality of each highway, by means, for example, of stipulating obligations befitting with the economic possibilities of the highway and a predicting of compatible lead times with traffic projections.
- Increase the reach of the PNLs, to the whole mesh of transport and logistics in the country, considering state highway networks and passenger vehicles, as well as an expanded vision up until 2035.
- Always guarantee sufficient time for the elaboration of well based viability studies, responsible basic projects, obtaining of corresponding environmental licenses, and anticipated prediction of expropriations etc.

³⁹In this sense it is relevant to mention Administrative rule of the Ministry of Transports n. 609, of 5th October of 2016, that allows concession contracts that explore federal highway infrastructure to contemplate different concession classes, considering items such as “Traffic volume, provision for capacity expansion, socioeconomic attributes of the impacted region, strategic character of portions of the highway, among others, with an eye on obtaining a more efficient relationship between support capacity of the projected demand and the set of foreseen obligations”. According to the administrative rule, these different classes of concessions could require the fixing of different technical and operational standards in distinct parts of the object of the contract and would be regulated by ANTT.
4.4.2 FINANCING AND ATTRACTION OF PRIVATE INITIATIVE

Due to their exact characteristics, equating the financing of the enterprises is a key point for their success.

The BNDES is responsible for the largest part of infrastructure financing in Brazil since the domestic capitals market is still incipient in relation to the financing of enterprises of this nature, and that up until recently, the rates charged by the public bank are significantly lower in relation to the rest of the Brazilian credit market.

4.4.2.1 UTILIZATION OF DEBENTURES

The inexistence of visible financing alternatives out of the public sector has brought – and continues to bring- great difficulties in making enterprises viable and their effective embodiment. On the positive side, we have the BNDES present policy that has extended financing of highways to up to 35 years. The maintenance of long terms compatible with the terms of the concession is fundamental for the efficient leveraging of enterprises.

The emission of debentures is a common form of financing used by companies in infrastructure and has the benefit of being exempt from income tax (IR) for private individuals and foreign investors⁴⁰. However domestic institutional investors⁴¹, important actors in the local financing market, still pay on these assets. The financing of infrastructure enterprises can become attractive if income tax exemption on these debentures is extended to institutional investors. With this exemption, it would be possible to increase the demand for these assets, the fundraising on the part of the companies that emit the debentures and the financing of enterprises.

It is necessary to implement standardization and simplification in the emission of debentures⁴², in order to promote transparency and asset liquidity in the secondary market⁴³.

Standardization involves greater agility to elaborate and analyze deeds, ease of accessing information, of comparing assets and predicting redemption clauses and/or anticipated maturity, reduction in structuring time and costs and distribution of the offer, besides an improvement in the pricing process of the assets by means of unified calculation criteria. This way we would facilitate investor understanding of the asset being negotiated, promoting greater interest and asset liquidity.

On the other hand, simplification involves facilitating emission of the assets, since present rules determine the necessity of approval by the ministry of the sector for the emission of debentures with incentive⁴⁴, generating greater agility to the procedure and allowing that its use be extended and expanded.

Finally, the pacification of the possibility of highway concessions themselves (SPEs, societies with a specific purpose) emitting debentures and debt abroad can facilitate fundraising by the sector. The financing of these projects could occur directly in foreign markets, with lower terms and more favorable conditions.

⁴⁰According to law nº 12.431/2011.
⁴¹Among these investors we find insurance companies, banks and pension funds, amongst others.
⁴²Minimum parameters for the preparation of distribution of Debenture offers are defined by means of standardization. These parameters refer to the writeup formats and the homogeneity of the ordering of the clauses the uniformity of calculations and consolidation of the amendments to the original deed.
⁴⁴Excepting cases considered priority.
4.4.2.2 MECHANISMS TO CIRCUMVENT EXCHANGE RATE RISKS

Mechanisms to protect against exchange rate losses have been shown to be relevant to attract foreign capital. Several countries have developed tools to minimize currency risks. In the Chilean case, for example, the authorities established a mechanism of an exchange rate range for the domestic currency in relation to the dollar.

Recently the state of São Paulo has inserted exchange protection mechanisms in highway concessions, such as, “Rodanel Norte”, the highway in the center west of the state of São Paulo and “Rodovia dos Calçados”, following those proposed by the Civil aviation sector ANAC (National Civil Aviation Agency), in conjunction with the Ministry of Transports, Ports and Civil Aviation in 2017. These mechanisms cover the readjustment of user tariffs, in the case of currency fluctuations that surpass 5%, to reduce the value of the “Ônus da Outorga” (Concession Fees) to be paid during the concession if there is a devaluation of the real.

The forecast of these mechanisms for exchange risks had a relevant role in awakening interest of foreign investors in concessions in the State of São Paulo. It’s fundamental that these mechanisms offer a hedge at a cost lower than that of the market. Two points could be perfected in the experience of the State of São Paulo involve the protection of the interest and the principal in financing contracted and the extension of the validity of the mechanism.

The implementation of this type of instrument of exchange risk reduction can favor the financing ability of the enterprise and make foreign investors less reticent in relation to this modality.

4.4.2.3 MAINTENANCE OF THE OPERATION OF BNDES

The public authorities and specially BNDES, have a significant role in the financing of infrastructure enterprises in Brazil. The conditions offered by the bank to the concessions sector in diverse projects were extremely important and favorable for their development. For example, In the concession of highway BR 050/GO/MG⁴⁵, the interest rates practiced (TJLP + 2% a year) are considerably below market numbers, as is the grace period stipulated to last until the end of the investment period (Predicted at 5 years) and the amortization period in 20 years. In this case the participation of public resources can total 70% of the investments foreseen for the first 5 years.

In the concessionaire sector, there is also the possibility of the bank participating by means of BNDESPAR in the social capital of the concessionaire via share subscription in the companies.

Although recently the bank has gone through a redirection⁴⁶ of its role, after a period of ample development, it is not possible to dispense its activities in the sector without compromising national and regional concession plans for the coming decades. Even in the restructuring phase, the BNDES will remain active in financing, giving incentive to and complementing private funding.

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4.4.2.4 PROJECT FINANCING OPERATIONS

The model of financing using Project Finance⁴⁷ was adopted successfully in various international cases of highway concessions, such as in Chile and Spain, thus its use in implementations should be increased based on these good examples. The operation using this form has the advantage of counting on cash flow from the project as payment guarantee, instead of using the company balance sheet or its shareholders, making the enterprise more financeable.

To guarantee the success of projects financed using Project Finance, it is necessary that they be well elaborated, with well executed project and viability studies, so as to guarantee positive expectations with regards to the operation and, consequently favorable financing conditions with the financial institutions.

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PROPOSALS TO FAVOR THE FINANCING OF HIGHWAY INFRASTRUCTURE ENTERPRISES:

- Expand the tax benefits of debentures for other investors besides private individuals and foreigners, considering the fiscal cost involved.
- Standardize the debentures in an effort to attract foreign capital, always utilizing external benchmarks, for example.
- Consider the risk of exchange rate fluctuation, as was done recently by the state of São Paulo to minimize the risk to foreign capital.
- Maintain the BNDES as a complementary part to private financing.
- Promote alternatives to attract foreign capital, with permission for the SPEs to emit debt abroad.
- Increase the operations of Project finance in the sector.

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4.4.3 EFFICIENT MODELLING OF ENTERPRISES

4.4.3.1 VIABILITY STUDIES, CONSISTENT AND PARTICIPATORY

EVTEA’s (Technical, Economic and Environmental Feasibility Studies) are essential prior conditions for the realization of enterprises. They not only have the objective of demonstrating the viability of the enterprise but also of evaluating its dimensions correctly and establishing limits and conditions (value of the grant and maximum rates, for example) and equate expectations, offer information to those interested and, make participation in the future bidding of the enterprise viable.

Despite their uncontested relevance, frequently the EVTEA don’t obey the best existing methodologies it has a great deficiency of information or yet, are adapted to fit in the economic expectations of the contracting party.

Maybe due to the fact that, after some time, the EVTEA became “merely indicative” for the concession, we see negligence in relation to the seriousness and depth of the studies. In the more recent modellings of highway

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⁴⁷ Project Finance is a long-term financing model, in which the guarantee of payment is the cash flow from the project, and not the financial situation of the company responsible for the enterprise or its shareholders.
concessions, the frustration of the expectations foreseen the EVTEA's (Technical, Economic and Environmental Feasibility Studies), although obviously gross, do not generate contractual effects, which could have contributed to the negligence of certain viability studies.

Poorly defined elements of the basic project, without a long-term vision, end up requiring several changes during the execution of the project, precisely because the needs have not been identified, dimensioned or quantified correctly during the studies prior to the contracting. Poorly done viability studies significantly increase future need for rebalancing in function of investment needs that were not foreseen, but that are indispensable for the actual execution of the enterprise. An obvious example of this was the EVTEA's (Technical, Economic and Environmental Feasibility Studies) of highways in the third phase of the federal concession program of the construction of returns on highways with dual carriageways, which would oblige the user to drive great distances in order to be able to turn around.⁴⁸

The challenge, at this point, is to regain the importance and credibility of the EVTEA in the bidding process. The quality of the viability study contributes to determining the seriousness of the proponents and the competitiveness of the bidding process, since the uncertainties tend to be priced in by the competitors. They also contribute to the execution of the contract as originally agreed, with more security for the public authorities and future concessionaires.

It is necessary to believe in the importance of the role of the public authorities in the elaboration and presentation of complete and well elaborated basic projects, based on identified needs, the fruit of quality long-term planning, where possible future interventions are foreseen in function of real traffic demand.

This capacity of state conception should be complemented with the ample participation of interested parties, including private initiative actors and the community itself in the realization of studies and modelling of enterprises, for more than the mechanisms required by law (public consultation, public hearings, publication clarifications and manifestations of private interest). It is necessary to overcome the atmosphere of lack of trust in the possibility of interaction between the conceding power and those interested in the concession contract.

Frequently, the dialogue and debate between the public and private initiative is held in an advanced phase of the modelling of enterprises - for example, during the public hearings and consultations - when the principal decisions have already been taken and when a revision in the process would represent a great loss in time for the enterprise. In this phase of maturity of the study (The public hearings) there are less chances of drastic changes in the adopted premise and significant changes in routes, which could be reached via public consultation and market probing in the initial phase of the modelling of specific points of the modelling or studies. This way we lose the possibility of hearing specialists in the sector and the parties that will be impacted, and consequently incorporate their ideas and suggestions.

On the other hand, doubts with regards to the compatibility of the hearings and consultation to individuals regarding objectivity, transparency, impersonality and equality frequently hinder that strategic commercial and negotiation dialogue between public authorities and private initiative really happen in a normal fashion.

At this point, the principal challenge is to promote a climate of trust between the parties and implement effective mechanisms of interaction and dialogue, that work in a manner that is clear, transparent and established by law.

⁴⁸In the BR 163/MS, for example, the inclusion of no less than 63 returns were necessary to furnish the complete absence of returns in the EVTEA that preceded the concession.
We should elaborate well-grounded EVTEAs, evaluated by dialogue with investors, as well as other essential studies and environmental licenses, amongst others. The signed contracts become deficient and bad because they are not supported with quality studies.

In this sense, ABCR proposes:

**PROPOSALS FOR THE REALIZATION OF CONSISTENT, CONSEQUENT AND PARTICIPATIVE VIABILITY STUDIES:**

- Foresee and guarantee the necessary technical time for the preparation of the EVTEA in order to have well elaborate basic projects, effective environmental licensing, traffic studies and risk matrix adequate for each enterprise. The first and essential step for us to reach a level of quality and adoption of long-term planning, treated as a state policy to be rigorously followed.

- Encourage the adoption of a minimum content and practical improvements in the realization of EVTEA, not admitting “adaptations” that fit the economic expectations of the contracting authorities.

- Overcome existing limitations in the structure of projects of enterprises due to restrictions in today's legislation applicable to the contracting of engineering projects (Law 8666/93), instituting contracting using a model similar to that used by multilateral financing institutions (IFC, World Bank, etc.), the “Request for Proposal”, model of technical choice, a hybrid between a bidding process and a direct contracting, where the contracting institution solicits technical and economic proposal to a “short list” of companies with notorious specialization in the job to be carried out.

- Create more effective mechanisms for the appreciation and criticism of studies by the interested parties and by the community itself, before the public consultation phase, so that suggestions and improvements may be incorporated at the beginning of the modelling of the project.

- Foresee the possibility of holding roadshows of enterprises, mechanisms such as obtaining subsidies and participative meetings for the modelling of enterprises.

- Foresee other presentation mechanisms for inputs by private agents independent to Processo de Manifestação de Interesse - PMI (Process of Expression of Interest) and Manifestação de Interesse Público - MIP (Manifestation of Public Interest).

- Expressly foresee that substantial alterations in projects or enterprise conditions should demand new public consultations and hearings, in order to preserve the material character (not merely formal) of these events.

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⁴⁹The “regulatory agenda” of the ANTT contemplated in the updating of Resolution nº 1187, of November 09 of 2005, that verses on the proceedings of execution of works and services by concessionaires of federal highways regulated by the ANTT. The ABCR has contributed with suggestions to the draft of the new Resolution that is being elaborated by ANTT. For some years The Engineering Institute of São Paulo, through GT ABNT/CEE-162 – Special commission for the study of TECHNICAL NORMS FOR THE ELABORATION OF WORK BUDGETS, created a specific GT to treat budgets for the concession of services (GTs), but these studies were not continued.
4.4.3.2 TENDERS WHICH ENABLE THE EFFECTIVE EXECUTION OF CONTRACTS

Once the phases of contractual modelling and publication of the tender instruments have been completed (by means of consultation and a public hearing), the tender shall proceed with the aim of obtaining the most advantageous bid for the Local Authority. More than the bid with the lowest highway tariff, what is central is the selection of the bidder and the proposal that is best able to meet public demand, that is to say, which shows signs of robustness, seriousness at a favourable cost, enhancing the chances of an effective future execution of the concession agreement.

As far as the selection criterion for a private partner is concerned, the federal model, which aims strictly at obtaining the lowest toll road tariff tendered for the execution of contractual obligations, has not been able to achieve the desirable objectives for the tender process, such as for example, the standardization of tariffs, the economic robustness to realize investments and the continuity of the concession.

In turn, the “outorga” (payment to the government) model (with the toll tariff set in advance, adopted by the state of Sao Paulo, for example, has raised questions as to the resources which are “withdrawn” from the highway network in order to defray general government expenses, once the grant charge has been collected from the single account of the tendering entity.

Bidding procedures must at all costs be capable of identifying and excluding unworkable proposals or private agents without a solid structure and capacity to execute their proposals before selecting the victor of the contest. These procedures are subject to the reinforcement of three instruments of evaluation: the requirement for strict technical qualifying conditions, the deposit of bonds and the requirement of the competitors’ Business Plan as a verification measure of the seriousness of their economic proposals.

As far as the Business Plan is concerned, or the set of documents both required and sufficient in number, showing the viability and workability of the offer being submitted, its requirement and appraisal at the time of the bidding has been abandoned in more recent tendering procedures, both at federal and state levels\(^5^0\). The unpreparedness of the Public Authority in terms of analysing and evaluating the Business Plan accompanying and underlying the offers meant that the government has abandoned the requirement for this document in a large portion of the tenders\(^5^1\). The absence of a Business Plan generated losses in terms of ascertaining the seriousness of the bidders and the feasibility of the proposals and significantly raised risk and uncertainty for parties to the contract, when conducting financial re-balancing procedures which are normal in infrastructure and long-term contracts (See Box 3 – the role of the Business Plan and its importance as an integral part of the Concession Proposals and Contracts, page\(^5^1\)).

Without a detailed analysis of the Business Plan in the course of the bidding, how would it be possible for the government to know that the bid that has been submitted encompasses all the obligations? What is expected is for there to be a successful project, meeting the expectations of both the government, and users of the highway. For this reason, it is essential that the economic pre-conditions are able to be verified.

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\(^5^0\)Although certain states, such as Minas Gerais and Goias, still require that a Business Plan be submitted at the time of examining the offers of the bidders.

\(^5^1\)It can be observed that international experience is quite varied in relation to the credibility attributed to the Business Plan and its role, both in the bidding process, as well as in the execution of the contract. In Spain, information appearing in the Business Plan will be considered for the purpose of reviewing concession agreements caused by fluctuations in demand, as well as to offset anticipated credit capital depreciation. In France, the Business Plan (together with the industrial plan) is examined by the State Authority and assessed as a part of the bids. In Mexico, in turn, the Business Plan is considered for purposes of assembling an “Emergency Fund for the Right of Way”.

Stated differently, choice based on the criterion of the lowest tariff as the defining characteristic of tendering may result in large disparities in the tariffs charged on Brazilian territory. Great variation in the amounts (tariffs) charged to end-users leads to confusion by users and a lack of uniformity in quality between different highway systems. As has been noted, in 2013 the variation between tariffs applied in the country had already reached 832%\(^52\). Various factors interact within this context, such as whether or not the highway should be outsourced or not, the modelling adopted for cases of concession, the characteristics of the lots, the volume of traffic involved, the local geography and demands set forth in the agreement. It is a fact, nevertheless, that a greater standardization of existing tariffs may be attained by means of adopting partner selection criteria which are not exclusively focussed on the lowest tariff.

Moreover, the provision of “ônus de outorga” (grant charges) shall have the advantage of stabilizing tariffs in the event of future financial rebalancing, bearing in mind that its reduction or increase may make future balance restoration adjustments feasible without the user feeling this variation. For this reason, however, that the system for levying an grant charge will have to be distributed over time, and not payable at the time of signing the agreement.

Given the importance in the value of basic tariffs for concessions, the procedure for setting them must be technical and independent, and not determined by any specific proposition during the tender for the selection of a concessionaire. The tariff must be defined by means of clear methodology and clear criteria, besides providing support for the operation of the concessionaire, taking into account its costs and the financial balance of the project, in such a way as to preserve the project’s viability and its attractiveness to the investor. This is an essential element of sectorial policy, which can only be set by the government. In this scenario, the selection of a private partner which has as a judgment criterion the assessment of the value of the grant charge paid to the granting authority shall allow the tariff to be set in a technical and independent manner by the government.

Accordingly, a harmonious and coherent tariff system should be promoted, based on the standard of infrastructure and service quality made available to users, and not on costs associated with each highway system, at the risk of perpetuating the extreme imbalance between highways and users.

Finally, another aspect of tendering which frequently brings uncertainty in terms of future contracting is related to environmental licensing existing at the time of bidding. It is frequent for bids to be made with only the faintest of guidelines for environmental licensing, leaving it up to the concessionaire to adopt the remaining measures for the remaining licensing during the contract’s execution. However, without at least the Preliminary Environmental License\(^53\), environmental restrictions which must be carried out in order to proceed with the project still remain unknown. For this reason, no concept of the cost and time required for the project to be completed is available.

Environmental licensing, which is a prerequisite for initiating the undertaking of obligations, represents, therefore, a great unknown factor, the risk of which is allocated to the private partner, which hinders the offering of bids which are consistent, realistic and reliable at the time of tender\(^54\). For this reason, in order to favour


\(^{53}\)The delay in drawing up studies by the departments responsible, such as Ibama, may delay the granting of a license, the execution of important works and even the performance of an operation by the Concessionaire. Consequently, more time may be required before road tolls can begin to be charged with the increase of perceived risk by creditors. The delay may also give rise to the reduction of tariffs by means of factor D, in the event that contracts where the awarding authority is the federal government.

\(^{54}\)It’s worth mentioning that there is a Bill for Environmental Licensing (PL 3,729/04) capable of offering greater legal security to entrepreneurs seeking to carry out new projects. Among their proposals, the bill seeks to reduce the period for issuing environmental licenses for infrastructure work, including those pertaining to highways.
the effective contractual execution according to the deadlines and with the economic-financial equation originally established, it is appropriate – and crucial – that environmental licensing be studied, as extensively as possible prior to the signing of the contract.

**BOX 3 - The role of the Business Plan and its importance as an integral part of the Bids and Concession Agreements**

Based on the call notices of the 3rd Stage – Phase III (2013), the Federal Government opted to forbid the presentation of the Business Plan of Bidders in the bids, by way of clarifying that it is the duty of each Bidder to develop their own plan and estimates, the respective costs and investments required for full compliance with obligations related to the Concession. It’s not the duty of ANTT to evaluate or become acquainted with the premises which led the Bidder to reach a judgement with regard to the viability of its offer.

However, Federal Law 8,987/95 (Law of Concessions and Permits for Public Services) recommends the exact opposite: The Administration has the duty to reject bids that are manifestly unworkable or financially incompatible with the aims of the tender⁵⁵, which will oblige it to appraise and express itself regarding such viability.

Similarly, Article 37, XXI of the Federal Constitution provides material content to the guarantee of financial balance in the agreement, by requiring that “effective conditions of the proposal should be maintained” by those contracted by the Government. For such protection to be effective – and not merely formal – this equation needs to appear on the contracts and cannot be assumed in its concrete content, nor for that matter, left to be set at a later date.

Despite the legal provision, both ANTT and several state bodies went on to require bidders merely to submit a letter from the financial institution or body evaluating the Bidder in the project’s financial arrangements, stating that it has examined the Business Plan submitted to it by the Bidder and attests to its viability and workability, as well as the letter from the independent auditing company, registered with the competent department, stating that it has examined the Business Plan submitted to it by the Bidder and attests to its appropriateness from both accountancy and tax perspectives.

Neither of the two abovementioned attestations are capable of correctly gauging the practicability of the project, since both the Bank as well as the Independent Auditors only assess the rationale, the conditions for arranging financing as well as tax and accounting aspects, based only on the data and amounts which are passed on to them directly by the bidder. There is no technical assessment if these data and amounts are allocated or not, simply because as a general rule, neither the Bank, nor Independent Auditor, possess the expertise and technical know-how to carry out this type of assessment. They would need to know about evaluation of traffic, development of its prospective growth, evaluation of its escape routes, engineering and other types of expertise in order to gauge alternatives as well as to budget for these works, not to mention experience in operating highways in order to assess their respective costs.

⁵⁵Art. 15 – In awarding the bid two of the following criteria shall be considered: § 3o The Awarding Authority shall reject offers which are manifestly or financially incompatible with the aims of the tender.
PROPOSALS FOR THE ADOPTION OF BIDDING PARAMETERS FAVOURING EFFECTIVE CONTRACTUAL EXECUTION:

Furthermore, these entities accept no liability before the Awarding Authority in relation to the actual practicability of the project, with it becoming merely a document to fulfil that which is required in the call for tender without practical effect.

Nor does this demand hold any guarantee that the data provided for these assessments by the Bank and Independent Auditor are in fact real data of the proposals which they examined.

In previous bidding processes this evaluation was conducted by the technical body of the Awarding Authority or by specialized consultancies, or even by other bidders during the viewing phase of other bids which were presented, which made it possible to assess the actual practicability or otherwise, of each bidder’s offer, a role which could not be delegated to the Public Administrator.

The presentation of the Business Plan, as well as its assessment and analysis during the bidding procedure, is being submitted has really complied with and priced in all the requirements and obligations of the prospective concessionaire set forth in the Call to Tender and the Plano de Exploração da Rodovia - PER (Highway Exploitation Plan), that is to say that the awarding authority may verify, before awarding the contract, if the bidder considers in its offer the delivery of everything required of it.

The Business Plan must therefore serve as an objective parameter resulting from maintaining economic and financial balance of the contract, as well as a way verifying the workability of the proposal put forward, by guaranteeing:

- The consistency between the evolution of projected traffic and estimate of the works to increase capacity due to having reached the Service Level limit stipulated in the call to tender;
- The consistency between the unitary budget of the main improvement and extension works in relation to the budget provided in the Feasibility Studies by the Awarding Authority, with evaluation by means of deviation from the standard stated in the call to tender;
- Verification of the estimate for special conservation works (periodic maintenance) between the end of the recovery phase and the last year of the concession;
- Verification of the estimate for works and services at the end of the concession for compliance with the required technical parameters, at the time of handback of the highway system;
- The constancy of capital pay-ins and adopted pre-conditions for financing;
- Stress tests for covenants of the financing agent;
- Internal rate of return (IRR) on the project.
As a result, the following measures have been proposed:

PROPOSALS FOR THE ADOPTION OF BIDDING PARAMETERS FAVOURING EFFECTIVE CONTRACTUAL EXECUTION:

- Adopt as a rule the requirement of all elements adequate and necessary for checking the workability of the proposals (Business Plan), which (i) should clearly demonstrate their viability, unequivocal compliance with the conditions of the call for tender, cash-flow, IRR in question and its compatibility with the tariff or the grant submitted; (ii) shall comprise the economic bid of each competitor and (iii) be evaluated in the course of the bidding, possibly with the assistance of bodies specialized in this area.

- To consider, in the course of the bidding minimum technical qualifications of the bidders, with a view to ensuring that they understand the challenges pertaining to a concession and their prospects for executing the contract effectively.

- Whenever possible, to favour the model pertaining to an award charge (having previously set the toll tariff) as a criterion for judging competing bids for highway concessions.

- To adopt more stable parameters in terms of tariffs, with a view to standardizing charging (or reduce discrepancies) within Brazilian territory, as well as preventing this from being the sole criterion for the selection of concessionaires.

- In the case of setting the award charge, to consider mechanisms which enable resources captured for this purpose to revert to highway users, for example, by means of their conversion into new investments or the improvement of parallel systems, city outskirts, etc. and not merely for purposes of taxation.

- Progressively adopt measures to promote, in the medium term, bids with prior environmental licences (Preliminary Environmental Licence and, in the long term, Installation License).
With reference to risk allocation in concession agreements, we have come a long way since the first concessions under the regime of the Law of Concessions and Permits pertaining to Public Services (Federal Law no. 8,987/1995). Whereas, at the outset, the risks were allocated to the concessionaire (“the concessionaire shall be fully liable for risks inherent in the Concession...”) a sufficient level of maturity has now been reached in the sector to recognize that risks shall be priced into each concession proposal and that it is not possible, therefore, to simply allocate all risks pertaining to the concession to the concessionaire, but rather to the party economically most suited to deal with risk and minimize the chances of their materialization or their possible effects. For this reason, a minute mapping of potential risks of each project has been promoted, determining which party shall be responsible for shouldering their effects.

Although current concession contracts dedicate a fair amount of space to a clear, detailed and rational allocation of risks, there are many unmanageable risks (outside the sphere of activity or control of the parties, and notably, the concessionaire) which are still attributed to the private partner. This is notably the case with risks associated with difficulties and constraints in obtaining environmental or project licenses, expropriation risks, risks referring to the removal of highway interferences, risks in removing blockages to the right of way, risks associated with judicial or administrative measures which give rise to renegotiating or altering the original model, etc. Similarly, demand risks, which do not depend on concessionaire activity, may be shared between the parties, as shall be considered in greater detail below (item 4.4.4.4, page 62). Since the insurance market is unwilling to underwrite such risks, and that they represent a considerable unknown factor for the performance of the concessionaire, without there being any way of controlling their occurrence, there is reason to envisage setting a ceiling to amounts dealing with unmanageable risks, thus conferring greater stability and attractiveness to contracts and standardizing the pre-conditions to be adopted at the moment of bidding.

Furthermore, the allocation of risk shall be consistent with the economic feasibility studies, that is to say, each risk allocated to a future concessionaire shall effectively be priced in and considered at the time of the economic analysis of the concession, failing which, a deal will be offered to the private partner which masks risks and prices which were not considered in the studies forming the basis of the concession equation.
b) Financial balance

Also the questions related to financial balance of the contract and the contractual mechanisms established to efficiently restore it, as well can be expected, with the necessary swiftness in order not to stifle the concessionaire, deserve special attention.

Since the concession contract is dynamic and mutable, the concessionaire is assured (but also the contracting Public Authority) that the economic terms agreed upon at the outset, that is to say, the obligation to re-establish the balance between risk and reward which the parties take on when agreeing to commit themselves by means of the concession contract.

Traditionally, complying with the constitutional and legal precepts, the Internal Rate of Return (IRR) initially agreed in the project as a means of establishing economic and financial balance has been adopted.

Recently, methodology for Marginal Cash Flow for restoring balance to situations which involved the incorporation of new investments has been introduced. This latter methodology excludes initial projections made at the time of signing the concession contract, by calculating exclusively the concrete impacts of the event causing the imbalance of the concession contract, according to the economic parameters (revenue and expenditure and capital costs) in force at the moment in which the imbalance occurs.

In general, caution is taken to use it only for new investments, not initially foreseen in the contract, and which, for that reason, were not considered in the initial formulation of the Business Plan and the proposal of the concessionaire. Furthermore, if the terms are not suited to the private partner, the latter shall not be obliged to invest. Equally, the public...
authority shall only attribute to the private partner new investments, should the terms be in the public interest of the users.

The swift and efficient rebalancing of contracts is essential for the concessionaires, for the public authority and for the highway users themselves, since it is an instrument for stabilization and continuity of contracts. Difficulties in performing this tend to worsen the economic situation of the concession contract, leading to delivery delays of works and services, to an increase in perceived risk within the sector (with an elevation in the Internal Rate of Return – IRR and of tariffs in force) and the alienation of serious private partners in the market, before the risk and insecurity. For this reason, instead of demonizing it, on the contrary, it is essential to redeem its importance and endow the Administration with confidence and capacity in order to perform it as a matter of course with the public interest in mind.

Furthermore, the aforementioned incompetence of the public authority to securely assess the Business Plan presented by the concessionaire, combined with the lethargy of the rebalancing processes or the unease of the public authority with its performance, have brought about excessive delays or impasse (absence of responses) in relation to requests for rebalancing, with not only economic losses, but also legal insecurity and a lack of investor confidence in the public authority. On the other hand, the adoption of the methodology of marginal cash-flow for the rebalancing of contracts based on tendering for Airports and Phase 3 of Highway has increased the uncertainty, vagueness and complexity of rebalancing procedures.

In spite of its importance, the complexity of the rebalancing procedure and the association of this moment with unorthodox practices have made the public authority, generally speaking, averse to this mechanism, which has caused a number of contractual initiatives by way of inhibiting rebalancing or limiting its scope of possibility. Take, for example, the guidelines adopted by the ANTT in its new “outorga” (payment to the government) plan for future concession contracts, with the clear purpose of reducing the possibilities for rebalancing, identifying it as an undesirable event in the contract (see Box 4 – New ANTT guidelines for highway concessions and the new call to tender of the Rodovia de Integração do Sul (page 58).

It is mistaken to wish to impede or limit the inclusion of new investments which prove to be necessary in long-term highway concession contracts. This contractual straight-jacket is harmful to users, since a moment will certainly come in the future when necessary investments will no longer be carried out simply due to the lack of a solution capable of overcoming the barriers imposed by contractual means.

It is indispensable, however, for the rebalancing process to stop being demonized and for it to go back to being considered the norm in complex contracts, the execution of which extends over several decades, and for the Administration to be empowered to deal with such procedures swiftly, responsibly and as a matter of course, complying with constitutional and legal precepts.
PROPOSALS FOR ECONOMIC AND FINANCIAL REBALANCING OF THE CONTRACT:

- Re-establishing “normality” of the restoration, since it constitutes a mechanism geared to stabilizing contracts over time while simultaneously maintaining its adherence to public interests from which it originated, the economic stability of the concession and, ultimately, its continuity.

- To adopt the methodology of marginal cash-flow only for new investments or otherwise risk unravelling the economic premises which guided the signature of the concession agreement.

- For alterations in the initial arrangement of the concession, prioritizing the restoration of IRR of the concessionaire’s proposal, in line with its Business Plan. For this purpose, to demand the presentation in the proposals of necessary and adequate elements (Business Plan), clearly demonstrating their viability, the unequivocal compliance with the terms of the call to tender; cash-flow and IRR all considered, which determined the tariff or the grant offered.

- To adopt contractual mechanisms geared to guaranteeing responsiveness and timeliness when examining requests for rebalancing, such as investment suspension clauses (except in emergencies) until rebalancing has been achieved.

- To prevent, within the scope of the contract, the partial achievement of rebalancing without considering all the events which impacted on the economic and financial equation of the contract. This is notably the case with rebalancing deductions, which may not be applied in a manner that is disconnected from other events of the contract review.

- To adopt contractual mechanisms which prevent the determination of execution of a new project or obligation without previously quantifying the economic rebalance and its application, except in case of a duly defined emergency.

- To promote a clear distinction between ordinary restoring mechanisms (which shall be periodically carried out and in a residual manner, in a way set forth in the contract) and extraordinary restoring (which shall be as far as possible, concurrent with the destabilizing event).

c) Dispute resolution

Finally, with respect to the dispute resolution mechanisms of the contract, although arbitration is expressly provided for in the Law of Concessions, there is still strong resistance to confiding in a private mechanism for the resolution of conflict. Arbitration is, however, a critical factor for the attractiveness of business ventures and how much it is possible to save, in terms of time and the stabilization of contractual relations, if compared with the judicial alternative. It is still possible to see several judicial decisions being adopted that are technically equivocal, or still based on social upheavals or on the will of the Judiciary, which generate economic impacts that render concessions practically irreparable.

Equally, the use of consensual mechanisms of resolution is still tentative, since mediation or the proceedings of dispute boards are expressly provided for in concession contracts.
PROPOSALS FOR DISPUTE RESOLUTION:

- The adoption of mandatory arbitration in all concession contracts, as a measure for broadening interest in business ventures and conferring legal security and technical accuracy to decisions binding with regard to the contract.

- The adoption of contractual mechanisms for the solution of disputes within the scope of the contract, perennially, as for example dispute boards or mediation bodies.

- Express provision that arbitration may provide for, among other subjects not expressly prohibited by law, regarding (i) economic and financial balance of government contracts; ii) the application of sanctions to private people; (iii) indemnities owed by or to the Government; (iv) changes in the specifications of contract execution, including a detailing of scope, a change of timeline or a set of obligations.

- Description of the essential terms of arbitration in the contract itself (closed arbitration clause), in such a way as to reduce uncertainty and accelerate the process.

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**BOX 4 - New ANTT guidelines for highway concessions and the new call for tender regarding the concession for the Southern Integration Highway**

Recently\(^{56}\) the call to tender for the concession BR-101/290/386/448, of Rio Grande do Sul, known as the Rodovia de Integração do Sul (RIS) was published. The call to tender had been eagerly awaited, since it dealt with the first federal project to see the light since 2015. The time for the maturity of the project was extended in accordance with the Accounting Tribunal’s (TCU) appraisal of the contents of the wording of the concession’s call to tender and the need to conform to the body’s considerations. The Accounting Tribunal criticized at length the feasibility study and the tender documents forwarded by the ANTT and handed down 33 orders for changing the concession model. The approval process of the call to tender – and the negotiation between the ANTT, PPI, Transport Ministry and TCU– gave rise to the publication, by the ANNT, of new guidelines for future concessions to be made by the department (ANTT Deliberation No 183/2018 and Technical Paper 01/2018/COOUT/SUINF). The adoption of the following rules stands out in the call to tender and the new guidelines:

1. Setting of provisional limits for extending the contract (5 years), for the extension of its term for rebalancing purposes forecast for the 15th, 20th and 25th year of the Concession;

2. Provision for a “stock of improvements” which allows for the total inclusion of a

\(^{56}\)The call to tender was published in the Government Gazette on 03/07/2018 by the ANTT.
BOX 4 - New ANTT guidelines for highway concessions and the new call for tender regarding the concession for the Southern Integration Highway / Continuation

particular improvement, with the prohibition of a project of the same nature which requires the rebalancing of the economic and financial equation;

3. Limitation of the possibility of inclusion, exclusion or alteration of projects and services which may only be effected by means of a 5-year review, except in the following cases: (i) highway safety, (ii) works envisaged in “stock of improvements”, (iii) works for maintaining levels of service, (iv) of works carried out by the public authority and (v) of cases in which the concessionaire is urged to conduct projects for which the public authority is in charge;

4. Introduction of a risk mechanism shared between the concessionaire and the Awarding Authority (ANTT) to execute works pertaining to service level maintenance (additional lanes), should traffic triggers be activated.

The introduction of stricter rules is emphasized for effecting contractual changes, reducing the possibility of an alteration in investments throughout the contract, and of rules destined to inhibit the corresponding processes of restoring the economic and financial balance.

The introduction of such rules reflects discomfort by the public departments involved, with the contract’s adjustment processes during its execution, notably the rebalancing processes. By casting contractual rebalancing in a negative light and making it undesirable within the scope of the contract, both Agency and Controlling Department appear to disregard the instability which would arise from rejecting the rebalancing process. It is, nevertheless, a normalizing instrument pertaining to contracts, unavoidable in complex and long-term concessions.

Instead of equipping the public partner in such a way as to deal with authority and normalcy in situations which demand rebalancing, providing clear rules and methodologies, an impasse is created in the concession. This regulatory option will only increase legal insecurity and mistrust between the parties while conferring a judicial character on disputes in the scope of concessions.

Similarly, previously adopted measures persist in rejecting the proposal of a private entity as the main aim of the execution of a contract, basing this on alleged asymmetry of information creating suspicion and the perception of concessionaires as villains.

The new rules, however, envisage enhancements benefitting the sector, such as, for example, providing a stock of improvements previously set forth in the contract, aimed at predicting such events for both the parties, although configured cost projections may cause distortions in the pricing of works that have been specifically targeted. Equally, the provision of a risk-sharing mechanism between concessionaire and awarding authority – in the event of new capacity enhancement operations in accordance with traffic trigger volumes – reflects a search for a more rational distribution of demand risks pertaining to highway concessions, even if the mechanism may be further refined.
4.4.4 SPECIFIC PROPOSALS FOR CONTRACTUAL IMPROVEMENT

In addition to the nerve centres indicated in the previous item (enhancing feasibility studies, alteration in the bidding process and an increase in the concession contract's attractiveness), other contractual aspects are indicated below the refinement of which might favour a more stable and favourable highway environment.

4.4.4.1 PRODUCTIVITY FACTOR

It is necessary to re-think and define less arbitrarily the use of productivity factors in concession contracts. Widely used in air and land transport energy sectors, the productivity factor, in short, makes it obligatory for the concessionaire to share with the users the economic gains which stem from the modernization, expansion or rationalization of the services.

The logic of application of the productivity factor (usually called Factor X) arises from the assumption that, in contracts that last several decades, it is normal to expect technological progress and the advancement of techniques and materials to lower the costs faced by the concessionaire, irrespective of its business efficiency, which would justify the sharing of such gains with the users of the infrastructure. However, as opposed to technology-intensive sectors, such as energy or telecommunications, technological gains in the case of highways tend not to accrue at the same speed, nor at the very least, can they be taken for granted.

In the highway sector, the indiscriminate or assumed use of factors destined to capture inertial gains in productivity in the contract tend to distort the logic which gave rise to the factor. The practice of predicting such a factor is especially harmful, rather than leaving it vaguely expressed in the contract, for the subsequent setting of its parameters. Ambiguity of the factor or its setting at the exclusive discretion of the public authority should be rejected, as it gives rise to a source of insecurity and potential arbitrariness within the scope of the contract. The productivity factor, if such exists, shall be based on solid techniques and shall be described in the concession contract, or established by mutual agreement between the government and the concessionaire.

**PROPOSALS FOR THE PRODUCTIVITY FACTOR:**

- The possible provision for the application of productivity factors in the concession contract cannot be vaguely expressed in the concession contract, left entirely at the discretion of the Public Authority to determine its quantification in the course of executing the concession contract. Either it must be exhaustively explained, as from the proposal in the call to tender (acquaintance with the rules of the game), or else mutually agreed upon between the parties during the contract’s execution.

4.4.4.2 DISCOUNT OR INCREASE OF REBALANCING

An analogous logic should be applied to discount or increase of rebalancing, or any other factor which claims to detect non-compliance with performance parameters, as well as the postponement or anticipation of the investments provided for in the contract. This involves a mechanism of contractual rebalancing, which attributes a value to the works and services provided for in the contract, estimating its impact on cash-flow. Therefore, should this project or service fail to be execu-
PROPOSALS FOR REBALANCING DISCOUNT OR INCREASE:

- Provide for mechanisms which permit the proportional and progressive measurement of investment compliance.
- To adopt numbers and percentages appearing in the Business Plan of the successful bidder in order to apply the discount or increase, instead of amounts determined by government.
- To consider for ascertaining the performance factor, not only disbursements, but also additional costs incurred by the alteration or delay of investment.
- To ensure the non-application of rebalancing deductions or any other mechanisms which deflate remuneration of the private partner before the pleas of the concessionaire have been appraised and addressed with regard to the contractual review (should at least be concurrent).
- Ensure that as soon as the performance obligation has been concluded, that the rebalancing deduction ceases, in such a way as for its effects not to extend unjustifiably.
Concession contracts include contractual sanctions for cases of default of obligations on the part of the concessionaire. It serves as a deterrent to (i) discourage non-compliance with the agreement and (ii) to inhibit its occurrence and repetition, and to serve as an example for other hired contractors. The ultimate purpose of contractual penalties, is however, frequently overlooked meaning that they are applied automatically and disconnected from the purpose for which they were established, often by levying fines which are disproportionate in value in relation to the business or even to the detected infringement.

It is, therefore, necessary to re-think sanctions and their application in order to ensure their sense of proportion and appropriateness, to admit mechanisms which may substitute them when it’s in the public interest to do so and to reject any automatic reflex in their application.

**PROPOSALS FOR A CONTRACTUAL SANCTION REGIME:**

- To recognize that contractual sanctions are not an end in themselves (revenue collection), but rather a means of achieving certain aims (discouraging new behaviour, punishing what has already occurred, etc.)
- To enhance the application of these contractual sanctions setting their economic value and other factors for them to effectively achieve their ends: parameters and limits shall be provided for; for them not to be transformed into a process disconnected from the goals of the concession, or which may unintentionally inhibit their economic well-being.
- Ensure that the criteria for applying sanctions ensure a sense of proportion, purpose and appropriateness.
- To adopt mechanisms which generally speaking, make it possible to enter into the terms of the adjustment of conduct or other instruments capable of steering the actions of the concessionaire and making them converge with the public interest.
- To promote the possibility of substituting sanctions with other measures in the government interest (such as, for example, performing new investments).

**4.4.4.4 RISKS OF DEMAND AND EXTRAORDINARY MACROECONOMIC VARIATIONS**

Traditionally, risks associated with the fluctuation of traffic are attributed in their entirety to the concessionaire. However, this risk which is crucial for revenue of the highway concession is rarely associated with its performance or competence and tends to be determined by factors that are external to the concessionaire’s activity, such as macroeconomic conditions or for carrying out regional projects concurrent with the highway system.

In order to ensure stability and good faith where the contract is concerned, such risks should be shared between the parties, both if demand is significantly below what was projected, as well as if it is substantially above initial expectations.

The effect of traffic fluctuation on obligations and investments shall also be measured and have clear contractual effects. In fact, since a considerable part of the investments is associated with the traffic volume and highway service level, such obligations shall be reassessed should the extraordinary fluctuation of traffic make it necessary or convenient to
Recently aired in the circles of highway, railway and airport sectors, the handback of concessions covers the possibility of amicable rescission of the contract by handing back the concession, and its re-tendering by the public authority. In a federal context, Law 13,448/2017 lays down general guidelines for the extension and re-tendering of partner-based contracts set forth in the PPI. The government’s intention in drawing up this regulation was to enable the immediate resumption of new investments to rehabilitate concessions which had become unworkable, given that the contractual parameters of economic and financial rebalancing have not proved sufficiently adequate in dealing with all the effects of the unprecedented macroeconomic crisis which Brazil has been facing.

Specific attention shall be given to cases in which extraordinary economic fluctuations give rise to big alterations in expenditure and revenue projected for the concession. Since the risk is unpredictable or unquantifiable, this risk should be the object of the contractual rebalancing in the same way as unforeseeable circumstances or force majeure, which shall be expressly provided for in the concession contract.

**PROPOSALS FOR THE SHARING OF DEMAND RISKS AND EXTRAORDINARY TRAFFIC FLUCTUATION RESULTING FROM MACROECONOMIC CONDITIONS:**

- Adopt mitigating mechanisms or demand risk sharing between the parties (bands of demand), equally.
- Consider the effects of traffic fluctuation on investment obligations.
- Provide for contractual regulation with regard to the possibility of rebalancing in the event of extraordinary variations of macroeconomic conditions or unexpected changes in service requirement.
- Establish, as a result, checking procedures for these extraordinary fluctuations and mechanisms for mitigating their effects.
- Allow for the possibility of either party terminating the concession contract in advance (way-out) without penalization in the face of extreme fluctuations that may irrevocably change the terms of the concession.

### 4.4.4.5 RETURN OF CONCESSIONS

Recently aired in the circles of highway, railway and airport sectors, the handback of concessions covers the possibility of amicable rescission of the contract by handing back the concession, and its re-tendering by the public authority. In a federal context, Law 13,448/2017 lays down general guidelines for the extension and re-tendering of partner-based contracts set forth in the PPI.

The government’s intention in drawing up this regulation was to enable the immediate resumption of new investments to rehabilitate concessions which had become unworkable, given that the contractual parameters of economic and financial rebalancing have not proved sufficiently adequate in dealing with all the effects of the unprecedented macroeconomic crisis which Brazil has been facing.

In this context, in order to provide continuity in rendering the public service as awarded, a separate – and swifter - procedure has been created for the amicable termination of the contract, providing tools to optimize the transition to another concession. The re-tendering does not presuppose the attribution of blame or negligence on the part of the concessionaire, thus avoiding a long and drawn out administrative and/or judicial impasse with regard to the apportionment of blame to the concessionaire (or awarding authority) due to the financial difficulty involved in maintaining the contract.

The same Law 13,448/2017 sets forth the need to regulate the process of re-tendering concessions. A year has elapsed since the date of its publication without this process coming into
effect\textsuperscript{57}, preventing many stalled concessions from taking advantage of this procedure, or the adoption of a similar one at the level of state highways.

Furthermore, it has become equally as important to establish clear criteria for the calculation of indemnities payable in the event of premature termination. The Ministry of Transport, Ports and Civil Aviation and the ANTT and ANAC requested the support of the EPL to elaborate a calculating methodology for indemnification with regard to those investments made by concessionaires during the course of concession contracts, for cases of rescission provided for in Law No. 13,448/2017. The objective is to adopt a standardized methodology which provides predictability and juridical security to the formalization of rescissions. However, provision has yet to be made for publicizing the outcome of work performed by the EPL.

**PROPOSALS CONCERNING THE RETURN OF CONCESSIONS:**

- Realize the possibility of returning over concessions is expressly provided for by Law 13,448/2017, by means of drawing up and publishing the Decree which shall regulate the procedure.
- Regulate, by the same token, the methodology concerning the calculation of indemnities relating to investments that have already been made, for cases provided for in Law No. 13,448/2017.

**4.4.4.6 EXERCISE OF POLICE POWER: EVASION, WEIGHING AND CONTROL OF SPEED**

Several economic aspects concerning the operation of highways depend, to a large extent, on the effective exercise of police authority by the State. Inefficiency in checking the weight of vehicles causes premature deterioration to the highway surface and, consequently, additional maintenance costs\textsuperscript{58}. Similarly, the absence of curtailing traffic evasion produces detrimental effects on the concession’s revenue, ultimately affecting its viability. Finally, shortfalls in highway speed checks tend to cause an increase in the number of accidents on the highways, which, apart from placing at risk the safety of users, reduces the expected level of service which leads to an additional economic onus in terms of providing support to victims, removal, mechanical service to vehicles, towing, lane clearance, among other things.

In this context, ABCR proposes:

**PROPOSTAS PARA O EXERCÍCIO EFETIVO DO PODER DE POLÍCIA:**

That concession contract should expressly provide for mechanisms capable of establishing the efficient exercise of Police Authority by the state and consequences for non-compliance of this contractual precondition, notably possible compensation of additional economic onus borne as the result of the inefficient exercise of Police Power.

\textsuperscript{57}To date: September 2018.

\textsuperscript{58}In recent years DNIT has been announcing actions for the introduction of a Weighing Plan, a program to check the weight of cargo trucks on all Brazilian highways, through the concession of the weighing system and by intensifying checks by the Federal Highway Police, though only a part of weighing posts work efficiently. There is a need to promote the reinforcement of the number of scales at strategic points in the country’s main motorways. The way to solve this serious problem is to introduce efficient inspection by weighing.
I. HISTORY OF FEDERAL AND STATE CONCESSIONS

Over the last few decades, Brazil has experienced road concessions at the federal, state and municipal levels. The following is a brief summary of the main experiments and models implemented during this period\(^59\).

Federal Concessions

The 1990s were marked by a strong economic crisis and the strategic redirection of the state’s role in the Brazilian economy. In this context, the interventionist model (with direct action through state-owned companies) lost ground, and a model emerged that had the indirect participation of public authority in the economy through regulation and supervision.

The depletion of the state financing model of investments brought about the need to raise private resources. At the federal level, the Highway Concession Program (PROCROFE) was created as an alternative to the lack of public resources for the national road network and represented a first movement in the search for private sector participation in the transport sector.

The federal concessions program is usually divided into three stages, which were not jointly planned and succeeded in three distinct administrations, under different economic and political scenarios, but which generated the concession of 9,234.6 km\(^60\) of federal highways.

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\(^59\)The history of concessions in Brazil was dealt with more extensively in recent works of IPEA (Neto, C.A.S.C, Moreira, SV, Motta, LV "Highway Concession Models in Brazil, Mexico, Chile, Colombia and the United States: Evolution Historical and Regulatory Advances", Text for discussion, IPEA 2018), and CNI (Frischtak, C. R., Fernandes, B., Lobo, M. and Dutra, C. "Highway Concessions: International Experiences and Recommendations for Brazil", CNI, 2018, Minuta).

\(^60\)Current extent of the federal network conceded (ABCR, July / 2018).
FIG. 6 THE HISTORY OF THE HIGHWAY CONCESSION PROGRAM

1994
Signed the first concession contract for the Rio-Niterói Bridge

1995
Sanctioned Law number 8,987 that deals with the regime of the concession of public services

1996
ABCR founded

1997
First contracts of the state programs were signed in Rio Grande do Sul and Paraná

1998
Start of the 1st stage of the program of highway concessions in São Paulo

1999
Creation of National Land Transport Agency - (ANTT)

2001
ABCR index starts measuring the flow of vehicles on conceded highways

2002
Launch of the 2nd phase of the federal concessions program

2003
3rd phase of the federal concessions program

2007
Start of the 2nd stage of the program of highway concessions in São Paulo

2008
Bidding for the federal concession, Rodovia de Integração do Sul - RIS

2013
Start of the 3rd stage of the program of highway concessions in São Paulo. Minas Gerais and Mato Grosso stage bidding for concessions

2015
20 years of the highway concessions program. Rebidding of the concession Rio-Niterói Bridge for 30 years more

2017

Source: ABCR.
The first stage was started in 1995, during the FHC government and soon after the success of the Real Plan in controlling hyperinflation. Marked by originality and the still frail economic context, this stage was launched in the face of the drastic need to recover a deteriorated highway infrastructure during the crisis that began in the late 1970s.

Six stretches of highway (which had already been tolled by the Ministry of Transport) were conceded through the criterion of the lowest tariff offered, totalling a transfer of 1,315.9 km\(^6\) of roads to the private sector. This stage was not scrutinized by regulatory agencies. Clearly, Brazil was still learning to take the first steps in the world of public service highway concessions. There was no clear agenda and the main objective was to promote improvement works on the highways, which led to the concessions being widely auctioned to large construction companies. During this period, delegation agreements, were also made for portions of federal highways with several states, through Law 9,277 / 1996. However, due to difficulties in implementing the state programs, the National Privatization Council (CND) recommended revising the Federal Highway Delegation Program and authorized the Ministry of Transport to adopt “necessary measures to unify the highway concessions policy.”\(^6\)

The second stage, which began in 2000 also focussing on the south and southeast, was only implemented in 2007, with the concession of eight highway sections, for a period of 25 years, totaling 3,305 km of highways.\(^6\) The criterion for the selection of the private operator continued being that of whom offered the lowest tariff, in search of the so-called reasonable tariff. At this stage, each company had up to six months to complete the initial work, eliminating emergency problems that entailed personal and material risks, and at the end of this period the restoration of the highway was started, along with toll collection and maintenance of the stretches conceded.\(^6\)

At this stage the National Agency of Terrestrial Transport - ANTT had already been created, tasked with regulating the sector. A more balanced risk matrix was defined, as well as performance parameters, with conditions for minimum quality and quantity of works.

Finally, in the third stage, which took place between 2013 and 2014, eight road sections were conceded through tenders, and the selection criterion continued to be the lowest tariff. The result was a total of 5,372 km\(^6\) of highways conceded, this time distributed amongst other regions of the country, such as the Midwest, where the intention was to meet the new frontier of agricultural production.

The investment program (doubling over 5 years) associated with the concessions of the 3rd Stage, was very ambitious, and the deadline for its implementation became insufficient in the face of what came next. There was frustration regarding two assumptions at that stage: (i) the conditions announced of the participation of BNDES in the financing, which didn't materialize, and (ii) the crisis that followed, with an impact on the traffic estimated for those highways, as a consequence of the financial collapse.

At this stage of the program, the presentation


of the Business Plan was discontinued as an integral part of the proposal, an important element in evaluating its feasibility (a setback) and eliminating important information for the rebalancing that would later become necessary.

The Federal Government submitted a proposal to adjust the concessions of the 3rd Stage, MP 800/17, which was approved in the Joint Committee of the National Congress, but wasn’t passed, within the regulatory deadlines, in the House and Senate plenaries. Under this proposal, periods for dual carriageway works, would be extended from 5 to 14 years, a measure that would be compensated by reducing tariffs and / or the term of the concession after completion. This renegotiation of deadlines would avoid the interruption of the program and the losses due to the delay in the implementation of this infrastructure.

It would certainly be a more beneficial option for users than expiration or rebidding (Law 13,448 / 17), which would imply a new contest with less favorable conditions, eventually resulting in lower investments and higher tariffs (see item 4.4.4.5, concessions, page 64).

Finally, an observation of a general nature, applicable to all tenders of highway concessions. It makes no sense to simply consider lower toll rates a “success” when compared to higher tariffs resulting from tenders made with different investment requirements.

A good way to address the issue of the overall balance of toll rates is to make concessions with a contest for “Ônus da Outorga” (Concession Fees), considering a pre-established tariff. This criterion promotes a harmonic and coherent tariff system, based on the quality standard of the infrastructure and services available to users, not the costs associated with each section.

**São Paulo concessions**

Parallel to the federal program, other experiments involving highway concessions have occurred in a number of states, as being the case of São Paulo, the most noteworthy and considered the most successful, although there are possibilities for improvements.

São Paulo currently has the largest highway concessions program in the country. Since 1998, 23 lots⁶⁶ of highways, with 7,105 km conceded, have been granted to the private sector. This means that 33.7% of São Paulo’s road network is conceded, while the federal road network, for example, remains at only 14.5%.

Contrary to what occurred in the federal program, São Paulo opted mainly for the selection of the private partner by the highest amount of grant offered. This helped in the quality of the highways of São Paulo, by avoiding the financial constriction of concessionaires by the unrestricted adoption of the lowest tariff. Among the 20 best Brazilian highways, 19 are concessions in São Paulo.⁶⁷

The most recent concessions projects in São Paulo also presented measures widely debated and defended by the market, such as the reduction of risks to foreign investors through the adoption of instruments to mitigate exchange rate variations.

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⁶⁶Including Rodoanel Norte, which the contract has yet to be signed, and ViaNorte, whose contract was terminated in May 2018.

⁶⁷CNT Survey of Highways.
Other state concessions

Besides São Paulo, states like Rio de Janeiro, Minas Gerais, Paraná, Bahia, Rio Grande do Sul, among others, also have highway concessions. There are even cases of municipal concessions in the city of Rio de Janeiro.⁶⁸

The State of Rio de Janeiro executed only two highway concessions that together accounted for 197 km: the first concession was that of the Lagos highway, which took place in 1996, whose criterion for the choice of victor was the one with the highest value of grant charge. The Itaboraí-Nova Friburgo-Macuco highway system was conceded in 2001, with the adoption of the criterion of the highest “Global Proposal Score”⁶⁹.

In Bahia, the state in the northeast with the largest road network conceded, two highway concessions were executed, BA-099 and BA-093, which together total 350 km. In the case of BA-099, the criteria for the choice of victor were the lowest percentage participation of the public authority in the execution of dual carriageway works and the shortest execution period. In the case of BA-093, the criterion adopted was the lowest value of the basic toll fee. Highlighted in the Bahian model, are the rules related to the tariff readjustment, which conform to, not only the inflation indexes, but also to the technical indices of earthmoving and civil construction.

In Paraná, the highway concession program was implemented in 1997, taking advantage of the delegation of the Federal Government to concede to the private sector, for a period of 24 years, federal highways that cut through the state. Currently, there are six lots of conceded highways, totaling 2,502 km (approximately 700 km state and 1,800 km federal), forming a logistical ring inside the state. Instead of choosing the victor by the financial grant charge, the state of Paraná opted to establish the tariffs and choose as victor by; the consortium that would commit to the conservation and maintenance of the longest section without tolls. Thus, discharging the public sector from the maintenance of these sections.

It is worth mentioning that during the 1998 election campaign, surrendering to popular pressure, the government took the unilateral attitude of reducing toll rates by 50%, causing substantial imbalances in concessionary contracts.

Because of this attitude, the companies filed a lawsuit against the measure, which was deemed justified. It was only 18 months later that the tariffs were reinstated. The contractual addendum that allowed the reinstatement of the charge, anticipated the reduction of the initially planned investments, in order to rebalance the loss of revenue caused by the tariff reduction imposed unilaterally. Since that time, successive governments of Paraná have intervened in the contracts, reinforcing the legal uncertainty of the concessions of the state.

The State of Rio Grande do Sul granted 1,788 km of highways to the private sector, although they were terminated in 2013. The implementation of the Rio Grande do Sul program occurred in 1998, in parallel with the first phase of the federal concession contracts, for a period of 15 years. However, the program came to an end in 2013 and has not yet been resumed. Finally, there was the creation of the EGR (Empresa Gaúcha de Rodovias), in January 2014, currently responsible for managing part of the sections that were previously managed by concessionaires. Recently, a regional movement to re-establish

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⁶⁸The concession of the “Linha Amarela” in Rio de Janeiro remained in the control of LAMSA, as well as “Via Rio” became responsible for the corridor “President Tancredo Neves - Transolimpica”.

⁶⁹In summary, a note was given to the technical proposals submitted by the bidders based on the parameters set forth in the bidding document; the same was done for the economic proposal, with the difference that in this case, only the bidder who offered the highest grant value obtained a maximum score, the notes of the other bidders being attributed proportionally to this one. Subsequently, these notes were added, composing the “Global Proposal Score”.

NEW WAYS FOR HIGHWAY CONCESSIONS IN BRAZIL | 69
the concessions project has resumed in the state. In the wake of this movement, the RIS proposal came up, which sought to incorporate previously conceded highways. Recently, the Administration has launched a new regulatory framework for state concessions⁷⁰, which has not yet been implemented.

Other states such as Pernambuco, Espírito Santo and Mato Grosso also submitted concession programs, though to a lesser extent compared to the states above.

In Pernambuco, there were two experiments: the, Rota dos Coqueiros and the, Rota do Atlântico, a total of 42 km. In 2006, the Parceria Público Privada - PPP (Public-private partnership) Rota dos Coqueiros marked the first modality of this type of arrangement in the highway sector in Brazil with a contract of 33 years.

In Espírito Santo, in 1998, part of the Rodovia do Sol and the, Terceira Ponte were conceded by the state government to the private sector for a term of 25 years a length of 68 km.

In 2011, Mato Grosso conceded the highway, MT-130, in the section between, Rondonópolis and Primavera do Leste to carry out the renovation and conservation of 112 km⁷¹ for 35 years. In 2018, the, Consórcio ViaBrasil obtained the right to administer portions of the MT 100, 320 and 208 highways for a term of 30 years.

Some of these states have established regulatory agencies for the transport sector; others have waived this mechanism. Some have followed the lower tariff federal model, while others have set fixed toll rates and prioritized the choice by the highest value of “outorga” (payment to the government) offered.

In practice, in addition to favoring the public coffers by guaranteeing resources to the treasury with the payment of concession fees by the concessionaires, state models have been more effective in promoting high quality roads over the years, since the tariff varies according to the needs of the operation, guaranteeing the financial health of the concessionaires without jeopardizing planned investments. The search for the lowest tariff as a selection criterion has often resulted in the offer of tariffs with elevated discounts, hindering both future investment capacity and the ability to maintain the highways by the successful concessionaire.


II. INTERNATIONAL EXPERIENCES

In dealing with economic crises that have compromised public investment capacity, several countries have adopted concessions as a tool for the development of their road infrastructure. Some of these experiences can offer important lessons, for the difficult time faced by Brazil, are summarized below\textsuperscript{72}.

Chile

Chile has been perfecting its model of highway concessions since the experiment begun in the 1980s. In order to boost the attraction of private resources for investment, the government adopted the Receita Mínima Garantida - RMG (Guaranteed Minimum Revenue) model, according to which the contract stipulated maximum and minimum limits to the variation of revenues. Thus, if the revenue received is lower than the minimum limit established, a supplement is paid using public resources, therefore, the concessionaire has its revenues assured. In the opposite case, that is, if the concession revenues exceed the stipulated maximum limit, it is incumbent upon the concessionaire to share the excess of collection with the government.

The successful bidders would be those requiring less government subsidy, shorter concession periods and lower tariffs. In practice, with RMG, private participation in the financing of Chilean highway infrastructure has increased. Functioning as an effective mechanism for sharing demand risk and therefore, proving to be fundamental for attracting private capital even in the high-risk environment of economic crises.

More recently, the Chilean program also adopted the criterion of the concessionaire’s choice of grant charge. Thus, the model generated a cross subsidy mechanism, in which funds obtained in the sections of higher demand were transferred to concessionaires of the sections with lower demand.

At the same stage, due to an economic crisis and a sharp decline in revenue flows of the concessionaires, the Mecanismo de Distribuição de Receitas - MDR (Revenue Distribution Mechanism) was created, a financial instrument that allowed the restructuring of project financing. Through the MDR, the government agreed to a growth rate for concessionaire revenues. On the other hand, the concessionaires were charged a percentage of the guaranteed revenues and the debt contracted would be paid by means of the execution of new works in the same venture. Adjustments in relation to actual and projected revenues involved reducing the extension of the contract, in cases where the revenues exceeded those initially projected, or in the extension, the opposite would occur. This mechanism has generated important economic effects, such as the adequacy of the contracts to the crisis situation experienced by the country and the collection of fiscal resources invested in the concessions themselves. The intention of this mechanism was to reduce the risks of demand on the part of the concessionaire.

From the 4\textsuperscript{th} stage, the criterion for the choice of victor became formalized as the, Lowest Present Value, which became known as the “Chilean model”. In this approach, there is the creation of a cash flow with estimates of cost and investment values of the project over time. Brought to present value by a rate of return that is considered adequate by the bidder. The victor would be the one with the lowest present value, although there is no contractual term. If the flow of vehicles is higher than projected, the required revenue will be achieved in a shorter

\textsuperscript{72}More detailed descriptions of the international experiences with highway concessions were elaborated in recent works by IPEA (Neto et al, 2018) and CNI (Frischtak et al, 2018), which were consulted for the construction of this Appendix. See footnote 59.
term; or in the opposite scenario, if the demand is lower than projected, the time needed to earn the required revenue is expanded. This reduces the risk of the business and increases the attractiveness of the venture.

Other characteristics that make the Chilean model successful and attractive to private capital are: (i) the exchange rate cover of investments, which prevents strong fluctuations in foreign currency, which increases the risks assumed by the investor; and (ii) prevision of contractual revision every two years, when the concessionaire may request from the government a review of tariff readjustment and the reallocation of toll booths, institutionalizing a mechanism for the readjustment of the contract at times of difficulty in the operating conditions of the highways.

**Colombia**

In the case of Colombia, after difficulties in the initial stages of implementation of the concessions model, the contracts also passed to the criterion of choice of the victor based on the lower present value of the revenues. That is, the victor is the one who offers the lowest financial value to fulfill all the anticipated contractual obligations and the end of the concession period occurs when the concessionaire’s revenue, in relation to present value, reaches the amount that was proposed in the bidding process. The tariffs are defined by the government and the concessionaire can request a contribution of resources to supplement toll revenues, in order to make the projects feasible.

Other interesting Colombian innovations include: (i) the “investment trigger”, which forecasts that the investments are aligned with the volume of traffic on the highways; (ii) the adoption of trust funds, which require a specialized and independent financial institution to be responsible for managing the proceeds of the concession, as well as its debt and capital, which guarantees greater security in obtaining the results stipulated in the contract; and (iii) exchange cover of the contracts, reducing the foreign exchange risks of the enterprise.

**Mexico**

The Mexican program began in the late 1980s, following an extensive process of privatization in the country’s economy. In this first phase of the program, the shortest contractual period to recover investment was adopted as a criterion for the decision of the victor. Fifty-two highway concessions were made between 1988 and 1994, the year of the outbreak of the Mexican crisis.

During this period, concessionaires faced severe financial problems mainly due to the combination of the effects of the economic crisis and inadequate proposals presented at the time of bidding. The companies that were successful at the tenders whom stipulated short terms to recover the investment made, had their initial expectations of return frustrated in this context of crisis, facing a severely lower than expected demand. This phase eventually required contributions from the public authorities and, finally, led to the early termination of several concessions, returning the right to operate, maintain and exploit these highways. The problems related to the Mexican experience refer to the excessively optimistic expectations of returns and incentives present in tenders of this type.

A decade after the first concessions were made, the Mexican government resumed the concessions program through three modalities (concessions, utilization of assets and projects to provide services) seeking to overcome the problems previously observed. Adopted as victor, was the bid which needed the least support from the government, or which offered the best economic proposal. Also, the execution of works to modernize, operate and maintain roads was delegated to private companies, selecting those
that presented the lowest net present value as consideration for the costs incurred in the execution of services. At this stage, the Mexican government also sought a better distribution of risks. For example, if companies were unable to raise the revenue needed to repay their debt, the government committed to provide a certain amount of resources for that purpose.

Spain

Also, in the 1950s, Spain inaugurated its history of highway concessions, which expanded rapidly during the 1970s. The modality used in this period to construct the highways was that of BOT (build-operate-transfer)\(^7^3\). Already in the 1990s, after an interval in which public concessions were little used, the concessions program was resumed amid a context of serious economic crisis.

The financial model for concessions is basically through Project Finance\(^7^4\) and cross subsidies \(^7^5\). Most of the risks are attributed to the concessionaire (with the exception of political risks and major events), but some of them are mitigated by the government itself, always considering its fiscal impact and the perpetuity of the concessions program.

This mitigation of risks plays a fundamental role in attracting private enterprise and can basically occur through changes in economic parameters such as toll rates and concession terms. Such methods may be of great value for the Brazilian situation, in which legal, regulatory and economic risks are significant.

India

In the wake of a process of economic liberalization in the 1990s, India also begun to partner with private enterprise to attract investment in infrastructure. Starting in 2000, the National Roads Development Project was launched, which has already passed through seven phases.

Several measures have been successfully adopted to facilitate private investment, such as permitting projects with resources originating entirely from foreign direct investment, exemption from taxes for importing construction equipment, and the assumption of costs associated with the preparation of feasibility studies for projects and land expropriation.

The Indian experience is also rich in modalities of private participation to handle highways of different levels of flow. There are, for example, BOT models with tolls - where demand for the road allows for charging - and BOT with annuity payments - where the Indian authority makes periodic payments to the concessionaire in order to minimize the risk of demand and make the concession more attractive. In this way, sections of highway with different levels of attractiveness, are also served by private enterprise.

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\(^7^3\) Modality that involves the concession of the right to the private sector, to build and operate highways, for example, over a certain period. At the end of the period, the object of the concession in question, is transferred back to the government.

\(^7^4\) Project Finance is a long-term modality of financing, in which the main guarantee of payment is the cash flow of the project itself.

\(^7^5\) The Spanish legislation provides that, where the concession contract has as its object the construction and operation of a particular public work, it may be demanded that the concessionaire in question be required to perform or retain, for example, works related to the main work. However, this modality can only apply to interconnected infrastructure systems.
III. STATISTICS OF HIGHWAY CONCESSIONS

The total length of the Brazilian paved road network is 212,886 km, according to the CNT survey of 2017. Of these, 20,264 km, or 9.5%, are conceded.

In 2017, more than 2.5 million vehicles were attended by the support services of concessionaires (medical and mechanical assistance), or 292 vehicles per hour.

The sector has achieved through safety activities, a 17.65% reduction in the death rate in accidents in the last five years (2012 to 2017).

The sector currently generates 47 thousand direct and indirect jobs.

Operational structure of service to the user

Source: ABCR, total available in all concessions on 31/12/17

897 Traffic Inspection Vehicles
675 Tow Trucks, Light and heavy
478 Rescue Ambulances and ICUs
568 User Service Bases
4,753 CCTV Cameras

47 thousand

897
675
478
568
4,753

Traffic Inspection Vehicles
Tow Trucks, Light and heavy
Rescue Ambulances and ICUs
User Service Bases
CCTV Cameras
FIG 7. QUALITY EVALUATION OF BRAZILIAN HIGHWAYS: CONCEDED VS. PUBLICLY MANAGED

REGONIZED AND EXCELLENT HIGHWAYS

CNT SURVEY OF HIGHWAYS 2017 PROVED:
THE 19 BEST HIGHWAYS IN THE COUNTRY ARE CONCEDED.

Source: Survey CNT 2017.

MUNICIPAL AND FEDERAL TAXES COLLECTED BY THE CONCESSIONAIRES IN 2017:

R$ 1,039 billion
TRANSFERRED TO ISSQN

R$ 2,397 billion
FEDERAL TAXES

SINCE 1995, MORE THAN R$ 97 billion
(CAPEX) has been invested, R$ 6.8 billion, of which, was in 2017.

Added to this, R$ 81 billion IN OPERATING EXPENSES
(OPEX), R$ 5.7 billion, of which was, in 2017.

76 Values adjusted by IPCA accumulated up to 2017.
77 Values adjusted by IPCA accumulated up to 2017.
STATE CONCESSIONS (*)

- Conceded State Highways
  10,999 KM

- Conceded Federal Highways
  9,235 KM

Conceded Municipal Highways
30 KM

Total
20,264 KM

(*) The mileage indicated does not include the federal highways granted in the states.
FIG 8. HIGHWAY CONCESSIONS IN BRAZIL

57 SPEs
7 GROUPS OF INVESTORS
45 CONCESSIONS
12 INDIVIDUAL CONCESSIONAIRES

INDIVIDUAIS

4,068 km
VIARONDON
CAMINHOS DO PARANÁ
RODOSOL
RODOVIA DO AÇO
ROTA 116

TEBE
VIABAHIA
VIAILAR
MGO RODOVIAS
SPMAR
TAMOIOS
ENTREVIA

1,737 km
AB COLINAS
AB NASCENTES DAS GERAIS - PPP
RODOVIAS DO TIETÊ
AB TRIÂNGULO DO SOL

3,449 km
RODOPISTA
FERNÃO DIAS
RODOPISTA FLUMINENSE
RODOPISTA LITORAL SUL
RODOPISTA

CONSÓRCIOS*

2,896 km
CCR NOVA
DUTRA
CCR AUTOBAN
CCR SPIVIA
CCR VARIO

CCR VIALAGOS
CCR MSVIA
CCR RODONORTE
CCR RODOANEL

2,022 km
TRIUNFO ECONORTE
TRIUNFO TRANSBASILIANA
CONCER
TRIUNFO CONCEBRA

670 km
VIARIO
RENOVIAS
BAHIA NORTE
ROTA DO ATLÂNTICO
CRT

2,005 km
CART
CLN
LAMSA
VIA 040

TRIUNFO

Invepar

1,141 km
ROTA DAS BANDEIRAS
ROTA DOS COQUEIROS - PPP
ROTA DO OESTE

2,276 km
ECOSUL
ECOCATARATAS
ECOVIA
ECO 101
ECOPONTES
ECO 135

80km

ODINEST

Source: ALCR, 30/06/18.

ViaRio: 33.34% Invepar / 66.66% CCR. Renovias: 60% Grupo Encalso / 40% CCR. Bahia Norte: 50% Invepar / 50% Odebrecht Rodovias. Rota do Atlântico: 50% Odebrecht Rodovias / 50% Invepar. CRT: 24.91% Invepar / 75.09% Outros.
NEW WAYS FOR HIGHWAY CONCESSIONS IN BRAZIL

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