



INVESTING IN CÓRDOBA

Summary of finances
and investments

FIRST QUARTER 2022

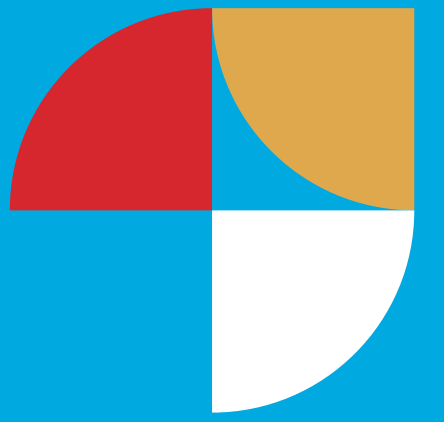


Ministerio de
FINANZAS



CÓRDOBA
entre todos





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PROVINCIAL ECONOMY

ECONOMIC ACTIVITY IN CÓRODBA

Productive activity, employment and consumption

In the first quarter of 2022, Córdoba recorded a year-on-year 4% drop in 0km car registrations, going from 12.626 units in the first quarter of 2021 to 12.078 in the same period of 2022.

In contrast, the province evidenced a slight year-on-year growth in cement dispatches, which reached cumulative 328,400 tonnes in the first quarter of 2022, some 2,800 tonnes more than in the same period of 2021.

Also noteworthy is the performance of real economy indicators such as oilseed milling. The province of Córdoba is the second largest contributor to the national grain milling, with a monthly average of

282,500 tonnes in the first quarter of 2022. In that period, it recorded a year-on-year fall of 5.5%, a decline lower than that of the national total in the same period (year-on-year - 12.9%).

Regarding consumption, real supermarket sales rose a cumulative year-on-year 3.1% in the first quarter compared to the previous year, although they are still 9% below the level of the first quarter of 2018, a pre-crisis benchmark.

The growth in economic activity also has a direct impact on more job positions. The salary modality registered in private companies experienced thirteen months of consecutive monthly increases in February 2022 (considering the deseasonalized series), while the number of workers grew a year-on-year 4.8% in the first two months of 2022. This percentage represents 22,700 people taking up formal jobs in the private sector during this period.



PROVINCIAL ECONOMY

ECONOMIC ACTIVITY IN CÓRODBA

Agriculture

According to preliminary estimates, the gross value of agricultural production in the 2021/22 season may reach USD 14,550 million, 4% above the previous season and 49% above the historical average of the last 10 seasons, of around USD 9,800 million.

(Graph 1).

Production is expected to be around 32 million tonnes (Graph 1). This figure is 14% lower than that of the last cycle and exceeds the historical average (31.5 tonnes) by only 1%. Therefore, the strong increase in the economic contribution with respect to the historical average is explained by the improvement in prices on the international market.

Among the main crops, corn stands out with an estimated 19.8 million tonnes of production, with a drop of 16% respect to last season, but 49% above the historical average, explained by a 58% increase in the area sown.

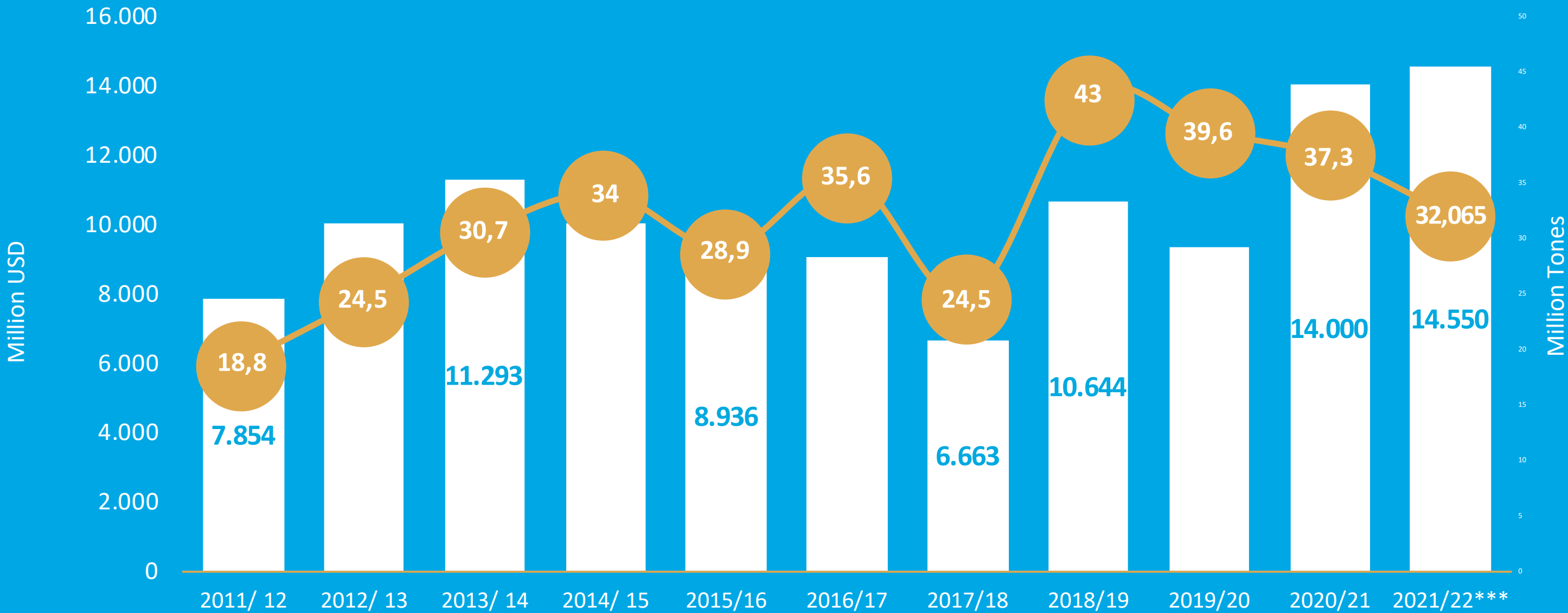
Soybean follows in order of importance, with a production tonnage of over 11 million, down 17% compared to last season and 13% compared to the historical average (2008-2021). This drop can be explained by the decrease in the area sown from the 2016/17 season onwards, in favor of grasses, motivated by commercial incentives that accompanied the adoption of the most efficient practice in the medium term for weed and pest control and soil care: crop rotation.



GRAPH 1.

Agricultural Production* and Production Gross Value** in Córdoba. Season 2021/2022

In million tonnes and million dollars



Note: *Calculation includes soybean, corn, wheat, peanut and sorghum crops. **Assuming that the entire crop is exported at the month of harvest and valued at its FOB international price, without any withholding. ***Estimated. Source: Own elaboration based on Córdoba Grain Exchange.



PROVINCIAL ECONOMY

ECONOMIC ACTIVITY IN CÓRODBA

Software Industry

The software industry expanded in Córdoba during 2021, despite the impact of the COVID-19 pandemic on the economy. By 2022, the sector expects another positive jump.

According to Monitor TIC data, in 2021, this sector had a turnover of AR\$ 66,120 million pesos (excluding multinational firms, such as Mercado Libre), 57% above the amount invoiced in 2020. Excluding inflation, growth was 7% in real terms.

Expressed in dollars, this industry achieved sales of USD 688 million, an increase of 15% over the previous year. Exports accounted for 21% of the sector's total sales (USD 143 million).

In terms of employment, in January 2022, this industry reached 15,480 job positions, 9% more than in the same month of 2021.



SITUATION OF PUBLIC FINANCES

BUDGET EXECUTION

The Province achieved sustained high levels of current savings

During the first three months of 2022, the Province has kept a prudent and austere management in terms of income and expenditure, thus allowing for the recovery of the levels of public investment. Even considering the recovery in revenues in 2022, it is noted that revenues remain at lower levels than those observed prior to the onset of the crisis in April 2018.

As accrued to March 2022, the net income of the province (resources available after subtracting the automatic transfers to municipalities and communes of the Province) was AR\$ 178,128 million (USD 1,671 million), showing a real increase of 1% compared to the

same period of the year 2021. In turn, net current expenditure (provincial expenditures without considering the automatic distribution to municipalities and communes) was AR\$ 130,648 million (USD 1,226 million), which implies a year-on-year decrease in expenditure of 2% in real terms (Table 1).

As a result, the 'current saving available' obtained to March 31, 2022 was AR\$ 47.479 million (USD 445 million), (Table 1). Even in an adverse macro-economic context, it was possible to keep throughout the first three months a 'current saving available' representing the 27% of the provincial net income, aligned with the ratio observed in the same period of 2021 and the historical average (Graph 2).



TABLE 1.**Income and Expenditure of the Non-Financial Public Administration**

Accrued to March 31 of every year – in million current pesos and in American dollars, except percentages

Concept	2021		2022		Variation AR\$	
	AR\$	US\$ / ¹	AR\$	US\$ / ¹	Nominal	Real / ²
NET INCOME	118.019	1.331	178.128	1.671	51%	1%
Taxable and Non-Taxable Net / ³	88.910	1.003	138.524	1.300	56%	4%
Social Security Contributions	17.581	198	25.451	239	45%	-3%
Net Current Transfers / ⁴	7.968	90	9.682	91	22%	-19%
Property Income	3.345	38	4.209	39	26%	-16%
Other income	216	2	260	2	21%	-19%
OPERATING EXPENSES	86.125	972	130.648	1.226	52%	2%
Wages and related and Social Security Benefits	67.434	761	105.047	986	56%	4%
COVID-19 Program expenses / ⁵	1.693	19	1.923	18	14%	-24%
Property Income	4.175	47	1.839	17	-56%	-70%
Other Net Current Expenses (Consumer Goods, Non-Personal Services and Net Transfers) / ⁶	12.823	145	21.839	205	70%	14%
CURRENT SAVING AVAILABLE	31.894	360	47.479	445	49%	0%
CURRENT SAVING AVAILABLE/						
TOTAL NET INCOME	27%		27%			
NET CAPITAL INCOME /⁷	1.912	22	1.778	17	-7%	-38%
CAPITAL EXPENDITURE	7.148	81	14.246	134	99%	34%
Construction Expenditure and Capital Assets / ⁸	5.996	68	12.249	115	104%	37%
Other Net Capital Expenditure / ⁹	1.152	13	1.996	19	73%	16%
FINANCIAL SAVING AVAILABLE	26.658	301	35.011	328	31%-	12%

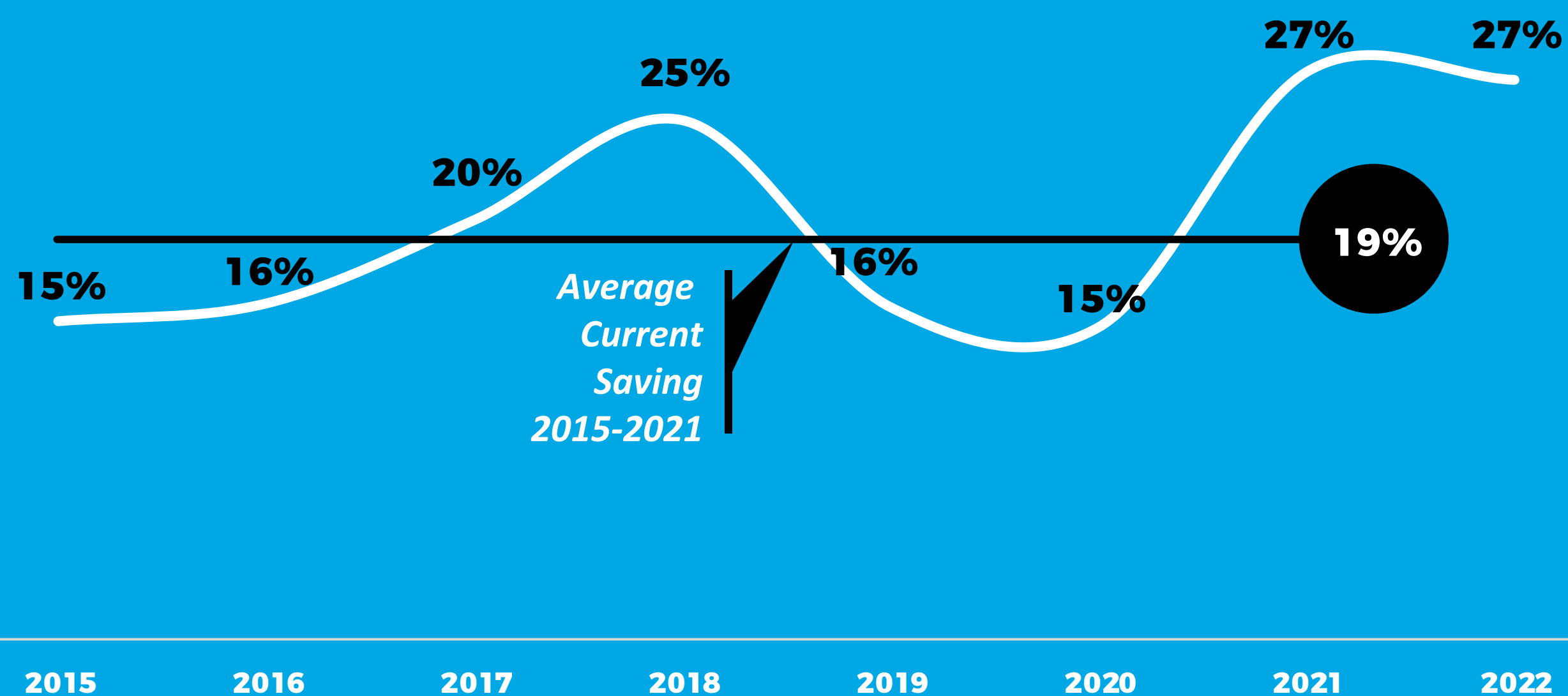
Notes: /1 The reference Exchange rate is the one published by the BCRA in Communication "A" 3500 (Wholesaler); /2 Based on the Córdoba Consumer Price Index; /3 Taxable and non-taxable resources available to the Province after subtracting the current resources automatically distributed to Municipalities and Communes; /4 Includes amounts received as Tax Consensus Compensation Item II Section A; excludes capital resources automatically distributed to Municipalities and Communes; /5 Fund for the state of alert, prevention and sanitary action for epidemic diseases created by Decree 156/2020; /6 Net of the resources automatically distributed to municipalities and communes; /7 Net Capital income from capital co-participation to municipalities and communes and from Tax Consensus Compensation Item II Section A; /8 Construction Expenditure and Capital Assets is equivalent to Real Direct Investment plus Capital Transfers to Others in the Public Sector; /9 Other Net Capital Expenditure of capital resources automatically distributed to municipalities and communes.

Source: Own elaboration based on budget execution to 31 March of the years 2021 y 2022. Ministry of Finance of the Province of Córdoba. See: <https://finanzas.cba.gov.ar/ejecuciones/>.

GRAPH 2.

Available Current Saving of the Non-Financial Public Administration.

To March 31 of every year - in % of the genuine income available /1



Notes: /1 Are the resources available to the Province after deducting the resources automatically distributed to Municipalities and Communes. Source: Own elaboration based on Budget execution to March 31 of the years 2015 to 2022. Ministry of Finance of the Province of Córdoba. See: <https://finanzas.cba.gov.ar/ejecuciones/>.

Recovery of investment

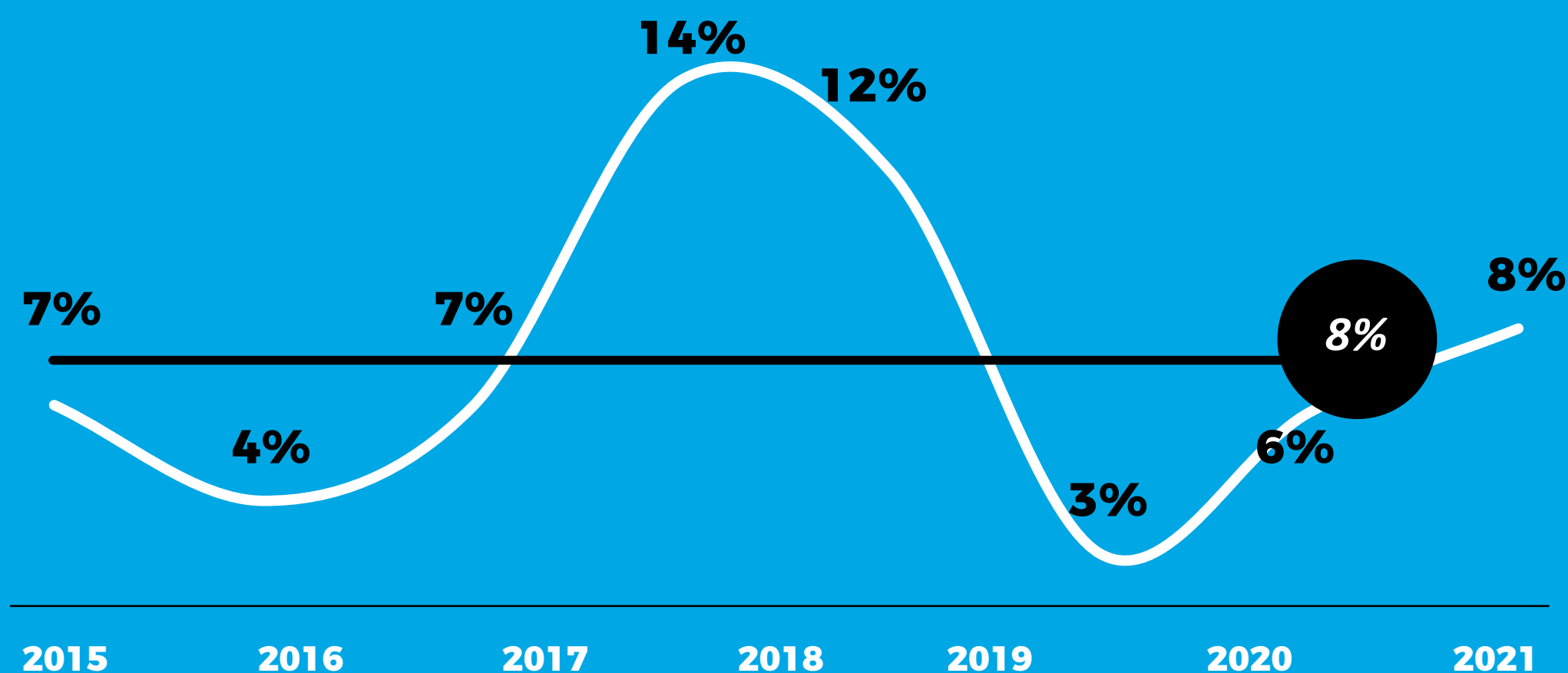
In the first three months of 2022, the provincial administration gave public investment a great impetus. It is essential to give continuity to the reactivation of works initiated in 2021, which are necessary to maintain the provincial infrastructure, as well as to start the execution of new projects.

In fact, the expenditure on construction to March 31, 2022 (\$12,249 million, USD 115 million) increased 70% measured in dollars respect to the levels observed in the same period of 2021 (\$5,996 million, USD 68 million), (Table 1). The construction expenditure as a percentage of the total net public expenditure of automatic transfers to municipalities reached 8% in 2022, aligned with the average of the period 2015-2021, which stood at 8% (Graph 3).

GRAPH 3.

Construction Expenditure ^{/1} of the Non-Financial Public Administration.

To March 31 of every year - in % of the total net expenditure ^{/2}



Notes: ^{/1} Construction expenditure considers Direct Real Investment (Spanish initials IRD) and the Capital Transfers to Others in the Public Sector. ^{/2} Net total expenses of current and capital co-participation to Municipalities and Communes.

Source: Own elaboration based on budget execution to March ³¹ of the years 2015 to 2022. Ministry of Finance of the Province of Córdoba. See: <https://finanzas.cba.gov.ar/ejecuciones/>.

FINANCIAL DEBT

To March 31, 2022 the provincial financial debt stock was AR\$ 284,364 million (USD 2,562 million). In addition, interests and amortization payments were made in a timely manner, which accrued AR\$ 4,491 million (USD 40 million), not considering the payment of the floating debt from prior years.

In March 2022, the debt stock decreased 26% in real terms compared to the same period of 2021 (Graph 4.a). This was mainly due to a growth of 21% of the nominal exchange rate compared to a 52% inflation in the period considered, since slightly more than 95% of the financial debt of the Province is denominated in foreign currency.

Also, measured in terms of provincial revenue, the debt stock was in average equivalent to 4.7 months of collection in the first three months of 2022. This indicator decreased 26% compared to the same period of 2021, when 6.3 months of collection were necessary to pay back the debt (Graph 4.b). This improvement is, in part, the result of a rise of 4% in real terms in collection performance during the first three months of 2022, against the same period in 2021 (at 2022 constant prices).

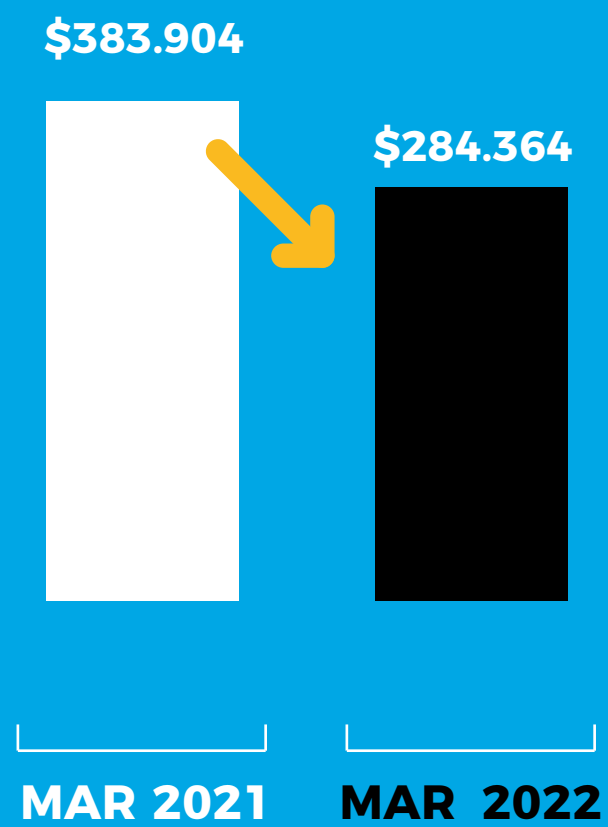


GRAPH 4A.

Debt Stock

To March 31 of every year

In million constant pesos of 2022*

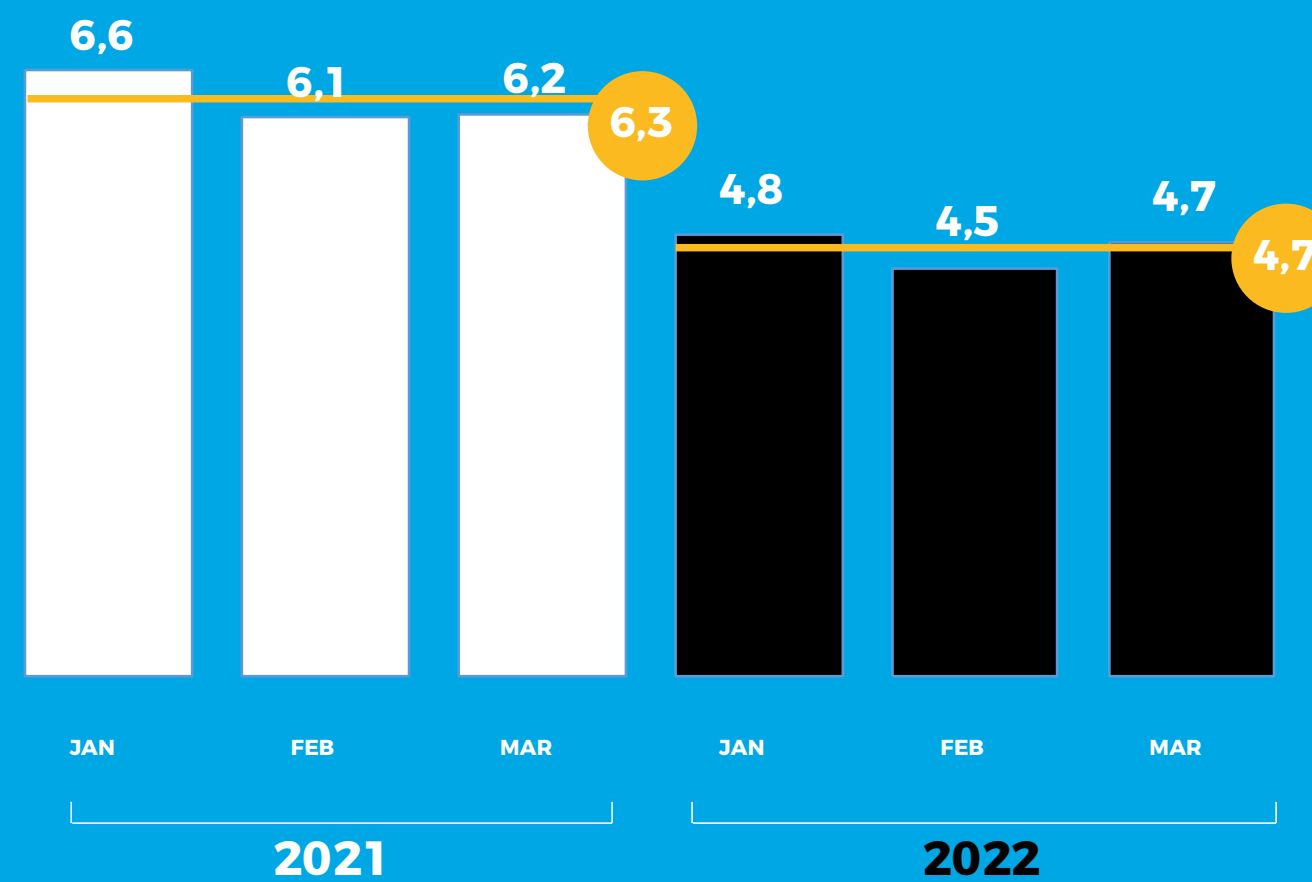


GRAPH 4B.

Debt Stock in relation to Income

January to March of every year

Number of months of collection equivalent to public debt*



Note: *Based on Córdoba CPI.
Source: Ministry of Finance.



LATEST NEWS

CÓRDOBA ENGINEERING APPLIED TO AGRICULTURE MAKES ITS APPEARANCE IN THE NORTH AMERICAN MARKET

B&P Motion Solutions, the new Brand of BPB Motion Group, specializing in the development of mechanical engineering products and services, made its first export of assembled units and special supports to the US agro-industrial market, one of the largest, most competitive and demanding in the world.

The shipment consisted of 30,000 custom-developed parts pursuant to high quality standards, focused on ISO standards, the testing process and product review. The company BPM Motion Group, based in the interior region of Cordoba, is a pioneer in the manufacture of bearings in Latin America. It has more than 30 years of experience in the development of solutions for the main brands of national machinery.

B&P Motion Solutions is oriented to the generation of quality products, which has allowed it to be at the forefront and successfully respond to the demands of the agricultural market, whose needs involve equipment with technology and applied engineering. In the search for continual improvement, it has been ISO 9001 certified since 2006 and has the necessary measuring instruments to control quality.

The company foresees that its presence in the international market will allow it to consolidate sales and create new opportunities. On this basis, they project a growth of more than 50% in exports for the second half of 2022 and for the first half of next year.



THE BLOOD DERIVATIVES LABORATORY WILL BE THE FIRST PRODUCER OF A SOLUTION THAT PRESERVES ORGANS FOR TRANSPLANTATION

The Blood Derivatives Laboratory of the National University of Córdoba (U.N.C.) will receive a national subsidy of AR\$ 64 million to expand production and modernize the technology and infrastructure of the Plant of Tissue and Medical Products. The institution, which has highly specialized technology and human resources, stands out for its decades of experience in the production of sterile solutions.

The plant currently manufactures an organ preservation medium for transplantation. This is a solution that allows organs to be preserved, once removed from the donor, until they are transplanted into the recipient. Its technical name is “Solución Conservadora de Órganos Scow U.N.C.”

[Organ Preservation Solution - Scow - U.N.C.] also known as “símil Wisconsin” [“simile Wisconsin”].

This medical product is registered with the National Administration of Medicines, Food and Medical

Technology of Argentina (A.N.M.A.T. for its acronym in Spanish) and the funding will enable production to be scaled up from 50 to 500 litres per batch produced. As from the expansion of the plant, the Blood Derivatives Laboratory will become the only national producer of this “gold standard” formulation, which is essential in the ablation and transplantation process.

Thus, it will not be necessary to import the product since this institution will have the capacity to supply the national demand for transplants, centralized by the National Institute for the Coordination of Ablation and Implants (I.N.C.U.C.A.I. for its acronym in Spanish), estimated at 6,000 litres per year.

The U.N.C. Blood Derivatives Laboratory holds a prominent position for its social commitment and its role in the national health system, ensuring the public production of strategic medicines and medical products for the country and the region.

I.D.E.COR. IMPLEMENTS INNOVATIONS IN IMAGE CLASSIFICATION FOR LAND COVER MAPPING

The program of Spatial Data Infrastructures of Cordoba (I.D.E.COR. for its acronym in Spanish) has implemented new techniques in the process of classifying satellite images, with the aim of producing models as close as possible to the spatial and geographical reality captured in imagery.

Land Cover and Land Use Mapping applications include innovative products that incorporate the particular requirements of each map. These applications are useful for academic and scientific studies and watershed analysis, among others. The satellite images are captured by the Sentinel 2 satellite, recording the level of light reflected by elements on the earth's surface.

Satellite image classification processes use georeferenced terrain data (samples) and, by means of Artificial Intelligence (AI) algorithms, relate them to the information contained in the pixel corresponding to its position in the satellite image, in order to assign each pixel to the class (type of coverage) it most closely resembles. One of the limitations of the pixel-based classification process is that the algorithms do not relate each pixel to the environment.

Thus, the pixel-based image analysis paradigm is moving towards an innovative Object Based Image Analysis (O.B.I.A. for its acronym in English) classification

methodology. This method, through a process known as segmentation, identifies groupings of pixels into homogeneous and meaningful regions capable of representing the entities and relationships present in the image, known as objects. It is the same process used to reduce noise in pixel-based classifications but in this case, it is used at the beginning rather than at the end. This paradigm presents significant improvements in the quality of the results. Descriptive statistical measures can be calculated to the spectral behavior of the pixels, while information intrinsic to the object, such as area, shape or topological attributes, can be incorporated.

The I.D.E.COR. team is currently researching and assessing this methodology with the aim of applying it to agricultural cover mapping, which is part of the annual studies of agricultural yields and production in support of the Ministry of Agriculture and Livestock of the Province of Córdoba (M.A. y G. for its acronym in Spanish). The method provides an approximation of the real geographical behavior of the cultivated areas by means of an edge detection analysis. I.D.E.COR. integrates the public sector, the academia and the private sector, with extensive experience in the development of land cover maps, achieving a schematic representation of land cover grouped into categories such as crops, salt flats, urban areas, mountains and water bodies, among others.

