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INTEREST RATES AND INFLATION IN ARGENTINA

by

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Summary

This paper explores the nature of the relationship between interest rates and prices in Argentina since the end of 1971. The relevant data are shown in a table attached at the end of the paper. The evidence supports the view that, during this period, the successive movements of the Argentine inflation rate were directly explainable by such factors as changes in fiscal policy and wage policy. If movements of the nominal rates of interest contributed to the intensification or the deceleration of inflation, it was not in the sense that higher interest rates increased costs and therefore added to upward price pressures or that lower interest rates alleviated such pressures. Rather, when nominal interest rates rose, they rose less rapidly than prices and became increasingly negative in real terms, and, when they declined, they did so more slowly than prices and eventually became positive in real terms. By allowing increasingly negative real interest rates, the authorities promoted an intensification of credit demand which, at a time when the economy already was overheated, worsened inflation. By bringing about a restoration of positive real interest rates, they helped to reduce credit demand and thereby to alleviate inflationary pressures. Under a stabilization program initiated in April 1976, an increase in interest rates at banks was used to help bring about a deceleration of inflation.

* The views expressed do not necessarily reflect those of the Board of Governors of the Federal Reserve System or of its staff.

Nature of the Interest Rate Data

Three interest rate series are shown in the table. Column 1 shows the maximum rate which the Central Bank allows banks in Greater Buenos Aires to charge any borrower on what are called "general loans" with a maturity of six months.1/ During most of the period, this maximum rate was only moderately higher than the maximum rate that the banks were allowed to pay on time and savings deposits, and the banks paid and charged the maximum rates allowable. In practice, only the most creditworthy borrowers or those to whom bank managers wished to extend a favor were able to borrow at this rate. Others were simply turned away.

Column 2 shows the rate on 180-day commercial paper which the most creditworthy enterprises issued to supplement their borrowings when they were unable to borrow as much as they needed at the maximum bank rate.2/ There does not appear to have been any ceiling directly affecting this rate, but it was indirectly affected for most of the period by the regulations governing the "swap" arrangement instituted by the Central Bank to bolster the country's international reserves. Under this arrangement, Argentines and non-Argentines could obtain an exchange guarantee on foreign funds brought into the country subject to the payment of a premium set by the Central Bank. The sum of the foreign interest rate, the guarantee premium, and the relevant commissions and taxes constituted an effective ceiling which the commercial paper rate (plus commissions and taxes) could not greatly exceed since, when it rose much above that level,

1/ It does not measure the total cost of credit to the borrower, as it does not take account of compensating balance requirements, nor does it include additional fees, charges, and commissions that the borrowers may have to pay. Specific information on these additional payments is not available to us, nor do we know how extensively they may have varied over this period.
2/ Higher rates applied to less creditworthy borrowers.

the issuers of commercial paper found it advantageous to use the swap arrangements instead.

Column 3 shows the rate on 30-day loans against Argentine Government bonds in the non-bank market. Because the maturity for these loans was shorter than for the commercial paper rate series, this rate fluctuated more widely. It appears to have been freer than the commercial paper rate from the indirect influence of ceilings affecting other sources of funds. However, it was rather heavily influenced, especially after May 1975, by speculative influences, as holders of the bonds would use the proceeds of borrowings against them to purchase more bonds, using these as collateral for more borrowings, etc., in a multi-tiered pyramid. The bonds were especially attractive because they were indexed to non-agricultural wholesale prices.

Information is not available on the volume of financing obtained in the commercial paper market or in the form of advances against Government securities. This makes it impossible to assess precisely the relative importance of the various forms of financing. However, according to Argentine officials in a position to know, well over half of the financing obatined by business is obtained directly from the banks.

Analysis of the Data

The table shows that the rate of inflation went through four distinct phases after 1971 and is now in a fifth phase. The year 1972 and most of the first half of 1973 were characterized by accelerating inflation. An abatement of inflation followed in the last half of 1973 and early in 1974, but the trend was then reversed. The third phase, which may be described as one of controlled acceleration, lasted until June 1975. From then until April 1976, inflation was out of control. Since April 1976, inflation has been diminishing.

Broadly speaking the movements of the rate of interest were in the same direction as those of the rate of inflation, whether measured by month-to-month or by year-to-year changes, but the amplitude of the interest rate movements was much smaller. Also, interest rates tended to follow rather than lead price movements. Most important, interest rates were usually below the rate of inflation, increasingly so when inflation accelerated, and, until the fifth phase, they exceeded the inflation rate (however measured) only when the latter reached relatively low levels.

First Phase: January 1972-May 1973. The virtual rigidity of interest rates during the first phase of accelerating inflation (1972-73) is particularly striking. The February 1972 increase in interest rates, which was the only break in this trend, appears to be related to the fact that the acceleration of inflation had been under way for the previous two years. As such, it was more likely a lagged adjustment to past price movements than a cause of the subsequent ones.

The acceleration of inflation in this period stemmed primarily from the growth of the public sector deficit and in the recourse to the Central Bank to finance it, and from a succession of generous wage increases. The public sector deficit rose from 1.7 per cent of GNP in

1970 to 4.3 per cent in 1971 and to 7.3 per cent in 1973. The rate of expansion of money supply increased from 20 per cent in 1970 to 31 per cent in 1971 and to 74 per cent in the twelve months ended in May 1973. The failure of nominal interest rates to rise after February 1972 helped to perpetuate inflation by making it increasingly attractive to borrow. The banking system's credit to the private sector rose 40 per cent in 1971, nearly 50 per cent in 1972, and 58 per cent in the twelve months ended in June 1973.

Second Phase: June 1973-January 1974. The ensuing abatement of inflation in the last half of 1973 and early 1974 coincided with a decline in interest rates, but it was due mainly to a virtually total administrative freeze on prices and wages. A new administration took office at the end of May 1973, intent on providing cheaper credit as well as halting the inflationary spiral in its tracks. In line with its wishes, the Central Bank reduced the maximum rate on bank loans to prime borrowers and the guarantee premium on "swap" transactions, thereby effectively lowering the commercial paper rate. But the reduction in the cost of doing business which this implied had a far smaller effect on the rate of inflation than the price and wage freeze.

The reduction in nominal interest rates does not explain the abatement of inflation in this period, except in the sense that it was small enough in comparison with the sharp reduction in the rate of price increase to produce positive real rates of interest for the first time in about three years. The attainment of positive real interest rates worked toward discouraging credit demand, and hence contributed to the reduction of inflationary pressures in the still overheated economy. The banking system's credit to the private sector rose by about 10 per cent in the third quarter of 1973, compared to about 15 per cent in the second quarter.[1/] The rate of expansion of money supply, bolstered by other factors, especially the growing surplus on external transactions, continued to increase. In October 1973, money supply was more than twice as high as a year earlier, and the year-to-year relationship persisted at about this level beyond the end of the second phase.

Third Phase: February 1974-May 1975. The resumption of the acceleration of inflation, early in 1974, preceded the upturn in interest rates by several months and could, therefore, not have been caused by it. The monthly rate of price increases, which had not exceeded an annual rate of 10 per cent in two consecutive months since May 1973, began to do so again in February-March (for the cost of living index) and in April-May (for wholesale prices) and continued to rise rapidly thereafter. But interest rates did not start rising until June. Indeed, the prime rate was cut slightly in May for borrowers engaged in basic production, manufacturing, and construction. It was not until September that the prime rate was increased, more than six months after the first signs of accelerating inflation had begun to appear.

The principal cause of the intensification of inflation was the progressive breakdown in the price and wage freeze as a result of

1/ This does not appear to be due to seasonal factors. The percentage rebounded to more than 14 per cent in the fourth quarter, a period of seasonally high credit demand.

social unrest and the inability to control the rise in public spending. The public sector deficit rose to 9.4 per cent of GNP in 1974. However, the rate of expansion of money supply eased and eventually levelled off at an annual rate of about 65 per cent in the period October 1974-May 1975. As real interest rates became increasingly negative once again, credit demand expanded. The banking system's credit to the private sector increased by 16.5 per cent in the first half of 1974, by 24 per cent in the second half, and by 27 per cent in the first half of 1975. Up to the end of 1974, this increase was roughly in line with the rate of price increase. But thereafter it was substantially smaller, as the rate of growth of GNP slowed.

Fourth Phase: June 1975-March 1976. In June 1975, there was a sharp increase in the rate of interest on bank loans to prime borrowers and other rates went up sharply as well. This coincided with a sharp intensification of inflation which began at that time. But the reason for the latter would appear to have been the complete collapse of the Government's attempts to place some limit on wage increases, on the heels of a large currency devaluation, rather than the rise in interest rates. In the face of a wave of strikes, the Government capitulated and allowed a doubling of wages, even though there had been quarterly increases of 15-20 per cent since early 1974. As a result, the public sector deficit took a sharp turn for the worse, (for 1975 as a whole, it amounted to more than 15 per cent of GNP), the rate of money supply growth increased dramatically, reaching 283 per cent in the twelve months ended in March 1976, and the rate of inflation accelerated out of control. Interest rates also rose more rapidly, reaching levels which, although high, were increasingly negative in real terms. The increase in nominal interest rates in this period was dwarfed by the intensification of inflation and of inflationary expectations and cannot be blamed for the intensification of inflation.

Fifth Phase: April 1976 to date. Inflation (on a month-to-month basis) began to abate in April 1976, and some interest rates turned down at that time. But the maximum rate of interest on bank loans to prime borrowers was raised substantially in May. This increase did not cause a new burst of inflation. On the contrary, the month-to-month rate of inflation continued to abate. The subsequent fall in the prime rate, in July and August, would appear to have been a reflection of the slowdown in the rate of inflation. Even at its August level, the prime rate remained higher than in any month up to May 1976, at least as far as the period covered by this study is concerned.

The decline in the commercial paper rate beginning in April and in the rate on non-bank loans against securities beginning in May was not one of the main causes of the lessening of upward pressures on prices. Rather, the main cause of both the abatement of inflation and the decline in these rates of interest was the initiation of a stabilization program at that time.

Under the 1976 stabilization program, the nominal rate of interest on bank loans to prime borrowers was raised substantially at the start, was reduced only modestly thereafter, and was raised again in September. This was an important factor in bringing about a decline in the inflation rate. At first, the month-to-month rate of inflation fell faster than the rate of interest, so that interest rates in real terms turned strongly positive in June and July. But the rate of inflation rebounded somewhat thereafter. Since the end of September, both the prime rate and the commercial paper rate in real terms have been negative in most months in relation to the month-to-month rate of consumer price increase. But, in relation to the month-to-month rate of wholesale price increase, the prime rate in real terms has fluctuated around zero, while the commercial paper rate in real terms has remained positive (except in January).

The partial restoration of positive real rates of interest induced businesses to reexamine their borrowing plans and to scale them down to levels which could be economically justified, thereby reducing demand for real resources. With the Argentine economy already in a recession since at least the middle of 1975, the release of real resources put further downward pressure on the rate of real GNP growth. It may also have helped to moderate upward pressures on costs and prices. To the extent that the earlier negative real rates of interest stimulated the build-up of large business inventories, they may have resulted in total interest costs for business enterprises at least as high as these enterprises may incur with trimmed-down inventories financed at higher nominal interest rates. Thus it is not even clear that the higher nominal interest rates must involve higher total interest costs for the borrowers. If total costs, including interest costs, are lowered by inventory reductions that exceed the rise in nominal interest costs, it is possible that marginal costs, and therefore prices, will decline. The exact outcome will depend on the elasticity of demand facing each firm and on each firm's production function.

The 1976 stabilization program was comprehensive. Apart from the rationalization of interest rates, it involved a sharp reduction in the public sector deficit, severe restraints on wage increases, tighter credit policies, currency depreciation, and other measures. Overall data for the 1976 public sector deficit are not yet available, but the deficit of the Central Government alone was reduced from about 13 per cent of GNP in 1975 to about 8 per cent last year. The rate of money supply expansion continued to increase for a time, until it stood at 414 per cent for the twelve months ended in July. Thereafter, the expansion slowed and, in December, money supply was 288 per cent higher than a year earlier.

Additional Comment

Finally, the relationship between interest rates and prices must be looked at from the standpoint of savings. The lending rates constitute a ceiling on the rates that can be paid on savings, and so long as the former were negative in real terms so were the latter. The prevalence of negative real rates in Argentina during most of the period since December 1971 discouraged savings and deprived the financial system of funds which it could have channeled to productive activities. This retarded the growth of output and thereby contributed to inflation. The restoration of positive real rates encouraged savings and stimulated their flow toward the financial institutions. This made a positive contribution to the reduction of the inflation rate.

Argentina - Rates of Interest and of
Increases in Prices
Since December 1971

	Interest Rates (per cent per annum)			Cost of Living[3/]		Wholesale Prices[4/]	
	Bank Loans to Prime Borrowers[1/]	Commercial Paper of Prime Borrowers[2/]	Non-Bank Loans Against Securities[2/]	Percentage Increase over 1 Month Earlier[5/]	Percentage Increase over 12 Months Earlier	Percentage Increase over 1 Month Earlier[5/]	Percentage Increase over 12 Months Earlier
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1971							
Dec.	18.14	26.00	n.a.	73.5	39.1	203.7	48.1
1972							
Jan.	18.14	27.69	n.a.	261.4	46.8	371.7	58.8
Feb.	26.25	29.18	n.a.	61.9	47.2	101.2	65.3
Mar.	26.25	28.84	n.a.	65.7	51.8	77.5	75.0
Apr.	26.25	28.95	n.a.	69.6	57.8	83.7	76.0
May	26.25	28.95	n.a.	37.7	56.5	51.1	75.7
June	26.25	29.24	n.a.	96.7	60.1	112.9	79.8
July	26.25	29.29	n.a.	81.6	61.1	63.8	79.5
Aug.	26.25	29.61	n.a.	10.0	56.8	31.4	74.8
Sept.	26.25	29.63	n.a.	37.7	59.2	73.5	77.6
Oct.	26.25	29.63	n.a.	58.3	65.3	45.9	83.6
Nov.	26.25	28.85	n.a.	58.3	68.8	19.6	82.1
Dec.	26.25	29.63	26.82	25.3	64.1	47.6	76.0
1973							
Jan.	26.25	29.61	25.58	238.7	63.2	77.5	62.3
Feb.	26.25[6/]	29.83	29.01	154.6	69.5	122.7	63.3
Mar.	26.25[6/]	29.19	31.88	172.1	76.5	112.9	67.6
Apr.	26.25[6/]	29.19	31.88	61.9	75.9	60.1	65.7
May	26.25[6/]	29.86	30.60	71.5	79.1	92.3	69.1
	End of First Phase--Beginning of Second Phase						
June	23.46	29.24	27.50	-36.1	64.8	-19.6	56.4
July	23.46	27.52	28.50	1.2	56.9	-10.0	49.2
Aug.	23.46	27.52	22.50	22.4	58.4	15.4	47.7
Sept.	23.46	27.85	18.50	8.7	55.4	3.7	41.6
Oct.	23.46	27.08	17.50	7.4	50.6	1.2	37.3
Nov.	23.46	27.10	16.50	-1.2	44.7	-3.7	33.6
Dec.	23.46	27.10	19.50	12.7	43.8	16.8	30.8

(continued)

Argentina (continued)

	Interest Rates (per cent per annum)			Cost of Living[3]		Wholesale Prices[4]	
	Bank Loans to Prime Borrowers[1]	Commercial Paper of Prime Borrowers[2]	Non-Bank Loans Against Securities[2]	Percentage Increase over 1 Month Earlier[5]	Percentage Increase over 12 Months Earlier	Percentage Increase over 1 Month Earlier[5]	Percentage Increase over 12 Months Earlier
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1974							
Jan.	23.46	27.15	17.50	-7.4	29.6	3.7	25.0
	End of Second Phase--Beginning of Third Phase						
Feb.	23.46	27.25	17.50	25.3	22.3	4.9	17.4
Mar.	23.46	27.45	18.50	19.6	14.0	4.9	10.6
Apr.	23.46	27.45	17.50	49.4	12.2	34.5	9.0
May	22.10[7]	26.24	15.50	65.7	12.4	62.0	7.6
June	22.10[7]	27.25	19.50	58.3	19.9	52.9	13.1
July	22.10[7]	27.15	18.50	32.9	22.6	39.3	17.2
Aug.	22.10[7]	27.15	19.00	42.6	23.9	40.9	19.2
Sept.	27.68	29.96	19.50	49.4	27.4	52.9	23.0
Oct.	27.68	31.10	21.00	37.7	30.2	62.0	27.9
Nov.	27.68	31.36	27.00	47.6	34.5	63.8	34.7
Dec.	27.68	31.36	28.50	83.7	40.1	39.3	36.7
1975							
Jan.	27.68	33.65	36.15	166.2	52.9	94.5	43.3
Feb.	27.68	35.21	35.45	77.5	57.5	306.6	61.7
Mar.	27.68	37.59	37.74	163.2	68.3	92.3	70.1
Apr.	27.68	41.72	37.81	220.8	79.5	51.1	73.8
May	27.68	44.29	43.14	75.5	80.5	83.7	75.4
	End of Third Phase--Beginning of Fourth Phase						
June	43.43	54.48	65.35	914.7	110.5	6,911.0	141.1
July	48.72	66.13	127.25	3,531.9	182.6	2,749.6	209.7
Aug.	48.72	77.78	120.96	1,196.1	238.6	452.0	247.1
Sept.	48.72	78.99	111.48	246.9	257.7	338.1	279.4
Oct.	48.72	79.21	98.28	315.4	292.2	187.5	300.6
Nov.	48.72	83.30	142.19	154.6	310.1	203.7	321.2
Dec.	73.13	97.45	149.59	269.2	334.8	197.1	348.7

(continued)

Argentina (concluded)

	Interest Rates (per cent per annum)			Cost of Living3/		Wholesale Prices4/	
	Bank Loans to Prime Borrowers1/	Commercial Paper of Prime Borrowers2/	Non-Bank Loans Against Securities2/	Percentage Increase over 1 Month Earlier5/	Percentage Increase over 12 Months Earlier	Percentage Increase over 1 Month Earlier5/	Percentage Increase over 12 Months Earlier
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1976							
Jan.	73.13	96.16	135.53	424.0	359.3	748.0	402.9
Feb.	73.13	106.29	141.93	731.2	423.6	1,946.0	474.3
Mar.	73.13	251.01	233.56	4,669.8	566.3	17,832.4	737.7
	End of Fourth Phase--Beginning of Fifth Phase						
Apr.	73.13	223.19	546.63	3,436.1	713.4	1,547.5	919.5
May	119.48 8/	189.72	288.76	338.1	777.6	75.5	914.8
June	119.48 8/	107.76	110.88	39.3	644.3	73.5	640.2
July	101.20 8/	92.23	89.44	65.7	475.8	103.5	494.5
Aug.	95.61 8/	68.66	72.14	117.8	326.1	151.8	457.3
Sept.	116.27 8/	96.85	73.99	238.7	395.0	175.1	436.6
Oct.	116.27 8/	129.60	n.a.	135.5	371.8	67.7	414.0
Nov.	116.27 8/	126.50	n.a.	127.6	371.8	120.2	399.6
Dec.	116.27 8/	151.95	n.a.	117.8	347.5	110.5	386.1
1977							
Jan.	116.27 8/	146.50	n.a.	376.7	344.0	371.7	362.7
Feb.	116.27 8/	146.06	n.a.	169.1	303.9	127.6	285.2
Mar.	116.27 8/	145.16	n.a.	149.0	215.8	56.4	159.4
Apr.	116.27 8/	138.43	118.27	n.a.	n.a.	n.a.	n.a.

1/ Rate at end of month.
2/ Monthly average of daily rates.
3/ Official index for Buenos Aires, seasonally adjusted, 1960 = 100.
4/ Official index for domestically produced and imported goods, 1960 = 100.
5/ Annual percentage rates (compound interest basis).
6/ A rate of 22.10 per cent applied to specified industries and trades.
7/ Rate applied to basic production, manufacturing, and construction. For utilities, trades, and services, the rate was 23.46 per cent.
8/ Includes tax of 8.5 per cent per semester payable in advance. The table shows the combined interest plus tax equivalent on an investment yield basis.

Sources: Central Bank of Argentina, Official Circulars. Fundación de Investigaciones Económicas Latinoamericanas (FIEL), Indicadores de Coyuntura, various issues, and Informe Financiero Mensual, various issues. Ministerio de Economía, Boletín Semanal, various issues.