The Impact of Argentina's Politics on its Economy

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Abstract

This thesis is about how Argentina's unstable political environment has negatively influenced its economic and financial situation, and how this is manifested in its stock index, the Merval. Furthermore, this has caused higher volatility in its respective market returns and subsequent recovery when compared to other countries with similar economic characteristics. Finally, this paper analyzes how the impact of political events on the economy is greater than that of other economic crises.

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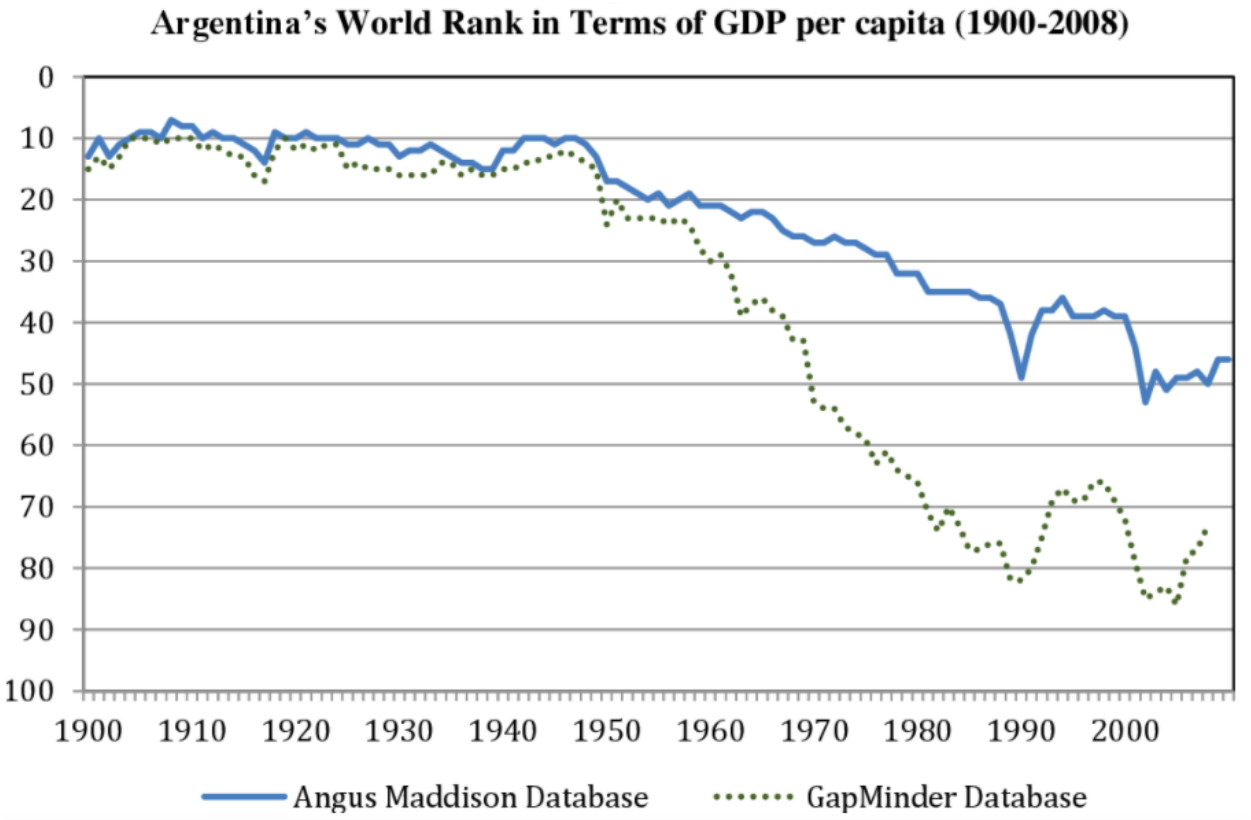
II. Introduction

During the first half of the 20th century, Argentina was one of the most prosperous countries in the world. Until about 1950, it was a top 10 country in terms of GDP per capita, but since then, it has been through 70 years of constant economic and social problems that have caused its prosperity to decrease at a high pace. In the meantime, most of the world, including the South American region, have increased their respective GDP per capita despite going through problems of their own.

Figure 1



This brings up lots of different questions, how could it be that Argentina has not been able to get back on the right track? What makes this case different than the other countries?

As Nobel Laureate Economist, Simon Kuznets, has said: “There are four kinds of countries: developed countries, underdeveloped countries, Japan, and Argentina.” This gives a very interesting idea of how this is a special case, meaning it should be approached differently than other economic research (Yglesias, 2012).

This makes the Argentine case a very curious one to study, and for that reason, this paper will be focused on its economy and what makes it different from other countries around the world, while trying to understand the reasons behind its singularities and answer some of the questions about its situation. The fact that it has struggled to develop for 70 years could mean that something is affecting its economy from a different perspective. Diverse ideas about why growth stopped have been developed, some claiming it has been a consequence of Populist and Leftist ideals that have affected politics in the country since 1946 (Nino, 2019), and still stand until the current days. In addition, other reasons mentioned claim that these issues root from its society, as Nobel Prize Paul Samuelson states, “Argentina is a classic example of an economy whose relative stagnation does not appear to be the consequence of climate, racial divisions, Malthusian poverty or technological shortcomings. It is its society, not its economy, that appears to be unwell.” (Gonzalez, 2021)

Today, economic problems for the country are nothing that the past 70 years have not seen. Economic activity contracted a 10% during 2020, inflation for the past year is now over 38.5% and more than 40% of the population lives below the poverty line. Moreover, the government defaulted on its foreign debt last year and it is, currently, the main debtor of the IMF with $44 billion. It is estimated that, in real terms, the current GDP is almost the same as in 1974. (Gonzalez, 2021)

This paper hypothesizes that Argentina's complex political issues have affected its economy in such a way that its trustworthiness has been compromised, preventing it from completely recovering after economic shocks, which ends up distressing its growth. If this is true, it should be reflected in its market reaction to the different financial crises, for example, the 2001 and 2020 sovereign bond defaults, when compared to other similar countries. For this to be true, it would manifest itself as higher market volatility during these economic periods. The test performed will analyze the reaction of the selected countries' market indexes, compared to the MERVAL, while measuring its respective volatility in order to prove any differences in their responses to these events.

This paper will develop as follows: context and background regarding Argentina's economy will be provided in the literature review of section II. Section III will focus on describing the methodology and data of the project, together with the model's restraints and boundaries. Section IV will analyze the results. Finally, section VI will give a conclusion on the finding, providing further possible work on the topic and ideas on the issue.

III. Literature Review

As explained above, Argentina's tumultuous economy has been the subject of many papers and arguments both in and out of the country. From being one of the wealthiest countries in the world in the first half of the 20th century, to not even being part of the top 60 today. Different ideas about the causes of this downfall have been formulated and lots of research has been done, and some of the main ones, together with important financial events and history, will be introduced below. These relevant economic events are crucial to the model since they will be later used as respective shocks to the market in the study.

Argentina's long history of economic crises has led to nine different external debt defaults since its independence. Since 1956, the country has entered 21 IMF programs. (Nelson, 2020). Moreover, Argentina has spent 33% of the time in recession, second in the world behind the Democratic Republic of Congo, according to the World Bank (Lloyds Bank, 2021)

On December 23rd, 2001, it is announced that Argentina will default on 93bn dollars of sovereign debt. This has a big economic and social impact that contracts the economy by 11% the next year. GDP per capita goes down to 1981 levels, unemployment rises to 22.5%, and poverty increases 21.5 points, reaching 57.5%. After this, the IMF stopped providing new loans to Argentina (Rabobank, 2013).

A second major crisis took place very recently. During 2018 the peso lost 40% of its value and the huge loan received from the IMF evaporated in desperate coverage of the fiscal deficit and speculative venture, with a big part of that money ending up abroad. This led to the 2019 primaries pointing to a return of the previous political party to power, which caused the stock market to plunge, and the peso devalued by a further 38% (Gonzalez, 2021).

Finally, the last crisis came closely after, with the 2020 COVID-19 pandemic. Argentina's economy contracted a record 19.1% in the second quarter versus a year earlier, and GDP decreased over 10%, analysts say. Data by the government's official statistics agency INDEC says that poverty rose to 42% in 2020, a significant increase from 35.5% in the second half of 2019. Moreover, Argentina officially defaulted on $65 billion in foreign debt in May 2020, forcing them to negotiate a debt restructuring deal (Reuters, 2020).

These important financial events described will play a major role in this study later on, providing our model with independent variables that will be part of our test, leading to a better understanding of their effects on our selected economies and the impact on their respective indexes. All the information provided in this section focuses on describing both the history and current state of affairs of the country and its economy, which will help further understand the situation analyzed and the reasons behind it. It is crucial to comprehend the significance of the events in order to provide a proper background that will help the reader understand the economic view of Argentina to the eyes of the world, which may support the reasons behind the possibility of altered response to the cases under examination.

The 21st century for Argentina has been mostly characterized by 12 years of uninterrupted populist governments, which began after the 2001 crisis and is a continuation of the same wave of thought introduced to the country in 1946, right around the time where GDP decrease begins, called Peronism. These populist governments are part of a wave that has affected the Latin American region to a great extent, with Venezuela and Brazil as the biggest examples. Common features of these political parties are, for instance, mobilization, propaganda, and charismatic

leader figures, although these are not exclusive of them. A distinctive feature is also changing the legitimacy of power into “the people”, creating a division between “us” and “them”, victimizing the followers. Moreover, political institutions are either a tool to be used at the discretion of the leader, or an obstacle to be removed, for these reasons it can be seen how populist governments share authoritarian characteristics of communist and fascist governments.

Distinctive economic policies of these governments are mostly Keynesian- inspired, expansionary measures that lead to unsustainable stimulus to consumption (Cachanosky, 2018). This is a perfect example of the path Argentina’s economy has taken during this century, leading to multiple financial recessions and the whole 2010 decade with inflation higher than 25% and 2019 reaching almost 54%, due to a constantly increasing monetary base and fiscal deficit that is a consequence of the expansionary monetary policies mentioned above. Between 2003 and 2015, Argentina's percentile ranking fell from 37.8 to 2.6 in the Economic Freedom of the World (EFW) index. Since 2012, Argentina ranks in the bottom-10 of free economies in the world. Finally, Argentina’s 10Y government bond has an estimated 48.5% yield, which shows how unreliable its economy is at the time, while the credit rating by the S&P is CCC + (World Government Bonds).

IV. Methodology

Model

The model used for the data analysis examines the ratio of the volatility of the MERVAL, Argentina’s stock index, compared with a basket of the previously mentioned countries: BOVESPA (Brazil), IPSA (Chile), FTSE (Malaysia), and SET (Thailand). For each index data,

monthly returns were calculated, together with six-month average returns and standard deviation return. The data was also divided into 6-month periods. Finally, a table was created for each index, and here we calculated its average return ration and standard deviation ratio, by dividing the six-month averages over the historical average returns, respectively.

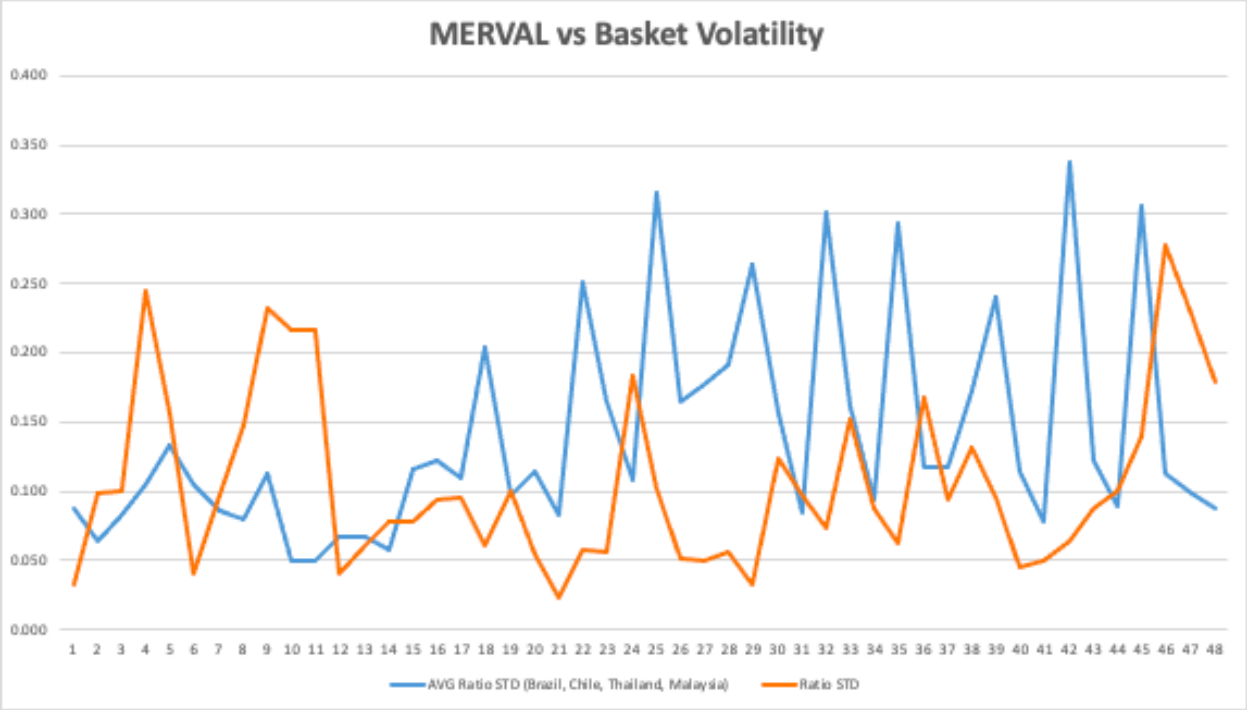
Afterward, a comprehensive table with all the results from previous calculations was put together. Here we have six-month average returns, average return ratio, and standard deviation ratio for every index, and a combined column that computes the average ratio of standard deviation for the basket of indexes (BOVESPA, SET, IPSA, KTSE) was added.

The next step consisted of putting these results together in a graph to assist in spotting differences in volatility.

Figure 2

	MERVAL			BOVESA			S&P CHILE			SET			KLSE			COMBINED	MERVAL
Period	SixMonthAvg	Ratio AVG	Ratio STD	SixMonthAvg	Ratio AVG	Ratio STD	SixMonthAvg	Ratio AVG	Ratio STD	SixMonthAvg	Ratio AVG	Ratio STD	SixMonthAvg	Ratio AVG	Ratio STD	AVG Ratio STD (Brazil, Chile, Thailand, Malaysia)	Ratio STD
1	0.037	2.421	0.032	0.039	3.528	0.037	0.056	7.732	0.107	-0.101	(60.556)	0.161	-0.003	-3.897	0.042	0.087	0.032
2	-0.027	-1.794	0.099	0.057	5.205	0.046	0.034	4.682	0.064	0.066	39.309	0.087	-0.013	-16.975	0.060	0.064	0.099
3	-0.037	-2.443	0.100	0.031	2.780	0.118	-0.003	-0.371	0.060	-0.031	(18.489)	0.040	-0.081	-105.080	0.110	0.082	0.100
4	-0.041	-2.712	0.245	-0.001	-0.054	0.144	-0.016	-2.200	0.036	0.004	2.599	0.074	-0.010	-12.989	0.168	0.105	0.245
5	0.025	1.628	0.156	-0.082	-7.425	0.232	0.013	1.734	0.040	0.038	22.669	0.081	-0.072	-94.053	0.182	0.134	0.156
6	0.016	1.085	0.041	0.053	4.840	0.161	-0.008	-1.136	0.040	-0.008	(4.647)	0.059	0.085	110.360	0.159	0.105	0.041
7	-0.017	-1.125	0.097	0.028	2.577	0.096	0.035	4.903	0.059	0.077	45.892	0.092	0.016	20.747	0.093	0.085	0.097
8	-0.006	-0.390	0.148	-0.003	-0.271	0.085	-0.022	-3.019	0.085	0.001	0.407	0.084	-0.030	-38.380	0.063	0.079	0.148
9	-0.051	-3.393	0.232	-0.015	-1.327	0.123	-0.016	-2.159	0.177	0.004	2.157	0.088	-0.042	-54.635	0.062	0.112	0.232
10	0.029	1.885	0.216	-0.036	-3.225	0.047	0.013	1.836	0.054	-0.025	(15.062)	0.025	0.004	5.689	0.074	0.050	0.216
11	0.029	1.885	0.216	-0.036	-3.225	0.047	0.013	1.836	0.054	-0.025	(15.062)	0.025	0.004	5.689	0.074	0.050	0.216
12	0.067	4.434	0.041	0.015	1.343	0.120	0.027	3.804	0.053	0.015	9.147	0.059	0.047	60.601	0.035	0.067	0.041
13	0.063	4.147	0.061	-0.050	-4.561	0.078	0.010	1.391	0.045	-0.058	(34.645)	0.094	-0.031	-40.141	0.050	0.067	0.061
14	0.056	3.699	0.078	-0.002	-0.148	0.120	-0.006	-0.787	0.034	-0.082	(48.881)	0.044	-0.008	-9.799	0.030	0.057	0.078
15	-0.021	-1.380	0.077	0.065	5.892	0.055	0.085	11.781	0.178	-0.060	(35.720)	0.189	0.043	56.155	0.040	0.115	0.077
16	0.062	4.119	0.094	0.060	5.452	0.060	0.158	21.899	0.192	-0.032	(19.335)	0.184	0.004	5.515	0.054	0.122	0.094
17	-0.001	-0.064	0.095	0.008	0.712	0.070	-0.018	-2.467	0.154	0.018	10.766	0.196	0.004	5.841	0.022	0.110	0.095
18	0.020	1.330	0.060	0.035	3.182	0.075	-0.217	-30.013	0.588	0.037	22.206	0.117	0.003	4.433	0.034	0.204	0.060
19	0.017	1.134	0.100	-0.001	-0.051	0.055	0.151	20.957	0.190	-0.012	(7.152)	0.107	0.006	7.691	0.033	0.096	0.100
20	0.033	2.201	0.054	0.053	4.838	0.068	0.045	6.250	0.230	-0.044	(26.525)	0.145	0.007	8.953	0.015	0.115	0.054
21	0.008	0.516	0.024	-0.011	-0.962	0.053	0.017	2.379	0.180	-0.025	(15.037)	0.080	0.007	8.729	0.020	0.083	0.024
22	-0.003	-0.198	0.057	0.032	2.903	0.039	-0.124	-17.146	0.678	0.154	92.130	0.251	0.049	62.999	0.034	0.251	0.057
23	-0.003	-0.226	0.056	0.036	3.314	0.029	0.143	19.798	0.208	0.053	31.562	0.376	0.011	14.465	0.047	0.165	0.056
24	-0.112	-7.352	0.183	0.025	2.272	0.068	0.006	0.780	0.117	0.082	48.953	0.205	-0.017	-21.517	0.043	0.108	0.183
25	0.064	4.240	0.102	-0.022	-1.986	0.089	-0.236	-32.629	0.486	-0.241	(143.702)	0.629	-0.066	-85.134	0.057	0.315	0.102
26	0.063	4.170	0.052	-0.063	-5.709	0.122	0.138	19.174	0.193	0.137	81.726	0.288	0.023	29.720	0.052	0.164	0.052
27	-0.010	-0.662	0.049	0.065	5.927	0.063	0.069	9.575	0.186	0.075	44.667	0.427	0.038	49.129	0.030	0.177	0.049
28	0.080	5.251	0.055	0.027	2.470	0.051	-0.201	-27.898	0.514	0.002	1.133	0.183	0.013	17.250	0.016	0.191	0.055
29	-0.008	-0.520	0.032	-0.003	-0.312	0.067	0.167	23.064	0.181	-0.113	(67.275)	0.775	0.019	24.198	0.033	0.264	0.032
30	-0.052	-3.417	0.123	0.006	0.511	0.041	0.041	5.663	0.148	0.072	42.746	0.417	0.003	4.170	0.021	0.157	0.123
31	-0.008	-0.530	0.097	-0.029	-2.667	0.026	0.029	3.967	0.117	0.068	40.566	0.143	-0.005	-6.158	0.050	0.084	0.097
32	0.033	2.152	0.073	0.025	2.310	0.074	-0.147	-20.401	0.538	-0.239	(142.812)	0.567	0.009	11.128	0.024	0.301	0.073
33	0.007	0.460	0.152	-0.024	-2.159	0.057	0.141	19.542	0.222	0.045	27.039	0.355	0.011	13.676	0.010	0.161	0.152
34	0.099	6.529	0.088	0.001	0.096	0.040	-0.002	-0.232	0.097	0.189	112.671	0.206	0.004	5.691	0.035	0.095	0.088
35	0.063	4.182	0.063	-0.023	-2.093	0.055	-0.213	-29.525	0.511	-0.266	(158.500)	0.589	0.008	10.957	0.021	0.294	0.063
36	0.014	0.924	0.168	-0.010	-0.909	0.046	0.149	20.608	0.216	0.144	86.130	0.185	0.006	7.610	0.022	0.117	0.168
37	0.051	3.369	0.093	0.044	3.987	0.035	0.030	4.203	0.145	0.125	74.645	0.281	-0.001	-1.901	0.006	0.117	0.093
38	0.000	0.017	0.131	-0.029	-2.609	0.080	-0.190	-26.284	0.504	0.006	3.635	0.087	-0.003	-4.346	0.020	0.173	0.131
39	0.038	2.519	0.095	-0.017	-1.529	0.065	0.164	22.675	0.210	-0.146	(86.998)	0.651	-0.015	-18.965	0.035	0.240	0.095
40	0.024	1.557	0.045	-0.014	-1.298	0.046	0.015	2.121	0.186	0.072	43.053	0.203	0.001	0.909	0.022	0.114	0.045
41	0.043	2.843	0.049	0.050	4.576	0.091	0.047	6.479	0.111	0.069	41.114	0.091	0.000	-0.034	0.018	0.078	0.049
42	0.053	3.476	0.063	0.023	2.132	0.058	-0.134	-18.533	0.605	-0.197	(117.295)	0.666	0.009	12.030	0.021	0.338	0.063
43	-0.024	-1.581	0.087	0.010	0.919	0.043	0.099	13.650	0.248	0.042	25.242	0.190	-0.002	-2.479	0.006	0.121	0.087
44	0.025	1.664	0.099	0.031	2.844	0.049	0.053	7.331	0.138	0.139	83.166	0.141	0.011	14.653	0.025	0.088	0.099
45	0.054	3.538	0.139	-0.018	-1.645	0.067	-0.210	-29.078	0.541	-0.243	(144.852)	0.568	-0.015	-19.492	0.046	0.306	0.139
46	0.000	-0.033	0.278	0.037	3.335	0.053	0.130	18.059	0.242	0.148	88.022	0.138	-0.007	-8.651	0.019	0.113	0.278
47	-0.012	-0.817	0.227	0.009	0.854	0.016	0.024	3.326	0.187	0.077	46.214	0.176	-0.005	-5.919	0.015	0.099	0.227
48	0.063	4.124	0.179	0.034	3.044	0.024	0.054	7.430	0.168	0.056	33.126	0.132	-0.019	-24.319	0.025	0.087	0.179

Figure 3



In the graph shown above, we can see differences in volatility during different periods. MERVAL, the orange line, shows high volatility when compared to the basket in periods 1-6, 7-12, and 46. This probably means that something occurred during these dates that caused a spike in volatility, so we decided to analyze these events.

Periods 3-6 are 1998/99 convertibility crisis in Argentina, which was marked by recession and a 4% decrease in GDP.

Periods 7-12 range from the beginning of 2000 until mid-2002, and the volatility here comes from the financial emergency and uncertainty that led to 93-billion-dollar default on sovereign bonds in December 2001.

Finally, volatility from period 46 comes from the results of the August 2019 presidential primaries, where the formula comprised by Populist candidates Fernandez-Kirchner showed a 16-point advantage over then-President Mauricio Macri. This meant that the political party that

ruled from 2003 to 2015 would return to power. The shown volatility here comes from the reaction of the markets to the results, which caused the MERVAL to collapse 46% the next day. It is important to take into account that this is the biggest volatility spike out of the three and that it stems from a political event instead of a financial crisis.

These volatility spikes established above play an important role in the next step of the analysis since they represent our external shocks to the data, used as independent variables in the regression equation utilized.

$$(\boldsymbol{Merval})_i = \boldsymbol{\beta_0} + \boldsymbol{\beta_1}(\boldsymbol{Relative\ Risk}) + \boldsymbol{\beta_2}(\boldsymbol{Shock\ 1}) + \boldsymbol{\beta_3}(\boldsymbol{Shock\ 2}) + \boldsymbol{\beta_4}(\boldsymbol{Shock\ 3}) + \boldsymbol{\epsilon_i};\ (\boldsymbol{Test\ 1})$$

For the first Linear Regression Model, the MERVAL historical volatility ratio was regressed on a Relative Risk statistic, which stems from dividing MERVAL Ratio STD over the Combined Index Ratio STD, and on each individual Shock 1, 2, and 3, separately. The formula for this test is shown above. The results were established in the following summary output table.

$$(\boldsymbol{Merval})_i = \boldsymbol{\beta_0} + \boldsymbol{\beta_1}(\boldsymbol{Relative\ Risk}) + \boldsymbol{\beta_2}(\boldsymbol{All\ Shocks}) + \boldsymbol{\epsilon_i};(\boldsymbol{Test\ 2})$$

The second Linear Regression performed was slightly different. Here, we used the same Merval Volatility Ratio statistic and Relative Risk, however, we tested the three shocks as one whole variable, meaning they were regressed together. MERVAL continued to be the independent variable in the model, and we use a 95% confidence interval to test the results.

$$(\boldsymbol{Merval})_i = \boldsymbol{\beta_0} + \boldsymbol{\beta_1}(\boldsymbol{Relative\ Risk\ Brazil/Chile}) + \boldsymbol{\beta_2}(\boldsymbol{Shock\ 1}) + \boldsymbol{\beta_3}(\boldsymbol{Shock\ 2}) + \boldsymbol{\beta_4}(\boldsymbol{Shock\ 3}) + \boldsymbol{\epsilon_i}$$

Lastly, one last model was subsequently added to provide a different perspective to the results. Here, the main focus was the MERVAL reaction when compared to other economies in the same geographical region, in this case, Brazil and Chile. This was done in order to understand if the differences found in the previous models were not necessarily tied to Argentina's economy but the geographical region and its own economic response to the events. The model used followed the same methods used for the first linear model since it tested the shocks individually.

Data

The data used for this work was obtained mainly through two main sources: https://www.marketwatch.com/ and The World Bank https://www.worldbank.org/en/home. These websites provided the main statistical information necessary for the work, which includes GDP, GDP per Capita, Inflation, Foreign Exchange Reserves, and Foreign Debt.

Data for stock market indexes used in the regression analysis was obtained through different sources, the main one being MarketWatch, although the other source utilized was https://finance.yahoo.com/.

Government bond information, which is composed by bond yield, rating, credit default swap (CDS) and spread in relation to US and Germany was retrieved through MarketWatch and http://www.worldgovernmentbonds.com/.

Finally, the corruption perception index (CPI) was taken from https://www.transparency.org/en/cpi/2020/index/nzl, while GINI coefficients came from World Bank.

The importance of the data collected was important for two different reasons. The first set of data collected consisted of GDP, GDP per capita, Population, CPI, GINI coefficients, GNI (Gross National Income), Foreign Debt, Foreign Reserves, and Government Bond information. This was crucial in building a table comparison of countries that would show certain similarities to the Argentine economy. Once this was constructed, it provided with the opportunity to find those most similar to Argentina and select them for the next step of the data analysis. It is important to understand that the geographic region of each country also played an important role in the selection process. Moreover, information about past debt defaults of these economies was collected.

Within some of the limitations of the data collection process, finding certain differences among sources regarding the same variable was a common observation, while some other data for specific countries was not found, such as CDS for Montenegro and Thailand, and bond spread for Montenegro. Finally, different sources had to be used at times to find data about the same variable for different countries, due to limited availability of information.

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										10 Year Govt. Bond			Spread (bp)				
Country	GDP (Blns)	GDP per Cap	Population	GNI	CPI*	GINI	Foreign Deb	For. Reserve	Debt to GDP	Yield*	Central Bank	S&P Rating	US	Germany	CDS	Debt Default	
Argentina	449.7	$9,000	45 M	22,100	45	41.4	$90.5 B	$45 B	91.70%	82.50%	36.00%	CCC+	8165	8309.8	1030.95	2001/2020	
Montenegro	5.74	$14,900	628,000	23,200	45	30.4	$8.2 B	$1.2 B	78%	2.55%		B+				None	
Croatia	64.6	$11,400	4.1 M	29,680	47	39	$48.3 B	$21 B	75.70%	0.715%		BBB-	-22	122.6	74.63	1993-96	
Chile	282	$10,000	19 M	24,140	67	44.4	$101 B	$39 B	32.50%	2.9%		A+	196.6	341	67.03	1983	
Malasya	364.7	$9,100	32.6 M	28,830	53	41	$247.3 B	$97.4 B	59%	2.77%	1.75%	A-	182.8	327.5	57.19	None*	*1997 crisis
Turkey	754.4	$9,000	82 M	27,600	39	41.9	$245.4 B	$107 B	39.40%	12.37%	15%	B+	1144.2	1288.5	394	2018	
Thailand	543.6	$7,800	66.5 M	18,500	36	36.4	$306 B	$193 B	39.20%	1.31%	0.50%	BBB+	40.1	184.8		1997	
Greece	218	$20,300	10.7 M	30,500	48	34.4	$488.7 B	$9 B	200%	0.62%		BB-	-34.6	118.3	101.6*	2012/2015	
Russia	1,658	$11,200	145 M	28,200	28	37.5	$461.2 B	$594.4 B	29%	5.90%	4.25%	BBB-	493	646	87.17*	1998	
															*5yr Bond		

The second step of data collection followed the selection of those countries that showed to be more similar to Argentina taking into account the factors previously found. The chosen economies were Brazil, Chile, Thailand, and Malaysia. The two main criteria for this were economic size and geographical location, which would allow us to measure and compare Argentina to both countries of similar economic size (Thailand and Malaysia), while also comparing it to countries under the same region, which can be crucial when it comes to the financial crisis due to interactions with neighboring countries and trade relations.

After this, the following step was finding their respective stock market index data, which would subsequently be used to perform the regression analysis. This data was sorted as monthly data, starting mainly in January 1996, although some show data entries from up to 1993, using its adjusted close price.

The only restriction found with the index data was that most of these records are not recorded until 1993, which leaves only the last 28 years of stock market data available to use for the study. This should not be a problem, although it leaves a smaller sample of observations to use and forces the model to be able to analyze financial shocks that have occurred only after 1993 or 1996, depending on the country.

V. Results

The Linear Regression tests performed show statistically significant results to our study. This provides evidence to support that, for the first model, both shocks 2 and 3 have a substantial impact on Argentina's MERVAL volatility, creating a disparity when compared to other countries' responses. Regarding Shock 1, it was not found significant under the test performed, this might be because the time period selected is not itself a financial event of the same magnitude as 2 and 3, and it represents the economic issues that ignited the buildup of the 2001 crisis that led to sovereign bond default. Using a 95% confidence interval, Shocks 2 and 3 show a P-Value of 1.13E-05 and 0.03, respectively, while their corresponding Correlation Coefficients are 1.643 and 1.709, showing a positive correlation. On the other hand, for Shock 1, P-Value did not meet the confidence interval criteria, as it showed a statistic of 0.193.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.628466
R Square	0.39497
Adjusted R S	0.353718
Standard Er	0.754181
Observation	48

ANOVA

	df	*SS*	*MS*	*F*	*ignificance F*
Regression	3	16.33770794	5.445903	9.574554	5.52E-05
Residual	44	25.02672448	0.568789		
Total	47	41.36443242			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*	*ower 95.0%*	*pper 95.0%*
Intercept	0.748747	0.123986616	6.038932	2.96E-07	0.498868	0.998625	0.498868	0.998625	0.082054	0.158489
SHOCK 1	0.524405	0.396950852	1.321082	0.193303	-0.2756	1.324407	-0.2756	1.324407	-0.37851	0.100447
SHOCK 2	1.643526	0.33191999	4.951572	1.13E-05	0.974585	2.312467	0.974585	2.312467	0.015724	0.163535
SHOCK 3	1.709631	0.76430483	2.236844	0.030413	0.169276	3.249986	0.169276	3.249986	-0.06389	0.083181
									-0.08499	0.061865

For the second model, as explained before, we tested for all shocks together as a single variable. Here, results found also showed statistically significant results, providing further evidence to support that these events caused a different impact in Argentina than they have on the other economies, manifested as higher volatility. P-Value for all shocks together was 3.16E-05, proving to be significant under a 95% confidence interval. Moreover, its corresponding Correlation Coefficient was 1.24.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.562585066
R Square	0.316501956
Adjusted R Square	0.301643303
Standard Error	0.783976883
Observations	48

ANOVA

	df	*SS*	*MS*	*F*	*ignificance F*
Regression	1	13.09192378	13.09192	21.30085	3.16E-05
Residual	46	28.27250864	0.61462		
Total	47	41.36443242			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	0.748746698	0.128885006	5.809417	5.59E-07	0.489315	1.008179	0.489315	1.008179
ALL SHOCKS	1.242582257	0.269231996	4.615284	3.16E-05	0.700646	1.784518	0.700646	1.784518

Finally, the last linear model performed showed different results from the previous examples. Here, only Shock 3 showed statistical significance, with a P-Value of 0.001. Shocks 1 and 2, on the other hand, did not pass the required significance threshold values. After the results provided by the three models, Shock 3 demonstrated to be significant in every opportunity, proving to be different from the other shocks examined.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.84312275
R Square	0.71085597
Adjusted R Sq	0.68395885
Standard Erro	0.03561045
Observations	48

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	0.13405737	0.03351434	26.4287031	4.2238E-11
Residual	43	0.05452847	0.0012681		
Total	47	0.18858584			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.04965311	0.007863	6.31478263	1.2734E-07	0.03379587	0.06551035	0.03379587	0.06551035
Relative Risk	0.05259092	0.00682129	7.70982379	1.226E-09	0.03883448	0.06634736	0.03883448	0.06634736
SHOCK 1	0.01479815	0.01915334	0.7726146	0.44397668	-0.0238282	0.05342454	-0.0238282	0.05342454
SHOCK 2	-0.0101278	0.01868213	-0.5421099	0.5905413	-0.0478039	0.02754833	-0.0478039	0.02754833
SHOCK 3	0.12909176	0.03687457	3.50083406	0.00109404	0.0547271	0.20345642	0.0547271	0.20345642

VI. Concluding Comments

The results delivered above have shown that Shock 3 proved to be the most important in our model, affecting MERVAL volatility under every test performed, and there is a reason why this is important. As explained under the Model section, Shock 3 was the only one that did not correspond to a genuine financial crisis or economic event, but to the volatility of the market the day after the 2019 Presidential primary elections, where the polls indicated a 16-point advantage from the Populist Party led by Fernandez-Kirchner over then-President Mauricio Macri, meaning the political party that ruled from 2003 to 2015 would return to power.

This demonstrates that the most significant high-volatility episode came from a political event, not a financial one, showing how the politics of the country have a higher impact on its economy than a recession (1998-1999) or a $93bn bond default (2001).

It can be concluded that we have found statistical evidence to support the hypothesis, and that, therefore, Argentina's economy is impacted differently than other similar countries by these financial events. Since the countries used for the study were chosen due to their economic and/or regional characteristics that resembled Argentina, we can support the premise of the country's political economics affecting its response to major financial events, which manifests itself as higher volatility in the returns of its corresponding stock index and proves to be even greater in the case of an event of political characteristics.

This can lay the groundwork for further analysis of the subject, where certain changes could be made in order to provide better results. Linear models have proved to have low power, and they might not be as strong as desired, however, this is only a first step model. Moreover, further work could include additional variables, such as inflation, political system, or government bond yields. It could also use a larger sample of countries, and longer-dating information, which could provide an opportunity to analyze other economic events of different magnitude. Finally, better event-tracking can be performed, where the different crises are followed more closely, possibly on a weekly basis, in order to increase the accuracy of the model.

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