

Finance Students and Their Knowledge of the Euro: A Comparison of Students at Two Universities

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Abstract

This study investigates what Finance majors and MBA students know about the Euro. The purpose of this research is to compare the results of students from two very different universities.

Introduction

The implementation of the Euro in 1999—a currency that rivals the dollar and the world's second most important reserve currency—has had a major impact on the international currency market. From its initial price on January 1, 1999, of one Euro = \$1.17, the Euro lost value rapidly. By October of 2000, one Euro was approximately \$0.82 at its lowest point. Since that time, the Euro strengthened, surpassing the \$1.34 mark. When this survey was administered, one Euro was between approximately \$1.25 and \$1.28.

The GDP of the 12 countries in the Eurozone (the European Monetary Union) equals that of the United States. In 2007, the first of the ten newest countries in the European Union (which now consists of 25 nations) should start using the Euro. The country is expected to be Slovenia. Also, in 2007, Bulgaria and Romania are expected to enter the E.U. Then, with 27 members, expansion will be on hold until the E. U. attempts to determine how to deal with an enlarged monetary union.

Other attempts have been made by several blocs of countries to adopt a single currency. All have failed without the structure of a fully integrated political union (as Germany in the 1800s and the United States). The first attempt by the E.U. to adopt a Constitution has failed. It will take several years for an E.U. Constitution to be accepted by all 27 member nations. If the Euro is successful, it will be the largest and uniquely successful undertaking of this kind in history.

Objective of the Study

The objective of this study is to investigate what business students (primarily upper division Finance students) know about the Euro.

The U.S. dollar has been the dominant currency in the world since World War II. The Euro now rivals the U.S. dollar in international currency markets and in the international political arena. Finance students must become better informed about this rival currency, one which may

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have the potential to eventually become the dominant currency in the world. Professors of Finance and other business disciplines should know the depth of the knowledge that their students exhibit with respect to this rival currency.

The survey is being given to both undergraduate finance students (the second course in Financial Management) and graduate students (the MBA Finance course). Altogether, 240 students have participated in this study in the Fall of 2006.

This research was previously undertaken in California in 2005 and presented at the 2006 Academy of Finance. Two universities are now used in order to find if there is a significant difference in two groups of students, which are actually proxies for students in two different parts of the country. This is discussed more below under "Research Design in Brief." Some of the wording of the instrument has been changed since the last survey.

Content of Study

Some of the areas that will be explored consist of what is the Euro; where is the Eurozone geographically located at the present time; how many countries use the Euro at the present time. Students are also being asked what was the approximate price of the Euro with respect to the dollar at the time the survey instrument was administered.

This study also explores the student's knowledge of other monetary questions. For example, students were asked whether nations that use the Euro must also give up the use of their own currencies, such as the French franc, the mark, etc. Students were asked if the nations that use the Euro must also give up the use of their own monetary policy as an economic tool. They are also asked the purpose of the European Central Bank.

Some of the classification variables used in this project are the student's major (if appropriate), the student's grade point average (GPA) and whether the student is an undergraduate student or a graduate student, what is the student's gender, and, of most importance to this study, the University the student is attending.

Research Design in Brief

Data is being analyzed primarily by using Chi Squares and ANOVAs (Analysis of Variance). The survey instrument (which is included in Appendix A) consists of 14 questions and statements. Further analysis was done with the current data set.

The questionnaire was being administered at two regional universities: California State University, Sacramento, and Illinois State University in Normal, Illinois. California State University in Sacramento (CSUS) is a multicultural university in northern California. Illinois State University is located in central Illinois with the majority of students coming from the Chicago area. ISU would not be called multicultural in the same sense as CSUS. A breakdown of the student bodies of the two Colleges of Business by ethnicities can be seen in Appendix B.

Undergraduate Responses at ISU and CSUS

The first analysis of questions and statements deals with ascertaining whether there is an association between the responses of undergraduates taking finance courses at ISU and CSUS with respect to the Euro and Eurozone or whether there is a lack of association between the responses at the two universities.

The first question (number VI in the Appendix) asks "What is the Euro?" The answers were arranged as: 2 = a new currency in several countries in Europe, often called the Eurozone; and 1 = All Other Responses.

[Table I]

As can be seen in Table I, 89% of the undergraduates responding answered the question correctly. However, the χ^2 suggests that there is little difference between the responses of ISU and CSUS undergraduates.

The second statement (VII in the Appendix) queries the location of the central bank for the Eurozone. The answers to be analyzed were 2 = Germany and 1 = All Others. The results are shown in Table II.

[Table II]

Although only 20% of the students answered correctly, the results suggest that there is a considerable disparity between the responses of the undergraduates at ISU and CSUS.

The next statement deals with the approximate value of the Euro (number VIII in the Appendix). The responses were:

- Correct =
- 1) 1 Euro = \$1.50
 - 2) 1 Euro = \$1.40
 - 3) 1 Euro = \$1.30
 - 4) 1 Euro = \$1.20
 - 5) 1 Euro = \$1.10
 - 6) 1 Euro = \$1.00
 - 7) I have no idea

Since the value of the Euro at the time of the survey was \$1.25 to \$1.28, responses number 3 and 4 were both deemed correct.

[Table III]

Again, the results indicate that there is a significant association between the correct answer and the university attended. 57.50% of ISU students answered correctly, while only 41.03% of CSUS undergraduates selected the correct answer. This is seen in Table III.

The fourth statement (number X in the Appendix) analyzed is “Nations that use the Euro as currency gave up the use of their country’s currency, such as the French franc, the mark, etc.” The responses were True and False (“False” also includes “I don’t know”).

[Table IV]

As seen in Table IV, there is no evidence of association between the variables. Approximate the same percentage of the undergraduates at ISU and CSUS answered the statement correctly.

The fifth statement (number XII in the Appendix) was “Nations that use the Euro as its currency gave up the use of their own monetary policy as an economic tool.” The answers were True and False (which includes “I do not know”). This is seen in Table V.

[Table V]

Again, there is no evidence of association between the variable. Approximately 50% of the undergraduates at each university answered the statement correctly.

The sixth statement (number XIII in the Appendix) was “How many countries are currently using the Euro?” The answers to select were:

Correct	→	1) 6
		2) 8
		3) 12
		4) 15
		5) 20
		6) I do not know

The results are shown in Table VI.

[Table VI]

There is no evidence of a difference between respondents at the two universities. Seventy-eight percent of undergraduates answered the question incorrectly.

Graduate Student Responses at ISU and CSUS

The second analysis of questions and statements deals with ascertaining whether there is an association between the responses of graduate students at ISU and CSUS, or whether there is a lack of association between the two universities. The same six statements are analyzed. Again, Chi-Square was used to analyze the responses, as seen in Table VII.

[Table VII]

Please note that two cells have fewer than five observations. However, 79 of the 82 respondents answered correctly in approximately the same proportions.

Table VIII demonstrates the students' knowledge of the location of the European Central Bank.

[Table VIII]

There is some evidence that shows an association between the universities and the responses.

Students were asked what was the current value of the Euro when the survey was given.

As shown in the multiple choice format in the Appendix, either \$1.20 or \$1.30 is deemed to be correct. Responses are in Table IX.

[Table IX]

As illustrated in Table IX, the Chi-Square suggests that there is no evidence of association between the variables. The majority of graduate students at both ISU and CSUS responded incorrectly.

Statement 4 asks whether nations that use the Euro give up the use of their own national currencies. The results are shown in Table X.

[Table X]

There is no evidence to suggest association between the variables. This is shown in Table X with a $\chi^2 = .302$ and $p = .582$.

Statement 5 is shown in Table XI.

[Table XI]

There is limited evidence of some association between the variables. CSUS graduate students responded correctly to Statement 5 at approximately 64%, while ISU students selected the correct answer 45% of the time. This is shown in Table XI.

Students were asked how many countries were using the Euro when the survey was given. This is illustrated in Table XII.

[Table XII]

The responses suggest that there is no relationship between the variables. Graduate students at both ISU and CSUS responded incorrectly at least two-thirds of the time, as shown in Table XII.

Student Responses with Backgrounds in IF or IB

Responses were further analyzed according to whether the students were currently taking or have previously taken a course in International Finance (IF) or International Business (IB). This analysis was applied to all 240 respondents. The six statements are listed as they have been previously presented. The data was analyzed using the Test of Two Proportions. A total of 58 students have previously taken a course in IF or IB.

[Table XIII]

Except for Statement 3, there is evidence that a background in IF or IB enhances the probability of favorable responses. The results are presented in Table XIII.

Student Survey Results and the Value of the Euro

Several ANOVAs were run to ascertain the value of the Euro for those responding to the appropriate questions. When this survey was administered, 1 Euro = \$1.25 to \$1.28, as previously mentioned.

In this survey, two questions specifically focus on the values of the Euro:

The first one is Statement 3 (Number VIII in the Appendix).

The second is "What is your estimate of the value of the Euro: 1 Euro = \$_____." (Please enter a figure if you have **any idea** of the Euro's value. If not, please leave it blank. Many students left this blank.

An ANOVA was run to calculate the value undergraduate students place on the Euro, by university.

[Table XIV]

ISU students estimated that the value of the Euro was approximately \$1.25; CSUS students valued the Euro at \$1.34. This is statistically significant. ISU students more accurately estimated the value of the Euro.

The next ANOVA pertained to graduate students.

[Table XV]

As seen in Table XV, the different means for graduate students are not statistically significant.

The following ANOVA dealt with all responding students at the two universities.

[Table XVI]

The results are significant at the .086 level of significance, as illustrated in Table XVI.

The next ANOVA was to determine whether there was a statistical difference between the females and males in the survey.

[Table XVII]

As can be seen above, the differences are not statistically significant.

The last calculation dealt with analyzing the GPAs of the students responding to Statement 2. The results of this ANOVA are stated below.

[Table XVIII]

Those students that answered Statement 2 correctly have higher GPAs at a statistically significant level than those who selected "All Others."

Conclusion

The results suggest that there are a few differences between the finance undergraduate students at ISU and CSUS with respect to the specific questions presented to them. The ISU undergraduates selected Germany as the location of the European Central Bank twice as often as CSUS students. However, that percentage was only 25% (vs. 11.39% for CSUS students). ISU undergraduates were also more likely to correctly select an approximate value for the Euro than CSUS students when using the multiple choice format.

Almost all the graduate students at both universities knew "What is the Euro?" Graduate students at CSUS were more likely to know the location of the ECB. Also, there is limited evidence that CSUS students were more likely to respond correctly that nations that use the Euro give up their own monetary authority as an economic tool.

There is evidence to suggest that students that took or have been concurrently taking an IF or IB course along with the second course in Finance or the graduate MBA course are more likely to have a favorable, or correct, response than those without an IF or IB background.

Undergraduate students at ISU were closer to the appropriate dollar range (\$1.25 to \$1.28) at \$1.2478 than undergraduates at CSUS (\$1.3431). With respect to **all** students at the two universities, ISU again did better (\$1.2885) than CSUS students (\$1.3382).

Considering everything, it is the opinion of these authors that ISU students performed slightly better than students at CSUS.

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Table I
What is the Euro?

Undergraduates		Responses (Statement 1)	
		1 (Incorrect)	2 (Correct)
ISU	Number	10	70
	% of Row	12.50%	87.50%
	% of Tabulation	6.29%	44.03%
CSUS	Number	8	71
	% of Row	10.13%	89.87%
	% of Tabulation	5.03%	44.65%
Chi-Square = .223, P-Value = .637			

Table II
The Location of the European Central Bank

Undergraduates		Responses (Statement 2)	
		All Others	Germany
ISU	Number	60	20
	% of Row	75%	25%
	% of Tabulation	37.74%	12.58%
CSUS	Number	70	9
	% of Row	88.61%	11.39%
	% of Tabulation	44.03%	5.66%
Chi-Square = 4.936, P-Value = .026			

Table III
Value of the Euro

		Responses (Statement 3)	
		Incorrect	Correct
ISU	Number	34	46
	% of Row	42.50%	57.50%
	% of Tabulation	21.52%	29.11%
CSUS	Number	46	32
	% of Row	58.97%	41.03%
	% of Tabulation	29.11%	20.25%
Chi-Square = 4.288, P-Value = .038			

Table IV
Abandoning Home Country Currency

Undergraduates		Responses (Statement 4)		
		True	False	All
ISU	Count	59	21	80
	% of Row	73.75%	26.25%	100%
	% of Tabulation	37.11%	13.21%	50.31%
CSUS	Count	54	25	79
	% of Row	68.35%	31.65%	100%
	% of Tabulation	33.96%	15.72%	49.69%
Chi-Square = .563, P-Value = .453				

Table V
Giving Up a Country's Monetary Policy

Undergraduate University		Responses (Statement 5)		
		True	False	All
ISU	Count	41	38	79
	% of Row	51.90%	48.10%	100%
	% of Tabulation	25.95%	24.05%	50%
CSUS	Count	39	40	79
	% of Row	49.37%	50.63%	100%
	% of Tabulation	24.68%	25.32%	50%
Chi-Square = .101, P-Value = .750				

Table VI
Number of Countries in the Eurozone

		Responses (Statement 6)		
		12 Countries	All Others	All
ISU	Count	19	61	80
	% of Row	23.75%	76.25%	100%
	% of Tabulation	11.95%	38.36%	50.31%
CSUS	Count	16	63	79
	% of Row	20.25%	79.75%	100%
	% of Tabulation	10.06%	39.62%	49.69%
Chi-Square = .283, P-Value = .595				

Table VII
Statement 1 (What is the Euro?)

		Responses		
		Incorrect	Correct	All
ISU	Count % of Row	3 6.12%	46 93.88%	49 100%
CSUS	Count % of Row	0 0	33 100%	33 100%
Chi-Square = 2.097, P-Value = .148				

Table VIII
Statement 2 (The Location of the Central Bank in the Zone)

		Responses		
		Incorrect	Germany (Correct)	All
ISU	Count % of Row	37 77.08%	11 22.92%	48 100%
CSUS	Count % of Row	19 57.58%	14 42.42%	33 100%
Chi-Square = 3.488, P-Value = .062				

Table IX
Statement 3 (The Current Value of the Euro)

		Responses		
		Incorrect	Correct	All
ISU	Count % of Row	28 57.14%	21 42.86%	49 100%
CSUS	Count % of Row	18 54.55%	15 45.45%	33 100%
Chi-Square = .054, P-Value = .816				

Table X
Statement 4
(Nations that Use the Euro as Currency Gave Up the Use of their County's Currency,)

Graduate Students		Responses		
		True	False	All
ISU	Count % of Row	36 73.47%	13 26.53%	49 100%
CSUS	Count % of Row	26 78.79%	7 21.21%	33 100%
Chi-Square = .302, P-Value = .582				

Table XI
Statement 5
(Nations that Use the Euro as Currency Gave Up the Use of their Own Monetary Policy as an Economic Tool)

Graduate Students		Responses		
		True	False	All
ISU	Count % of Row	22 44.90%	27 55.19%	49 100%
CSUS	Count % of Row	21 63.64%	12 36.36%	33 100%
	All	43	39	82
Chi-Square = 2.776, P-Value = .096				

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Table XII
Statement 6 (How Many Countries are Using the Euro?)

Graduate Students		Responses		
		Correct (12 Countries)	Incorrect	All
ISU	Count % of Row	14 28.57%	35 71.43%	49 100%
CSUS	Count % of Row	11 33.33%	22 66.67%	33 100%

Chi-Square = .211, P-Value = .646

Table XIII
Background in IF or IB

	Chi-Square	P-Value
Statement 1	2.693	P = .101
Statement 2	4.524	P = .033
Statement 3	.030	P = .861
Statement 4	2.794	P = .095
Statement 5	9.391	P = .002
Statement 6	5.123	P = .024

Table XIV
Undergraduate Students: Dollars per Euro

University	Number of Undergraduates	\$ Per Euro	
ISU	58	\$1.2478	F = 8.86
CSUS	51	\$1.3431	P = .004

Table XV
Graduate Students: Dollars per Euro

University	Number of Graduate Students	\$ Per Euro	
ISU	39	\$1.3490	F = .16
CSUS	22	\$1.3268	P = .692

Table XVI
All Students

University	N	\$ Per Euro	
ISU	97	\$1.2885	F = 2.99
CSUS	73	\$1.3382	P = .086

Table XVII
Females/Males

Gender	N	\$ Per Euro	
Female	60	\$1.3267	F = .75
Male	110	\$1.3006	P = .387

Table XVIII
GPA's of Students with Incorrect and Correct Responses

Responses	N	GPA	
All Others	124	3.2646	F = 5.72
\$1.20 or \$1.30	111	3.3864	P = .018

APPENDIX

STUDENT SURVEY OF THE EURO

- I. What university are you attending?
- 1) ISU
 - 2) CSUS
- II. Are you classified as an undergraduate or graduate student?
- 1) Undergraduate student
 - 2) Graduate student
- III. What is your approximate GPA? _____
- IV. Are you a _____?
- 1) Female
 - 2) Male
- V. Were you born in the United States?
- 3) Yes
 - 4) No
- VI. What is the Euro?
- 1) A new currency in Russia
 - 2) A new currency in several countries in Europe, often called the Eurozone
 - 3) A new currency that includes Europe and Asia
 - 4) I do not know
- VII. The central bank for the Eurozone is in:
- 1) France
 - 2) Germany
 - 3) United Kingdom
 - 4) Italy
 - 5) I do not know
- VIII. The current value of the Euro is approximately:
- 1) 1 Euro = \$1.50
 - 2) 1 Euro = \$1.40
 - 3) 1 Euro = \$1.30
 - 4) 1 Euro = \$1.20
 - 5) 1 Euro = \$1.10
 - 6) 1 Euro = \$1.00
 - 7) I have no idea
- These two questions were analyzed in this research project. However, nothing statistically was found and there was nothing to report.

- IX. What is your estimate of the value of the Euro: 1 Euro = \$_____ (Please enter a figure if you have **any idea** of the Euro's value. If not, please leave it blank.)
- X. Nations that use the Euro as currency gave up the use of their country's currency, such as the French franc, the mark, etc.
- 1) True
 - 2) False
 - 3) I do not know
- XI. What is your major?
- 1) Finance (undergraduate)
 - 2) Other (undergraduate)
 - 3) MBA (or other graduate degree)
- XII. Nations that use the Euro as its currency gave up the use of their own monetary policy as an economic tool.
- 1) True
 - 2) False
 - 3) I do not know
- XIII. How many countries are currently using the Euro?
- 1) 6
 - 2) 8
 - 3) 12
 - 4) 15
 - 5) 20
 - 6) I do not know
- XIV. Have you previously or are you currently taking courses in International Finance or International Business?
- 1) Yes
 - 2) No