International Studies Program

Working Paper 04-23
November 2004

From a Currency Board to the Euro: Public Attitudes toward Unilateral Euroization in Bulgaria

Neven T. Nalev

Georgia State University

Andrew Young
School of Policy Studies

From a Currency Board to the Euro: Public Attitudes toward Unilateral Euroization in Bulgaria

Working Paper 04-23

Neval T. Valev
November 2004

International Studies Program
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 651-1144
Fax: (404) 651-3996
Email: ispaysps@gsu.edu
Internet: http://isp-aysps.gsu.edu

International Studies Program
Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to two academic departments (economics and public administration), the Andrew Young School houses seven leading research centers and policy programs, including the International Studies Program.

The mission of the International Studies Program is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

The International Studies Program at the Andrew Young School of Policy Studies is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies and private sector institutions.

The success of the International Studies Program reflects the breadth and depth of the in-house technical expertise that the International Studies Program can draw upon. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40countries around the world. Our technical assistance strategy is not to merely provide technical prescriptions for policy reform, but to engage in a collaborative effort with the host government and donor agency to identify and analyze the issues at hand, arrive at policy solutions and implement reforms.

The International Studies Program specializes in four broad policy areas:

- **Fiscal policy**, including tax reforms, public expenditure reviews, tax administration reform
- **Fiscal decentralization**, including fiscal decentralization reforms, design of intergovernmental transfer systems, urban government finance
- **Budgeting and fiscal management**, including local government budgeting, performance-based budgeting, capital budgeting, multi-year budgeting
- **Economic analysis and revenue forecasting**, including micro-simulation, time series forecasting,

For more information about our technical assistance activities and training programs, please visit our website at **http://isp-aysps.gsu.edu** or contact us by email at **ispaysps@gsu.edu**.

*From a Currency Board to the Euro: Public Attitudes toward Unilateral Euroization in Bulgaria**

Neven T. Valev

Georgia State University

Abstract

Bulgaria has operated a currency board since 1997. It is expected to join the EU in 2007 and the EMU thereafter. This paper uses survey data to analyze public attitudes toward adoption of the euro in advance of EMU membership. Bulgarians are equally split in support for and opposition to euroization. The reasons to support euroization include the eliminated risk of currency devaluation and the perception that the euro is already widely used in the economy. The opposition derives from people's attachment to the national currency and from concerns about the conversion costs involved in a switch to the euro.

JEL Classification: P2; F3
Keywords: Euroization; Dollarization; Euro; Survey Data; Bulgaria; Currency Boards

---

*The author would like to Jeffrey Frieden and Steven Buigut for valuable comments and suggestions, the National Science Foundation grant SEC 0234664 for financial support, and Valentin Zjechev from Fact AD for compiling the data.
Address: Department of Economics, Andrew Young School of Policy Studies, Georgia State University, PO Box 3992, Atlanta, GA 30302-3992. E-mail: nvalev@gsu.edu; Fax: 404-651-4985; Phone: 404-651-0418.

1. Introduction

The decision to officially dollarize (or euroize) an economy is of a level of importance not easily matched by other economic policy decisions. Dollarization is a lasting, if not a permanent, change in the economic environment of a country, with economic costs and benefits that extend far into the future and are difficult to quantify. Therefore, the decision to dollarize, while influenced by economic analysis, rests primarily in the political domain. According to Frieden (2003), political economy considerations explain much more successfully the choice of exchange rate regimes compared to standard economic cost-benefit analysis. For example, as Willett (2000) points out, the European Monetary Union is here, although according to traditional economic analysis, it should not be. This paper contributes to the literature on the choice of an exchange rate regime by using unique survey data to reveal the factors driving the public support for and opposition to official euroization in Bulgaria. The question is whether citizens would support adoption of the euro as official currency and why.[1]

Bulgaria has operated a currency board regime since 1997 when the exchange rate was pegged to the German mark to stabilize the economy after one of the worst financial crises in a transition economy. The currency board lowered inflation very rapidly and has sustained low inflation since 1997 contributing to rapid rates of economic growth. Hence, a possible decision to adopt the euro in advance of entry into the EMU would constitute a move from a relatively credible peg to euroization. The literature has not studied such a case, although it is an interesting one. Three likely future members of the EMU: Bulgaria, Estonia, and Lithuania, currently operate currency boards. Several Caribbean economies with pegs to the US dollar have considered adopting the dollar. The literature, e.g., Collins (1996), Edwards (1996), Frieden (2003), and Klyuev (2002), has studied the choice between fixed and flexible exchange rates.

The official policy of the European Union has been to oppose unilateral euroization for all accession countries, which has restricted debates on euroization in Bulgaria. Aside from several analysts, no government institution or major political party has initiated such a debate.

[1] Several papers in the July 2002 edition of the *Economics of Transition* such as Coricelli (2002), Gros (2002), and Sulling (2002) analyze the advantages and disadvantages of early euroization in transition economies. In general, official dollarization/euroization has become a frequently discussed policy option in the last several years (see Winkler et. al. 2004 for a review).

We cannot be sure whether a decision to not adopt the euro reflects EU policies or domestic preferences. Bulgarians may very well be in full support of adopting the euro without these preferences being revealed in an actual policy choice. One advantage of using the survey data, instead of studying the actual policy choice, is that domestic preferences are revealed. The literature has generally studied the final outcomes in terms of exchange rate choices making it difficult to distinguish between domestic and external factors.[2] The survey data also make it possible to study the determinants of support for euroization at the micro level, whereas the literature has studied exchange rate choices across countries. For example, the data show whether respondents perceive costs and benefits from euroization on the national and on the personal level. This allows us to test Kinder and Kiewiet's (1979, 1981) sociotropic hypothesis that citizens are motivated primarily by national economic conditions and not by personal costs and gains in evaluating policies and voting. The data also allow us to examine whether the costs and benefits of euroization studied by economists are the same as the costs and benefits expected by the population at large. For example, there could be forceful reasons to oppose abandoning the national currency related to nationalism that do not enter economic calculations.

The surveys show that Bulgarians are roughly split into three groups: a third are in favor of adopting the euro, a third are against euroization, and a third cannot form an opinion. The most frequently advanced reasons to support euroization are that adopting the euro would eliminate the risk of devaluation against the euro; that it would increase foreign direct investment; and that it would speed integration with the European Union. The opposition is based primarily on concerns with various fees that may be collected during the conversion of the local currency into euro and on the view that the currency is an important national symbol. Loss of seignorage does not rank high as a concern. Furthermore, the widespread unofficial euroization in Bulgaria contributes strongly to support for official euroization. Respondents who perceive a widespread use of the euro in the country are more likely to support official euroization. The data also show that the recent strong appreciation of the euro vis-à-vis the dollar has not affected the level of support for adopting the euro. The remaining sections in the paper elaborate on these results. The next section discusses the pros and cons of euroization in

[2] One exception is Gabel and Hix (forthcoming) who study public attitudes toward euroization in the U.K.

Bulgaria. Section III presents the survey data and section IV presents summary statistics from the surveys. Section V reports econometric estimates using the data. Section VI concludes.

2. The theoretical arguments in favor of and against euroization in Bulgaria

Bulgaria introduced a currency board in 1997, pegging the local money (lev) to the German mark and later to the euro. During the crisis, which prompted the introduction of the currency board, inflation reached hyperinflation levels, the currency depreciated by more than 25 times within a few months, and a large part of the banking system collapsed. As Dobrinsky (2000) describes, the crisis was a culmination of the slow pace and ad hoc nature of structural reforms during several years of transition. Public enterprises operated on soft budget constraints and many loss-making firms were kelp afloat by direct subsidies from the government or by credits from the banking system, which were implicitly or explicitly guaranteed by the government. This system started to unravel in 1996 when it became apparent that many loans were not performing and that the government, which was already running large deficits, could not deliver on the loan guarantees. Confidence in the financial system eroded rapidly, leading to massive withdrawals of deposits and flight from the local currency. The economy shrank and the socialist government, which was then in office, resigned under the pressure of public demonstrations.

The new center-right government, which came to power in 1997, cut subsidies, closed down large numbers of loss-making state firms, and accelerated privatization. In 1998 alone, it privatized as many state firms as were privatized since the beginning of transition. The government also tightened welfare and unemployment benefits and sold off many banks. As a result, the private sector share of Bulgaria's GDP increased from 45 percent in 1996 to around 75 percent in 2002, which put Bulgaria in line with the private sector shares in advanced transition economies (EBRD, 2003). The government budget was close to being balanced each year since 1997. Every major party in Bulgaria has expressed strong commitment to financial stability under the currency board regime. Bulgaria is expected to join the European Union in 2007 and the European Monetary Union thereafter, at which point the lev will be replaced with the euro.

The official policy of the Bulgarian National Bank and the European Union has been to keep the currency board until entry into the EMU.

Theoretically, the choice between flexible and fixed exchange rates is guided by a trade-off between monetary and exchange rate flexibility under flexible exchange rates and greater price stability under fixed exchange rates as in Edwards (1996) and Klyuev (2002) or by a trade-off between preserving exchange rate flexibility for competitive purposes and maintaining exchange rate stability for the promotion of cross-border trade and investment transactions as emphasized by Frieden (2003). In Bulgaria, the currency board rules out monetary and exchange rate policies and has delivered low inflation, which means that the trade-offs studied in the literature on flexible versus fixed exchange rates do not apply.[3] The gain from euroization is that it would eliminate a possible collapse of the currency board resulting in a large devaluation of the lev and another episode of financial instability. A low level of confidence in the Bulgarian currency board would therefore be associated with support for adopting the euro. The currency board contributed to a remarkable economic recovery and to restoring some confidence in the local currency, which had plummeted during the crisis. Yet, confidence in the lev remains incomplete. Data from the Bulgarian National Bank (various years) show that about 60 percent of deposits in the banking system are in foreign currencies, a share that has not declined since 1997. During the 2000 to 2003 period studied here, the average spread between interest rates on one-year local currency bank deposits and euro deposits was 284 basis points, which is a non-negligible risk premium on leva deposits. As Valev and Carlson (2004) show, the persistent expectations of devaluation are explained by concerns over negative external shocks and the persistent double digit unemployment. Euroization would eliminate the currency risk premium reducing the cost of credit and allowing both greater volume and longer-term maturities of

[3] According to Williamson (1995), a theoretical currency board is a fixed exchange rate regime similar to a gold standard regime. The authorities forego discretionary control over the money supply and replace it with an automatic mechanism that links money supply changes to the balance of payments. The amount of foreign exchange reserves that the currency board stands ready to exchange for domestic money is sufficient to cover the monetary base. The currency board has no responsibilities to react to unemployment or to finance the budget. In Bulgaria these operating rules are written into the Law of the Bulgarian National Bank. The legal framework makes it difficult to change the rules of the monetary regime and also serves as an important "information device" (Ho, 2002) since the objectives and tools of monetary operations are spelled out in black and white. Although the law can be changed, it deters ad hoc changes in policy. The legal framework is an important difference between currency boards and standard fixed exchange rate regimes. See Miller (2001) for a detailed account of the structure of the Bulgarian currency board and its success in stabilizing the economy.

financial assets denominated in local currency. Without exchange rate uncertainty, trade and cross-border investment may increase contributing to higher growth rates and lower unemployment.

The main economic cost of euroization compared to the currency board is the loss of seignorage revenue calculated at about 2 percent of GDP in 2000 by Nenovsky et. al. (2001). The conversion to the euro would also involve costs that Nenovsky et. al. (2001), who provide the only estimate to my knowledge, predict to be about 8 percent of GDP. This is a substantial burden. Nonetheless, weighing the costs and benefits of early adoption of the euro, a number of authors have expressed support for that policy in Bulgaria. According to Nuti (2002, p. 438) Bulgaria "presents all the favorable conditions for an early adoption of the euro." Nenovsky et. al. (2001) also conclude that "even if not coordinated with the European Central Bank, euroization has more pluses than minuses." The following sections explore whether the public shares those views.

3. Survey data

The paper uses data from two national surveys, which were conducted by a national polling organization in Bulgaria in October 2001 and August 2003. The sample of about 1000 respondents and its demographic structure are standard for national surveys taken in Bulgaria and are considered representative of the population of 8 million. The surveys are part of a long-term project using periodic surveys since 1997 to assess public attitudes toward the economic transition in Bulgaria and the level of confidence in its currency board. The surveys are conducted by certified professionals using questionnaires with close-ended questions. The questions on euroization were first included in the 2001 survey before the physical introduction of the euro and were repeated with several additional questions in the 2003 survey.

The question of primary interest in this paper, Question 1, was asked after survey respondents read the following statement: "As you probably know, since the beginning of 2002, most countries in Western Europe use the same currency, the euro, after giving up their national currencies (such as the German mark, the Italian lira, or the French frank). We in Bulgaria can

also give up the lev and start using the euro as official currency. This can be done in two ways – after we enter the European Union or before that. If we decide to adopt the euro, all leva will be replaced with euro, the euro will become official currency in Bulgaria, and the currency board will cease to exist." Then the survey respondents were asked whether they strongly supported, supported, opposed, or strongly opposed adopting the euro *before* joining the European Monetary Union. The 2001 survey included the above statement rephrased in terms of near future developments in Europe, i.e. "from the beginning of 2002, most countries in Western Europe will use the same currency…"

Two additional questions, Question 2 and Question 3, asked respondents about the economy-wide potential benefits and costs of adopting the euro. Respondents could choose up to three answers on the expected benefits of euroization and up to three answers on the expected costs of euroization from a list of possible alternatives. The list of answers was constructed from the theoretical costs and benefits of euroization, pilot surveys, and issues that appear often in the Bulgarian media when discussion of monetary regimes takes place. The 2003 survey included an additional question, Question 4, which asked respondents whether they expected any personal benefits or costs if the lev was replaced with the euro. They could answer that the conversion would have positive, negative or no consequences for them, or choose to say that they didn't know. Using Questions 2, 3, and 4 we can differentiate between the effects of expected economy-wide costs and benefits revealed in Questions 2 and 3 and expected personal costs and benefits revealed in Question 4 on the level of support for euroization. This distinction is motivated by the political science literature, which studies the effect of economic conditions on voting. Using U.S. data, Kinder and Kiewiet (1979, 1981) find that voting decisions are influenced primarily by national economic conditions, i.e., sociotropic voting, and much less by individual economic circumstances, i.e., egocentric or pocketbook voting.

Next, the 2003 survey inquired about the use of foreign currencies in the economy:

Question 5: *Based on your observations, how frequent are transactions in Bulgaria (between citizens and between citizens and firms) in which foreign currencies are used instead of leva?*

Respondents could answer that such transactions were very frequent, frequent, not frequent, very rare, or that they were not aware of transactions using foreign currencies. This question can be used to test whether greater unofficial euroization is associated with greater support for official euroization. Anecdotal evidence suggests that Bulgarians use foreign money in large transactions such as real estate purchases, some automobile purchases and also some rent agreements. Furthermore, the euro has largely displaced the dollar as the preferred currency in these transactions. Unlike the use of foreign money for savings, which can be measured to some extent using available statistics from the financial system, the use of foreign money as medium of exchange cannot be measured using available data. Question 5 is an attempt to gauge how widespread is the use of foreign money in transactions, or at least how widespread is the perception of such use.[4] In a related analysis, Vujcic (2004) makes a compelling argument that the high degree of unofficial euroization in Croatia is an important reason to consider early adoption of the euro as official currency in Croatia.

The next question inquires about the expected future value of the euro relative to the dollar:

Question 6: *Over the last 5-6 months, the euro became more expensive than the U.S. dollar (one euro exchanges for more than one dollar). In your opinion, what will be the exchange rate of the euro versus the dollar over the next year?*

Respondents could answer that the euro would remain more expensive than the dollar, that the one dollar for one euro exchange rate would be restored or that the dollar will become more expensive than the euro, or that they didn't know. This question is not the typical question on exchange rates asked of experts. Surveys of experts ask about point forecasts of various exchange rates over a given forecast horizon (Kaminsky 1993). In Bulgaria, the dollar-euro exchange rate was often discussed among non-experts in terms of variations around the 1 dollar = 1 euro exchange rate at that time. We cannot expect that consumers can forecast the dollar-

[4] As a parallel, the Eurobarometer surveys on attitudes toward the euro outside the EMU in Denmark, Sweden, and the UK (Gallup Europe 2002) inquire whether respondents had seen prices denominated in euro, whether they had traveled to countries that use the euro, and whether they had held euro coins and notes in their hands. The goal of the questions is to find out whether respondents are familiar and comfortable with the euro currency before inquiring about respondents' attitudes toward euroization in their economies. The survey reports can be obtained at http://europa.eu.int/comm/public_opinion/euro_en.htm.

euro exchange rate over the next year but we can find out whether expectations of a strong euro contribute to support for euroization. The euro was a new currency and the increase of its price, inasmuch as it reflects growing demand for it, may have reduced concerns about its viability. Conversely, an appreciating euro and, therefore, appreciating local currency reduces the international competitiveness of some Bulgarian exports. Hence, a strong euro may be an argument against an irrevocable adoption of the euro. In any case, the broader question is whether preferences over euroization are influenced by transitory movements in exchange rates or by more fundamental reasons.

The 2003 survey asked several questions about the occupation of respondents, i.e., whether they were employed in a firm with predominantly export orientation, whether they were employed in a firm with predominantly foreign ownership, and in what sector of the economy they were employed: manufacturing, retail and wholesale trade, construction, agriculture, transportation, or services. These questions can be used to test whether support for euroization is stronger in certain segments of the economy. Frieden (2003) points out that support for fixed exchange rates is stronger in industries with large cross-border activities, while import-competing interests may favor flexible exchange rates. In Bulgaria, such differentiation may not exist because the lev is already pegged to the euro. The survey also asks about the occupation of respondents in terms of being an owner of a private business, employed, student, unemployed or retired. Finally, it asks about demographic characteristics: education (less than high school education, high school or higher education), age in years, personal income in leva, gender, and place of residence (village, small city, big city, or the capital Sofia). Section V uses the demographic variables along with answers to the questions above to analyze the cross-sectional distribution of support for euroization. Before that, the following section presents a summary of the survey results.

4. The expected benefits and costs of euroization

Table 1 reports the percent of survey respondents who declared support for or opposition to euroization in the 2001 and 2003 surveys. The results in 2001 and 2003 were very similar. About 30 percent of the respondents did not express an opinion regarding euroization. Of those

who did, about 49 percent in 2001 and about 48 percent in 2003 supported euroization. Table 2 shows that the greatest benefit associated with euroization in both surveys is the zero probability of devaluation versus the euro. However, the importance of this expected benefit declined from 2001 to 2003; 41.7 percent of respondents choose zero probability of devaluation as a number-one benefit in their first round of choices in 2001 compared to 26.5 percent in 2003. The decrease in concerns about devaluation reflects a gradual increase of the public's confidence in the sustainability of the currency board. Other important benefits in the first, second, and third round of answers include an expected increase in foreign investment, lower inflation, faster integration with the European Union, as well as some gain in income and reduction in unemployment. The percent of respondents who chose one or more expected benefits from the list declined between 2001 and 2003, while the percent of respondents who answered that there were no benefits increased. Similar to the benefit of zero expected devaluation, the importance of most benefits declines over time as the economy develops and becomes more integrated with the EU while under the currency board regime.

In terms of the costs reported in Table 3, the most important problem associated with euroization in 2001 was a perceived instability of the euro; 25.2 percent of respondents chose this in the first round of answers. As the euro came into physical existence between 2001 and 2003, only 8.9 percent of respondents expressed the same concern in 2003. Many respondents believed that the lev is an important national symbol and an important part of national sovereignty, and that euroization would cause a loss on those counts.[5] Many respondents were also concerned with fees that may be collected during the conversion of local money into euro. Although this didn't show prominently in the first round of choices, a sizable proportion of respondents claimed that there was no essential difference between the currency board and euroization in their third round of choices. Only 7.6 percent of respondents were concerned that during the switch from lev to euro the government would be able to track the finances of individuals, which is somewhat surprising in an economy with a large shadow sector where many agents may be concerned about revealing their finances. Also, a very small percentage of

[5] A July 2001 study by the European Commission on the preparation of citizens for the changeover to the euro described the dynamics of these concerns in the euro-zone: "Nostalgia about the idea of the disappearance of the currency as a symbol of national identity: this remains strong in Germany and the Netherlands and is still present in other Member States in which it was already seen, but nowadays it is rarely a factor of active resistance: the euro is now an unavoidable fact of life, whether people like it or not." (European Commission, 2001, p. 10)

respondents believed that the loss of interest on foreign currency reserves is an important cost, possibly because that is a fairly technical point. In contrast, experts believe that the lost seignorage is the most important economic cost of euroization. Overall, the benefits expected by the public are more in line with what experts would consider to be the economic benefits from euroizatoin, whereas the costs perceived by the public are related more to national pride.

The 2003 survey asked respondents whether euroization would benefit them personally. About twelve percent of respondents answered that they would experience personal benefits from euroization and about 14 percent answered that they would be hurt by euroizatoin. Another 36 percent believed that euroization would have no effect on them and 38 percent answered that they did not know whether euroization would benefit them personally. Expectations of national and personal costs are well aligned. Only 1 percent of the respondents who expected only costs and no benefits on the national level in Questions 3 expected personal gains from euroization. Similarly, only 3 percent of those who expected only benefits and no costs on the national level expect personal costs. There are many agents, however, who expected national costs or benefits but believed that euroization would not affect them personally.

5. Explaining the support for and opposition to euroization

This section uses the demographic variables in the survey along with several variables based on the questions discussed above to explain whether or not a respondent supports adoption of the euro. About a third of respondents answered that they could not formulate an opinion on euroization; hence I employ Heckman's (1979) procedure to correct for self-selection bias. It involves the maximum likelihood estimation of a participation equation which explains the decision to express either support for or opposition to euroization and a probit equation explaining whether a respondent supports euroization. The procedure produces consistent and asymptotically efficient estimates by taking into account the correlation of the error terms in the two equations. The dependent variable in the probit equation equals 1 if a respondent supports or strongly supports euroization and 0 if a respondent opposes or strongly opposes euroization.

Each of the there equations reported in Table 5 include a variable for education equal to 1 if a respondent had higher education and 0 otherwise, a variable for gender equal to 1 for female

respondents and 0 for male respondents, and age in years. The reported equations do not include income since a fairly large number of respondents did not provide their income. The estimates using a smaller sample including income were similar to the ones reported in Table 5 and income did not have a statistically significant effect. The decision to express either support for or opposition to euroization is explained by education, gender, and age in the participation equation.

In addition to demographics, the equation reported in the first column of Table 5 includes three variables describing the occupation of a respondent – the variable Entrepreneur, which equals 1 if a respondent owned a business and 0 otherwise; the variable Export, which equals 1 if a respondent was employed by a firm that exports at least fifty percent of its output and 0 otherwise; and the variable Foreign Firm which equals 1 if a respondent was employed by a firm with at least fifty percent foreign ownership and 0 otherwise. The latter two variables, i.e. Export and possibly Foreign Firm, capture cross-border activities. In the political economy literature on fixed versus flexible exchange rates, economic agents in sectors with substantial cross border activity lend strong support to currency pegs. Entrepreneurs may also expect opportunities related to greater integration with the EU and, thus, might be more likely to support euroization.

The second column in Table 5 adds two variables based on Questions 5 and 6 to education, gender, and age. Foreign Currencies, which is based on Question 4, equals 0 if a respondent did not believe that foreign currencies were used in the economy, 1 if a respondent believed that the use was very rare, 2 if the use was rare, etc.[6] Thus a higher value of Foreign Currencies signifies a perception of a wider use of foreign money in transactions. We are interested in whether such perceptions of unofficial euroization contribute to support for official euroization. The second variable, Strong Euro equals 1 if a respondent believed that the euro would continue to exchange for more than one dollar, and 0 otherwise. Using this variable we can test whether expectations of a strong euro contribute to support for euroization.[7]

[6] Table 4 shows that about half of the respondents did not believe that foreign currencies were used for transactions in the economy and about 20 percent answered that foreign currencies were used frequently or very frequently. Respondents with higher income, younger respondents, and respondents in big cities were more likely to report that foreign currencies were used frequently in the economy.

[7] At the time of the survey in August 2003, one euro exchanged for about 1.10 dollars after appreciating by close to 15 percent since the beginning of the year. As Table 4 shows, few respondents believed that one euro would exchange for less than a dollar after a year, i.e. that the euro would depreciate very significantly. Many agents believed, however, that the one euro for one dollar parity would be restored, which implied some depreciation of the

The third column adds four variables based on Questions 2 and 3 to the list of demographic characteristics. The variable National Costs equals 1 if a respondent provided at least one answer on Question 3 on the costs of euroization, and zero otherwise. The variable National Benefits is constructed in the same way using Question 2. Two additional variables, Personal Costs and Personal Benefits capture any expected personal gains and losses from euroization using Question 4. Personal Costs (Benefits) equals 1 if a respondent expected personal costs (benefits) and zero otherwise. The objective of including these variables is twofold. First, we can compare the relative effects of national versus personal expected effects on support for euroization. Second, we can test for asymmetries of the perceived costs and benefits, i.e. whether perceived gains contribute to support for euroization more strongly than perceived costs contribute to opposition to euroization.

The results in Table 5 show that older respondents were more likely to oppose adopting the euro in each of the specifications. Perhaps this result is explained by a stronger attachment to the national currency or by a greater willingness of younger respondents to support relatively radical policy changes. For comparison, in the 2002 Eurobarometer survey, age has no effect on support for adopting the euro in Denmark, Sweden, and the U.K. (Gallup Europe, 2002). The first and second specifications in Table 5 suggest that more education is associated with less support for adoption of the euro.[8] This effect becomes not statistically significant in the third equation controlling for perceived costs and benefits of adopting the euro, which suggests that education may be a proxy for some of these views in the first two equations.

The estimations in column (1) suggest that affiliation with sectors of the economy with significant cross-border activity does not contribute to greater support for adopting the euro,

---

euro. Twenty-two percent of respondents believed that the euro would continue to exchange for more than a dollar over the coming year. As it happened, the euro appreciated by another 10 percent during the year following the survey.

[8] In the survey, 46 percent of respondents with higher education expressed support for euroization while only 36 percent of the remaining respondents expressed support for adopting the euro. The estimation results reported here reveal the opposite effect of education, which shows the importance of using multivariate estimations and of allowing for self-selection. The 2002 Eurobarometer survey shows stronger support for adopting the euro among the more educated respondents but only using cross-tabulation without controlling for other effects. It is not clear whether this education effect would be significant in a multivariate framework.

which may be explained by the exchange rate stability already provided by the currency board.[9] Entrepreneurial activity is marginally statistically significant, with entrepreneurs showing somewhat stronger support for adopting the euro. Column (2) in Table 5 shows that unofficial euroization contributes significantly to support for official euroization, whereas expectations of a strong euro have no effect on support for adopting the euro.

The estimates reported in the third specification show that the perception of both national and personal effects of euroization have a statistically significant effect on support for adopting the euro. These results suggest that respondents who perceive national gains but no personal gains from euroizatoin are nevertheless more likely to support it and similarly respondents who perceive national costs but no personal costs of euroization are more likely to oppose it. The sizes of the coefficients suggest a particularly strong effect of the expected national benefits; the magnitude of the coefficient on National Benefits is twice larger than the absolute magnitude of the remaining coefficients. A public campaign focusing on these benefits may contribute strongly to growing support for adopting the euro.

6. Conclusion

The survey data analyzed in this paper reveal the level of support for early adoption of the euro in Bulgaria, in advance of Bulgaria's entry into the European Monetary Union. Bulgaria presently has a currency board pegging the local currency to the euro. The surveys show that the population is roughly split into three equal size groups regarding euroization. One third of the respondents neither supported nor opposed adoption of the euro. About half of the respondents who offered an opinion supported early adoption of the euro and about half opposed it. Support for euroization is stronger among younger respondents and among people who believe that the euro is already being used extensively in the country. The most important expected benefits from euroization are the reduced risk of currency devaluation, an increase in trade and investment, and more rapid integration with the European Union. The opposition to euroization is based primarily on attachment to the national currency and on concerns that the conversion to the euro would be

[9] Similar statistically non-significant results were obtained using alternative variables for employment in various sectors in the economy such as finance, trade, and tourism. The estimations were also performed using variables for place of residence, i.e., rural versus urban residence, with no additional statistically significant results.

costly. Continued financial stability under the currency board, positive economic growth rates, and deepening integration with the EU would likely reduce support for euroization because the currency board shows that it can deliver many of the benefits associated with euroization, i.e. low inflation and exchange rate stability. Simultaneously, however, increased integration with EMU countries may increase the use of the euro in the country, which in turn increases the public support to formalize the use of the euro. Future studies will tell how these opposing factors play out. Of course, in the event of a crisis of confidence in the currency board, support for adopting the euro may increase very rapidly from its current levels.

The European Commission has officially expressed its opposition to early euroization as an exchange rate strategy for EU candidate countries and, therefore, policymakers in Bulgaria have not engaged in an open debate on this important policy option. According to Sulling (2002), the major concern of the European Commission is the inconsistency between early euroization and the principles and sequencing of the path towards adopting the euro as provided in the Maastricht Treaty and with the economic rationale of the Treaty. A number of economists find no significant legal or economic justification for this position (e.g. Nuti, 2002). The results presented here suggest that, although a public debate has not taken place, a relatively large part of the Bulgarian population is aware of the potential economic benefits and economic costs of euroization. It would be interesting to see how these attitudes change if a discussion about euroization takes place in Bulgaria.

References

Bulgarian National Bank, *Annual Report*, various years.

Collins, Susan (1996). "On Becoming Flexible: Exchange Rate Regimes in Latin America and the Caribbean." *Journal of Development Economics*, 41, 117-138.

Coricelli, Fabrizio (2002). "Exchange Rate Policy during Transition to the European Monetary Union, the Option of Euroization." *Economics of Transition*. Vol.10 (2), 405-417.

Dobrinsky, Rumen (2000). "The Transition Crisis in Bulgaria." *Cambridge Journal of Economics*, 24, 581-602.

Edwards, Sebastian (1996). "The Determinants of the Choice between Fixed and Flexible Exchange-Rate Regimes." *NBER Working Paper Series* # 5756.

European Bank for Reconstruction and Development, *Transition Report*, various years.

European Commission (2001). *Qualitative Study on the Preparation of Citizens for the Changeover to the Euro*. Available at http://europa.eu.int/comm/public_opinion/euro_en.htm.

Frieden, Jeffrey (2003). "The Political Economy of Dollarization: Domestic and International Factors" in Eduardo Levy-Yeyati and Federico Sturzenegger (eds.) *Dollarization: Debates and Policy Alternatives*, Cambridge: MIT Press.

Gabel, Matthew and Simon Hix (forthcoming). "Understanding Public Support for British Support of the Single Currency." *Political Studies*.

Gallup Europe (2002). *Euro Attitudes (Wave 4): Outside Euro Zone*. Flash Eurobarometer 121/4.

Gros, Daniel (2002). "The Euro for the Balkans?" *Economics of Transition*, Vol.10 (2), 491-511.

Heckman, James J. (1979). "Sample Selection Bias as a Specification Error." *Econometrica*, 47, 153-161.

Ho, Corrinne (2002) "A Survey of the Institutional and Operational Aspects of Modern-Day Currency Boards." *BIS Working Paper* # 110.

Kaminsky, Graciela (1993). "Is There a Peso Problem? Evidence from the Dollar/Pound Exchange Rate, 1976-1987." *American Economic Review*, 83(3), 450-472.

Kinder, Donald and Roderick Kiewiet (1979). "Economic Discontent and Political Behavior: The Role of Personal Grievances and Collective Economic Judgments in Congressional Voting." *American Journal of Political Science*, 23(3), 495-527.

Kinder, Donald and Roderick Kiewiet (1981). "Sociotropic Politics: The American Case." *British Journal of Political Science*, 11(2), 129-161.

Klyuev, Vladimir (2002). "Exchange Rate Regime Choice in Central and Eastern European Transitional Economies." *Comparative Economic Studies*, 44(4), 85-118.

Miller, Jeffrey (2001). "The Bulgarian Currency Board" *Comparative Economic Studies*, 43 (1), 53-77.

Nenovsky, Nikolay, Kalin Hristov, and Boris Petrov (2001). *From Lev to Euro: What is the Best Route*? (in Bulgarian) CIELA Publishing: Sofia, Bulgaria.

Nuti, Mario (2002). "Costs and Benefits of Unilateral Euroization in Central and Eastern Europe." *Economics of Transition*. Vol.10 (2), 419-444.

Sulling, Anne (2002). "Should Estonia Euroize?" *Economics of Transition*. Vol.10 (2), 469-490.

Valev, Neven and John Carlson (2004). "Beliefs About Exchange-Rate Stability: Survey Evidence from the Currency Board in Bulgaria" *William Davidson Institute Working Papers Series* # 705.

Vujcic, Boris (2004). "Euro Adoption: Views from the Third Row." *Comparative Economic Studies*, 46(1), 159-176.

Willett, Thomas, D. (2000). "Some Political Economy Aspects of EMU." *Journal of Policy Modeling*, 22(3), 379-389.

Williamson, John (1995) *What Role for Currency Boards?* Institute for International Economics, Washington DC.

Winkler, Adalbert, Francesco Mazzaferro, Carolin Nerlich, and Christian Thimann (2004). *Official Dollarization/Euroization: Motives, Features and Policy Implications of Current Cases*. European Central Bank Occasional Paper Series # 11.

Table 1
Support for euroization in Bulgaria.
Percent of answers in each category.

	Year 2001	Year 2003
Strongly support	14.9	16.6
Support	20.4	16.8
Oppose	17.5	15.2
Strongly oppose	19.8	20.7
I don't know	27.4	30.7
Total	100.0	100.0

Table 2
Expected benefits from euroization in Bulgaria.
Percent of answers in each category.

	Year 2001			Year 2003		
	First answers (783)	Second answers (583)	Third answers (467)	First answers (703)	Second answers (440)	Third answers (330)
Lower unemployment	12.5	1.2	0.6	12.5	3.4	0.9
Zero probability of devaluation vis-à-vis the euro	41.7	8.9	2.8	26.5	8.6	3.9
Lower inflation	4.8	19.9	3.4	7.3	22.9	6.9
Lower interest rates on credits	0.9	10.3	5.6	2.6	4.8	6.7
It would be easier to obtain bank credit	2.6	7.0	9.0	1.6	8.2	7.9
Increase in foreign investment	8.4	22.5	22.3	8.1	19.3	21.8
Increase in income	2.3	6.3	13.1	2.3	11.6	15.5
Faster integration with the European Union	6.3	16.6	23.4	6.1	12.7	23.9
Reduced corruption	0.4	1.4	5.6	0.4	2.5	6.0
Discretionary monetary policy will be eliminated	1.8	4.5	14.1	2.7	4.8	6.4
Other	0.4	0.3	0.1	0.1	0.3	0.0
There are no benefits	17.9	1.1	0.0	29.8	0.9	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Number of respondents in parentheses.

Table 3
Expected costs of euroization in Bulgaria.
Percent of answers in each category.

	Year 2001			Year 2003		
	First answers (739)	Second answers (561)	Third answers (399)	First answers (586)	Second answers (374)	Third answers (257)
Financial instability because of euro weakness	25.2	1.6	3.0	8.9	1.6	1.9
Loss of interest on foreign currency reserve	6.9	7.4	2.3	8.4	2.4	3.1
In the conversion, government will track individuals' finances	10.0	6.1	4.0	9.6	9.1	3.9
Banks will collect fees for currency conversions	19.4	22.8	12.5	18.6	21.9	8.9
Loss of a national symbol	14.1	22.3	22.8	14.3	25.1	23.4
Loss of national sovereignty	4.8	21.5	23.3	7.8	20.3	25.7
Discretionary monetary policy will be eliminated	1.2	5.2	9.5	3.1	5.6	10.1
There is no difference between euroization and the curr. board	7.1	11.6	22.1	11.9	11.2	18.6
Other	0.0	0.3	0.5	2.1	0.8	0.8
There are no costs	11.3	1.2	0.0	15.3	2.0	3.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Number of respondents in parentheses.

Table 4
The use of foreign currencies as medium of exchange and expected euro-dollar exchange rate in the 2003 survey.
Percent of answers in each category.

Use of foreign currencies as medium of exchange		Expected value of the euro relative to the dollar	
Not aware of such use	47.8	Euro will remain more expensive	22.0
Very rare use	10.4	Dollar will become more expensive than the euro	9.4
Rare use	20.8	The price will be about one dollar for one euro	24.5
Frequent use	16.8	I don't know	44.1
Very frequent use	4.2		

Table 5
Support for euroization in Bulgaria.
Probit model with sample selection using the 2003 survey.

	Dependent variable: 1 if a respondent supported or strongly supported euroization, 0 otherwise		
	(1)	(2)	(3)
Higher education	-0.363*** (0.103)	0.389*** (0.105)	0.072 (0.513)
Age	-0.005*** (0.001)	-0.004* (0.002)	-0.009* (0.005)
Female	-0.024 (0.078)	0.006 (0.083)	-0.273 (0.197)
Entrepreneur	0.329* (0.202)		
Export	0.144 (0.211)		
Foreign firm	0.323 (0.274)		
Foreign currencies		0.064** (0.028)	
Strong euro		0.106 (0.085)	
National benefits			1.446*** (0.237)
National costs			-0.684*** (0.162)
Personal benefits			0.827*** (0.223)
Personal costs			-0.738*** (0.211)
Constant	0.692 (0.101)	0.478 (0.166)	-0.111 (0.401)
LR test of ind. equations Prob > chi2	0.024	0.016	0.832
	Participation equation. Dependent variable: 1 if a respondent provided an answer, 0 otherwise		
Higher education	0.946*** (0.136)	0.954*** (0.136)	0.962*** (0.137)
Age	-0.011*** (0.001)	-0.011*** (0.002)	-0.009*** (0.002)
Female	-0.297*** (0.084)	-0.293*** (0.087)	-0.323*** (0.088)
Constant	1.086 (0.101)	1.065 (0.138)	1.033 (0.138)
Model Chi2(7) Number of obs.	31.82 974	23.68 970	212.48 975

Notes: Standard errors in parentheses. ***(**, *) indicates significance at the 1(5, 10) percent level.