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National or International Inflation Targeting? The Wicksellian Dilemma of the Euro-outs

LARS JONUNG *Research adviser, DG ECFIN, European Commission*[1]

ABSTRACT

Inflation targeting is the monetary strategy of all EU member states; whether in the euro area, the two euro-outs, Sweden and the United Kingdom. The latter are now faced with two alternatives to achieve price stability: either remain outside the euro area or join it as full-fledged members. This paper examines this policy choice starting from the views of Knut Wicksell, who considered it in his 1920s analysis of an international monetary system based on price level targeting. Price stability could be achieved either within every country by maintaining flexible exchange rates or jointly on a global scale through a system of fixed exchange rates, that is through a monetary union. To him this was a choice between two 'evils': fluctuating price levels in the member states of a global monetary union while the average price level is maintained constant versus fluctuating exchange rates in the absence of a monetary union. To Wicksell, the choice of the proper route towards price stability was less complicated than today because he analysed it solely in monetary terms. The current choice for Sweden and the United Kingdom involves other crucial dimensions, such as the existence of nominal rigidities, and the politics of domestically issued money. Political aspects concerning the euro will be the ultimate determinants of the future monetary path for both countries.

1. Monetary convergence within the EU

Inflation targeting is today the strategy for monetary policy within the European Union (EU). It is manifested in the price stability program of the European Central Bank (ECB) announced in the spring of 1998: in the medium term the rate of inflation is targeted not to exceed 2 per cent a year. Later clarification has set the interval for the targeting regime between 0 and 2 per cent annual rate of inflation. This is now the norm for 12 of the 15 EU member states forming the euro area.

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For all practical matters this is also the rule for Denmark, as the Danish currency is tied to the euro in an arrangement that may properly be classified as a bilateral currency board. Thus, Denmark is the thirteenth – if unofficial – member of the euro area.

Sweden and the United Kingdom, the two remaining euro-outs within the EU, adopted inflation targeting prior to the creation of the ECB.[2] An explicit numerical inflation target was announced in the United Kingdom in October 1992, later modified in 1997. The target is set at 2,5 per cent in terms of the RPIX measure (retail price index excluding mortgage and interest payments) with a range for inflation of 1 percentage point from this midpoint. In January 1993 the Swedish Riksbank announced a target of 2 per cent per year, allowing for deviations of 1 percentage point around this level. The inflation target was scheduled to become binding from January 1995, after a period of adjustment following the failed defence of the fixed exchange rate of the *krona* in the fall of 1992.

Within Europe, the United Kingdom and Sweden have pioneered explicit inflation targeting. Measures were taken to improve communication between the central banks and the public concerning the new monetary policy strategy. The central banks were made more independent from the executive power as well as more accountable for their inflation performance. The ECB has to a large extent followed this approach. Among the candidate countries, the Czech Republic, Hungary and Poland have adopted inflation targeting as part of their preparation for EU-membership.[3] Switzerland and Norway have also moved towards inflation targeting in recent years.

The convergence towards inflation targeting as the sole strategy for monetary policy-making has had a clear impact on the inflation performance within the EU. The switch to the new monetary regime in the 1990s reduced the average level of inflation as well as the dispersion of inflation rates within the EU. After the breakdown of the Bretton Woods system in the early 1970s, inflation rates rose rapidly, remained at double-digit levels in several countries for about two decades. Next, during the run-up to EMU in the 1990s, inflation rates fell sharply.

The cross-country dispersion of inflation rates in Figure 1, measured by the coefficient of variation, shows high convergence through low dispersion under the Bretton Woods system in the 1960s and during the run-up to EMU and low convergence, that is wide dispersion, in the high inflation years of the 1970s and 1980s. We have to go back to the dollar-gold standard of the Bretton Woods period of the 1950s and 1960s, and even further, to the classical gold standard prior to 1914, to find a similar picture for Europe. The current extent of inflation

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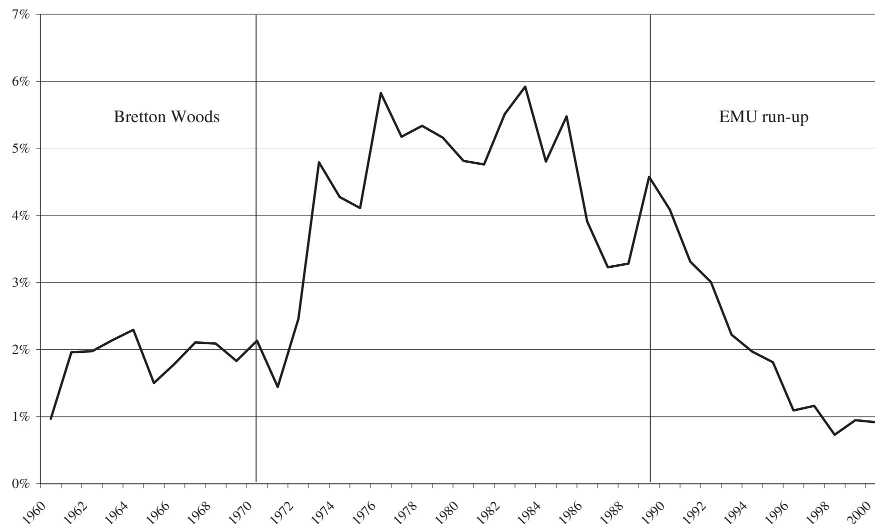

Comment: Dispersion is measured as the coefficient of variation.

FIGURE 1: *Dispersion of the annual rate of inflation in the EU, 1960–2001.*

convergence among the EU members is actually stronger today than at any other period. The present monetary strategy has so far accomplished an inflationary stability and convergence that surpasses that of other monetary regimes (Bordo and Jonung, 2001: Table 7). It remains to be seen how strong the drift in the European price level will be in the long run under inflation targeting.

2. *The Wicksellian dilemma: national or international price level targeting?*

Currently, Sweden and the United Kingdom, the two euro-outs, have broadly speaking the same monetary policy strategy as the euro area members, the major difference being that they are not members of the Eurosystem. Instead, they are maintaining a floating exchange rate for their domestic currencies. They are presently facing the choice of whether to join the European monetary union as full-fledged members or to remain outside. Their monetary policy dilemma can be expressed in the following way, for the moment ignoring all other economic and political aspects: how can they best stabilise their inflation rates?

The two euro-outs (and EU-ins) are faced with two options. In the first, they continue their present inflation targeting on a national basis, thus maintaining a national currency of their own and a floating

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exchange rate to the euro. In the second, they target inflation on a common European (international) basis by joining the euro area, eliminating the national currency, or – which is equivalent – establishing an irrevocably fixed exchange rate between the euro and the domestic currency.

The ultimate goal for monetary policy is identical in both alternatives, that is a low rate of inflation, often depicted as price stability, ignoring minor differences in the setting of the numerical values of the midpoint and target range for inflation. The choice of monetary arrangement, however, is fundamentally different, either a national currency produced by a domestic central bank, or a common international currency by being a member of a monetary union with a single central bank.

Here these two options will be considered from a history of monetary thought perspective, that is from the views of Knut Wicksell in the first half of the 1920s. Next, some missing elements in his initial account will be discussed.

The choice between the two routes to price stability may be termed the Wicksellian dilemma after Knut Wicksell who, to my knowledge, was the first economist to explicitly consider these two policy options in a world based on a paper (fiat) standard. Wicksell's interest in this issue stems from his life-long advocacy for price level stability as the goal of monetary policy. He should properly be regarded as having laid the theoretical foundation of the present regime of inflation targeting. He did this in his central contribution to monetary theory – the theory of changes in the price level – originally published in German in 1898 as *Geldzins und Güterpreise* (Wicksell, 1898). In the following decades, until his death in 1926, he was a frequent commentator on current monetary affairs, never wavering from his original view that the norm for central banking should be price stability.

In short, Wicksell's theory of price level determination is based on the discrepancy between two interest rates: the market, money or the loan rate, which is the rate that investors pay for loans from the banking system to finance their investments, and, the natural or real rate, which is the return that investors/entrepreneurs expect to receive from new investments. When the natural rate exceeds the loan rate, it is advantageous to borrow. The volume of bank credit and the money supply expands and the price level is pushed upwards. An inflationary process is started. If the natural rate falls below the loan rate, entrepreneurs reduce their borrowing. Consequently, the volume of bank lending, the money supply and the price level falls. Deflation is the outcome.

Wicksell made his theory, later given the name 'the cumulative pro-

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cess', the basis for his proposal for a monetary policy norm, rule or strategy. It was simple: the central bank shall keep the price level constant by adjusting its discount rate so that the loan rate of the commercial banking system always remains at par with the natural rate (Wicksell,1898; Laidler,1991).

Wicksell's norm for price level targeting may be viewed as a special case of inflation targeting, where the rate of inflation is set to zero, while inflation targeting as practised today aims for a rate of inflation a few percentage points above the zero level. The present monetary policies of the ECB, the Bank of England and the Bank of Sweden can be traced back to Wicksell's original rule. They represent modified forms of his norm (cf. Svensson, 1998; Berg and Jonung, 1999).

At the beginning of the twentieth century, Wicksell expected his rule of price stability to be adopted by central banks. His forecast proved faulty, however, the primary reason being that his norm required a regime of flexible exchange rates, i.e. a paper standard. Such an institutional arrangement, however, was impossible to reconcile with the reigning international gold standard, the foundation of the international exchange rate system at that time. As long as the gold standard was perceived to work smoothly, which was the case in the years before World War I, Wicksell's price stability rule attracted no interest among policy-makers.

World War I changed the foundations for monetary policy-framing in Europe. The international gold standard collapsed when countries made their currencies inconvertible into gold. The belligerent nations financed the war effort by resorting to inflationary finance. After the war, a lively debate among politicians and economists started about the future of the international monetary system. The general view within Europe was supportive of a return of the gold standard. Wicksell, however, strongly objected to this in Swedish academic and public debate. In his opinion, a return to a gold standard after the years of war would not guarantee a stable price level. Instead he recommended a paper standard where central banks aimed for price stabilisation as the basis for the world monetary system.

According to Wicksell (1922, p. 136) price stabilisation could be implemented in two ways: either on an international or on a national basis:

> We have actually two systems to choose among or alternatively aim for: fixed exchange rates and for the whole world a stable average price level, from which the price levels of individual countries can deviate more or less in a way that can not be forecasted in advance, nor can be prevented from moving. Or fixed price levels, and thus a stable value of money in every individual country, and as a consequence fluctuating exchange rates within seemingly narrow

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bounds but without being completely unchanged. Of these two systems we can choose any one, but not both at the same time.

A year later Wicksell (1923, p. 179) argued that the gold standard should not be restored in Europe because it would not work as it did prior to the war. Instead he again identified the two options considered above, presenting them as a dilemma:

Should different countries by themselves try to maintain the value of their currency, that is their average price level or index number, constant and accept the consequent fluctuations in the exchange rates as the lesser evil? Or should they instead – with or without the gold standard – try to regulate the value of money according to a common price index for the whole commercial world, with the consequent fixed exchange rates and accept local differentials of the price levels as the lesser evil?

Wicksell was uncertain about the proper option to adopt. He did not know which was the lesser evil to use his own wording: price level deviations *within* a global monetary union, or exchange rate fluctuations *between* individual countries each stabilising their domestic price levels, nor did he specify in what sense these deviations/fluctuations were 'evil'.

It is not clear why Wicksell did not solve this dilemma in his writings. At least two reasons can be suggested. First of all, as he had no empirical evidence from price level targeting to consider, little could be said about actual performance under the two options. Thus, Wicksell was perhaps satisfied by merely identifying the two policy options. Secondly, Wicksell's macro-model was that of the classical (neoclassical) school. Thus, he downplayed the role of nominal rigidities so prominent in present discussion about monetary unification in Europe, as epitomised in the literature on optimal currency areas. Instead he viewed the actual economy functioning smoothly and frictionless in response to monetary changes. This is seen clearly from the treatment of unemployment in his writings, perhaps most notably in his proposal that Sweden should return to the price level of 1914 after the sharp rise in the price level during the inflationary period of 1914–1920. He did not expect the necessary deflation to cause unemployment, believing instead that workers would accept a lowering of their wages during a period of deflation (Jonung 1989).

By assuming that the real world economy is working at full resource utilisation, the choice between national and international price level targeting does not become a major policy issue. Instead, for all practical purposes the two options become almost equivalent. They lead ultimately to the same basic result: stable prices.

As the gold standard was re-established internationally by the mid

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1920s, the proper approach to price stabilisation under a paper standard disappeared from the policy debate.[4] However, Wicksell's dilemma has now returned to Europe, following first, the disappearance of the gold standard with the breakdown of the Bretton Woods system, and, second, the adoption of inflation targeting by all EU members in the 1990s.

3. *Missing elements in Wicksell's approach*

Today, theoretical and empirical aspects other than those considered by Wicksell can be brought into the discussion of the policy options for Sweden and the United Kingdom. Three such perspectives are considered here: the optimal currency area theory, recent European performance under national and international inflation targeting, and the role of trust, highlighting the political dimension of monetary unification.

3.1. *The optimal currency area theory.*

Should Sweden and the United Kingdom join or remain outside the euro area? The standard approach of economists to analyse this question has been to resort to the optimal currency area (OCA) theory. This body of theory has exerted a major influence on the academic debate on the proper geographical extent of a monetary union. In its initial version, the theory had a clear Keynesian flavour, as it was based on the existence of nominal rigidities, primarily sticky wages and/or low labour mobility. If a region/country was hit by unemployment, the use of a flexible exchange rate for that area would serve as an instrument of adjustment to restore full employment. Given a fixed exchange rate (the case of a monetary union), this option would no longer exist. The cost of giving up monetary autonomy should be compared to the efficiency gains from lower transaction costs and increased trade through the use of one common currency.

A number of studies of the monetary future of Sweden and the United Kingdom has been based on the optimal currency area theory. They weigh the microeconomic benefits in terms of reduced transaction costs, improved competition and a more transparent price system against the macroeconomic costs, primarily in terms of a loss of monetary sovereignty. However, the economics profession has not reached a clear view on the outcome of this type of calculus. By now the optimal currency area theory has developed into a rather amorphous and complex set of theories, often with contradicting conclusions (cf. Artis, 2002; Tavlas, 1993). It does not supply us with a clear answer to the policy choice of the two euro-outs.

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The basic insight of the OCA-approach is the role assigned to nominal rigidities and other types of frictions, most prominently to obstacles to price and wage flexibility. If we move from a Keynesian world of fixed prices to a neoclassical one of flexible prices, the focus is no longer on the proper geographical division of monetary areas for stabilising output. Instead, we are back to the problem initially formulated by Wicksell: which is the 'optimal' division of the world into currency areas given that the overriding goal of monetary policy is to achieve price stability. Here is a niche for a 'new' theory of optimal currency areas based solely on price level or inflation targeting.[5]

3.2. Performance

Wicksell presented two options for price level targeting without making a clear choice between them. Now, evidence from recent years makes it possible to consider at least two issues: first, how well have the three autonomous central banks now existing within the EU managed to target the rate of inflation, and, second, what has happened to price level deviations (inflation differentials) within the euro area and to exchange rate fluctuations between the British, the Swedish and the European monetary union?

A simple approach to the first issue is examining to what extent the three autonomous central banks have managed to maintain the rate of inflation within the announced range, ignoring cross-country differences in the measurement of inflation. British inflation has been kept almost constantly around 2 per cent on a monthly basis. There is no case of breaching the boundaries. The Bank of Sweden has been outside its announced band for short periods, actually erring more on the deflationary than on the inflationary side, below the target range rather than above. Inflation has on average remained within the band during the period 1995–2001. The ECB, the newcomer to inflation targeting, has opted for the most ambitious target range, that is the lowest band of the three autonomous central banks. However, it has too short a record to infer much. Euro area inflation started in 1999 below 2 per cent a year but rose to a level above the band by the end of 2001. To sum up, the three autonomous central banks have so far managed to keep inflation at low levels by historical standards.

The evidence suggests that the ECB is facing a more difficult task. The ECB is a young central bank, involved in a learning process to find the proper operating procedures, and to strike a compromise between members with different macroeconomic performance. The Bank of England and the Bank of Sweden are the two oldest central banks in the world. They moved into inflation targeting before the ECB after

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the ERM-crisis of the early 1990s. Their credibility has been earned during a longer period. The evidence thus shows that countries may establish credibility for a low inflation policy by themselves, and the argument that monetary credibility should be imported by joining a monetary union should be used with caution for countries such as Sweden and the United Kingdom.[6]

Should Sweden and the United Kingdom join the euro area, what would the effect on the price level behaviour of the Eurosystem be? Judging from the past, the present euro-outs would add credibility to the euro, reducing aggregate inflation. On the other hand, the rate of inflation in Sweden and the United Kingdom may be higher than otherwise if they join the euro area.[7]

A second issue to consider is the Wicksellian dilemma of inflation differentials versus exchange rate fluctuations. In a world of price level targeting, Wicksell identified two 'evils': fluctuating price levels among countries forming a fixed exchange area (a global monetary union in his view) and fluctuating exchange rates between countries with currencies of their own. He believed that these two types of fluctuations would occur but apparently expected them to be of a moderate character.

In a world of inflation targeting, the first 'evil' is represented by inflation differentials between different regions of the common currency area. Within the euro area, inflation differentials have been substantial (Rogers, 2001). Members on the periphery with strong growth tend to have higher inflation than the centre members (Figure 2).

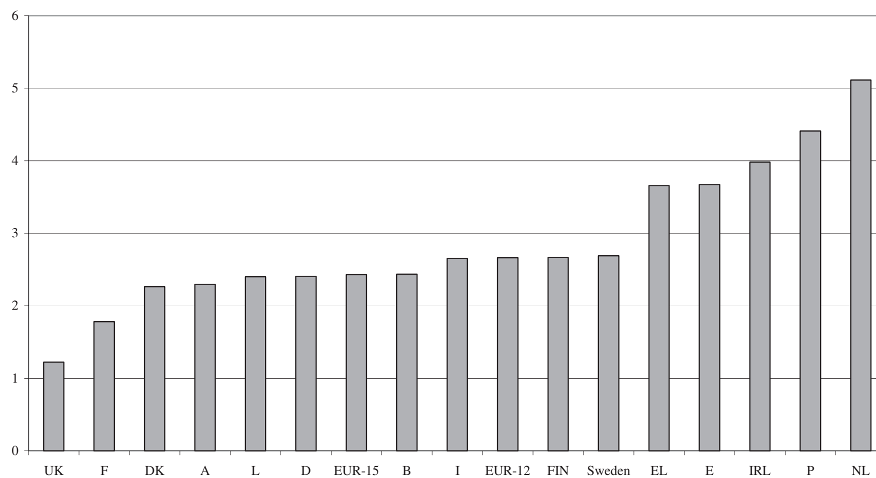

FIGURE 2: *Annual rate of inflation in the EU, 2001 ranked by inflation rate. (HICP)*

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Price level and inflation differentials within the euro area have recently attracted the interest of policy-makers and economists alike. Such macroeconomic divergences may cause overshooting of real exchange rates, rapid rise in unit labour costs and loss of competitiveness.[8] They occur within other large monetary unions like the United States as well as within regions of traditional nation states.[9] Such developments may constitute a challenge to the common monetary policy framework of the euro area.[10] A standard policy response is to call for supply side reforms to make prices and wages more flexible, thus facilitating the adjustment process. At this point in time, it is too early to tell to what extent inflation differentials will constitute a policy problem in the euro area.

Concerning the second 'evil', movements in exchange rates, the picture is complicated. The Swedish *krona* has depreciated relative to the euro, while the British pound has appreciated in recent years. The fluctuations in the *krona* and the pound rate are sometimes regarded as larger than expected from fundamentals. In Sweden these fluctuations have become a political concern while the economics profession holds a neutral position and the export industry silently enjoys the depreciation. The Bank of Sweden has been put under pressure to arrest the fall in the *krona* by interventions and made a few failed attempts to do so in 2001.

Although the volatility of the exchange rate of the euro-outs has not emerged as a major concern for academic economists or for central bankers, the political economy of exchange rate fluctuations suggests a different answer. In public debate the depreciation of the *krona* as well as its volatility have emerged as a main argument for Sweden to join the euro area. Judging from opinion polls showing voter sentiments towards the euro, the depreciation of the *krona* seems to be a driving force behind the rise in the frequency of positive responses to the euro. In Sweden the euro-yes-camp surpassed the no-camp in the Summer of 2001. However, the exchange rate fluctuations, that is the depreciation of the Swedish *krona* and the appreciation of the British pound as well as the volatility of the exchange rate, have not been viewed as a threat to the inflation targeting approach in either country.

3.3. Trust

The decision for the two euro-outs to adopt the euro or not is fundamentally a political one, not being based primarily on economic costs and benefits although such factors influence the political outcome. A major shortcoming of the optimal currency area approach is, in fact, its lack of political and historical dimensions. History demonstrates that

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membership in monetary unions is determined primarily by political considerations, which is the case for Sweden and the United Kingdom today as well.

The use of money, that is the demand for money, is closely related to the trust of the public in the set of institutions that supplies money in a broad sense, including the central bank, the parliament and other elements of the political system. The concept of trust is close to that of credibility underlying much of modern monetary theory and policy (Cohen, 1998, Aykens, 2002). In old nation states like Sweden and the United Kingdom, this trust is commonly taken for granted. It is not an issue of contention. The traditional functions of money – that of a medium of exchange, a unit of account and a store of value – are regarded as self-evident. Currency substitution is not an issue due to deep trust in the domestic money and the political institutions behind it.

Trust emerges as a major issue in Sweden and the United Kingdom when the adoption of the euro is considered since the common currency represents a new money that may replace the *krona* and the pound, respectively. It is issued by a European central bank, backed by an institutional framework that is fairly unfamiliar to the Swedish and British public, thus lacking in credibility and trust. The Eurobarometer opinion poll in April–May 2001 asked people about their trust in the European Commission as well as about whether they were for or against the euro. The British poll displayed the lowest degree of trust in the European Commission, followed by that of Germany and Sweden. The frequency of pro-euro answers was also at its lowest among British and Swedish respondents.

A simple regression using trust in the European Commission as the explanatory variable for acceptance of the euro shows a strong positive relationship across the member states of the EU (Figure 3). Countries like Italy, Belgium, Luxembourg, Ireland, the Netherlands, Spain are at the opposite end of the scale from the United Kingdom and Sweden. Denmark, which voted against the euro in the referendum of 2000, is close to the British and Swedish position.

The two euro-outs have been independent nation states, never occupied by foreign powers. Their domestic political systems enjoy considerable public confidence. Their democratic traditions are well developed. The parliamentary system is a British invention. Sweden has a strong constitutional tradition. The two countries have not experienced domestic political violence for centuries. Public institutions are usually regarded as efficiently and honestly run. Domestic politicians and bureaucrats are respected compared to the case in many other EU member states. Sweden has been neutral and not been involved in war activities

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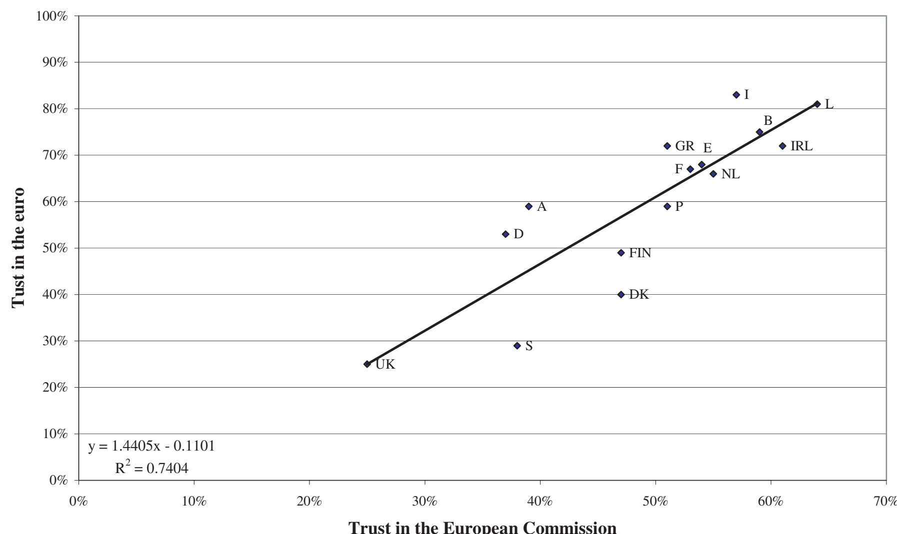

Source: Eurostat, Commission Services

FIGURE 3: *How trust in the euro is related to trust in the European Commission*

for almost two centuries, lending trust to domestic politics.[11] Looking at European cooperation from such a domestic perspective, the institutions of the European integration process and the common European currency appear less trustworthy than is the case in member states where confidence and trust in domestic institutions are lower.

To Wicksell, writing in the 1920s, the choice of currency arrangement was primarily a technical rather than a political issue, although he discussed how international monetary cooperation should be organised to establish price stability. He was writing in the shadow of the gold standard which was a truly international arrangement.[12] Money was brought into the sphere of domestic politics by events during the 1930s, including the rise of the Keynesian view on stabilisation policies. Seen in this perspective, the creation of the euro is a major step towards an open Europe similar to that existing before 1914 (Jonung, 2002).

4. Conclusions

Wicksell's dilemma is the current monetary dilemma of the euro-outs: either establishing price stability domestically with a national central bank and a national currency or establishing price stability jointly with

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a common currency and common central bank. Wicksell did not provide an answer to it. He identified the two mutually exclusive alternatives now facing Sweden and the United Kingdom but he could not say much about them from an empirical point of view as he lacked observations.

Today, we have had a few years of experience of Wicksell's two 'evils'. It is a question of judgement whether at this point we should view the euro area inflation differentials and the exchange rate behaviour of the *krona* and pound as excessive or as moderate. Most economists would look upon these movements as proper elements of the workings of the price mechanism. Admittedly, the evidence is scant and insufficient for any firm conclusions. The choice for Sweden and the United Kingdom involves crucial dimensions that he did not consider, most importantly, the politics of a domestic supply of money. Political aspects concerning the euro will be the ultimate determinants of the future monetary path for both countries.

NOTES

1. The author is research adviser at DG ECFIN of the European Commission, Brussels. Views expressed here are exclusively those of the author and should not be attributed to the European Commission. Within DG ECFIN, the author owes a great debt for help from Oliver Dieckmann, Emil Ems, Harry Huizinga, Sven Langedijk, Nigel Nagarajan, Moises Orellana and Michael Thiel. Karel Havik has skillfully prepared the charts and Cecilia Mulligan has improved the text. Michael D. Bordo, Benjamin Cohen, Bill Gavin, Thomas Hagberg, David Laidler and Geoffrey Wood have significantly improved the presentation by their comments.
2. Denmark and the United Kingdom have an explicit opt-out clause concerning stage III of the EMU. Sweden has no such clause, only an implicit one, due to domestic political considerations. The term euro-out is used here to cover the case of Sweden and the United Kingdom in spite of these legal differences.
3. Outside Europe, inflation targeting has been adopted in several industrialised countries in the 1990s like New Zealand, Canada, Israel and Australia.
4. It re-appeared briefly in the 1930s. Sweden adopted Wicksell's norm in 1931 as a guide for the *Riksbank*. Some economists like Irving Fischer and Erik Lindahl viewed this step as the beginning of an international adoption of price level targeting. The gold standard re-appeared after World War II in the Bretton Woods system.
5. The plea for this type of optimal currency theory gives a different twist to the traditional debate of fixed versus flexible rates, which has permeated the analysis of the costs and benefits of monetary unification.
6. The successful inflation targeting of the euro-outs invites two contrary policy conclusions. By inflation targeting, the outs have showed they are well prepared for joining the euro area. Joining the euro area will be a continuation of the monetary policy pursued domestically, thus not involving any major change. The opposite conclusion runs like this: the central banks of the euro-outs have demonstrated that they can perform at least as well as the ECB. Thus there is no reason to join the euro area to gain additional monetary credibility. Both arguments are used in the domestic debate in Sweden and the United Kingdom.
7. In addition, the central banks of the euro-outs may also contribute to reforming the monetary strategy of the Eurosystem as argued by Svensson (2002). He views the inflation targeting approach of the Bank of England and the Bank of Sweden as superior to the present two-pillar system of the ECB.
8. See Deroose, Langedijk and Roeger (2002) and chapter 2.5 in *European Economy*, no. 72, 2001.
9. See for example Cecchetti et al (2000).
10. See the views of a monetary policy maker in the speech by Duisenberg (2000).

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11. The experience of Switzerland is similar to that of Sweden, contributing to Swiss isolationism versus the EU.
12. See for example Wicksell's (1917, p 71) view of the pre-1914 gold standard: 'It can even be said without exaggeration that before the outbreak of this disastrous war, the entire civilised world had already achieved a state in which it lived under a single monetary system.'

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LARS JONUNG
Economic and Financial Affairs Director-General
European Commission
B-1049 Brussels
email: lars.jonung@cec.eu.int

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