

Seminar Paper No. 681

**THE FIRST YEAR OF THE EUROSISTEM:
INFLATION TARGETING OR NOT?**

by

Lars E.O. Svensson



INSTITUTE FOR INTERNATIONAL ECONOMIC STUDIES
Stockholm University

Seminar Paper No. 681

THE FIRST YEAR OF THE EUROSISTEM:
INFLATION TARGETING OR NOT?

by

Lars E.O. Svensson

Papers in the seminar series are also published on internet
in Adobe Acrobat (PDF) format.

Download from <http://www.iies.su.se/>

Seminar Papers are preliminary material circulated to
stimulate discussion and critical comment.

February 2000

Institute for International Economic Studies
S-106 91 Stockholm
Sweden

Abstract

This paper is a brief evaluation of the Eurosystem's monetary-policy regime after its first year, in particular of the extent to which it is similar to inflation targeting as practiced by an increasing number of central banks. I examine the Eurosystem's *goals*, *framework for monetary-policy decisions* and *communication with outsiders*. Criteria for evaluation are whether the goals are unambiguous and appropriate; whether the decision framework is efficient in collecting and processing information and reaching decisions that are appropriate relative to the goals; and whether the communication is effective in motivating decisions, simplifying external evaluation and thereby improving transparency and accountability. I also consider whether the actual instrument setting has been appropriate, given the information available at the times of decision.

JEL Classification: E42, E52, E58

Keywords: Monetary targeting, ECB, transparency

The First Year of the Eurosystem:

Inflation Targeting or Not?

Lars E.O. Svensson*

January 2000

On January 1, 1999, the Euro was launched and the Eurosystem (the ECB and 11 national central banks in Europe) took responsibility for monetary policy in the Euro area. This paper is a brief evaluation of the Eurosystem's monetary-policy regime after its first year, in particular of the extent to which it is similar to inflation targeting as practiced by an increasing number of central banks.¹ I examine three elements of the Eurosystem, namely the *goals*, the *framework for monetary-policy decisions* and the *communication* with outsiders. Criteria for evaluation are whether the goals are unambiguous and appropriate; whether the decision framework is efficient in collecting and processing information and reaching decisions that are appropriate relative to the goals; and whether the communication is effective in motivating decisions, simplifying external evaluation and thereby improving transparency and accountability. I also consider whether the *actual instrument setting* has been appropriate, given the information available at the times of decision.

During the 1990s an increasing number of central banks have adopted inflation targeting, which due to its logical and transparent design and apparent success so far has become a focus of interest and a natural frame of reference. Inflation targeting is characterized by, *first*, an explicit numerical inflation target. The inflation target is pursued in the medium run, with due concern for avoiding real instability, for instance, in the output-gap; that is, inflation targeting is “flexible” rather than “strict.” *Second*, due to the unavoidable lags in the effects of instruments on inflation, the decision framework is in practice “inflation-forecast targeting” (see below). *Third*, communication is very explicit and to the point; policy decisions are consistently motivated with reference to published inflation and output(-gap) forecasts. Indeed, inflation targeting has introduced unprecedented transparency and accountability in monetary policy. Three central banks—the

Reserve Bank of New Zealand, the Bank of England, and Sweden's Sveriges Riksbank—stand out as particularly consistent and transparent in their implementation of inflation targeting.

I. Goals

The Maastricht Treaty assigns price stability as the primary objective for the Eurosystem but leaves to the Eurosystem the formulation of an operational definition. In October 1998 the Eurosystem defined price stability as “as a year-on-year increase in the Harmonised Index of Consumer Prices for the euro area of below 2%” (ECB 1998a). It has several times emphasized the medium-term orientation of its policy and that a gradualist and measured response to threats to price stability will not introduce “unnecessary and possibly self-sustaining uncertainty into short-term interest rates or the real economy...” (ECB 1999). This emphasis on the medium term, gradualism, and stability of the real economy is consistent with “flexible” rather than “strict” inflation targeting.

However, as commentators quickly pointed out, the Eurosystem's definition of price stability was ambiguous, since it did not specify a lower bound for inflation. In November 1998 the ECB president, Willem Duisenberg (1998a), clarified that the word “increase” should be interpreted as excluding deflation. It would seem to follow that the lower bound was zero and that the definition refers to an inflation rate between 0 and 2%. However, two days later, Duisenberg (1998b) stated that “[w]e did not announce a floor for inflation, because we know that the price index may include a measurement bias, but we do not know its magnitude”.

If the lower bound is zero, it would seem logical to use the midpoint, 1%, as the point inflation target in the calculation of the M3 reference value. However, when the reference value was announced in December 1998 (ECB 1998b), it appeared that a point inflation target of 1.5% had been used instead.

To this date (January 2000), so far as I know, the Eurosystem has not yet been explicit about the lower bound. If this omission were due to uncertainty about possible measurement bias, it would seem that this would affect both the lower and upper bound to the same extent; otherwise, the width of the range becomes dependent on the measurement bias. It is difficult to see any benefit from such ambiguity. An unambiguous

symmetric definition (for instance, “above 0 and below 2%”) seems preferable, especially since deflation may be as serious a threat these days as inflation.²

II. Decision Framework

Although inflation targeting is technically difficult in practice, the principles of inflation targeting are relatively straightforward. Given that monetary policy actions affect inflation with a lag, efficient inflation targeting requires inflation-*forecast* targeting (see, for instance, Lars Svensson (1997) and (1999a) and Svensson and Michael Woodford (1999)). That is, the central bank needs to make conditional inflation forecasts (conditional on its view of the transmission mechanism, the current state of the economy, and a given planned path for its instrument rate). The bank then selects the instrument plan that results in an “optimal” inflation forecast, that is, an inflation forecast that approaches the inflation target at an appropriate pace without causing too much variability in the real economy or interest rates. The bank then starts implementing the instrument plan, by setting the interest rate accordingly. At regular intervals, if new significant information has been collected, the procedure is repeated and a new interest rate plan adopted and implemented. From this perspective, inflation-forecast targeting is just an algorithm to solve an intertemporal optimization problem. With minor differences, this is the decision framework used by all inflation-targeting central banks.³ Thus, if the Eurosystem wants to meet its definition of price stability in the medium term, it must decide on an instrument plan such that the corresponding inflation forecast in the medium term, conditional on all relevant information and its instrument plan, falls between the undisclosed lower bound and the upper bound of 2%.

In October 1998, the Eurosystem (ECB 1998a, see also ECB 1999) announced that the monetary policy strategy would consist of “two key elements,” later called “the two pillars:” The first pillar is “a prominent role for money” with a reference value for M3 growth, set at 4.5% in December 1998 (ECB 1998b). Monetary targeting *per se* was rejected, however. Instead money’s role as an indicator of future inflation was emphasized: “Deviations of current monetary growth from the reference value would, under normal circumstances, signal risks to price stability.” The reference value was reconsidered in

December 1999 and maintained at 4.5%. The second pillar is a “broadly-based assessment of the outlook for price developments and the risks to price stability,” where the assessment is made “using a wide range of economic and financial variables as indicators for future price developments.”

From the above discussion, it is clear that the first pillar is redundant. Only the second pillar is needed, if interpreted as a conditional forecast, taking into account all relevant information, including that in monetary aggregates. There seem to be no rational reason for giving a certain set of indicators of future inflation the status of a separate “pillar” (rather than one of the bricks in one main pillar). This instead makes the framework inconsistent and ambiguous, as several observers have noted. In contrast, when the Swiss National Bank (1999) in December 1999 announced that it would abandon monetary targeting, it simply made clear that “[m]onetary policy decisions will be based mainly on an inflation forecast, which will take all relevant indicators into account.”

III. Communication

Inflation-targeting central banks make considerable effort to explaining past outcomes and motivate current policy decisions, typically with reference to published conditional inflation forecasts. For instance, Sveriges Riksbank organizes its quarterly *Inflation Report* (see, e.g., Sveriges Riksbank, 1999) according to its view of the transmission mechanism and the determination of inflation; it also systematically updates its estimates of the main determinants of inflation and summarizes the resulting adjustments in its conditional inflation forecast relative to that reported in the previous *Inflation Report*. The degree of uncertainty in the forecast is also updated and assessed in each *Report*.

These practices of inflation-targeting central banks allow outside observers to scrutinize the central banks’ analysis and forecasts and then judge whether the policy decisions taken are appropriate, given the goals and available information. Several central banks also publish minutes from the monetary policy meetings, which allows outsiders further to assess whether the discussion and analysis are competent, whether the various arguments presented are appropriate, and whether final decisions are consistent with the goals. Altogether, this commitment to communicate simplifies outside monitoring and evaluation of monetary policy, strengthens the accountability of the central banks, and provides

stronger incentives for the banks to fulfill their announced goals. Compared to previous monetary-policy regimes, the inflation targeting has introduced an unprecedentedly high degree of transparency into monetary policy.

How does the Eurosystem compare? So far the Eurosystem has not published its most crucial information, the internal forecasts. Indeed, initially keeping the forecasts secret was considered a virtue (Duisenberg 1998a): "... publishing an inflation forecast would obscure rather than clarify what the Governing Council is actually doing. ... [B]ecause publishing a single inflation forecast would be likely to suggest that monetary policy reacts mechanistically to this forecast, publication might mislead the public and therefore run counter to the principle of clarity." However, since September 1999 several public statements have indicated that forecasts will be published, and in December Duisenberg (1999) stated: "We, of course also compare those [external] forecasts with our internal preliminary forecasts, which will ultimately be published in the course of next year...". The extended quarterly versions of the *Monthly Bulletin* of June, September and December 1999 have started to report external forecasts. Duisenberg (1999) actually seems to reveal ECB's internal forecast: "...the European Commission also forecasts average inflation in 2000 and 2001 to be 1.5%, and we see no reason to deviate from that forecast" (emphasis added). Duisenberg did not reveal whether this number should be interpreted as an unconditional forecast (conditional on optimal policy by the Eurosystem) or a conditional forecast (for instance, conditional on an unchanged interest rate). In the former case, it seems that 1.5% for 2001 should probably be interpreted as the Eurosystem's point inflation target (consistent with the inflation target used in the calculation of the M3 reference value).

The Eurosystem does not publish minutes and voting records of the General Council meetings. Instead, it has argued that the introductory statement at the press conference held immediately after the meetings are similar to "summary minutes." If that is the case, a comparison of the statements with the minutes of Bank of England and Sveriges Riksbank gives the unfortunate impression that the Eurosystem is considerably less advanced, systematic, and forward-looking than those banks. The 2-week delay in publishing the minutes from Bank of England is probably close to the minimal time necessary to summa-

rize and edit sophisticated and detailed discussions and arguments. In any case, a press conference is certainly not a commitment to give an adequate report of the discussions at a meeting and rather an invitation to a somewhat selective presentation.

The Eurosystem's reluctance to be more open and transparent, in particular in publishing internal forecasts and minutes, has probably been quite costly from a public-relations perspective. The Eurosystem's repeated pronouncements about its high degree of transparency (for instance, Ignazio Angeloni and Otmar Issing, 1999) have not carried far, since critics have the easy task of pointing to other central banks that are clearly more transparent.

IV. Actual Instrument Decisions

The Eurosystem's main instrument is its "main refinancing rate," a short repurchase rate. On December 22, 1998, the Eurosystem announced that it would set an initial rate of 3%. On April 8, 1999, the rate was lowered to 2.5%. On November 4, the rate was increased to 3%. Were these decisions appropriate, given the goals of the Eurosystem and the information available at the times of decision?

Did the Eurosystem take its controversial first pillar into account? Between October 1998 and October 1999, the 3-month moving average of 12-month M3 growth rates fluctuated between 4.7% and 6.0%. At the time of the decision in April, the 3-month moving average of the 12-month M3 growth through February was 5.1%, well above the reference value of 4.5% (the money-growth rate is published with about 4 weeks lag). Presumably, this should have motivated an increase rather than a decrease of the interest rate. During March-September, the moving average rose steadily to 5.9%, motivating an increase, but not necessarily as late as November. Obviously, the first pillar has been disregarded at the Eurosystem's discretion—hardly surprising, given its redundancy.

Instrument decisions should ideally be evaluated *ex ante*, given the information available to the Eurosystem at the time of the decisions. The crucial information would include the Eurosystem's internal conditional inflation forecasts during the period, for instance, the conditional inflation forecasts for 3% and 2.5% interest rates in April and November, respectively. Since the Eurosystem has declined to make this information available and

to allow outside scrutiny of its forecasts, it is not possible to decide with any precision whether the decisions were appropriate. Using external forecasts is problematic, since the assumptions of external forecasters about Eurosystem monetary policy need to be sorted out. Nevertheless, it is reassuring that external forecasts, as reported in the December 1999 *Monthly Bulletin* (and apparently also internal forecasts, see above) point to average inflation of 1.5% in 2000 and 2001.

Because of the transmission lags in monetary policy, it is too early for any ex post evaluation of Eurosystem decisions. Another year or two will be needed for that. Since actual outcomes are contaminated by shocks occurring after instrument decisions, or unknown at the time of decisions, ex post evaluation is far from straightforward. Missing the target range is not necessarily evidence of a mistake, and meeting it is not necessarily evidence of good decisions.

V. Conclusions

The first year of the Eurosystem has seen a successful launch of the Euro and an apparently successful introduction of the common monetary policy. The Eurosystem monetary strategy is quite similar to flexible inflation targeting, for instance, in having a quantitative definition of price stability, in the emphasis on the medium term, and in the concern to avoid real instability. Eventual publication of internal forecasts would increase this similarity. There seem to be no fatal mistakes in either design or instrument setting. Still, there is considerable room for improvement with regard to internal consistency and transparency of the regime.

The remaining asymmetry and ambiguity in the definition of price stability, although minor, does not serve any useful purpose. The insistence on the separate first pillar is an important source of ambiguity and inconsistency. The first pillar is redundant (as also indicated by the first year's experience). A rational role for monetary aggregates is to contribute to conditional forecasts, among other indicators and according to their predictive power, as for the inflation-targeting central banks (and now apparently also the Swiss National Bank). There is considerable room for increased transparency about General Council meetings. The introductory statements at the press conference after the

meetings are hardly enough, certainly not if the meetings become more sophisticated and are the genuine locus for decisions. It is difficult to see that the Eurosystem could lose from further increases in consistency and transparency.

It is worth emphasizing that since the ECB was created in 1998, it has made sincere efforts to maintain an open dialogue with academic researchers and external experts, including critics, as witnessed by an active visitors program and participation in and organization of a number of academic conferences. Visitors to the ECB have also experienced open-minded, sophisticated and informative discussions with a very competent and insightful staff. Overall, I believe there are good reasons to be optimistic about the future of Eurosystem monetary policy.

References

- Angeloni, Ignazio and Issing, Otmar.** “The ECB is Transparent and Accountable,” *Wall Street Journal*, October 21, 1999.
- Bernanke, Ben S.; Laubach, Thomas; Mishkin, Frederic S. and Posen, Adam S.** *Inflation Targeting: Lessons from the International Experience*, Princeton: Princeton University Press.
- Duisenberg, Willem F.** “The ESCB’s Stability-Oriented Monetary Policy Strategy,” speech, November 10, 1998a.
- ___. “The Stability-Oriented Monetary Policy Strategy of the European System of Central Banks and the International Role of the Euro,” speech, November 12, 1998b.
- ___. “The President’s Introductory Statement, with Transcripts of the Questions and Answers,” Press Conference, December 2, 1999.
- ECB.** “A Stability-Oriented Monetary Policy Strategy for the ESCB,” Press Release, October 13, 1998a.
- ___. “The Quantitative Reference Value for Monetary Growth,” Press Release, December 1, 1998b.
- ___. “The Stability-Oriented Monetary Policy Strategy of the Eurosystem,” *ECB Monthly Bulletin*, January 1999, pp. 39–50.
- Svensson, Lars E.O.** “Inflation Forecast Targeting: Implementing and Monitoring Inflation Targets,” *European Economic Review*, 1997, 41, pp. 1111-1146.
- ___. “Inflation Targeting as a Monetary Policy Rule,” *Journal of Monetary Economics*, 1999a, 43, pp. 607–54.
- ___. “Monetary Policy Issues for the Eurosystem,” *Carnegie-Rochester Conference Series on Public Policy*, 1999b, forthcoming.

Svensson, Lars E.O. and Woodford, Michael. “Implementing Optimal Policy through Inflation-Forecast Targeting,” Working Paper, Princeton University, 1999.

Sveriges Riksbank. *Inflation Report*, December 1999.

Swiss National Bank. *Press Release*, December 10, 1999.

Footnotes

* Institute for International Economic Studies, Stockholm University, SE-10691 Stockholm, Sweden. Email: Lars.Svensson@iies.su.se. Homepage: [http:// www.iies.su.se/leosven/](http://www.iies.su.se/leosven/). I thank Ben Bernanke and Michael Woodford for comments and Princeton University for its hospitality. The views expressed and any errors are my own responsibility.

¹ A more detailed discussion of the Eurosystem is given in Svensson (1999b). Inflation targeting is discussed in Bernanke *et al* (1999) and Svensson (1997, 1999a).

² The Eurosystem's "below 2%" is reminiscent of the brief period when the previous Chancellor of Exchequer specified Bank England's inflation target as the ambiguous "2.5% or less," leaving open the interpretation of "or less." The current Chancellor wisely removed the "or less."

³ As discussed Svensson (1999a) and Svensson and Woodford (1999), inflation-forecast targeting can be interpreted as a "targeting rule" and is different from a commitment to a simple "instrument rule" (like a Taylor rule). The latter paper also discusses to what extent inflation-forecast targeting can achieve the socially optimal monetary policy under commitment.

SEMINAR PAPER SERIES

The Series was initiated in 1971. For a complete list of Seminar Papers, please contact the Institute.

1996

616. *Assar Lindbeck:* The West European Employment Problem. 31 pp.
617. *Assar Lindbeck:* Full Employment and the Welfare State. 22 pp.
618. *Javier Ortega:* How (Good) Immigration Is: A Matching Analysis. 30 pp.
619. *Joakim Persson and Bo Malmberg:* Human Capital, Demographics and Growth Across the US States 1920-1990. 21 pp.
620. *Assar Lindbeck and Dennis J. Snower:* Centralized Bargaining, Multi-Tasking, and Work Incentives. 43 pp.
621. *Paul Söderlind and Lars E.O. Svensson:* New Techniques to Extract Market Expectations from Financial Instruments. 47 pp

1997

622. *Assar Lindbeck:* Incentives and Social Norms in Household Behavior. 12 pp.
623. *John Hassler and José Vicente Rodriguez Mora:* Employment Turnover and Unemployment Insurance. 36 pp.
624. *Nils-Petter Lagerlöf:* Strategic Saving and Non-Negative Gifts. 20 pp.
625. *Lars E.O. Svensson:* Inflation Targeting: Some Extensions. 43 pp.
626. *James E. Anderson:* Revenue Neutral Trade Reform with Many Households, Quotas and Tariffs. 36 pp.
627. *Mårten Blix:* Rational Expectations in a VAR with Markov Switching. 37 pp.
628. *Assar Lindbeck and Dennis J. Snower:* The Division of Labor Within Firms. 12 pp.
629. *Etienne Wasmer:* Can Labour Supply Explain the Rise in Unemployment and Inter-Group Wage Inequality in the OECD? 64 pp.

630. *Torsten Persson and Guido Tabellini:* Political Economics and Macroeconomic Policy. 100 pp.
631. *John Hassler and Assar Lindbeck:* Intergenerational Risk Sharing, Stability and Optimality of Alternative Pension Systems. 38 pp.
632. *Michael Woodford:* Doing Without Money: Controlling Inflation in a Post-Monetary World. 62 pp.
633. *Torsten Persson, Gérard Roland and Guido Tabellini:* Comparative Politics and Public Finance. 55 pp.
634. *Johan Stennek:* Coordination in Oligopoly. 14 pp.

1998

635. *John Hassler and José V. Rodríguez Mora:* IQ, Social Mobility and Growth. 34 pp.
636. *Jon Faust and Lars E. O. Svensson:* Transparency and Credibility: Monetary Policy with Unobservable Goals. 40 pp.
637. *Glenn D. Rudebusch and Lars E. O. Svensson:* Policy Rules for Inflation Targeting. 51 pp.
638. *Lars E. O. Svensson:* Open-Economy Inflation Targeting. 51 pp.
639. *Lars Calmfors:* Unemployment, Labour-Market Reform and Monetary Union. 35 pp
640. *Assar Lindbeck:* Swedish Lessons for Post-Socialist Countries. 37 pp.
641. *Donald Brash:* Inflation Targeting in New Zealand: Experience and Practice. 11 pp.
642. *Claes Berg and Lars Jonung:* Pioneering Price Level Targeting: The Swedish Experience 1931-1937. 50 pp.
643. *Jürgen von Hagen:* Money Growth Targeting. 34 pp.
644. *Bennett T. McCallum and Edward Nelson:* Nominal Income Targeting in an Open-Economy Optimizing Model. 48 pp.
645. *Assar Lindbeck:* Swedish Lessons for Post-Socialist Countries. 42 pp.
646. *Lars E.O. Svensson:* Inflation Targeting as a Monetary Policy Rule. 51 pp.

647. *Jonas Agell and Mats Persson:* Tax Arbitrage and Labor Supply. 35 pp.
648. *Frederic S. Mishkin:* International Experiences With Different Monetary Policy Regimes. 47 pp.
649. *John B. Taylor:* The Robustness and Efficiency of Monetary Policy Rules as Guidelines for Interest Rate Setting by The European Central Bank. 39 pp.
650. *Christopher J. Erceg, Dale W. Henderson and Andrew T. Levin:* Tradeoffs Between Inflation and Output-Gap Variances in an Optimizing-Agent Model. 43 pp.
651. *Etienne Wasmer:* Labor Supply Dynamics, Unemployment and Human Capital Investments. 36 pp.
652. *Daron Acemoglu and Fabrizio Zilibotti:* Information Accumulation in Development. 43 pp.
653. *Argia Sbordone:* Prices and Unit Labor Costs: A New Test of Price Stickiness. 33 pp.
654. *Martin Flodén and Jesper Lindé:* Idiosyncratic Risk in the U.S. and Sweden: Is there a Role for Government Insurance? 30 pp.
655. *Thomas P. Tangerås:* On the Role of Public Opinion Polls in Political Competition. 36 pp.
656. *Peter Svedberg:* 841 Million Undernourished? On the Tyranny of Deriving a Number. 39 pp.
657. *Lars Calmfors:* Macroeconomic Policy, Wage Setting and Employment – What Difference Does the EMU Make? 52 pp.
658. *Torsten Persson and Guido Tabellini:* The Size and Scope of Government: Comparative Politics with Rational Politicians. 47 pp.
659. *Lars Calmfors:* Monetary Union and Precautionary Labour-Market Reform. 10 pp.
660. *Daron Acemoglu and Fabrizio Zilibotti:* Productivity Differences. 48 pp.
661. *Ramon Marimon and Fabrizio Zilibotti:* Unemployment vs. Mismatch of Talents: Reconsidering Unemployment Benefits. 35 pp.
662. *Yves Zenou:* Urban Unemployment and City Formation. Theory and Policy Implications. 35 pp.

663. *Stefan Palmqvist:* Why Central Banks Announce Their Objectives: Monetary Policy with Discretionary Signalling. 22 pp.
664. *Kjetil Storesletten:* Sustaining Fiscal Policy Through Immigration. 41 pp.
665. *John Hassler,*
José V. Rodríguez Mora,
Kjetil Storesletten and
Fabrizio Zilibotti: Equilibrium Unemployment Insurance. 56 pp.

1999

666. *Michael Woodford:* Optimal Monetary Policy Inertia. 112 pp.
667. *Lars E.O. Svensson:* Monetary Policy Issues for the Eurosystem. 54 pp.
668. *Assar Lindbeck:* The Price in Economic Sciences In Memory of Alfred Nobel 1969-1998. 28 pp.
669. *Lars E.O. Svensson:* The Equilibrium Degree of Transparency and Control in Monetary Policy. 25 pp.
670. *Assar Lindbeck and*
Solveig Wikström: The ICT Revolution in Consumer Product Markets. 23 pp.
671. *Lars E.O. Svensson:* Does the P^* Model Provide Any Rationale for Monetary Targeting? 14 pp.
672. *Glenn Rudebusch and*
Lars E.O. Svensson: Eurosystem Monetary Targeting: Lessons from U.S. Data. 29 pp.
673. *Lars Svensson:* Price Stability as a Target for Monetary Policy Defining and Maintaining Price Stability. 50 pp.
674. *Thomas P. Tangerås:* Collusion-Proof Yardstick Competition. 33 pp.
675. *Bertil Ohlin:* The Theory of Interregional Exchange. 42 pp.
676. *Assar Lindbeck:* Unemployment – Structural. 16 pp.
677. *Assar Lindbeck and*
Solveig Wikström: ICT and Household-Firm Relations. 23 pp.
678. *Andrew K. Rose:* One Money, One Market: Estimating the Effect of Common Currencies on Trade. 40 pp.
679. *Jonas Agell, Mats Persson*
and Hans Sacklén: Labor Supply Prediction When Tax Avoidance Matters. 36 pp.

680. *Lars E.O. Svensson:* How Should Monetary Policy Be Conducted in an Era of Price Stability? 50 pp.
681. *Lars E.O. Svensson:* The First Year of the Eurosystem: Inflation Targeting or Not? 11 pp.

ISSN 0347-8769
Stockholm, 2000
Institute for International Economic Studies