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### **Forecasting pooling for short time series of macroeconomic variables**

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# Forecast pooling for short time series of macroeconomic variables<sup>\*</sup>

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## Abstract

It is rather common to have several competing forecasts for the same variable, and many methods have been suggested to pick up the best, on the basis of their past forecasting performance. As an alternative, the forecasts can be combined to obtain a pooled forecast, and several options are available to select what forecasts should be pooled, and how to determine their relative weights. In this paper we compare the relative performance of alternative pooling methods, using a very large dataset of about 500 macroeconomic variables for the countries in the European Monetary Union. In this case the forecasting exercise is further complicated by the short time span available, due to the need of collecting a homogeneous dataset. For each variable in the dataset, we consider 58 forecasts produced by a range of linear, time-varying and non-linear models, plus 16 pooled forecasts. Our results indicate that on average combination methods work well. Yet, a more disaggregate analysis reveals that single non-linear models can outperform combination forecasts for several series, even though they perform rather badly for other series so that on average their performance is not as good as that of pooled forecasts. Similar results are obtained for a subset of unstable series, the pooled forecasts behave only slightly better, and for three key macroeconomic variables, namely, industrial production, unemployment and inflation.

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*Keywords:* Time-Varying models, Non-linear models, Forecast Pooling,  
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## 1. Introduction

Due to the recent developments in time series analysis and computing capability, a broad range of forecasts for the same variable are now readily available. Since the pioneering work of Bates and Granger (1969), it is well known that pooling several forecasts can yield a mean square forecast error (msfe) lower than that of each single forecast. Hence, rather than selecting a preferred forecasting model for a specific variable, it can be convenient to combine all the available forecasts, or at least some subsets.

Several pooling procedures are available. The three most common methods in practice are linear combination, with weights related to the msfe of each forecast, median forecast selection, and predictive least squares, where a single model is chosen, but the selection is recursively updated at each forecasting round on the basis of the past forecasting performance.

Stock and Watson (1999) present a detailed study of the relative performance of these pooling methods, using a large dataset of about 200 US macroeconomic variables, and using as basic forecasts those produced by a range of linear and non-linear models.

The analysis presented in this paper is similar to that by Stock and Watson (1999), but it differs in three main respects. First, we analyze a larger dataset, for several countries, but for a shorter sample. Specifically, we consider the main economic indicators for the 11 European countries that joined the Monetary Union in the year 2000, for a total of 480 time-series. In order to have a comparable homogeneous dataset, the sample size is rather short, about 15 years of monthly data. Since this is a common problem with EMU variables, it is important to evaluate whether and how it affects the performance of the pooling procedures.

Second, we also include time-varying AR models in the comparison. This type of models performed well in the stability analysis of Stock and Watson (1996) for US time series. Since many social, economic and institutional changes took place in the EMU countries over the '80s and '90s, it is important to include in the comparison models that can capture these features of the data.

Third, and related to the previous comment, we evaluate whether the performance of the pooling methods is affected by the presence of instability in the series, as detected by formal testing procedures. We then also focus on a subset of three key macroeconomic

variables, namely industrial production, unemployment and inflation for all the EMU countries, and evaluate how big are the gains from forecasting pooling, if any.

The present paper differs also from Marcellino (2001), who presents a detailed analysis of the relative forecasting performance of linear and non-linear methods for EMU variables, because here we focus on the comparison with the pooling procedures.

The paper is organized as follows. Section 2 briefly describes the dataset. Section 3 lists the competing forecasting models and the pooling procedures, and discusses their main characteristics. Section 4 presents the results of the forecast evaluation exercise for all the 480 variables under analysis. Section 5 specializes the results for the unstable series, and for the three key macroeconomic variables. Section 6 summarizes and concludes.

## 2. The data

The dataset we use is taken from Marcellino, Stock and Watson (2000,2001), to whom we refer for additional details. It includes the OECD main economic indicators, monthly, for the period 1982:1-1997:8, for the 11 countries originally in the EMU in the year 2000. The dataset and the sample range is chosen in order to have rather homogenous variables over countries, for a long enough comparable time span. Overall, there are 480 series, listed in the Data Appendix.

In particular, for each country there are output variables (industrial production and sales, disaggregated by main sectors); labour market variables (employment, unemployment, wages and unit labour costs); prices (consumer and producer, disaggregated by type of goods); monetary aggregates, interest rates (different maturities), stock prices; exchange rates (effective and nominal); imports, exports and net trade; and other miscellaneous series.

## 3 Forecasting methods

We consider forecasting models of the type

$$y_{t+h}^h = f(Z_t; \mathbf{q}_{ht}) + \mathbf{e}_{t+h}, \quad (1)$$

where  $y_t$  is the variable being forecast,  $h$  indicates the forecast horizon,  $Z_t$  is a vector of predictor variables,  $e_t$  is an error term, and  $\mathbf{q}_h$  is a vector of parameters, possibly evolving over time. Forecasting methods differ for the choice of the functional form of the relationship between  $y_{t+h}^h$  and  $Z_t$ ,  $f$ . Within each method, different models are characterized by the choice of the regressors  $Z_t$  and the stationarity transformation applied to  $y_t$ .

The  $h$ -step forecast is

$$\hat{y}_{t+h}^h = f(Z_t; \hat{\mathbf{q}}_{ht}), \quad (2)$$

with associated forecast error

$$e_{t+h} = y_{t+h}^h - \hat{y}_{t+h}^h. \quad (3)$$

When  $y_t$  is treated as stationary, it is  $y_{t+h}^h = y_{t+h}$ , while if  $y_t$  is I(1) then  $y_{t+h}^h = y_{t+h} - y_t$ . Besides computing results for both cases, we also consider a pre-test forecast where the decision on the degree of integration of  $y_t$  depends on a unit root test. Pre-testing often improves the forecasting performance, see e.g. Diebold and Kilian (2000). Specifically, we use the Elliot, Rothenberg and Stock (1996) DF-GLS statistics, which performed best in the simulation experiments in Stock (1996). Note that  $e_{t+h} = y_{t+h} - \hat{y}_{t+h}$ , independently of whether  $y_t$  is treated as stationary or not, so that forecast errors from the three different cases (stationary, I(1) and pre-test) can be directly compared.

To mimic real time situations, for each variable, method and model the pre-test for unit root, estimation, and model selection are repeated each month over the forecasting period, 1993:1-1997:8.

Because of the short sample available, we consider forecast horizons,  $h$ , of 1, 3 and 6 months. When  $h$  is larger than one, the " $h$ -step ahead projection" approach in (1), also called dynamic estimation (e.g. Clements and Hendry (1996)), differs from the standard approach of estimating a one-step ahead model, and iterate it forward to obtain  $h$ -step ahead predictions. The  $h$ -step ahead projection approach has two main advantages in this context. First, the impact of specification errors in the one-step ahead model can be reduced by using the same horizon for estimation as for forecasting. Second, simulation methods are not required to obtain forecasts from non-linear models. The resulting

forecasts could be slightly less efficient, see e.g. Granger and Terasvirta (1993, Ch.8), but the computational savings in our real time exercise with many series and models are substantial.

In few cases there are problems with the estimation of the non-linear models, which then yield very large forecast errors. We introduced an automatic forecast trimming procedure, in order not to bias the comparison against these methods. In particular, when the absolute value of a forecasted change is larger than any previously observed change, a no change forecast is used.

Let us now describe first the forecasting methods and models, and then the pooling procedures we compare. More details can be found in Stock and Watson (1996, 1999), Marcellino (2001).

### **Linear methods**

*Autoregression (AR).* Though very simple, these models have performed rather well in forecast comparison exercises, see e.g. Meese and Geweke (1984), or Marcellino, Stock and Watson (2001) for the Euro area. The  $f$  function in (1) is linear, and  $Z_t$  includes lags of the  $y$  variable and a deterministic component. The latter can be either a constant or also a linear trend. The lag length is either fixed at 4, or it is chosen by AIC or BIC with a maximum of 6 lags. Given that the  $y_t$  variable can be treated as stationary, I(1), or pre-tested for unit roots, overall we have 18 models in this class.

*Exponential smoothing (ES).* Makridakis et al. (1982) found this method to perform rather well in practice even though, from a theoretical point of view, it is optimal in the mean square forecast error sense only when the underlying process follows a particular ARMA structure, see e.g. Granger and Newbold (1986, Ch.5). We consider both single and double exponential smoothing, which are usually adopted for, respectively, stationary and trending series. Estimation of the parameters is conducted by means of (recursive) non-linear least squares (see e.g. Tiao and Xu (1993)). The third model in this class is given by a combination of the single and double models, based on the outcome of the unit root test.

## Non-linear methods

*Time-varying autoregression (TVAR).* Following Nyblom (1989), we let the parameters of the AR model evolve according to the following multivariate random walk model:

$$\mathbf{q}_{ht} = \mathbf{q}_{ht-1} + u_{ht}, \quad u_{ht} \sim iid(0, \mathbf{I}^2 \mathbf{s}^2 Q), \quad (4)$$

where  $\mathbf{s}^2$  is the variance of the error term  $\mathbf{e}$  in (1),  $Q = (E(Z_t Z_t'))^{-1}$ , and we inspect several values of  $\mathbf{I}$ : 0 (no variation), 0.0025, 0.005, 0.0075, 0.01, 0.015, or 0.020. We consider first a specification with a constant, 3 lags and  $\mathbf{I} = 0.005$ , and then we allow for AIC or BIC selection of the number of lags (1, 3 or 6) jointly with the value of  $\mathbf{I}$ . In each case,  $y_t$  can be either stationary, or I(1) or pre-tested, so that we have a total of 9 TVAR models. The models are estimated by the Kalman filter.

*Logistic smooth transition autoregression (LSTAR).* The generic LSTAR model can be written as

$$y_{t+h}^h = \mathbf{a}' \mathbf{z}_t + d_t \mathbf{b}' \mathbf{z}_t + \mathbf{e}_{t+h}, \quad (5)$$

where  $d_t = 1/(1 + \exp(\mathbf{g}_0 + \mathbf{g}_1' \mathbf{z}_t))$ , and  $\mathbf{z}_t = (1, y_t, y_{t-1}, \dots, y_{t-p+1})$  if  $y_t$  is treated as stationary or  $\mathbf{z}_t = (1, \Delta y_t, \Delta y_{t-1}, \dots, \Delta y_{t-p+1})$  if  $y_t$  is I(1). The smoothing parameters  $\mathbf{g}_1$  regulate the shape of parameter change over time. When  $\mathbf{g}_1 = 0$  the model becomes linear, while for large values of  $\mathbf{g}_1$  the model tends to a self-exciting threshold model, see e.g. Granger and Terasvirta (1993), Terasvirta (1998) for details. For models specified in levels we consider the following choices for the threshold variable in  $d_t$ :  $\mathbf{z}_t = y_t$ ,  $\mathbf{z}_t = y_{t-2}$ ,  $\mathbf{z}_t = y_{t-5}$ ,  $\mathbf{z}_t = y_t - y_{t-6}$ ,  $\mathbf{z}_t = y_t - y_{t-12}$ . For differenced variables, it can be  $\mathbf{z}_t = \Delta y_t$ ,  $\mathbf{z}_t = \Delta y_{t-2}$ ,  $\mathbf{z}_t = \Delta y_{t-5}$ ,  $\mathbf{z}_t = y_t - y_{t-6}$ ,  $\mathbf{z}_t = y_t - y_{t-12}$ . In each case the lag length of the model was either 1 or 3 or 6. We report results for the following models: 3 lags and  $\mathbf{z}_t = y_t$  (or  $\mathbf{z}_t = \Delta y_t$  for the I(1) case); 3 lags and  $\mathbf{z}_t = y_t - y_{t-6}$ ; AIC or BIC selection of both the number of lags and the specification of  $\mathbf{z}_t$ . In each case,  $y_t$  can be either stationary, or I(1) or pre-tested, so that overall there are 12 LSTAR models. Estimation is carried out by (recursive) non-linear least squares, using an optimizer developed by Stock and Watson (2000).

*Artificial neural network (ANN).* ANN models can provide a valid approximation for the generating mechanism of a vast class of non-linear processes, see e.g. Hornik, Stinchcombe and White (1989), and Swanson and White (1997) for their use as forecasting devices. The single layer feedforward neural network model with  $n_1$  hidden units (and a linear component) is specified as:

$$y_{t+h}^h = \mathbf{b}_0' \mathbf{z}_t + \sum_{i=1}^{n_1} \mathbf{g}_{1i} g(\mathbf{b}_{1i}' \mathbf{z}_t) + \mathbf{e}_{t+h}, \quad (6)$$

where  $g(x)$  is the logistic function,  $g(x) = 1/(1 + e^{-x})$ . Even more flexibility can be obtained with the double layer feedforward neural network with  $n_1$  and  $n_2$  hidden units:

$$y_{t+h}^h = \mathbf{b}_0' \mathbf{z}_t + \sum_{j=1}^{n_2} \mathbf{g}_{2j} g\left(\sum_{i=1}^{n_1} \mathbf{b}_{2ji} g(\mathbf{b}_{1i}' \mathbf{z}_t)\right) + \mathbf{e}_{t+h}. \quad (7)$$

We report results for the following specifications:  $n_1=2, n_2=0, p=3$  (recall that  $p$  is number of lags in  $\mathbf{z}_t$ );  $n_1=2, n_2=1, p=3$ ;  $n_1=2, n_2=2, p=3$ ; AIC or BIC selection with  $n_1=(1,2,3), n_2=(1,2 \text{ with } n_1=2), p=(1,3)$ . For each case  $y_t$  can be either stationary, or I(1) or pre-tested, which yields a total of 15 ANN models. The models are estimated by (recursive) non-linear least squares, using an algorithm developed by Stock and Watson (2000).

### **No- change**

*No change (NC).* The random walk based forecast is simply  $\hat{y}_{t+h} = y_t$ . Notwithstanding its simplicity, in a few cases it was found to outperform even forecasts from large-scale structural models, see e.g. Artis and Marcellino (2001).

### **Pooling procedures**

*Linear combination forecasts (C).* These forecasts are weighted averages of those described so far:

$$\hat{y}_{t+h} = \sum_{m=1}^M k_{m,h,t} \hat{y}_{t+h,m}, \quad k_{m,h,t} = (1/\text{msfe}_{m,h,t})^w / \sum_{j=1}^M (1/\text{msfe}_{j,h,t})^w, \quad (8)$$

where  $m$  indexes the models,  $k_{m,h,t}$  denotes the weights, and  $\text{msfe}$  indicates the mean square forecast error. Bates and Granger (1969) showed that the weighting scheme that



minimizes the msfe of the pooled forecasts involves the covariance matrix of all the forecast errors, which is unfeasible in our case because  $M$  is very large. Hence, following their suggestion, the weight of a model is simply chosen as inversely proportional to its msfe, which is equivalent to setting  $w=1$  in equation (8). We also consider the cases  $w=0$ , equal weight for each forecast, and  $w=5$ , more weight for the best performing models. Moreover, we analyze separately pooling the linear models only, the non-linear models only, and all the models. Thus, overall we have 9 linear combination forecasts.

*Median combination forecasts (M).* These are the median forecasts from a set of models, and are computed because with non-Gaussian forecast errors linear combinations of the forecasts are no longer necessarily optimal. As in the previous method, we distinguish among three groups of models: linear, non-linear, and all models. Thus, we have 3 median combination forecasts.

*Predictive least squares combination forecasts (PLS).* In this approach the model is selected on the basis of its past forecasting performance over a certain period, that for us is one year. Thus, the model that produced the lowest msfe over the past year is used as the forecasting model, and the choice is recursively updated each month over the forecast period. We compute 4 of these forecasts, that differ for the set of models compared: all models, all linear models, all non-linear models, all models plus the linear and the median combination forecasts. Given that the first forecast from linear and non-linear models is produced in 1993:1, the first PLS forecast can be computed in 1994:1.

The 58 models and the 16 pooling procedures to be used in the forecast comparison exercise are summarized in Table 1.

#### **4. Forecast Evaluation**

The evaluation of the relative forecasting performance of the  $M=74$  models for the  $N=480$  variables in the dataset, over the period 1994:1-1997:8, requires the choice of a loss function.

For variable  $n$  and forecasting method  $m$ , we define the loss function as

$$Loss_{n,m}^h = \frac{1}{T-h} \sum_{t=1}^{T-h} (e_{t+h,n,m})^r, \quad (9)$$

where  $e_{t+h}$  is the  $h$ -step ahead forecast error, and  $r$  can be equal to 1, 1.5, 2, 2.5 or 3. The values  $r=1$  and  $r=2$  correspond to the familiar choices of, respectively, the mean absolute and the mean square forecast error as the loss function.

To compare the loss over all the variables, we use the following loss function for method  $m$ :

$$Loss_m^h = \frac{1}{N} \sum_{n=1}^N \frac{Loss_{n,m}^h}{Loss_{n,1}^h}, \quad (10)$$

namely, a weighted average of the loss for each variable, with weights given by the inverse of the loss of a benchmark forecast, which makes the magnitude of the losses comparable across variables. As a benchmark, we adopt throughout an AR model with 4 lags and a constant, specified in levels.

In commenting the results we focus on the comparison between pooling methods and other methods, since a detailed analysis of the relative performance of linear and non-linear methods is presented in Marcellino (2001).

In Table 2 we report the ranking of the models, based on the loss function in (10), for different values of  $r$ , focusing on the top-10 models in order to save space. The striking result is that most models are pooled. In particular, non-linear models appear in the ranking only in 2 out of 150 cases (the best 10 models for 5 values of  $r$  and 3 forecast horizons), linear models in 27 out of 150, and pooled models in 121 out of 150.

Among the pooled models, linear combinations work best. When  $h=1$ , the best forecast is C11, namely, a combination of linear, non-linear and no-change forecasts, with weights inversely proportional to their msfe. The second best is a combination of the same models but with equal weights, i.e., C10. For  $h=3$  the results depend on the value of  $r$ . In particular, when  $r=2$  the best model is C20, that combines only linear forecasts with equal weights, and the second best is C11. For  $r=1$  the best model becomes C10, while the second best remains C11. When  $h=6$  the best model is instead linear, an AR

specified in levels, with a constant and AIC lag length selection. The same model with a fixed number of lags (4) ranks second.

Overall these results are similar to what Stock and Watson (1999) found for the US, even though their preferred forecast was a combination also for  $h=6$ .

Though the figures in Table 2 strongly support the combination methods, the ranking is based on the average loss function in (10). We now want to take a more disaggregate approach, and evaluate for what fraction of series each forecasting method yields the lowest msfe.

The values in Table 3a dramatically change the ranking. Combination methods (C, M and P) are the best for only 7% of the series, the linear models (AR, ES and no change) for about 30-35% of the series, and the non-linear models for the remaining 60-65%.

In Table 3b, we then report the fraction of series for which a model is among the  $N$  models with the lowest msfe, for  $N=5,10,15,20$ , focusing on the models with the lowest msfe in each class in order to save space. The best combination technique has lowest msfe for only 1% of the series, while the best linear and non-linear models have the lowest msfe for about 4% of the series.

These figures suggest two comments. First, there is no model that performs best for all the series, different variables require different forecasting models. Second, the good performance of the combination methods from Table 2 is due to the use of an average loss function. Some of the linear models, and in particular of the non-linear models, should yield very high losses for a few variables that more than compensate the low losses for other variables, so that on average they perform worse than the combination methods.

To test whether our intuition is correct, we adopt the following strategy. First, for each variable we compute the relative msfe (rmsfe) of each forecasting model with respect to the benchmark AR(4), so that an rmsfe higher than one indicates that the method under analysis is worse than the benchmark. In formulae, the rmsfe of model  $j$  for variable  $m$  is:

$$rmsfe^h_{j-AR4,m} = \left( \sum_{t=1}^{T-h} e^2_{j,t+h,m} \right) / \left( \sum_{t=1}^{T-h} e^2_{AR4,t+h,m} \right) \quad (11)$$

Then, for each model, we calculate the empirical distribution of the rmsfe over the variables. In Table 4 we report the mean of the distribution and some percentiles for selected models (the best in Table 2 and those in Table 3b, results for all models are available upon request).

Our intuition that the ranking in Table 2 (for  $r=2$ ) is determined by the tails of this distribution is substantially confirmed. In particular, the values in the upper 10% and 2% tail of the distribution (last two columns of Table 4), are substantially higher for the linear and non-linear models in Table 3b than for the best models in Table 2, notwithstanding the forecast trimming we described earlier. Values in the lower 10% and 2% tail (columns 3 and 4 of Table 4) are instead of comparable magnitude or lower. As a consequence, the mean of the distribution is much lower for the top forecasts in Table 2 than for those in Table 3b.

## 5. Further results

Since a common justification for the use of pooling procedures is the presence of structural breaks in the series to be forecast, see e.g. Clements and Hendry (2001), in Section 5.1 we evaluate whether the combination forecasts perform better for the subset of series for which the Nyblom's (1989) test for parameter stability rejects at the 10% level. This set includes 134 series, that are listed in the Appendix. A similar list is obtained by applying other tests for parameter constancy, in particular we also experimented with the F-test based statistics in Andrews and Ploberger (1994). In Section 5.2 we then focus on forecasting some macroeconomic variables of particular interest, i.e., industrial production (IP) growth, the change in unemployment (UNEMP), and cpi inflation (INFL) for all the 11 countries originally in the EMU.

### 5.1 Instability

Table 5 reports the ranking of the competing models for the unstable series, using the average loss function in (10). No substantial differences emerge with respect to Table 2.

Specifically, the best model is C11 for  $h=1,3$ , ARFC0a for  $h=6$ , and this finding is more robust to the value of  $\rho$  than before.

From Table 6a, there is a slight improvement in the fraction of series for which the combination methods produce the lowest msfe, that increases from 5% to about 10%, with a corresponding decrease for the linear models, in particular when  $h=3$ . The performance of the non-linear models is also slightly better, and this is reflected in the figures in Table 6b that report the fraction of cases for which the best model in each class in terms of msfe is also in the top-N, with  $N=5,10,15,20$ .

The empirical distribution of the relative msfe for the models follows the same pattern as before, see Table 7. The best models in Table 5 have a more stable performance over the variables, so that on average they outperform the models in Table 6b, but the latter can do better for some series.

Hence, these results confirm the opinion that forecast pooling works better with unstable series, but the gains are rather minor.

## 5.2 Forecasting IP growth, unemployment and inflation

The final issue we address is whether pooling works better for forecasting some particularly relevant macroeconomic variables for fiscal and monetary policy in the EMU.

The performance of the pooling methods is not particularly brilliant even when evaluated with the average loss function in equation (10). From Table 8, the linear combination, median and PLS forecasts belong to the 30 top models (best 2 models for 3 horizons and 5 values of  $\rho$ ) only in 5 cases for IP growth, 17 cases for UNEMP, and never for INFL. Now the large N averaging that underlies the ranking in Tables 2 and 5 does not take place, since N is only equal to 11 for IP and INFL and to 10 for UNEMP (data for Portugal are not available for the whole sample period).

Yet, focusing on the average msfe ( $\mathbf{r}=2$ ), the C31 forecast is still the best on average for IP growth when  $h=1$ , while C30 and M3 are the best for UNEMP when, respectively,  $h=3,6$ . Notice that in all the three cases non-linear forecasts only are pooled. Linear models work well for INFL and for IP, while an ARTV is the best for UNEMP when  $h=1$ .

Ranking the models on the basis of the fraction of series for which they yield the lowest msfe changes the ordering also in this case, see Table 9. Now the non-linear models (ARTV, LSTAR, ANN) can be ranked first, they yield the lowest msfe for about 8 out 11 cases for all the three variables under analysis. They are followed by linear methods, while pooled forecasts are the last. As in the previous cases, such an outcome is due to the bad performance of the non-linear models for a few series, which is only partly attenuated by pooling. In particular, as mentioned before, for IP growth C31, a combination of the non-linear forecasts only, was the best on average for  $h=1$ , and for UNEMP C30 and M3 were the best for  $h=3,6$ .

## 5. Conclusions

In this paper we have compared the relative performance of several pooling procedures with respect to the adoption of a single model for the whole forecasting period, using a very large set of macroeconomic variables for the Euro area.

When the loss function is averaged over all the variables, the linear combination of the forecasts, either with equal weights or with weights inversely proportional to the msfe, works very well.

Yet, a more disaggregate analysis reveals that linear and, in particular, non-linear models can outperform pooled forecasts for a substantial fraction of the series. Though, their performance is rather poor for the remaining variables, so that their average ranking is low. In other words, pooled forecasts, or simple AR models, have a stable performance over all the variables, but specific linear or non-linear models can do better for specific series.

The performance of the pooling procedures improves only slightly for the subset of unstable variables, and they yield the lowest msfe only in a few cases when forecasting IP growth, unemployment or inflation.

Though these results should be interpreted with care because of the short sample on which they are based, overall they suggest that the forecasting gains from pooling procedures for EMU macroeconomic variables are limited, and there can be larger gains from forecast selection on a variable by variable basis.

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Table 1 – Forecasting models

**A. Linear methods**

ARF(X,Y,Z)	<i>Autoregressive models</i> (18 models) X = C (const.) or T (trend) Y = 0 (stationary), 1 (I(1)), P (pre-test) Z = 4 (4 lags), a (AIC), b (BIC)
EX(X)	<i>Exponential smoothing</i> (3 models) X = 1 (single), 2 (double), P (pre-test)

**B. Non-linear methods**

ARTVF(X,Y,Z)	<i>Time-varying AR models</i> (9 models) X = C (const.) Y = 0 (stationary), 1 (I(1)), P (pre-test) Z = 3 (3 lags), a (AIC), b (BIC)
LS(X,Y,Z)	<i>Logistic smooth transition</i> (6 models) X = 0 (stationary), 1 (I(1)), P (pre-test) Y = transition variable, 10 ( $Z_t = y_t$ ), 06 ( $Z_t = y_t - y_{t-6}$ ) Z = 3 (p, lag length)
LSF(X,W)	<i>Logistic smooth transition</i> (6 models) X = 0 (stationary), 1 (I(1)), P (pre-test) W = a (AIC on transition variable and p), b (BIC)
AN(X,Y,Z,W)	<i>Artificial neural network models</i> (9 models) X = 0 (stationary), 1 (I(1)), P (pre-test) Y = 2 ( $n_1$ ) Z = 0, 1, 2 ( $n_2$ ) W = 3 (p, lag length)
ANF(X,S)	<i>Artificial neural network models</i> (6 models) X = 0 (stationary), 1 (I(1)), P (pre-test) S = a (AIC on $n_1, n_2, p$ ), b (BIC)

**C. No Change**

NOCHANGE	<i>No change forecast</i> (1 model)
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**D. Pooling**

C(X,Y)	<i>Linear combination</i> (9 forecasts) X = 1 (combine A,B,C), 2 (A only), 3 (B only) Y = 0, 1, 5 (weight, w in equation (8))
M(X)	<i>Median combination</i> (3 forecasts) X = 1 (combine A,B,C), 2 (A only), 3 (B only)
P(X)	<i>Predictive least square combination</i> (4 forecasts) X = 1 (combine A,B,C), 2 (A only), 3 (B only), A (A,B,C,D)

Table 2 - Ranking of competing models with different loss functions

Rank	Horizon	$\rho=1$	$\rho=1.5$	$\rho=2$	$\rho=2.5$	$\rho=3$
1	h=1	C11	C11	C11	C11	C11
	h=3	C10	C11	C20	C20	C20
	h=6	C20	ARFC0a	ARFC0a	ARFC0a	ARFC0a
2	h=1	C10	C10	C10	C10	C10
	h=3	C11	C20	C11	C21	C21
	h=6	ARFC0a	ARFC04	ARFC04	ARFC04	ARFC04
3	h=1	m1	m1	m1	m1	C20
	h=3	C20	C10	C21	C11	C11
	h=6	ARFC04	ARFC0b	ARFC0b	ARFC0b	ARFC0b
4	h=1	C31	C20	C20	C20	m1
	h=3	C21	C21	C10	C10	C10
	h=6	C21	C20	C20	C20	C20
5	h=1	m3	m3	C21	C21	C21
	h=3	m1	m1	m1	ARFC04	ARFC04
	h=6	ARFC0b	C21	C21	C21	C21
6	h=1	C20	C31	m3	m3	m3
	h=3	C31	C31	ARFC04	m1	ARFC0a
	h=6	C11	C10	C10	C10	C10
7	h=1	C21	C21	C31	C31	C31
	h=3	m2	m2	C31	ARFC0a	ARFC0b
	h=6	C10	C11	C11	C11	C11
8	h=1	C30	C30	C30	C30	C30
	h=3	C30	ARFC04	ARFC0a	C31	m1
	h=6	m2	m2	m2	m2	ARTVFC 03
9	h=1	m2	m2	m2	m2	m2
	h=3	m3	C30	m2	ARFC0b	C31
	h=6	C31	C31	C31	ARTVFC 03	m2
10	h=1	P2	P2	P2	P2	ARFC04
	h=3	ARFC04	m3	ARFC0b	m2	m2
	h=6	m1	m1	m1	C31	m1

Notes:

See Table1 for definition of models

The loss function is  $Loss_m^h = \frac{1}{N} \sum_{n=1}^N \frac{Loss_{n,m}^h}{Loss_{n,1}^h}$ ,  $Loss_{n,m}^h = \frac{1}{T-h} \sum_{t=1}^{T-h} (e_{t+h,n,m})^r$ , where the

benchmark model is ARFC04 and  $e_{t+h}$  is the h-step ahead forecast error

Table 3a – Fraction of series for which a forecasting method has lowest msfe

Method	AR	ES	NoChange	ARTV	LSTAR	ANN	C	M	P
h=1	0.20	0.10	0.02	0.12	0.22	0.23	0.03	0.01	0.03
h=3	0.20	0.08	0.02	0.12	0.28	0.27	0.02	0.00	0.05
h=6	0.22	0.09	0.03	0.07	0.22	0.31	0.01	0.00	0.04

Notes:

Figures do not sum up to one because of rounding errors.

Table 3b – Fraction of series for which a forecasting model is in the top-N

	N=1	N=5	N=10	N=15	N=20
ARFT0b	0.03	0.11	0.19	0.25	0.32
	0.03	0.12	0.19	0.25	0.31
	0.04	0.12	0.18	0.23	0.28
EX1	0.04	0.14	0.22	0.26	0.3
	0.04	0.14	0.21	0.28	0.31
	0.04	0.15	0.23	0.27	0.32
ARTVFC03	0.03	0.13	0.2	0.26	0.34
	0.03	0.13	0.24	0.32	0.38
	0.01	0.06	0.17	0.26	0.33
LS0103	0.03	0.09	0.15	0.2	0.24
	0.05	0.15	0.21	0.27	0.32
	0.04	0.13	0.23	0.27	0.31
ANF0b	0.04	0.11	0.17	0.22	0.25
	0.04	0.12	0.2	0.25	0.28
	0.04	0.13	0.19	0.26	0.29
NOCHANGE	0.02	0.07	0.11	0.14	0.16
	0.02	0.09	0.14	0.17	0.2
	0.03	0.12	0.18	0.22	0.24
C20	0.01	0.03	0.12	0.27	0.48
	0.01	0.03	0.09	0.2	0.36
	0.01	0.03	0.08	0.16	0.28
m3	0.01	0.04	0.15	0.29	0.45
	0	0.02	0.07	0.17	0.31
	0	0.01	0.06	0.11	0.2
P1	0.01	0.09	0.16	0.23	0.3
	0.02	0.09	0.16	0.25	0.33
	0	0.08	0.19	0.26	0.33

Notes: See Table 1 for definition of models

The figures report the fraction of series for which a model is among the N models with the lowest msfe.

The reported models are the best performers in each class for N=1.

For each model, the three rows report result for, respectively, h=1,3,6.

Table 4 – Mean and percentiles of relative msfe for selected forecasting models

Forecast	Mean	0.02	0.10	0.25	0.50	0.75	0.90	0.98
C11	0.97	0.58	0.86	0.92	0.98	1.03	1.08	1.17
	0.98	0.39	0.72	0.88	0.98	1.09	1.21	1.55
	1.12	0.19	0.49	0.72	0.95	1.22	1.59	2.98
C20	0.98	0.65	0.87	0.93	0.98	1.03	1.09	1.21
	0.98	0.40	0.70	0.88	0.98	1.08	1.21	1.42
	1.06	0.19	0.48	0.72	0.96	1.27	1.61	2.52
ARFC0a	1.01	0.85	0.94	0.99	1.00	1.03	1.08	1.19
	1.01	0.77	0.92	0.98	1.00	1.04	1.08	1.21
	1.00	0.66	0.84	0.94	1.00	1.03	1.14	1.38
ARFT0b	1.08	0.67	0.87	0.95	1.02	1.11	1.30	1.93
	1.22	0.45	0.74	0.88	1.04	1.26	1.79	3.44
	1.84	0.19	0.49	0.75	1.08	1.84	2.99	9.79
ARTVFC03	1.03	0.72	0.90	0.96	1.01	1.07	1.17	1.52
	1.07	0.59	0.81	0.92	1.01	1.12	1.34	2.14
	1.24	0.37	0.62	0.86	1.04	1.29	1.96	3.94
EX1	1.50	0.65	0.85	0.94	1.05	1.26	2.02	5.00
	1.81	0.43	0.76	0.91	1.06	1.40	3.08	9.75
	3.55	0.16	0.44	0.76	1.07	1.78	5.24	20.32
ANF0b	1.31	0.66	0.88	0.98	1.08	1.24	1.53	2.15
	1.42	0.41	0.78	0.95	1.14	1.47	2.09	4.76
	2.75	0.16	0.48	0.87	1.30	2.15	4.13	12.17
LS0103	1.19	0.68	0.90	0.99	1.07	1.21	1.54	2.57
	1.35	0.50	0.79	0.96	1.09	1.32	1.81	4.17
	2.10	0.22	0.51	0.84	1.13	1.69	3.26	10.62
NOCHANGE	1.67	0.64	0.88	1.02	1.24	1.56	2.24	5.00
	1.90	0.42	0.77	0.95	1.22	1.63	3.04	9.75
	3.65	0.15	0.44	0.81	1.27	2.18	4.56	18.28
C20	0.98	0.65	0.87	0.93	0.98	1.03	1.09	1.21
	0.98	0.40	0.70	0.88	0.98	1.08	1.21	1.42
	1.06	0.19	0.48	0.72	0.96	1.27	1.61	2.52
m3	0.98	0.59	0.85	0.92	0.99	1.04	1.10	1.34
	1.02	0.41	0.70	0.87	0.98	1.10	1.29	1.95
	1.28	0.19	0.45	0.69	0.95	1.28	1.98	4.48
P1	1.16	0.56	0.83	0.95	1.04	1.14	1.33	1.81
	1.11	0.35	0.69	0.88	1.05	1.24	1.49	2.11
	1.44	0.18	0.42	0.76	1.01	1.58	2.48	5.19

Notes:

The models are the best in Table 2 and those in Table 3b. The benchmark model is ARFC04

For each forecast the three rows correspond to, respectively, h=1, 3, 6

See Table 1 for the definition of the models

Table 5 - Unstable series , ranking of competing models with different loss functions

Rank	Horizon	$\rho=1$	$\rho=1.5$	$\rho=2$	$\rho=2.5$	$\rho=3$
1	h=1	C11	C11	C11	C11	C11
	h=3	C11	C11	C11	C11	ARFC04
	h=6	ARFC0a	ARFC0a	ARFC0a	ARFC0a	ARFC0a
2	h=1	C10	C10	C10	C10	C10
	h=3	C10	C10	C10	C10	ARFC0a
	h=6	ARFC04	ARFC04	ARFC04	ARFC04	ARFC04
3	h=1	P2	C31	C31	C31	C31
	h=3	P3	C20	C20	ARFC0a	C11
	h=6	ARFC0b	ARFC0b	ARFC0b	ARFC0b	ARFC0b
4	h=1	C31	P2	P2	P2	P2
	h=3	C31	C21	C21	ARFC04	C10
	h=6	C21	C21	C20	C20	C20
5	h=1	P1	C30	C30	C20	C20
	h=3	C20	C31	ARFC0a	C20	C20
	h=6	C20	C20	C21	C21	C21
6	h=1	C30	C20	C20	C30	C21
	h=3	C21	ARFC0a	ARFC04	C21	ARFC0b
	h=6	C11	C11	C11	C10	ARFT1a
7	h=1	ARFT1b	ARFC04	C21	C21	ARFC04
	h=3	P1	ARFT1a	C31	ARFC0b	C21
	h=6	ARFT1a	ARFT1a	C10	ARFT1a	ARFT14
8	h=1	ARFT1a	C21	m1	m1	m1
	h=3	ARFT1a	P3	ARFC0b	C31	C31
	h=6	C10	C10	ARFT1a	C11	C10
9	h=1	ARFC04	m1	ARFC04	ARFC04	C30
	h=3	ARFC0a	P1	ARFT1a	ARFT1a	ARFT1a
	h=6	ARFT14	ARFT14	ARFT14	ARFT14	C11
10	h=1	m1	P1	m3	m3	m3
	h=3	C30	ARFC04	P1	C30	ARTVFC03
	h=6	ARFT1b	ARFT1b	ARFT1b	ARFT1b	ARFT1b

Notes:

See Table1 for definition of models

The loss function is  $Loss^h_m = \frac{1}{N} \sum_{n=1}^N \frac{Loss^h_{n,m}}{Loss^h_{n,1}}$ ,  $Loss^h_{n,m} = \frac{1}{T-h} \sum_{t=1}^{T-h} (e_{t+h,n,m})^r$ , where the

benchmark model is ARFC04 and  $e_{t+h}$  is the h-step ahead forecast error

Table 6a – Fraction of unstable series for which a forecasting method has lowest msfe

Method	AR	ES	NoChange	ARTV	LSTAR	ANN	C	M	P
h=1	0.15	0.04	0.04	0.15	0.21	0.28	0.03	0.02	0.05
h=3	0.15	0.06	0.01	0.16	0.27	0.17	0.03	0.01	0.1
h=6	0.22	0.06	0.05	0.06	0.28	0.27	0.02	0.01	0.03

Notes:

Figures do not sum up to one because of rounding errors.

Table 6b – Fraction of unstable series for which a forecasting model is in the top-N

	N=1	N=5	N=10	N=15	N=20
ARFT1b	0.02	0.11	0.26	0.34	0.37
	0.02	0.13	0.23	0.31	0.34
	0.04	0.14	0.24	0.29	0.34
EX1	0.01	0.1	0.18	0.21	0.26
	0.04	0.12	0.19	0.25	0.25
	0.04	0.13	0.19	0.22	0.27
ARTVFC03	0.07	0.19	0.28	0.38	0.48
	0.06	0.16	0.28	0.41	0.48
	0.02	0.05	0.19	0.3	0.34
LS0103	0.03	0.11	0.19	0.29	0.32
	0.05	0.24	0.28	0.34	0.41
	0.07	0.18	0.3	0.33	0.36
ANF0b	0.07	0.17	0.26	0.34	0.36
	0.03	0.13	0.25	0.31	0.34
	0.04	0.15	0.25	0.32	0.38
NOCHANGE	0.04	0.1	0.17	0.2	0.24
	0.01	0.1	0.16	0.19	0.21
	0.05	0.13	0.21	0.23	0.25
C20	0.01	0.04	0.09	0.19	0.38
	0.01	0.02	0.1	0.22	0.4
	0	0.03	0.1	0.21	0.31
m3	0.02	0.06	0.16	0.3	0.5
	0.01	0.01	0.05	0.13	0.28
	0	0.02	0.07	0.1	0.2
P1	0.01	0.16	0.24	0.34	0.43
	0.04	0.15	0.25	0.33	0.41
	0	0.09	0.19	0.29	0.42

Notes: See Table 1 for definition of models

The figures report the fraction of series for which a model is among the N models with the lowest msfe.

The reported models are the best performers in each class for N=1.

For each model, the three rows report result for, respectively, h=1,3,6.

Table 7 – Unstable series, mean and percentiles of relative msfe for selected forecasting models

Forecast	Mean	0.02	0.10	0.25	0.50	0.75	0.90	0.98
C11	0.98	0.71	0.86	0.92	0.98	1.03	1.09	1.37
	0.98	0.42	0.71	0.86	0.98	1.09	1.21	1.55
	1.23	0.19	0.39	0.68	0.91	1.32	2.01	3.37
ARFC0a	1.01	0.87	0.97	0.99	1.00	1.03	1.07	1.20
	0.99	0.74	0.89	0.97	1.00	1.04	1.08	1.20
	0.98	0.62	0.81	0.91	0.98	1.03	1.15	1.37
ARFT1b	1.01	0.69	0.84	0.95	1.01	1.06	1.18	1.45
	1.03	0.34	0.62	0.87	1.03	1.17	1.34	2.06
	1.29	0.14	0.35	0.68	1.01	1.29	2.74	5.19
EX1	1.59	0.70	0.86	0.95	1.09	1.48	2.14	4.57
	1.91	0.39	0.74	0.92	1.15	1.86	3.84	7.42
	2.83	0.15	0.4	0.79	1.36	2.63	6.23	18.26
ARTVFC03	1.01	0.68	0.85	0.92	0.99	1.05	1.17	1.53
	1.03	0.56	0.75	0.87	0.97	1.10	1.29	2.57
	1.33	0.28	0.5	0.83	1.03	1.47	2.05	3.94
LS0103	1.15	0.68	0.88	0.96	1.06	1.18	1.45	1.89
	1.19	0.46	0.73	0.87	1.05	1.35	1.73	2.89
	1.67	0.12	0.4	0.7	1.09	1.68	3.46	8.21
ANFPb	1.26	0.79	0.9	0.98	1.11	1.35	1.86	2.60
	1.33	0.45	0.75	0.94	1.16	1.65	2.22	3.08
	2.05	0.16	0.37	0.72	1.16	2.47	4.01	11.12
NOCHANGE	1.67	0.64	0.85	1.00	1.14	1.63	2.36	4.57
	1.94	0.36	0.73	0.94	1.18	1.96	3.84	7.42
	2.86	0.13	0.39	0.79	1.38	2.64	6.23	18.26
C20	1.00	0.75	0.88	0.94	1.00	1.05	1.12	1.30
	0.99	0.41	0.73	0.87	0.99	1.11	1.23	1.53
	1.15	0.19	0.48	0.71	0.95	1.37	1.91	3.84
m3	1.00	0.77	0.86	0.91	0.98	1.06	1.16	1.50
	1.06	0.41	0.69	0.85	1.01	1.19	1.48	2.04
	1.54	0.18	0.38	0.67	0.97	1.50	2.49	7.84
P1	1.01	0.50	0.76	0.92	1.00	1.11	1.25	1.59
	1.02	0.33	0.57	0.82	1.01	1.21	1.47	1.96
	1.59	0.14	0.31	0.59	0.98	1.89	2.99	8.40

Notes:

The models are the best from Table 5 and those from Table 6b. The benchmark model is ARFC04

For each forecast the three rows correspond to, respectively, h=1, 3, 6

See Table 1 for the definition of the models

Table 8 - Ranking of competing models with different loss functions, selected series

IP growth

Rank		$\rho=1$	$\rho=1.5$	$\rho=2$	$\rho=2.5$	$\rho=3$
1	h=1	C10	C31	C31	ARFTP4	ARFTP4
	h=3	ARFCP4	ARFCP4	ARFTP4	ARFCP4	ARFTP4
	h=6	ARFCPa	ARFTP4	ARFTP4	ARFCP4	ARTVFC13
2	h=1	C31	C10	ARFCP4	ARFC14	ARFC14
	h=3	ARFC14	ARFC14	ARFC14	ARFC14	ARFC14
	h=6	ARFTP4	ARFC14	ARFC14	ARFC14	ARTVFCP3

Unemployment (change)

Rank		$\rho=1$	$\rho=1.5$	$\rho=2$	$\rho=2.5$	$\rho=3$
1	h=1	NOCHANGE	ARTVFCP3	ARTVFCP3	ARTVFCP3	ARTVFC13
	h=3	C31	C30	C30	C30	C30
	h=6	ANP213	ANP213	m3	m3	m3
2	h=1	C20	ARTVFC13	ARTVFC13	ARTVFC13	ARTVFCP3
	h=3	m3	C31	C10	C10	C10
	h=6	AN1213	AN1213	C11	C21	C21

CPI inflation

Rank		$\rho=1$	$\rho=1.5$	$\rho=2$	$\rho=2.5$	$\rho=3$
1	h=1	ARFC04	ARFC04	ARFC04	ARFC04	ARFC04
	h=3	LS0103	ARFC04	ARFC04	ARFC04	ARFC04
	h=6	AN0223	ARFC04	ARFC04	ARFC0a	ARFC0a
2	h=1	P3999	ANF0b	ANF0b	ANF0b	ANF0b
	h=3	ARFC04	LS0103	LS0103	LS0103	LS0103
	h=6	ARFC04	AN0223	ARFC0a	ARFC04	ARFC04

Notes:

See Table1 for definition of models

The loss function is  $Loss^h_m = \frac{1}{N} \sum_{n=1}^N \frac{Loss^h_{n,m}}{Loss^h_{n,1}}$ ,  $Loss^h_{n,m} = \frac{1}{T-h} \sum_{t=1}^{T-h} (e_{t+h,n,m})^r$ , where the

benchmark model is ARFC04 and  $e_{t+h}$  is the h-step ahead forecast error

Unemployment for Portugal is not available



Table 9 - Fraction of series for which a forecasting method has lowest msfe

IP growth

Method	AR	ES	NoChange	ARTV	LSTAR	ANN	C	M	P
h=1	1/11	-	-	1/11	6/11	1/11	2/11	-	-
h=3	1/11	1/11	-	2/11	6/11	1/11	-	-	-
h=6	3/11	-	-	1/11	-	6/11	1/11	-	-

Unemployment (change)

Method	AR	ES	NoChange	ARTV	LSTAR	ANN	C	M	P
h=1	1/10	-	-	1/10	6/10	1/10	2/10	-	-
h=3	1/10	1/10	-	2/10	6/10	1/10	-	-	-
h=6	3/10	-	-	1/10	-	6/10	1/10	-	-

CPI inflation

Method	AR	ES	NoChange	ARTV	LSTAR	ANN	C	M	P
h=1	3/11	1/11	-	1/11	-	6/11	-	-	-
h=3	2/11	-	-	2/11	5/11	2/11	-	-	-
h=6	1/11	-	1/11	1/11	3/11	4/11	1/11	-	-

Notes:

Unemployment for Portugal is not available

## Appendix: The dataset

The first column reports the OECD identifier of the series. The second column reports \*\*\*, \*\*, \* when the Nyblom (1989) test for parameter stability rejects at the, respectively, 1%, 5%, and 10% level. The third column reports a brief description of the series.

### Austria

OECD Code	OECD Definition
7020349K	* Consumer goods, sa /Industrial production /PRODUCTION 1990=100 Austria /AUTNSO-OECD STATI
7020439K	Intermediate goods, sa /Industrial production /PRODUCTION 1990=100 Austria /AUTNSO-OECD ST
7020449K	Investment goods, sa /Industrial production /PRODUCTION 1990=100 Austria /AUTNSO-OECD STAT
7020519K	Total, sa /Industrial production /PRODUCTION 1990=100 Austria /AUTNSO-OECD STATISTICS, PAF
70206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Austria /INTISI-OECD STATISTICS, PAR
7032419K	Total: value, sa /Retail sales /DOMESTIC TRADE 1990=100 Austria /AUTNSO-OECD STATISTICS, F
7032439K	Durable goods: value, sa /Retail sales /DOMESTIC TRADE 1990=100 Austria /AUTNSO-OECD STAT
7032449K	RETAIL SALES (volume), sa 1990 = 100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7032519K	Total: value, sa /Wholesale sales /DOMESTIC TRADE 1990=100 Austria /AUTNSO-OECD STATISTIC
70325383	New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Austria /
70426780	Foreign workers /Employment /LABOUR '000 Austria /AUTLAB-OECD STATISTICS, PARIS"
70428283	Registered unemployed, sa /Unemployment /LABOUR '000 Austria /AUTLAB-OECD STATISTICS, PA
704284A3	Rate, sa /Unemployment /LABOUR % Austria /AUTLAB-OECD STATISTICS, PARIS"
70429983	*** Unfilled vacancies, sa /Labour - other /LABOUR (continued) '000 Austria /AUTLAB-OECD STATI
7043119H	Hourly rates /Wages /WAGES 1990=100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7043219K	Monthly earnings, sa /Wages /WAGES 1990=100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7043779H	PRODUCER PRICES (manufacturing) 1990 = 100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7044029H	** Agricultural goods /Wholesale prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PAF
7044119H	Food /Wholesale prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7044219H	* Petroleum products /Wholesale prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PA
7044259H	*** Transport equipment /Wholesale prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, P/
7044459H	Food /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7044479H	Fuel and electricity /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PA
7044559H	All items less food /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PAF
7044579H	All items less food less rent /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STATI
7044589H	Rent /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7044619H	All items /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STATISTICS, PARIS"
7044639H	All items excl. seasonal items /Consumer prices /PRICES 1990=100 Austria /AUTNSO-OECD STAT
7054821D	AUT MONETARY AGGREGATE M1 SA /MN SCHILLING Austria OECD STATISTICS, PARIS"
7054829D	MONETARY AGGREGATES, sa 1990 = 100 Austria /AUTCBA-OECD STATISTICS, PARIS"
7054831D	** AUT MONETARY AGGREGATE (M3) SA /MN SCHILLING Austria OECD STATISTICS, PARIS"
7054839D	** MONETARY AGGREGATES, sa 1990 = 100 Austria /AUTCBA-OECD STATISTICS, PARIS"
7054911A	* AUT SAVINGS DEPOSITS /MN SCHILLING Austria OECD STATISTICS, PARIS"
7054911X	AUT FOREIGN EXCHANGE DEPOSITS /MN SCHILLING Austria OECD STATISTICS, PARIS"
7055111A	** AUT QUASI-MONEY /MN SCHILLING Austria OECD STATISTICS, PARIS"
7055251A	** Domestic credit /Domestic finance /DOMESTIC FINANCE S bln Austria /AUTCBA-OECD STATISTICS
705561AH	Official discount /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Austria /AUTCBA-OE
7055809H	VSE WBI Index /Share prices /INTEREST RATES - SHARE PRICES 1990=100 Austria /AUTSTE-OEC
705581AH	Yield of public sector bonds /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Austria
7056009H	EFFECTIVE EXCHANGE RATES 1990 = 100 Austria /OECD-OECD STATISTICS, PARIS"
705601AH	EXCHANGE RATES National currency units per US dollar Austria /OECD-OECD STATISTICS, PARIS
705611AS	** Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Austria /INTIMF
7056151A	Net foreign position /Foreign finance /FOREIGN FINANCE S bln Austria /AUTCBA-OECD STATISTI
70663200	Current account balance /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCBA-C
70663250	AUT BOP CURRENT BALANCE /MN US DOLLARS Austria OECD STATISTICS, PARIS"
70663400	Net current transfers /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCBA-OEC
70663500	Financial account balance /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCBA
70663600	Net services /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCBA-OECD STATI
70663700	Net errors and omissions /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCBA-
70663900	** Change in official reserves /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCB
70664000	Net investment income /Balance of payments /BALANCE OF PAYMENTS S mln Austria /AUTCBA-OE
70765103	Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE S bln Austria /AUTNSO-OECD STA
70765253	FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Aust
70765303	Imports c.i.f., sa /Foreign trade /FOREIGN TRADE S bln Austria /AUTNSO-OECD STATISTICS, PA
70765553	FOREIGN TRADE - Ftr Imports (fob/cif) Total, sa Billions US dollars; monthly averages Aust
70765603	Exports f.o.b., sa /Foreign trade /FOREIGN TRADE S bln Austria /AUTNSO-OECD STATISTICS, PA
70765753	FOREIGN TRADE - Ftr Exports Fob Total, sa Billions US dollars; monthly averages Austria /A

## Belgium

OECD Code	OECD Definition
2220339K	Construction, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO-OECD STATISTI
2220359K	Consumer durable goods, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO-OEC
2220369K	Consumer non-durable goods, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO
2220439K	Intermediate goods, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO-OECD ST
2220449K	Investment goods, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO-OECD STAT
2220459K	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO-OECD STATIS
2220519K	Total, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELNSO-OECD STATISTICS, PAR
2220539K	Total including construction, sa /Industrial production /PRODUCTION 1990=100 Belgium /BELN
22206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Belgium /INTISI-OECD STATISTICS, PAR
2232048X	BEL CON BUILDING STARTED RESID /CUB METERS Belgium OECD STATISTICS, PARIS"
22321180	Total /Permits issued /CONSTRUCTION cu. m. '000 Belgium /BELNSO-OECD STATISTICS, PARIS"
22321283	Residential, sa /Permits issued /CONSTRUCTION cu. m. '000 Belgium /BELNSO-OECD STATISTICS,
22321480	Total /Buildings started /CONSTRUCTION cu. m. '000 Belgium /BELNSO-OECD STATISTICS, PARIS"
22321780	CONSTRUCTION Thousands; monthly averages Belgium /BELNSO-OECD STATISTICS, PARIS"
2232419K	Total: value, sa /Retail sales /DOMESTIC TRADE 1990=100 Belgium /BELNSO-OECD STATISTICS, P
2232449Y	Total: volume, sa /Retail sales /DOMESTIC TRADE 1990=100 Belgium /BELNSO-OECD STATISTICS,
22325383	New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Belgium /
224280A3	Rate, sa /Unemployment /LABOUR % Belgium /BELLAB-OECD STATISTICS, PARIS"
22428183	Total, sa /Unemployment /LABOUR '000 Belgium /BELNSO-OECD STATISTICS, PARIS"
224284A0	* BEL UNEMPLOY. % CIV. LAB. FORCE /PERCNT Belgium OECD STATISTICS, PARIS"
224284AX	BEL UNEMPL % INSURED LAB FORCE /PERCNT Belgium OECD STATISTICS, PARIS"
224286A3	STANDARDISED UNEMPLOYMENT RATES, sa Per cent Belgium /INTEUR-OECD STATISTICS, PARIS"
2243459H	*** Chemicals /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2243479H	** Consumer goods /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2243529H	Food, beverages and tobacco /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATIS
2243649H	Intermediate goods /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARI
2243659H	** Investment goods /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2243749H	Petroleum products /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARI
2243759H	Textiles and clothing /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, P
2243779H	Manufactured goods /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARI
2243869H	Total /Producer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2244449H	BEL CPI ENERGY //90 Belgium OECD STATISTICS, PARIS"
2244459H	*** Food /Consumer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2244479H	Fuel and electricity /Consumer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PA
2244499H	All goods less food /Consumer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PAR
2244559H	* BEL CPI NON FOOD //90 Belgium OECD STATISTICS, PARIS"
2244589H	** Rent /Consumer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2244599H	*** Services less rent /Consumer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARI
2244619H	*** All items /Consumer prices /PRICES 1990=100 Belgium /BELNSO-OECD STATISTICS, PARIS"
2254829D	MONETARY AGGREGATES, sa 1990 = 100 Belgium /BELCBA-OECD STATISTICS, PARIS"
2254839D	** MONETARY AGGREGATES, sa 1990 = 100 Belgium /BELCBA-OECD STATISTICS, PARIS"
225567AH	Treasury certificates /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Belgium /BELCB
225578AH	Yield of government bonds /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Belgium /B
2256009H	EFFECTIVE EXCHANGE RATES 1990 = 100 Belgium /OECD-OECD STATISTICS, PARIS"
225601AH	EXCHANGE RATES National currency units per US dollar Belgium /OECD-OECD STATISTICS, PARIS"
225611AS	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Belgium /INTIMF
22765103	** Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE FB bln Belgium /BELNSO-OECD ST
22765303	Imports c.i.f., sa /Foreign trade /FOREIGN TRADE FB bln Belgium /BELNSO-OECD STATISTICS, P
22765603	*** Exports f.o.b., sa /Foreign trade /FOREIGN TRADE FB bln Belgium /BELNSO-OECD STATISTICS, P

## Finland

OECD Code	OECD Definition
6420349J	Consumer goods, sa /Industrial production /PRODUCTION 1990=100 Finland /FINNSO-OECD STATIS
6420439J	Intermediate goods, sa /Industrial production /PRODUCTION 1990=100 Finland /FINNSO-OECD ST
6420449J	* Investment goods, sa /Industrial production /PRODUCTION 1990=100 Finland /FINNSO-OECD STAT
6420459J	*** Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Finland /FINNSO-OECD STATIS
6420519J	** Total, sa /Industrial production /PRODUCTION 1990=100 Finland /FINNSO-OECD STATISTICS, PAR
64206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Finland /INTISI-OECD STATISTICS, PAR
64207182	Wood fellings, sa /Commodity output /PRODUCTION cu. m. mln Finland /FINNSO-OECD STATISTICS
64321180	Total /Permits issued /CONSTRUCTION cu. m. mln Finland /FINNSO-OECD STATISTICS, PARIS"
64321280	Residential /Permits issued /CONSTRUCTION cu. m. mln Finland /FINNSO-OECD STATISTICS, PARI

6432239H	**	Total /Cost of construction /CONSTRUCTION 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6432449J	**	Volume, sa /Retail sales /DOMESTIC TRADE 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6432519J	*	Value, sa /Wholesale sales /DOMESTIC TRADE 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS
64325383	*	New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Finland /
6432589J	*	Volume, sa /Wholesale sales /DOMESTIC TRADE 1990=100 Finland /FINNSO-OECD STATISTICS, PARI
64426580	**	FIN EMPLOYMENT TOTAL /PERSONS Finland OECD STATISTICS, PARIS"
6442659H	**	TOTAL EMPLOYMENT 1990 = 100 Finland /FINNSO-OECD STATISTICS, PARIS"
64426883	**	FIN EMPLOYMENT INDUSTRY SA /PERSONS Finland OECD STATISTICS, PARIS"
64427480	*	Part-time (economic reasons) /Employment /LABOUR '000 Finland /FINNSO-OECD STATISTICS, PAR
644280A2	***	Rate, sa /Unemployment /LABOUR % Finland /FINNSO-OECD STATISTICS, PARIS"
64428182	***	Total, sa /Unemployment /LABOUR '000 Finland /FINNSO-OECD STATISTICS, PARIS"
64429180		Total hours worked: industry /Labour - other /LABOUR hrs mln Finland /FINNSO-OECD STATISTI
64429983		Unfilled vacancies, sa /Labour - other /LABOUR '000 Finland /FINNSO-OECD STATISTICS, PARIS
6443479H	**	Consumer goods /Producer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6443649H		Intermediate goods /Producer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARI
6443659H		Investment goods /Producer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6443749H	**	Petroleum products /Producer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARI
6443869H		PRODUCER PRICES (manufacturing) 1990 = 100 Finland /FINNSO-OECD STATISTICS, PARIS"
6444419H	**	Beverages and tobacco /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, P
6444459H	**	Food /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6444479H	**	Fuel and electricity /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PA
6444509H	**	All items less food less housing /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD ST
6444529H	***	Housing /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6444559H	**	All items less food /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PAR
6444619H	**	All items /Consumer prices /PRICES 1990=100 Finland /FINNSO-OECD STATISTICS, PARIS"
6444709H	**	FIN CPI NON FOOD NON ENERGY /I/90 Finland OECD STATISTICS, PARIS"
6454821D		Monetary aggregate (M1), sa /Domestic finance /DOMESTIC FINANCE Fmk bln Finland /FINCBA-OE
6454829D		MONETARY AGGREGATES, sa 1990 = 100 Finland /FINCBA-OECD STATISTICS, PARIS"
6454831D	***	Monetary aggregate (M3), sa /Domestic finance /DOMESTIC FINANCE Fmk bln Finland /FINCBA-OE
6454839D	***	MONETARY AGGREGATES, sa 1990 = 100 Finland /FINCBA-OECD STATISTICS, PARIS"
6454841B	***	Monetary aggregate (M2), sa /Domestic finance /DOMESTIC FINANCE Fmk bln Finland /FINCBA-OE
6455231A		Credit to economy /Domestic finance /DOMESTIC FINANCE Fmk bln Finland /FINCBA-OECD STATIST
645561AH		Base rate /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Finland /FINCBA-OECD STATI
6455631H		Liquidity credit rate /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Finland /FINCB
6455849H		HEX All Share Index /Share prices /INTEREST RATES - SHARE PRICES 1990=100 Finland /FINCBA-
6456009H		EFFECTIVE EXCHANGE RATES 1990 = 100 Finland /OECD-OECD STATISTICS, PARIS"
645601AH		EXCHANGE RATES National currency units per US dollar Finland /OECD-OECD STATISTICS, PARIS"
645611AS	*	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Finland /INTIMF
64663100	***	Trade balance /Balance of payments /BALANCE OF PAYMENTS Fmk bln Finland /FINCBA-OECD STATI
64663200	*	Current account balance /Balance of payments /BALANCE OF PAYMENTS Fmk bln Finland /FINCBA-
64663400		Net current transfers /Balance of payments /BALANCE OF PAYMENTS Fmk bln Finland /FINCBA-OE
64663500		Financial account balance /Balance of payments /BALANCE OF PAYMENTS Fmk bln Finland /FINCB
64663700		Net errors and omissions /Balance of payments /BALANCE OF PAYMENTS Fmk bln Finland /FINCBA
64664000		Net investment income /Balance of payments /BALANCE OF PAYMENTS Fmk bln Finland /FINCBA-OE
64765303		Imports c.i.f., sa /Foreign trade /FOREIGN TRADE Fmk bln Finland /FINNSO-OECD STATISTICS,
64765603		Exports f.o.b., sa /Foreign trade /FOREIGN TRADE Fmk bln Finland /FINNSO-OECD STATISTICS,

## France

OECD Code	OECD Definition
1420339J	Construction, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STATISTIC
1420349J	Consumer goods, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STATIST
1420399J	Energy, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STATISTICS, PAR
1420439J	Intermediate goods, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STA
1420449J	Investment goods, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STATI
1420459J	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STATISTI
1420519J	Total, sa /Industrial production /PRODUCTION 1990=100 France /FRANSO-OECD STATISTICS, PARI
14206183	Passenger cars, sa /Commodity output /PRODUCTION '000 France /FRAND-OECD STATISTICS, PARI
14206780	Crude steel /Commodity output /PRODUCTION tonnes '000 France /INTISI-OECD STATISTICS, PARI
14321780	CONSTRUCTION Thousands; monthly averages France /FRATRA-OECD STATISTICS, PARIS"
1432419J	*** Value, sa /Retail sales /DOMESTIC TRADE 1990=100 France /FRACHA-OECD STATISTICS, PARIS"
1432449J	Volume, sa /Retail sales /DOMESTIC TRADE 1990=100 France /FRACHA-OECD STATISTICS, PARIS"
14325382	New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 France /F
1432549J	Manufact. products - 1980 prices, sa /Retail sales /DOMESTIC TRADE 1990=100 France /FRANSO
14428282	Registered unemployed, sa /Unemployment /LABOUR '000 France /FRALAB-OECD STATISTICS, PARIS
144286A3	STANDARDISED UNEMPLOYMENT RATES, sa Per cent France /INTEUR-OECD STATISTICS, PARIS"
1442879J	New jobseekers, sa /Unemployment /LABOUR 1990=100 France /FRALAB-OECD STATISTICS, PARIS"

1443249H	***	Labour cost: engineering industries /Wages /WAGES 1990=100 France /FRANSO-OECD STATISTICS, PAR
1443259H	***	Labour cost: textile industries /Wages /WAGES 1990=100 France /FRANSO-OECD STATISTICS, PAR
1443419J		Agricultural goods, sa /Producer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, P
1443459H		Chemicals /Producer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS"
1443649H		Intermediate goods /Producer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS
1443699H		Metal products /Producer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS"
1443809H		FRA WPI INTERM PRICE OF RAW MATER //90 France OECD STATISTICS, PARIS"
1444449H		FRA CPI ENERGY //90 France OECD STATISTICS, PARIS"
1444459H	***	Food /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS"
1444479H		Fuel and electricity /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PAR
1444499H	***	All goods less food /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARI
1444559H	**	All items less food /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARI
1444589H	***	Rent /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS"
1444599H	***	Services less rent /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS
1444619H	**	All items /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS"
1444659H	**	Paris: all items /Consumer prices /PRICES 1990=100 France /FRANSO-OECD STATISTICS, PARIS"
1454822B	**	Monetary aggregate (M1), sa /Domestic finance /DOMESTIC FINANCE FF bln France /FRACBA-OECD
1454829B	**	MONETARY AGGREGATES, sa 1990 = 100 France /FRACBA-OECD STATISTICS, PARIS"
1454832B	**	Monetary aggregate (M3), sa /Domestic finance /DOMESTIC FINANCE FF bln France /FRACBA-OECD
1454839B	**	MONETARY AGGREGATES, sa 1990 = 100 France /FRACBA-OECD STATISTICS, PARIS"
1454892B		Investment aggregate (P1), sa /Domestic finance /DOMESTIC FINANCE FF bln France /FRACBA-OE
1455631H		Call money /Interest rates /INTEREST RATES - SHARE PRICES % p.a. France /FRACBA-OECD STATI
145565AH		3-month PIBOR /Interest rates /INTEREST RATES - SHARE PRICES % p.a. France /FRACBA-OECD ST
145581AH		Bonds: public and semi-public /Interest rates /INTEREST RATES - SHARE PRICES % p.a. France
1455849H		Paris Stock Exchange: SBF 250 /Share prices /INTEREST RATES - SHARE PRICES 1990=100 France
1456009H		EFFECTIVE EXCHANGE RATES 1990 = 100 France /OECD-OECD STATISTICS, PARIS"
145601AH		EXCHANGE RATES National currency units per US dollar France /OECD-OECD STATISTICS, PARIS"
145611AS	**	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln France /INTIMF-
14765102		Net trade (f.o.b.-f.o.b.), sa /Foreign trade /FOREIGN TRADE FF bln France /FRACUS-OECD STA
14765252		FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Fran
14765302		Imports f.o.b., sa /Foreign trade /FOREIGN TRADE FF bln France /FRACUS-OECD STATISTICS, PA
14765552		FOREIGN TRADE - Ftr Imports (fob/cif) Total, sa Billions US dollars; monthly averages Fran
14765602		Exports f.o.b., sa /Foreign trade /FOREIGN TRADE FF bln France /FRACUS-OECD STATISTICS, PA
14765752		FOREIGN TRADE - Ftr Exports Fob Total, sa Billions US dollars; monthly averages France /FR

## Germany

OECD Code	OECD Definition
1220519J	INDUSTRIAL PRODUCTION, sa 1990 = 100 Germany /DEUCBA-OECD STATISTICS, PARIS"
12206180	Passenger cars /Commodity output /PRODUCTION '000 Germany /DEUNSO-OECD STATISTICS, PARIS"
12206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Germany /INTISI-OECD STATISTICS, PAR
12321100	Total /Permits issued /CONSTRUCTION DM bln Germany /DEUNSO-OECD STATISTICS, PARIS"
12321200	Residential /Permits issued /CONSTRUCTION DM bln Germany /DEUNSO-OECD STATISTICS, PARIS"
1232449K	** RETAIL SALES (volume), sa 1990 = 100 Germany /OECD-OECD STATISTICS, PARIS"
12325383	New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Germany /
1242669K	DEU CIVILIAN EMPLOYMENT SA //90 Germany OECD STATISTICS, PARIS"
12427183	Manufacturing, sa /Employment /LABOUR '000 Germany /DEUNSO-OECD STATISTICS, PARIS"
12427480	Part-time (economic reasons) /Employment /LABOUR '000 Germany /DEUNSO-OECD STATISTICS, PAR
12428280	Registered unemployed /Unemployment /LABOUR '000 Germany /DEULAB-OECD STATISTICS, PARIS"
124286A3	STANDARDISED UNEMPLOYMENT RATES, sa -- ADJUSTED Down by 2% in xxx (AC) Per cent Germany
12429180	Monthly hours of work /Labour - other /LABOUR hrs mln Germany /DEULAB-OECD STATISTICS, PAR
12430082	Unfilled vacancies, sa /Labour - other /LABOUR '000 Germany /DEUCBA-OECD STATISTICS, PARIS
1243569H	PRODUCER PRICES (manufacturing) 1990 = 100 Germany /DEUNSO-OECD STATISTICS, PARIS"
1244619H	CONSUMER PRICES 1990 = 100 Germany /DEUNSO-OECD STATISTICS, PARIS"
1254821B	Monetary aggregate (M1), sa /Domestic finance /DOMESTIC FINANCE DM bln Germany /DEUCBA-OEC
1254829B	MONETARY AGGREGATES, sa 1990 = 100 Germany /DEUCBA-OECD STATISTICS, PARIS"
1254829D	DEU MONETARY AGGT M1 RFA+RDA EST SA //90 Germany OECD STATISTICS, PARIS"
1254831B	Monetary aggregate (M3), sa /Domestic finance /DOMESTIC FINANCE DM bln Germany /DEUCBA-OEC
1254839B	MONETARY AGGREGATES, sa 1990 = 100 Germany /DEUCBA-OECD STATISTICS, PARIS"
1254839D	DEU M1 + QUASI MONEY RFA+RDA(EST)SA //90 Germany OECD STATISTICS, PARIS"
1254841B	Monetary aggregate (M2), sa /Domestic finance /DOMESTIC FINANCE DM bln Germany /DEUCBA-OEC
1254911A	Personal savings deposits /Domestic finance /DOMESTIC FINANCE DM bln Germany /DEUCBA-OECD
1254931B	Monetary aggregate (M3+), sa /Domestic finance /DOMESTIC FINANCE DM bln Germany /DEUCBA-OE
1255231D	Credit to economy, sa /Domestic finance /DOMESTIC FINANCE DM bln Germany /DEUCBA-OECD STAT
125561AH	Official discount /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Germany /DEUCBA-OE
1255631H	* Call money /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Germany /DEUCBA-OECD STAT
125565AH	3-month FIBOR /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Germany /DEUCBA-OECD S
125581AH	Public sector bond yield /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Germany /DE

1255849H	CDAX Share Price Index /Share prices /INTEREST RATES - SHARE PRICES 1990=100 Germany /DEUN
1256009H	EFFECTIVE EXCHANGE RATES 1990 = 100 Germany /OECD-OECD STATISTICS, PARIS"
125611AS	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Germany /INTIMF
1256151A	Net foreign position /Foreign finance /FOREIGN FINANCE DM bln Germany /DEUCBA-OECD STATIST
12663200	Current account balance /Balance of payments /BALANCE OF PAYMENTS DM bln Germany /DEUCBA-O
12663250	FDR/DEU BOP CURRENT BALANCE /MN US DOLLARS Germany OECD STATISTICS, PARIS"
12663500	Financial account balance /Balance of payments /BALANCE OF PAYMENTS DM bln Germany /DEUCBA
12663700	Net errors and omissions /Balance of payments /BALANCE OF PAYMENTS DM bln Germany /DEUCBA-
12663900	Change in official reserves /Balance of payments /BALANCE OF PAYMENTS DM bln Germany /DEUC
12765102	Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE DM bln Germany /DEUNSO-OECD ST
12765252	FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Germ
12765302	Imports c.i.f., sa /Foreign trade /FOREIGN TRADE DM bln Germany /DEUNSO-OECD STATISTICS, P
12765552	FOREIGN TRADE - Ftr Imports (fob/cif) Total, sa Billions US dollars; monthly averages Germ
12765602	Exports f.o.b., sa /Foreign trade /FOREIGN TRADE DM bln Germany /DEUNSO-OECD STATISTICS, P
12765752	FOREIGN TRADE - Ftr Exports Fob Total, sa Billions US dollars; monthly averages Germany /D

## Ireland

OECD Code	OECD Definition
2820349J	Consumer goods, sa /Industrial production /PRODUCTION 1990=100 Ireland /IRLNSO-OECD STATIS
2820439J	Intermediate goods, sa /Industrial production /PRODUCTION 1990=100 Ireland /IRLNSO-OECD ST
2820449J	Investment goods, sa /Industrial production /PRODUCTION 1990=100 Ireland /IRLNSO-OECD STAT
2820459J	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Ireland /IRLNSO-OECD STATIS
2820519J	Total, sa /Industrial production /PRODUCTION 1990=100 Ireland /IRLNSO-OECD STATISTICS, PAR
2832249H	** Residential /Cost of construction /CONSTRUCTION 1990=100 Ireland /IRLENO-OECD STATISTICS,
2832419J	Value, sa /Retail sales /DOMESTIC TRADE 1990=100 Ireland /IRLNSO-OECD STATISTICS, PARIS"
2832449J	** Volume, sa /Retail sales /DOMESTIC TRADE 1990=100 Ireland /IRLNSO-OECD STATISTICS, PARIS"
28325383	** New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Ireland /
28427480	Part-time (economic reasons) /Employment /LABOUR '000 Ireland /IRLNSO-OECD STATISTICS, PAR
28428282	Registered unemployed, sa /Unemployment /LABOUR '000 Ireland /IRLNSO-OECD STATISTICS, PARI
284286A3	STANDARDISED UNEMPLOYMENT RATES, sa Per cent Ireland /INTEUR-OECD STATISTICS, PARIS"
2844049H	Investment goods /Wholesale prices /PRICES 1990=100 Ireland /IRLNSO-OECD STATISTICS, PARIS
2844119H	Food /Wholesale prices /PRICES 1990=100 Ireland /IRLNSO-OECD STATISTICS, PARIS"
2844189H	Manufactured goods /Wholesale prices /PRICES 1990=100 Ireland /IRLNSO-OECD STATISTICS, PAR
2844269H	** Total /Wholesale prices /PRICES 1990=100 Ireland /IRLNSO-OECD STATISTICS, PARIS"
2854829D	*** MONETARY AGGREGATES, sa 1990 = 100 Ireland /IRLCBA-OECD STATISTICS, PARIS"
2855631H	Call money /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Ireland /IRLCBA-OECD STAT
2855809H	ISEQ Index - Overall /Share prices /INTEREST RATES - SHARE PRICES 1990=100 Ireland /IRLCBA
2856009H	EFFECTIVE EXCHANGE RATES 1990 = 100 Ireland /OECD-OECD STATISTICS, PARIS"
285601AH	EXCHANGE RATES National currency units per US dollar Ireland /OECD-OECD STATISTICS, PARIS"
285611AS	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Ireland /INTIMF
28765102	Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE pdlr mln Ireland /IRLNSO-OECD
28765252	FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Irel
28765302	* Imports c.i.f., sa /Foreign trade /FOREIGN TRADE pdlr mln Ireland /IRLNSO-OECD STATISTICS,
28765552	FOREIGN TRADE - Ftr Imports (fob/cif) Total, sa Billions US dollars; monthly averages Irel
28765602	Exports f.o.b., sa /Foreign trade /FOREIGN TRADE pdlr mln Ireland /IRLNSO-OECD STATISTICS,
28765752	FOREIGN TRADE - Ftr Exports Fob Total, sa Billions US dollars; monthly averages Ireland /I

## Italy

OECD Code	OECD Definition
1620349J	Consumer goods, sa /Industrial production /PRODUCTION 1990=100 Italy /ITANSO-OECD STATISTI
1620439J	Industrial materials, sa /Industrial production /PRODUCTION 1990=100 Italy /ITANSO-OECD ST
1620449J	Investment goods, sa /Industrial production /PRODUCTION 1990=100 Italy /ITANSO-OECD STATIS
1620459J	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Italy /ITANSO-OECD STATIS
1620519J	Total, sa /Industrial production /PRODUCTION 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS
16206180	Passenger cars /Commodity output /PRODUCTION '000 Italy /ITANSO-OECD STATISTICS, PARIS"
16206480	Commercial vehicles /Commodity output /PRODUCTION '000 Italy /ITANSO-OECD STATISTICS, PARI
16206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Italy /INTISI-OECD STATISTICS, PARIS
1631299H	* Consumer goods /Sales /MANUFACTURING 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1631309H	Intermediate goods /Sales /MANUFACTURING 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1631319H	Investment goods /Sales /MANUFACTURING 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1631329H	Total /Sales /MANUFACTURING 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1632019H	* Total /New orders /MANUFACTURING 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"

1632249H	***	Residential /Cost of construction /CONSTRUCTION 1990=100 Italy /ITANSO-OECD STATISTICS, PA
1632419K	*	Major outlets: value, sa /Retail sales /DOMESTIC TRADE 1990=100 Italy /ITANSO-OECD STATIST
1632449K		RETAIL SALES (volume), sa 1990 = 100 Italy /ITANSO-OECD STATISTICS, PARIS"
16325383		New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Italy /IT
164286A3		STANDARDISED UNEMPLOYMENT RATES, sa Per cent Italy /INTEUR-OECD STATISTICS, PARIS"
16429880	*	Labour disputes: time lost /Labour - other /LABOUR hrs '000 Italy /ITANSO-OECD STATISTICS,
1643119H	**	Hourly rates /Wages /WAGES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1643429H	*	Machinery and equipment /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, P
1643459H	***	Chemical products /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1643529H		Food,, beverages and tobacco /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTI
1643709H	***	Non-metallic mineral products /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATIST
1643719H		Metal and metal products /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS,
1643749H		Petroleum products /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1643759H		Textiles and clothing /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PAR
1643869H		Total /Producer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1644419H		Beverages and tobacco /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PAR
1644459H	*	Food /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1644489H		Fuel and electricity /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARI
1644499H	**	All goods less food /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS
1644559H		All items less food /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS
1644589H		Rent /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1644599H		Services less rent /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1644619H		All items /Consumer prices /PRICES 1990=100 Italy /ITANSO-OECD STATISTICS, PARIS"
1644679H		CONSUMER PRICES 1990 = 100 Italy /ITANSO-OECD STATISTICS, PARIS"
1654822D	***	Monetary aggregate (M1), sa /Domestic finance /DOMESTIC FINANCE Lit '000 bln Italy /ITACBA
1654832A	**	ITA TOTAL LIQUIDITY /BN ITA LIRA Italy OECD STATISTICS, PARIS"
1654833D	**	Monetary aggregate (M2), sa /Domestic finance /DOMESTIC FINANCE Lit '000 bln Italy /ITACBA
1654839D	**	MONETARY AGGREGATES, sa 1990 = 100 Italy /ITACBA-OECD STATISTICS, PARIS"
165498AH	**	3-month interbank deposits /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Italy /IT
1655121A		Gross bond issues: public sector /Domestic finance /DOMESTIC FINANCE Lit '000 bln Italy /I
1655131A		Gross bond issues: banking sector /Domestic finance /DOMESTIC FINANCE Lit '000 bln Italy /
1655251A	*	Domestic credit /Domestic finance /DOMESTIC FINANCE Lit '000 bln Italy /ITACBA-OECD STATIS
1655292A		Finance to the non state sector /Domestic finance /DOMESTIC FINANCE Lit '000 bln Italy /IT
1655751H		Bond yield /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Italy /ITACBA-OECD STATIS
165578AH		Long-term treasury bonds /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Italy /ITAC
1655849H		ISE MIB Storico /Share prices /INTEREST RATES - SHARE PRICES 1990=100 Italy /ITACBA-OECD S
1656009H		EFFECTIVE EXCHANGE RATES 1990 = 100 Italy /OECD-OECD STATISTICS, PARIS"
165601AH		EXCHANGE RATES National currency units per US dollar Italy /OECD-OECD STATISTICS, PARIS"
165611AS		Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Italy /INTIMF-O
1656152A		Net foreign position /Foreign finance /FOREIGN FINANCE Lit '000 bln Italy /ITACBA-OECD STA
16663100		Trade balance /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /ITACBA-OECD ST
16663200		Current account balance /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /ITAC
16663250		ITA BOP CURRENT BALANCE US \$ /MN US \$ Italy OECD STATISTICS, PARIS"
16663400		Net current transfers /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /ITACBA
16663500		Financial account balance /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /IT
16663600		Net services /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /ITACBA-OECD STA
16663700		Net errors and omissions /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /ITA
16663900		Change in official reserves /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /
16664000		Net income /Balance of payments /BALANCE OF PAYMENTS Lit '000 bln Italy /ITACBA-OECD STATI
16765103		Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE Lit bln Italy /ITASCO-OECD STA
16765253		FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Ital
16765303	*	Imports c.i.f., sa /Foreign trade /FOREIGN TRADE Lit bln Italy /ITASCO-OECD STATISTICS, PA
16765553	**	FOREIGN TRADE - Ftr Imports (fob/cif) Total, sa Billions US dollars; monthly averages Ital
16765603		Exports f.o.b., sa /Foreign trade /FOREIGN TRADE Lit bln Italy /ITASCO-OECD STATISTICS, PA
16765753	*	FOREIGN TRADE - Ftr Exports Fob Total, sa Billions US dollars; monthly averages Italy /ITA

## Luxembourg

OECD Code	OECD Definition
2420339K	Construction, sa /Industrial production /PRODUCTION 1990=100 Luxembourg /LUXNSO-OECD STATI
2420459K	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Luxembourg /LUXNSO-OECD STAT
2420519K	Total, sa /Industrial production /PRODUCTION 1990=100 Luxembourg /LUXNSO-OECD STATISTICS,
24206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Luxembourg /INTISI-OECD STATISTICS,
24321383	Permits issued, sa /Construction /CONSTRUCTION number Luxembourg /LUXNSO-OECD STATISTICS,
24325383	New passenger car registrations, sa /Domestic trade /DOMESTIC TRADE number Luxembourg /LUX
2442699H	Industry: employees /Employment /LABOUR 1990=100 Luxembourg /LUXNSO-OECD STATISTICS, PARIS
24427080	Iron and steel: wage earners /Employment /LABOUR '000 Luxembourg /LUXNSO-OECD STATISTICS,

24428283	Registered unemployed, sa /Unemployment /LABOUR number Luxembourg /LUXNSO-OECD STATISTICS,
244286A3	STANDARDISED UNEMPLOYMENT RATES, sa Per cent Luxembourg /INTEUR-OECD STATISTICS, PARI
2442929H	Monthly hours of work /Labour - other /LABOUR 1990=100 Luxembourg /LUXNSO-OECD STATISTICS,
24429983	Unfilled vacancies, sa /Labour - other /LABOUR number Luxembourg /OECD-OECD STATISTICS, PA
2443159H	Monthly earnings /Wages /WAGES 1990=100 Luxembourg /LUXNSO-OECD STATISTICS, PARIS"
2443589H	Industrial goods /Producer prices /PRICES 1990=100 Luxembourg /LUXNSO-OECD STATISTICS, PAR
2444459H	Food /Consumer prices /PRICES 1990=100 Luxembourg /LUXNSO-OECD STATISTICS, PARIS"
2444479H	Fuel and electricity /Consumer prices /PRICES 1990=100 Luxembourg /LUXNSO-OECD STATISTICS,
2444559H	All items less food /Consumer prices /PRICES 1990=100 Luxembourg /LUXNSO-OECD STATISTICS,
2444619H	All items /Consumer prices /PRICES 1990=100 Luxembourg /LUXNSO-OECD STATISTICS, PARIS"

## Netherlands

OECD Code	OECD Definition
1820459J	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Netherlands /NLDNSO-OECD STA
1820519J	Total, sa /Industrial production /PRODUCTION 1990=100 Netherlands /NLDNSO-OECD STATISTICS,
18206680	** Crude petroleum /Commodity output /PRODUCTION tonnes '000 Netherlands /NLDNSO-OECD STATIS
18206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Netherlands /INTISI-OECD STATISTICS,
18206880	Natural gas /Commodity output /PRODUCTION cu. m. mln Netherlands /NLDNSO-OECD STATISTICS,
18321100	Total /Permits issued /CONSTRUCTION f. mln Netherlands /NLDNSO-OECD STATISTICS, PARIS"
18321203	Residential, sa /Permits issued /CONSTRUCTION f. mln Netherlands /NLDNSO-OECD STATISTICS,
1832419K	Total: value, sa /Retail sales /DOMESTIC TRADE 1990=100 Netherlands /NLDNSO-OECD STATISTIC
1832449K	RETAIL SALES (volume), sa 1990 = 100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
18325383	New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Netherlan
184286A3	*** STANDARDISED UNEMPLOYMENT RATES, sa Per cent Netherlands /INTEUR-OECD STATISTICS, PARIS"
1843149H	Hourly rates: manufacturing /Wages /WAGES 1990=100 Netherlands /NLDNSO-OECD STATISTICS, PA
1843469H	** Output: consumer goods /Producer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATIS
1843489H	Output: crude petroleum /Producer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATIS
1843569H	** PRODUCER PRICES (manufacturing) 1990 = 100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1843649H	* Output: intermediate goods /Producer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STAT
1843659H	Output: investment goods /Producer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATIS
1843879H	** Input: total /Producer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1843889H	* Output: total /Producer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS, PARIS
1844459H	** Food /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1844479H	Fuel and electricity /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS
1844499H	All goods less food /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS,
1844559H	All items less food /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS,
1844589H	Rent /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1844599H	** Services less rent /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS,
1844619H	** All items /Consumer prices /PRICES 1990=100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1844709H	NLD CPI NON FOOD-NON ENERGY //90 Netherlands OECD STATISTICS, PARIS"
1854829D	MONETARY AGGREGATES, sa 1990 = 100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1854832D	NLD MONETARY AGGREGATE M3 SA /MN GUILDER Netherlands OECD STATISTICS, PARIS"
1854839D	MONETARY AGGREGATES, sa 1990 = 100 Netherlands /NLDNSO-OECD STATISTICS, PARIS"
1855631H	Call money (Amsterdam) /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Netherlands /
1856009H	EFFECTIVE EXCHANGE RATES 1990 = 100 Netherlands /OECD-OECD STATISTICS, PARIS"
185601AH	EXCHANGE RATES National currency units per US dollar Netherlands /OECD-OECD STATISTICS, PA
185611AS	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Netherlands /IN
1856151A	*** Net foreign position /Foreign finance /FOREIGN FINANCE f. mln Netherlands /NLDNSO-OECD STA
18765103	Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE f. mln Netherlands /NLDNSO-OEC
18765253	FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Neth
18765303	Imports c.i.f., sa /Foreign trade /FOREIGN TRADE f. mln Netherlands /NLDNSO-OECD STATIS
18765603	Exports f.o.b., sa /Foreign trade /FOREIGN TRADE f. mln Netherlands /NLDNSO-OECD STATIS

## Portugal

OECD Code	OECD Definition
3620459K	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Portugal /PRTNSO-OECD STATIS
3620519K	Total, sa /Industrial production /PRODUCTION 1990=100 Portugal /PRTNSO-OECD STATISTICS, PA
36206780	Crude steel /Commodity output /PRODUCTION tonnes '000 Portugal /INTISI-OECD STATISTICS, PA
36428280	Registered unemployed /Unemployment /LABOUR '000 Portugal /PRTEPT-OECD STATISTICS, PARIS"
36429980	** Unfilled vacancies /Labour - other /LABOUR '000 Portugal /PRTEPT-OECD STATISTICS, PARIS"
3644459H	** Food /Consumer prices /PRICES 1990=100 Portugal /PRTNSO-OECD STATISTICS, PARIS"
3644549H	*** Lisbon: all items less rent /Consumer prices /PRICES 1990=100 Portugal /PRTNSO-OECD STATIS
3644559H	*** All items less food and rent /Consumer prices /PRICES 1990=100 Portugal /PRTNSO-OECD STATI
3644609H	** All items less rent /Consumer prices /PRICES 1990=100 Portugal /PRTNSO-OECD STATISTICS, PA



3654829D		MONETARY AGGREGATES, sa 1990 = 100 Portugal /PRTCBA-OECD STATISTICS, PARIS"
3654831D		PRT MONETARY AGGREGATE M2- SA /MN ESCUDO Portugal OECD STATISTICS, PARIS"
3654839D		MONETARY AGGREGATES, sa 1990 = 100 Portugal /PRTCBA-OECD STATISTICS, PARIS"
3654861A	*	Total liquidity (L-) /Domestic finance /DOMESTIC FINANCE Esc bln Portugal /PRTCBA-OECD STA
3655231A		Bank credit to economy /Domestic finance /DOMESTIC FINANCE Esc bln Portugal /PRTCBA-OECD S
3656009H	*	EFFECTIVE EXCHANGE RATES 1990 = 100 Portugal /OECD-OECD STATISTICS, PARIS"
365601AH		EXCHANGE RATES National currency units per US dollar Portugal /OECD-OECD STATISTICS, PARIS
365611AS	*	Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Portugal /INTIM
3656151A		Net foreign position /Foreign finance /FOREIGN FINANCE Esc bln Portugal /PRTCBA-OECD STATI
36765103		Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE Esc bln Portugal /PRTNSO-OECD
36765303		Imports c.i.f., sa /Foreign trade /FOREIGN TRADE Esc bln Portugal /PRTNSO-OECD STATISTICS,
36765603	***	Exports f.o.b., sa /Foreign trade /FOREIGN TRADE Esc bln Portugal /PRTNSO-OECD STATISTICS,

## Spain

OECD Code		OECD Definition
3220349H		Consumer goods /Industrial production /PRODUCTION 1990=100 Spain /ESPNSO-OECD STATISTICS,
3220439H		Intermediate goods /Industrial production /PRODUCTION 1990=100 Spain /ESPNSO-OECD STATISTI
3220449H		Investment goods /Industrial production /PRODUCTION 1990=100 Spain /ESPNSO-OECD STATISTICS
3220459K	***	Manufacturing, sa /Industrial production /PRODUCTION 1990=100 Spain /ESPNSO-OECD STATISTIC
3220519J	**	Total, sa /Industrial production /PRODUCTION 1990=100 Spain /ESPECO-OECD STATISTICS, PARIS
32206180		Passenger cars /Commodity output /PRODUCTION '000 Spain /ESPCAR-OECD STATISTICS, PARIS"
32206580		Cement /Commodity output /PRODUCTION tonnes '000 Spain /ESPIND-OECD STATISTICS, PARIS"
32206780		Crude steel /Commodity output /PRODUCTION tonnes '000 Spain /INTISI-OECD STATISTICS, PARIS
32321580		Dwellings completed /Construction - General /CONSTRUCTION '000 Spain /ESPTRA-OECD STATISTI
32321780	**	CONSTRUCTION Thousands; monthly averages Spain /ESPNSO-OECD STATISTICS, PARIS"
3232239H	*	Building construction /Cost of construction /CONSTRUCTION 1990=100 Spain /ESPTRA-OECD STAT
3232319H		Naval construction /Commodity output /PRODUCTION 1990=100 Spain /ESPNSO-OECD STATISTICS, P
32325383		New passenger car registrations, sa /Domestic trade - other /DOMESTIC TRADE '000 Spain /ES
32428282	**	Registered unemployed, sa /Unemployment /LABOUR '000 Spain /ESPNSO-OECD STATISTICS, PARIS"
324286A3		STANDARDISED UNEMPLOYMENT RATES, sa Per cent Spain /INTEUR-OECD STATISTICS, PARIS"
32429780		Labour disputes: time lost /Labour - other /LABOUR '000 Spain /ESPLAB-OECD STATISTICS, PAR
32429983	*	Unfilled vacancies, sa /Labour - other /LABOUR '000 Spain /ESPEMP-OECD STATISTICS, PARIS"
3243419H	*	Agricultural products /Producer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PAR
3243479H		Consumer goods /Producer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3243519H		Energy /Producer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3243569H	*	PRODUCER PRICES (manufacturing) 1990 = 100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3243649H		Intermediate goods /Producer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3243659H		Investment goods /Producer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3244449H		Fuel and electricity /Consumer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARI
3244459H	***	Food /Consumer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3244559H	***	All items less food /Consumer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS
3244589H	*	Rent /Consumer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3244599H	***	Services less rent /Consumer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3244619H	***	All items /Consumer prices /PRICES 1990=100 Spain /ESPNSO-OECD STATISTICS, PARIS"
3254829D		MONETARY AGGREGATES, sa 1990 = 100 Spain /ESPCBA-OECD STATISTICS, PARIS"
3254832A	**	Monetary aggregate (M3) /Domestic finance - General /DOMESTIC FINANCE Ptas bln Spain /ESPC
3254833D	***	ESP MONETARY AGGREGATE M3 SA /BN PESETA Spain OECD STATISTICS, PARIS"
3254839D	***	MONETARY AGGREGATES, sa 1990 = 100 Spain /ESPCBA-OECD STATISTICS, PARIS"
3254861A	***	Total liquidity (ALP2) /Domestic finance - General /DOMESTIC FINANCE Ptas bln Spain /ESPCB
3255302A		Commercial banks /Credit to private sector /DOMESTIC FINANCE Ptas bln Spain /ESPCBA-OECD S
3255312A		Other credit institutions /Credit to private sector /DOMESTIC FINANCE Ptas bln Spain /ESPC
3255631H	***	Call money /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Spain /ESPCBA-OECD STATIS
325564AH		3-month interbank loans /Interest rates /INTEREST RATES - SHARE PRICES % p.a. Spain /ESPCB
3256009H		EFFECTIVE EXCHANGE RATES 1990 = 100 Spain /OECD-OECD STATISTICS, PARIS"
325601AH		EXCHANGE RATES National currency units per US dollar Spain /OECD-OECD STATISTICS, PARIS"
325611AS		Official reserves excluding gold /Foreign finance /FOREIGN FINANCE SDR mln Spain /INTIMF-O
3256151A		Net foreign position /Foreign finance /FOREIGN FINANCE Ptas bln Spain /ESPCBA-OECD STATIST
32765102		Net trade (f.o.b.-c.i.f.), sa /Foreign trade /FOREIGN TRADE Ptas bln Spain /ESPCUS-OECD ST
32765252		FOREIGN TRADE - Ftr Trade Balance (fob-fob), sa Billions US dollars; monthly averages Spai
32765302		Imports c.i.f., sa /Foreign trade /FOREIGN TRADE Ptas bln Spain /ESPCUS-OECD STATISTICS, P
32765552	*	FOREIGN TRADE - Ftr Imports (fob/cif) Total, sa Billions US dollars; monthly averages Spai
32765602		Exports f.o.b., sa /Foreign trade /FOREIGN TRADE Ptas bln Spain /ESPCUS-OECD STATISTICS, P
32765752		FOREIGN TRADE - Ftr Exports Fob Total, sa Billions US dollars; monthly averages Spain /ESP