Big Data Econometrics Nowcasting and Early Estimates Tasks 5, 6 & 7: "Evaluation of Nowcasting / Flash Estimation based on a Big Set of Indicators"

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Abstract

The main goal of this paper is to assess whether the use of big data (Reuters news and Google searches summarised to construct uncertainty indicators) can, either in isolation or in combination with high frequency economic and financial indicators, improve the precision of nowcasts and flash estimates. We are interested in gains in terms of both standard measures such as the Mean Absolute Error (MAE) and Root Mean Squared Forecast Error (RMSFE) and in increased timeliness. Estimates are produced with a variety of econometric methods, every five, four, three, two and one week(s) prior to the official data release. Empirical evidence suggests that improved nowcasts are produced as early as three weeks prior to the official release, for monthly as well as quarterly targets. The evidence on the usefulness of the big data-based uncertainty indexes is mixed, but for variables such as unemployment and the Gross Domestic Product (GDP) it seems to be quite relevant.

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1 Introduction

In this paper, we consider the issue of nowcasting / flash estimation of key monthly and quarterly macroeconomic variables. The purpose of the analysis is twofold: (i) we evaluate the use of big data, including uncertainty indicators based on Reuters news and Google searches, to improve the precision of the nowcasts, and, (ii) we assess gains in terms of increased timeliness by evaluating the accuracy of nowcasts produced from five to one week(s) prior to the official release.

Our target variables include three monthly and two quarterly macroeconomic indicators. In particular, we nowcast the (i) monthly industrial production, (ii) monthly Harmonised Index of Consumer Prices and (iii) the monthly Unemployment Rate. Finally, we provide a separate section for the nowcasting of the quarterly GDP growth rates. The exercise is conducted recursively, in a pseudo out-of-sample framework, for four European economies: Germany, France, Italy and the UK.

The large panel of indicators we use as predictors includes various monthly macroeconomic and weekly financial variables, complemented with weekly big data-based uncertainty indexes.

The econometric methods we consider include: (i) Naive and autoregressive (AR) models, as benchmarks; (ii) Dynamic Factor Analysis (DFA); (iii) Partial Least Squares (PLS); (iv) Sparse Principal Components (SPC), (v) LASSO and Elastic Net sparse regressions, (vi) Spike and Slab Bayesian regressions, and (vii) various univariate methods. DFA, PLS and SPC are representatives of data reduction methods, while LASSO, Elastic Net and Spike and Slab regressions are representatives of machine learning techniques. In addition, we also consider model averaging using the best 3, 5 and 10 top models, recursively selected. Overall, we have a total of 93 models and model combinations.

The rest of the paper is structured as follows. Section 2 is concerned with the description of the nowcasting exercise, models, and evaluation criteria. Sections 3 and 4 provide results for, respectively, the monthly and quarterly target variables. Finally, Section 5 summarises the overall results and offers concluding remarks. Tables and selected figures are reported at the end of the paper, while a large additional set of more detailed results is available in a separate Appendix.

2 Description of the Nowcasting Exercise

2.1 Data

2.1.1 Targets

We consider the four largest EU countries: Germany (DE), France (FR), Italy (IT) and the UK. For each of them, we have collected data on the quarterly GDP growth rate and three key economic indicators: the monthly industrial production (IP), the monthly harmonised index of consumer prices (HICP) and the monthly unemployment rate (UR). The data have been downloaded from Eurostat[1].

2.1.2 Predictors

Our set of monthly macroeconomic predictors includes various coincident and leading indicators plus additional key economic variables for each country. Specifically, we consider: Bank Lending Rate, Bankruptcies, Building Permits, Capital Flows, Car Registrations, Construction Output, Consumer Credit, Core Consumer Prices, various CPI components, Crude Oil Production, Export Prices, Exports, Factory Orders, Gasoline Prices, House Price Index, Import Prices, Imports, Job Vacancies, Manufacturing Production, Mining Production, Money Supply M1, M2 and M3, New Orders, Private Sector Credit, Producer Prices, Steel Production, Youth Unemployment Rate, Consumer Confidence Indicators and various surveys.

Our set of weekly variables includes mainly financial indicators: interest rates at various maturities and spreads, equity indexes, volatility indexes.

We also consider two big data-based uncertainty indicators, one based on Reuters news and the other on Google searches, described in more details in Section 2.6.

2.1.3 Transformations

To ensure that the variables under analysis are stationary, a pre-requisite for several of the econometric methods we will implement, we use a set of transformations, which include: (i) log, (ii) first difference, (iii) percentage change, (iv) log difference, (v)

[1]The Eurostat codes we use are: target.ei_isin_m.XX, target.prc_hicp_midx.XX, target.ei_lmhr_m.XX and target.namq_10_gdp.XX for IP, HICP, UR and GDP respectively. XX denotes the corresponding country code.

second log difference. The specific transformation for each variable follows standard practice in the literature, see, e.g., McCracken and Ng (2015) as well as Stock and Watson (2002a and 2002b) among others.

In our exercise, we nowcast the period-to-period percentage change of IP, HICP and GDP and the period-to-period first difference of UR. The nowcasts for most models are first produced using growth rates, and then translated to levels, as Eurostat and other official statistical agencies typically publish their nowcasts in levels.

2.1.4 Timing, Mixed-Frequency & Unbalancedness

For each variable, we mark the publication delay and the day of the month that the release for this variable is due. For example, suppose that industrial production for month T is released on the 25th day of the next month, month T+1. In that case, we note one time period publication lag (i.e., -1) and the 25th day as publication release. Repeating this procedure for each variable allows us to construct a nowcasting exercise that is accurate (on average) in terms of the information which is available at each point in time. For example, when we are about to construct nowcasting estimates five weeks prior to the official release, we use only the available information up to that point.

In our nowcasting exercise we transform weekly observations to monthly (or quarterly) by averaging the available information in each month (or quarter), as routinely done when constructing bridge models. This creates an unbalanced panel of variables in which weekly-to-monthly variables have zero publication lag, i.e. full information up-to-date, but macroeconomic variables might have 1, 2, or more periods of publication lags. In such cases of unavailable information, we assign missing values.

The U-MIDAS approach could also be an attractive alternative, in general, to deal with mixed frequency data. However, in our specific context the available sample is too short and the difference in sampling frequency can be rather high (when going from weekly to quarterly)[2]. The U-MIDAS approach could reduce the number of parameters to be estimated but it would introduce non-linearity, which would make an estimation with a large number of explanatory variables practically unfeasible.

[2]In particular, Reuters and Google data are only available from 2007 onwards, so there would be only about 40 quarters in the U-MIDAS regressions for GDP growth with a large number of regressors, which would lead to overfitting.

Hence, our preference for simple temporal aggregation.

To deal with the missing values at the end of the sample due to publication delays, we adjust each series by moving it forward so that the last observed data point matches the observed value in the dependent variable. Other solutions could be to replace the missing values with the median or mean, or to use extrapolation employing a simple autoregressive (AR) or other model. However, the median or mean could be different from the recent trend of the variables, and extrapolation is complex when dealing with a very large dataset.

2.1.5 Time Span

Because the Reuters Uncertainty Index starts in 2007, our monthly variables (including monthly targets) span from 2007-01-31 to 2016-10-31 (118 months). The nowcasting exercise starts in 2014-01-31, to ensure that there is sufficient data to be used in the estimation also for the complex econometric models. A lag of the target variable is included in most specifications, i.e., an autoregressive term. However, lags of the predictors are not included, to avoid overfitting due to the short sample span.

For the monthly variables, we have 34 evaluation periods (2014-01-31 to 2016-10-31). For the quarterly GDP, we have 12 periods, still for 2014-2016. The short evaluation sample should be kept in mind when assessing the empirical results.

2.2 Econometric Methods

2.2.1 Penalised Regressions

Penalised regressions are a simple, linear and tractable approach to dealing with large data. Let

$$y = X\beta + \varepsilon, \quad \mathbb{E}[\varepsilon|X] = 0, \ \mathbb{E}[\varepsilon^2|X] = \sigma^2. \tag{1}$$

where y and ε are $T \times 1$ vectors, X is a $T \times N$ matrix containing a potentially large number of explanatory variables (N might be close or larger than T), and β is a $N \times 1$ vector of parameters. Typically the series are demeaned prior to estimation and no intercept is required. Demeaning is important as shrinking the intercept can cause bias. Penalised regressions are a wide class of models resulting from minimising the

sum of squared model's residuals subject to an additional penalty

$$\widehat{\beta}^{PR} = \arg\min_{\beta} \frac{1}{T}(\varepsilon'\varepsilon + f(\lambda, \beta)) \tag{2}$$

where typically the penalty $f(\lambda, \beta)$ is of the form $f(\lambda, \beta) = \lambda \|\Psi\beta\|$, and Ψ is a diagonal matrix consisting of penalty loadings and the notation $\|\cdot\|$ denotes a generic norm. For example, $\|\|_p$ denotes the Lp-norm with $\|\beta\|_p = \sum_{j=1}^{N} |\beta_j|^p$. The penalty $\lambda \|\Psi\beta\|$ 'shrinks' some of the parameters in β to zero and hence copes with the potentially large dimension of β. If λ is fixed and does not depend on T, then it is clear from (2) that $p\lim_{n\to\infty} \widehat{\beta}^{PR} = \widehat{\beta}^{OLS}$, the ordinary least squares estimator, as, from (2), asymptotically λ/T converges to zero and the penalty term disappears from the loss function. On the other extreme, if $\lambda \to \infty$ faster than T, then the penalty term dominates asymptotically, and $p\lim_{n\to\infty} \widehat{\beta}^{PR} = 0$, so that all parameter estimators converge to zero.

In the big data context, the interest is on what are the properties of the resulting penalized estimators when the number of regressors is large and potentially diverging, $N \to \infty$. In this case, the shrinkage parameter, λ, is required to increase at some rate typically slower than T (therefore λ is now indexed by T and $\lambda_T \to \infty$). In this setup, Knight and Fu (2000) study the asymptotic properties of penalised regression estimators of the general form

$$\widehat{\beta}^{PR} = \arg\min_{\beta} Z_n := \frac{1}{T}(\sum_{t=1}^{T} \varepsilon_t^2 + \lambda_T \sum_{i=1}^{N} |\beta_i|^{\gamma}). \tag{3}$$

Note that this specification includes a wide range of estimators, such as the Ridge, LASSO and Lp-norm estimators discussed individually below, and Ψ is taken to be the $N \times N$ identity matrix. The two main assumptions that they make are:

1. $C_N := \frac{1}{T}\sum_{t=1}^{T} x_t x_t' \to C$ as $T \to \infty$, where C is a nonnegative definite matrix
2. $\frac{1}{T}\max x_t' x_t \to 0$ as $T \to \infty$.

The first result is that under assumptions 1 and 2, with C nonsingular, the sufficient condition for consistency is $\lambda_T = o(T)$. That is, when $\frac{\lambda_T}{T} \to \lambda_0 \geq 0$ the penalised regression estimators of the general form in (3) are consistent: $\widehat{\beta}^{PR} \to_p \beta$

as $T \to \infty$. More interestingly, in order to obtain standard asymptotic normality results, λ_T is required to grow at a rate slower than T, and the exact rate depends on the penalty function and, in particular, on whether $\gamma \geq 1$ or $\gamma < 1$. In their Theorem 2, Knight and Fu (2000) show that whenever $\gamma \geq 1$, $\lambda_T = O\left(\sqrt{T}\right)$ is sufficient for asymptotic normality:

$$\sqrt{T}\left(\widehat{\beta}^{PR} - \beta\right) \to_d N(0, \sigma^2 C^{-1}).$$

For the case when $\gamma < 1$, the sufficient condition is actually weaker: $\lambda_T = O\left(T^{\gamma/2}\right)$ (note that $\lambda_T = O\left(\sqrt{T}\right)$ suffices for $\gamma < 1$).

There are several important and interesting implications of the asymptotic results presented in Knight and Fu (2000). If $\gamma < 1$, the nonzero regression parameters can be estimated at the usual $\sqrt{T}$ rate without asymptotic bias while shrinking the estimates of zero regression parameters to zero with positive probability. In contrast, when $\gamma \geq 1$, their results indicate that nonzero parameters are estimated with some asymptotic bias if $\lambda_0 > 0$.

In practice, determining how much shrinkage to use in applications is an important question, as it affects the bias-variance trade-off of the penalised regression estimators, with large values of λ generally resulting in smaller variance and larger bias and vice versa. K-fold cross-validation methods are often used to get an optimal value for λ; these are popular and work well in practice but lack theoretical justification. Theoretical results for alternative procedures are often available for special cases, for instance, in the case of LASSO, theoretical results are presented by Belloni and Chernozhukov (2013).

LASSO Regression Tibshirani (1996) suggested using the L1-norm in (2), which produces the LASSO (Least Absolute Shrinkage and Selection Operator) estimator:

$$\widehat{\beta}^{LASSO} = \arg\min_{\beta} \frac{1}{t}(\varepsilon'\varepsilon + \lambda \left\|\Psi\beta\right\|_1). \tag{4}$$

where $\left\|\beta\right\|_1 = \sum_{j=1}^{N} \left|\beta_j\right|$. Belloni, Chen, Chernozhukov and Hansen (2012) extend the estimation problem to errors ε_i that may be non-Gaussian or heteroskedastic. The resulting estimator shares similarity with the Ridge estimator. However, the

choice of L1-norm makes the problem nonlinear and no closed form expression is available for $\widehat{\beta}^{LASSO}$. In addition, the L1 norm results into some coefficients in β to be exactly equal to zero, which can be convenient in economic applications to enhance interpretability of results. This is the main difference between the two penalised methods: LASSO is more appropriate in cases where the model is sparse (i.e. there are many irrelevant regressors in X), while Ridge performs better in situations where the model is approximately sparse (i.e. there are many very small but not zero elements in β).

Under regularity conditions, Tibshirani (2013) proves that the minimisation problem in (4) has a unique solution. Several algorithms have been proposed in the literature in order to obtain the solution numerically. For example, Wang, Gordon and Zhu (2006) develop an efficient linear programming algorithm which can solve the entire regularization path in one pass. Wu and Lange (2008) compare the $l2$ algorithm based on cyclic coordinate descent and propose a new $l1$ algorithm based on greedy coordinate descent and Edgeworth's algorithm.

Elastic Net The advantage of the Ridge estimator is that it shrinks all parameters towards zero (without setting them exactly to zero), which is expected to perform well in approximately sparse models (models in which the parameters of all explanatory variables are small but different from 0). On the other hand, the $L1$ norm used in Lasso has the property of setting some elements in β exactly equal to zero, which is desirable whenever the true model is exactly sparse (that is when some of the variables in X do not appear in the true model). When working with data, researchers typically do not know the data generating process, so allowing for the possibility of both exact and approximate sparsity is desirable. This is the motivation behind using the Lp norm with $p \in (1, 2)$.

An alternative way to combine Ridge and LASSO regressions is the Elastic Net (EN), proposed by Zou and Hastie (2005), whose penalty function is a weighted average of those for LASSO and Ridge:

$$\widehat{\beta}^{NET} = \arg\min_{\beta} \frac{1}{T}\left(\varepsilon'\varepsilon + \lambda \sum_{j=1}^{N}\left(\alpha\beta_j^2 + (1-\alpha)\left|\beta_j\right|\right)\right),\ \alpha \in (0,1)$$

The advantage of penalised regression methods is that they are linear (hence

easily interpretable) and overall computationally fast to estimate.

Spike and Slab Regressions Spike and Slab regressions were originally proposed by Mitchell and Beauchamp (1988) and recently popularised by Scott and Varian (2013). They are another case resulting from a special choice of prior in the penalised regression model in (3). The idea is to include an indicator variable $\gamma_i = 1$ if $\beta_i \neq 0$ (i.e. the corresponding regressor is included in the equation), and $\gamma_i = 0$ if $\beta_i = 0$. Denoting the nonzero elements of β by β_γ, the spike and slab prior for β and γ can be written as

$$p(\beta, \gamma, \sigma^2) = p(\beta_\gamma|\gamma, \sigma^2)p\left(\sigma^2|\gamma\right)p\left(\gamma\right)$$

The vector of indicator variables γ is assumed to have a Bernoulli prior (independent across elements)

$$p\left(\gamma\right) = \prod_{i=1}^{N} \pi_i^{\gamma_i} \left(1 - \pi_i\right)^{(1-\gamma_i)},$$

so it represents a spike as it places positive probability mass at zero[3]. Conditional on a particular variable being in the equation (that is, conditional on a posterior draw for γ), a standard Normal-Gamma conjugate (typically diffuse) prior for the regression parameters can used, of the form:

$$\beta_\gamma|\sigma^2, \gamma \sim \mathcal{N}(\beta_{\gamma 0}, \sigma^2\Psi_{\gamma 0}), \quad \left(\sigma^2\right)^{-1} \sim Ga(\alpha_0/2, \delta_0/2)$$

where Ψ_γ denotes the rows and columns of Ψ for which $\gamma_i = 1$. Then, the conditional posterior of β_γ and σ^2 is also Normal-Gamma with closed form parameters

$$\beta_\gamma|\sigma^2, \gamma, y, X \sim N(\hat{\beta}_\gamma, \sigma^2\hat{\Psi}_\gamma), \quad \left(\sigma^2\right)^{-1}|y, X \sim Ga(\hat{\alpha}/2, \hat{\delta}/2) \tag{5}$$

[3]Note that, in applications, the Bernoulli prior can be simplified by setting $\pi_i = \pi$ for all $i = 1, ..., N$ and π can be set to be m/N, where m is the prior belief about the number of nonzero predictors.

with

$$\begin{aligned}\hat{\Psi}_\gamma &= \left(X'X + \Psi_{\gamma 0}^{-1}\right)^{-1} \\ \hat{\beta}_\gamma &= \hat{\Psi}_\gamma \left(X'y + \Psi_{\gamma 0}^{-1}\beta_{\gamma 0}\right) \\ \hat{\alpha} &= \alpha_0 + N \\ \hat{\delta} &= \delta_0 + y'y + \beta'_{\gamma 0}\Psi_{\gamma 0}^{-1}\beta_{\gamma 0} + \hat{\beta}'_\gamma \hat{\Psi}_\gamma \hat{\beta}_\gamma.\end{aligned}$$

Because of conjugacy, the marginal distribution of γ can be analytically derived (up to a proportionality constant):

$$p(\gamma|y, X) \propto \frac{|\Psi_{\gamma 0}|^{-\frac{1}{2}} p(\gamma)}{\left|\hat{\Psi}_\gamma\right|^{-\frac{1}{2}} \hat{\delta}^{N/2-1}}. \tag{6}$$

Standard Monte Carlo algorithms can be used to approximate the joint posterior density of the parameters and corresponding probabilities. Specifically, the following algorithm can be used.

Metropolis within Gibbs Algorithm

1. Initialise the algorithm with guesses for $\gamma^0, \beta^0, (\sigma^2)^0$.

   For $i = 1, ..., N^{sim}$ iterate between the following steps:

2. Draw the vector of indicator variables γ^i from the posterior (6).

3. Conditional on γ^i, draw $\beta_\gamma|\sigma^2, \gamma, y, X$ and $(\sigma^2)^{-1}|y, X$ from the (5) posterior.

The Spike and Slab prior differs from LASSO, Ridge and other penalised regression in that it gives a nonzero prior probability mass to the parameters of being exactly equal to zero (note that the $L1$-norm of LASSO places positive density (not mass) of coefficients equal to zero). It is that feature that Scott and Varian (2013) claim can help in reducing considerably the dimension and complexity of a large sparse model, where sparsity can be achieved for the full posterior rather than just the mode as with LASSO.

2.2.2 Factor Models

Principal Components Factor models are commonly used data-rich forecasting methods. Factor methods have been at the forefront of developments in forecasting with large data sets and, in fact, started this literature with the influential work of Stock and Watson (2002a) and Forni, Hallin, Lippi and Reichlin (2000). The defining characteristic of most factor methods is that relatively few summaries of the many available variables are used in forecasting equations, which thereby become standard forecasting equations as they only involve a few explanatory variables.

The main assumption is that the co-movements across the (weakly stationary and standardized) indicator variables x_t, where $x_t = (x_{1t} \cdots x_{Nt})'$ is a vector of dimension $N \times 1$, can be captured by a $r \times 1$ vector of unobserved factors $F_t = (F_{1t} \cdots F_{rt})'$, i.e.,

$$\tilde{x}_t = \Lambda' F_t + e_t, \tag{7}$$

where $\tilde{x}_t$ may be equal to x_t or may involve other variables, such as lags, leads or products of the elements of x_t, and Λ is an $r \times N$ matrix of parameters describing how the individual indicator variables relate to each of the r factors, which we denote with the terms 'loadings'. In (7) e_t is a zero-mean $I(0)$ vector of errors that represent, for each indicator variable, the fraction of dynamics unexplained by F_t, the 'idiosyncratic components'. The number of factors is assumed to be finite. So, implicitly, in (1) $\alpha' = \tilde{\alpha}' \Lambda \tilde{x}_t$, where $F_t = \Lambda \tilde{x}_t$, which means that a small, r, number of linear combinations of $\tilde{x}_t$ represent the factors and act as the predictors for y_t, the target variable. The main difference between different factor methods relates to how Λ and the factors are estimated.

The use of principal component analysis (PCA) for the estimation of factor models is, by far, the most popular method. It has been popularised by Stock and Watson (2002a, 2002b), in the context of large data sets, although the idea had been well established in the traditional multivariate statistical literature. The method of principal components is simple. Estimates of Λ and the factors F_t are obtained by solving:

$$V(r) = \min_{\Lambda, F} \frac{1}{NT} \sum_{i=1}^{N} \sum_{t=1}^{T} (\tilde{x}_{it} - \lambda_i' F_t)^2, \tag{8}$$

where λ_i is an $r \times 1$ vector of loadings that represent the N columns of $\Lambda = (\lambda_1 \cdots \lambda_N)$.

One, non-unique, solution of (8) can be found by taking the eigenvectors corresponding to the r largest eigenvalues of the second moment matrix $X'X$, which then are assumed to represent the rows in Λ, and the resulting estimate of Λ provides the forecaster with an estimate of the r factors $\hat{F}_t = \hat{\Lambda}\tilde{x}_t$. To identify the factors up to a rotation, the data are usually normalized to have zero mean and unit variance prior to the application of principal components; see Stock and Watson (2002a) and Bai (2003). We note that factor estimates obtained via PC estimation are $\min(\sqrt{N}, T)$-consistent. Further, if $\sqrt{T}/N = o(1)$, using estimated factors rather than true factors in predictive regressions produces negligible estimation errors.

PC estimation of the factor structure is essentially a static exercise as no lags or leads of x_t are considered. One alternative is dynamic principal components, which, as a method of factor extraction, has been suggested in a series of papers by Forni, Hallin, Lippi and Reichlin (see, e.g., Forni, Hallin, Lippi and Reichlin (2000) among others) and is designed to address this issue. Dynamic principal components are extracted in a similar fashion to static principal components but, instead of the second moment matrix, the spectral density matrix of the data at various frequencies is used. The dynamic PCs are then used to construct estimates of the common component of the data set, which is a function of the unobserved factors. The basic version of this method uses leads of the data, making it not suitable in a forecasting context, but later work by the developers of the method has addressed this issue (see, e.g., Forni, Hallin, Lippi and Reichlin (2005)).

An alternative is to use filters such as the Kalman filter, which requires additional assumptions on the stochastic law of motion of the factors F_t. Another alternative way of extracting factors is Partial Least Squares (PLS), introduced in order to facilitate the estimation of multiple regressions when there is a large, but finite, amount of regressors, and to target the estimated factors towards the specific variable of interest, y. PLS will be described in a later subsection.

Sparse Principal Component Analysis Empirical studies in the literature support the argument that standard PC does a good job in dimension reduction. A number of forecasting applications show that when the linear combinations of input variables is used (instead of the whole set of variables) the forecast error is reduced. However, a disadvantage of standard PC is that the principal components are com-

binations of all input variables. Sparse Principal Component Analysis (Sparse PC), introduced by Zou, Hastie and Tibshirani (2006), combines aspects of sparse regression and PC. In particular, the principal components are derived using linear combinations of some of the variables.

Given an integer k with $1 \leq k \leq N$ Sparse PC is aiming to maximize the variance along a vector υ while constraining its cardinality:

$$\begin{aligned} &\max \upsilon' \Sigma \upsilon \\ &s.t. \sum_{i=1}^{N} \upsilon_i^2 = 1 \\ &\#\left(i|\upsilon_i \neq 0\right) \leq k, \end{aligned}$$

where Σ denotes the sample covariance matrix. The first constraint ensures that υ is a unit vector and the second constraint is the L_0-norm, i.e. the number of the non-zero components in υ is less than k. If we take $k = N$ then the above problem reduces to the ordinary PC. After finding the optimal solution we deflate

$$S = \Sigma - (\upsilon' \Sigma \upsilon)\upsilon' \upsilon,$$

and iterate this process to obtain further principal components. Sparse PC can retain consistency even if $N \gg T$ which makes the method suitable for use with big data.

Partial Least Squares Partial least squares (PLS) is a relatively new method with a very similar idea to Principal Component Analysis (PCA) in that a number of factors or components, which are linear combinations of the original regression variables, are extracted and used as regressors instead of the original typically much larger set of variables.

A simple algorithm to construct k PLS factors is discussed among others, in detail, in Helland (1990). Assuming for simplicity that y_t has been demeaned and x_t have been normalized to have zero mean and unit variance, a simplified version of the algorithm is given below.

1. Set $u_t = y_t$ and $v_{i,t} = x_{i,t}$, $i = 1, ...N$. Set $j = 1$.

2. Determine the $N \times 1$ vector of indicator variable weights or loadings $w_j = (w_{1j} \cdots w_{Nj})'$ by computing individual covariances: $w_{ij} = Cov(u_t, v_{it})$, $i = 1, ..., N$. Construct the j-th PLS factor by taking the linear combination given by $w_j' v_t$ and denote this factor by $f_{j,t}$.

3. Regress u_t and $v_{i,t}$, $i = 1, ..., N$ on $f_{j,t}$. Denote the residuals of these regressions by $\tilde{u}_t$ and $\tilde{v}_{i,t}$ respectively.

4. If $j = k$ stop, else set $u_t = \tilde{u}_t$, $v_{i,t} = \tilde{v}_{i,t}$ $i = 1, .., N$ and $j = j + 1$ and go to step 2.

This algorithm makes clear that PLS is computationally tractable for very large data sets.

Once PLS factors are constructed, y_t can be modeled or forecasted by regressing y_t on $f_{j,t}$, $j = 1, ..., k$. Helland (1990) provides a general description of the partial least squares (PLS) regression problem. Helland (1990) shows that the estimates of the coefficients α in the regression of y_t on x_t, as in Equation (1), obtained implicitly via PLS Algorithm and a regression of y_t on $f_{j,t}$ $j = 1, ..., k$, are mathematically equivalent to

$$\widehat{\beta}_{PLS} = V_k (V_k' X' X V_k)^{-1} V_k' X' y \tag{9}$$

with $V_{k_1} = (X'y \quad X'XX'y \quad \cdots \quad (X'X)^{k-1}X'y)$, $X = (x_1 \cdots x_T)'$ and $y = (y_1 \cdots y_T)'$. Thus, (9) suggests that the PLS factors that result from the PLS Algorithm span the Krylov subspace generated by $X'X$ and $X'y$, resulting in valid approximations of the covariance between y_t and x_t.

The main difference between PC and PLS is that PLS takes into account the relationship between y_t and x_t when constructing the factors, while factors extracted by PC are constructed taking into account only the values of the x_t variables.

Recently, Kelly and Pruit (2015) and Groen and Kapetanios (2016) have extended and provided theoretical results on PLS, showing that it can be also applied in the large N context, while Hepenstrick and Marcellino (2016) have introduced the mixed frequency version and provided empirical evidence in favour of its use for nowcasting with very large datasets.

2.3 Nowcasting Exercise

The nowcasting exercise is based on the algorithm described in the following steps.

1. First, we leave a number of observations, T^{OUT}, out-of-sample, in order to use them in the evaluation of the nowcasting performance of different models. In our experiments, $T^{OUT} = 34$ for the monthly targets and $T^{OUT} = 12$ for the quarterly target.

2. The initial sample we use in the first round of estimation and nowcasting is $T_1^{IN} = \{1, .., \big(T - T^{OUT} + 1\big)\}$. Then, we estimate the parameters and produce the nowcasts from the various models. We construct nowcasts for $h = \{-5, -4, -3, -2, -1\}$ weeks prior to the target date when the official release is due. For each h, we keep the same target date, however we re-estimate and produce different nowcasts (updates) using all available information up to that time point. This produces six estimates for each corresponding target date.

3. We repeat Step 2 in a recursive manner, i.e. $T_2^{IN} = \{1, .., \big(T - T^{OUT} + 2\big)\}$ and generally $T_j^{IN} = \{1, .., \big(T - T^{OUT} + j\big)\}$. We stop when $T_j^{IN} = \{1, .., (T - 1)\}$, as we always need the true value of the next period to evaluate the nowcasts.

At the end of the above recursive procedure we end up with T^{OUT} nowcasts for each model under consideration. The DFA forecasts are produced using the Kalman Filter whereas the forecasts in PLS, SPC, LASSO and EN are produced adopting a direct approach. In the direct forecasting approach, say for a simple model $Z_t = \gamma F_t + u_t$ for $t = 1, .., T$, $\widehat{\gamma}_h$ denotes the parameter estimate which is obtained by regressing $Z_{t=\{h+1,..,T\}}$ on $F_{t=\{1,..,T-h\}}$. Then this estimate is used to calculate $\widehat{Z}_{t+h} = \widehat{\gamma}_h F_t$.

2.4 Models

In the nowcasting exercise we employ several methodologies: Naive and autoregressive (AR) models, as benchmarks; DFA, PLS, SPC, LASSO, EN and Spike and Slab. For each econometric method we consider various specifications and, in addition, we

also experiment with model averaging. Overall, we have a total of 93 models and model combinations.

- (7) Naive and AR models. The first group of models consists of some simple models which assume that the best nowcast is given by: the average of the last four periods ($Ave4$), the average of the last twelve periods ($Ave12$) and the average of the last twenty-four periods ($Ave24$). The $Naive$ model uses the last observed value as the best nowcast (which coincides with that from a pure random walk model). Then, we include an $AR(1)$, $AR(4)$ and an $AR(p_{AIC})$ model where the p_{AIC} is determined via the Akaike's Information Criterion.

- (6) Simple Linear Regressions. These are simple specifications using the Google and Reuters Uncertainty Indexes with zero, one and three lags of the target variable.

- (8) Various univariate models. The following models have shown to work well in various forecasting competitions by the International Journal of Forecasting. More details can be found in Hyndman and Khandakar (2008).

  - AutoArima: chooses the best ARIMA(p,d,q) model using AIC. Transformation of the univariate series not necessary as the model handles integrated series.
  - ETS and BaggedETS: Exponential smoothing methods as in Hyndman et al. (2002) and Bergmeir et al. (2016). The methodology is fully automatic and performed extremely well on the M3-competition data. The bootstrapped series are obtained using the Box-Cox and Loess-based decomposition (BLD) bootstrap; see Bergmeir et al. (2016).
  - BATS and TBATS: This class of models are exponential smoothing state space models with Box-Cox transformation, ARMA errors, Trend and Seasonal components. It is part of automatic procedure forecasting. See De Livera et al. (2011).
  - Neural Networks (NN): This is a simple feed-forward neural network with a single hidden layer and lagged inputs.

  - Spline forecasts: this model produces local linear nowcasts using cubic smoothing splines.
  - Theta method: The theta decomposition method of Assimakopoulos and Nikolopoulos (2000).

- (16) DFA. We use the default setup of Giannone, Reichlin and Small (2008) with $(q, r, p) = (2, 2, 1)$ where q is the dynamic rank, r is the static rank and p is the AR order of the state vector. We also try three more settings with $(q, r, p) = (3, 3, 1)$, $(q, r, p) = (4, 4, 1)$ and $(q, r, p) = (5, 5, 1)$. For each setting we use: (i) the set of macroeconomic and financial indicators only (MacroFin), (ii) the set of macroeconomic and financial indicators including the Google Uncertainty Indexes (MacroFin-Google), (iii) the set of macroeconomic and financial indicators including the Reuters Uncertainty Indexes (MacroFin-Reuters), and (iv) the set of macroeconomic and financial indicators including both the Google and the Reuters Uncertainty Indexes (MacroFin-GoogleReuters).

- (20) PLS. We use PLS to extract one, two, three, four and five factors; the resulting models and nowcasts are labeled, respectively, $PLS(1)$, $PLS(2)$, $PLS(3)$, $PLS(4)$ and $PLS(5)$. As above, for each model we use MacroFin, MacroFin-Google, MacroFin-Reuters and MacroFin-GoogleReuters.

- (20) SPC. We use SPC to extract one, two, three, four and five factors; the resulting models and nowcasts are labeled, respectively, $SPC(1)$, $SPC(2)$, $SPC(3)$, $SPC(4)$ and $SPC(5)$. As above, for each model we use MacroFin, MacroFin-Google, MacroFin-Reuters and MacroFin-GoogleReuters.

- (8) LASSO and EN. We use the standard 10-fold cross-validation to determine the value for λ in LASSO. The chosen value is the one which minimises the in-sample MSE. As above, we use MacroFin, MacroFin-Google, MacroFin-Reuters and MacroFin-GoogleReuters.

- (4) Spike and Slab using MacroFin, MacroFin-Google, MacroFin-Reuters and MacroFin-GoogleReuters.

- (4) Data-Driven Automated Forecasting Strategies. On top of the above methodologies we introduce some automated data-driven *"forecasting strategies"*. Our

idea is simple and intuitive: we suggest the use of a *"model rotation"* strategy which chooses the model with the smallest cumulative nowcast error. Furthermore, we use an equally-weighted average of the top three, five and ten models.

In addition to the above procedures, we also consider the inclusion of a lag in the set of predictors and let each method choose the necessary variables unconditionally (even though in some cases a lag might not be chosen as significant in terms of nowcasting/forecasting).

2.5 Evaluation Criteria

Once we have computed T^{OUT} nowcasts for 5 to 1 weeks prior to the release, and transformed them in levels, we evaluate their performance using the mean absolute error and the root mean squared forecast error statistics defined as:

$$MAE_{i,h} = \frac{1}{T^{OUT}} \sum_{t=1}^{T^{OUT}} |e_{i,t}|,$$

$$RMSFE_{i,h} = \left(\frac{1}{T^{OUT}} \sum_{t=1}^{T^{OUT}} e_{i,t}^2 \right)^{\frac{1}{2}},$$

where e_i is the out-of-sample forecast error (in levels) for model i and weekly nowcast h weeks prior to the release.

All our tables present the actual MAE and RMSFE in order to illustrate how nowcast errors change as we approach the release date.

We further calculate the Diebold and Mariano (1995) statistic for predictive accuracy as follows:

$$DM = \frac{\overline{d}}{\left(\widehat{LRV}_{\overline{d}}/T \right)^{1/2}}$$

where

$$\overline{d} = \frac{1}{T^{OUT}} \sum_{t=1}^{T^{OUT}} d_t,$$
$$d_t = e_{1,t}^2 - e_{2,t}^2,$$
$$LRV_{\overline{d}} = \gamma_0 + 2\sum_{j=1}^{\infty} \gamma_j, \ \gamma_j = cov(d_t, d_{t-j}),$$

for candidate models 1 and 2. The null hypothesis states equal predictive ability between models. In the tables we report the p-value of the test.

2.6 Uncertainty Indexes and Eurostat Vintages

2.6.1 The Reuters Uncertainty Index

Using web-scraping procedures, we download data from the Reuters news database and construct the uncertainty indexes. In particular, we use the following keywords:

- Germany: at least one of {uncertainty uncertain, uncertainty, uncertainties} and at least one of {Germany, German, Germans}.
- France: at least one of {uncertainty uncertain, uncertainty, uncertainties} and at least one of {France, French}.
- Italy: at least one of {uncertainty uncertain, uncertainty, uncertainties} and at least one of {Italy, Italian, Italians}.
- UK: at least one of {uncertainty uncertain, uncertainty, uncertainties} and at least one of {UK, Britain, British, United Kingdom, Briton}.

It has been shown that Reuters Uncertainty is strongly correlated with other uncertainty measures such as the Economic Policy Uncertainty index of Baker, Bloom and Davis (2016) and volatility indexes such as VIX.

2.6.2 The Google Uncertainty Index

The Google Uncertainty Index is based on the use of Google trends. For the general uncertainty and risk indexes, we consider four keywords, given that the searches are directed worldwide and the language barrier might jeopardise the result, and two keywords for the country-specific indexes using the domestic languages. In particular, we include the following Google Trends:

- Germany: for the German Google Uncertainty Index we use the keywords "unsicherheit" and "risiko" across web and news searches in the region of Germany.
- France: for the French Google Uncertainty Index we use the keywords "incertitude" and "risque" across web and news searches in the region of France.
- Italy: for the Italian Google Uncertainty Index we use the keywords "incertezza" and "rischio" across web and news searches in the region of Italy.
- UK: for the UK Google Uncertainty Index we use the keywords "uncertainty" and "risk" across web and news searches in the region of the UK.

For the separate countries, we use both "uncertainty" and "risk" keywords in order to cover more user profiles and obtain a more robust result.

2.6.3 Publicly-Available Big Data Issues

One of the problems of publicly available big data sources is the sudden change or discontinuation of data. Recently, in 2015, Google decided to no longer provide weekly Google Trends for long time frames (e.g., starting from 2004). Instead, monthly data are provided for longer time frames and weekly or daily data are provided for shorter time frames. Therefore, this poses problems in our weekly nowcasting exercise.

For Google Trends, we suggest an interpolation-based solution below. However, for other data sources, a solution might not always be feasible. Therefore, the researcher should ensure that the data provider is reliable, and the data feed will continue normally during forthcoming periods.

To obtain a weekly time series of Google trends, we proceed as follows.

- First, we download the monthly Google Trends and the corresponding sets of weekly Google Trends.
- Then, for a particular month (one-point observation in the monthly dataset), we identify the corresponding weekly data (four-point observations). We scale the weekly data appropriately so that the last week observation equals the monthly observation.
- We repeat the same procedure for all months and obtain the weekly dataset.
- Finally, we re-scale the weekly series in order to fluctuate between 0 and 100, as published by Google.

The above procedure could be applied as well to obtain daily Google Trends, even if in that case the interpolation error could be larger.

2.6.4 Eurostat Vintages

To provide preliminary evidence on the usefulness of big data-based uncertainty indexes, we perform a simple regression analysis with Eurostat vintages as dependent variables and the uncertainty indexes as predictors. Given the unavailability of official vintages for the variables we use in the nowcasting exercise, in this simple experiment we use: the Industrial Production Index with 2005 as the base year, the Harmonised CPI with 2005 as the base year and the unemployment rate measured in thousands of persons. The regressions are computed for Germany, France, Italy and the UK, and the last four vintages closer to the official release are used.

It must be highlighted that this analysis is performed to motivate the use of big data-based indicators in nowcasting exercises. We do not argue that only the use of such data is sufficient to provide accurate nowcasts. Instead, we are aware of the big data hubris, which suggests that big data should not replace the traditional variables but supplement them.

Tables 1 to 4 present the results of the contemporaneous and one-step ahead predictive regressions using the big data-based uncertainty indexes of Google and Reuters.

Starting with Table 1, we see that for Germany both uncertainty indexes can explain the four official releases ($r = 1$ to $r = 4$). Starting with the contemporaneous

regression, all coefficients are statistically significant using either Google or Reuters. The result is repeated for Reuters in the predictive regression setup as well. Google also explains the nowcasts for HICP and Unemployment but not for the Industrial Production.

For France and Italy and the UK, in Tables 2, 3 and 4, we again see that both big data-based indexes explain well the nowcasts in both contemporaneous and one-step ahead regression setups for the HICP and Unemployment. As before, this is not the case for the Industrial Production.

The above analysis presents favourable evidence for the use of big data indexes for inflation and labour variables. Based on this result, we include these indexes in our set of indicators used in the next section.

3 Key Macroeconomic Indicators

In this section we discuss the performance of various models using the monthly macroeconomic targets. For each series and country, we present three tables reporting, respectively: (i) the actual MAE relative, (ii) the actual RMSFE rand (iii) the p-values of the Diebold-Mariano test statistic using the AR(1) model as benchmark. We choose to report the actual MAE and RMSFE in order to highlight how the nowcast error changes as we approach the release date. For all cases, the figures with the out-of-sample nowcasts and the subsequent updates are available in the Appendix.

As a general conclusion across all targets, the nowcast error decreases when we estimate three weeks prior to the official release. As we discuss in the next subsections, some indicative examples include LASSO with macroeconomics, financial and big data-based indicators for Italian Industrial Production, the PLS(5) with macroeconomics, financial and big data-based indicators for the German HICP and a simple linear regression using the Reuters data and a lag of the dependent variable for the French Unemployment Rate.

As we approach the release date, more data is available and the error, on average, decreases further, however at a slower rate. This is also why we note that for some variables, the gains in MAE/RMSFE are larger for $h = -2$ rather than $h = -3$.

Moreover, univariate models seem to perform well. However, it is worth reminding that the out-of-sample evaluation period is rather short, and there is a strong trend

in the series, which makes forecasting relatively easier. Finally, the inclusion of big data-based uncertainty indexes results in improved nowcasting performance, as a model which includes these indicators is usually included in the top performers across all weekly releases[4].

3.1 Industrial Production

Tables 5 to 16 are concerned with the results for the Industrial Production. In particular, Tables 5 to 7 present the results for DE, Tables 8 to 10 for FR, Tables 11 to 13 for IT and Tables 14 to 16 for the UK.[5]

Starting with Germany, we see that in terms of MAE the best nowcasting model for $h = \{-5, -3, -2, -1\}$ is the THETA method with MAE of 0.883, 0.907, 0.848 across h. Using RMSFE, the best models are AutoArima, BaggedETS and NN.

The univariate models also seem to be dominant for FR, where the top 5 models include AR models, ETS, BATS and TBATS. In the case of IT, LASSO with MacroFin and the uncertainty indexes, the Best1 and Best3 are also top performers along with the univariate methods. For the UK, SPC(5) with MacroFin, Google and Reuters also returns improved nowcasts in terms of RMSFE with 0.822, 0.787, 0.691, 0.673, 0.681 for across all h prior to the official release respectively.

Also, in Figures 1 to 4 we see the evolution of nowcasts for some indicative models. It is evident that as we approach the target date, nowcasting errors shrink. In conjunction with the results in the corresponding tables, this is typically occurring three weeks before the target date.

For example, we see that for Italy, the LASSO model using MacroFin and both Google and Reuters indicators has a MAE of 0.857, 0.855, 0.792, 0.822, 0.813 for $h = \{-5, -4, -3, -2, -1\}$ weeks respectively. Similarly, the Best10 model for the UK has a MAE of 0.877, 0.877, 0.705, 0.67 and 0.672 across all h.

[4]See some of the previously discussed indicative models.

[5]The MAE/RMSFE of univariate results sometimes change more than once during our 5 evaluation periods. This is due to the data release calendar that is such that, over our entire sample, data can be released in different weeks of the month. See Table 53 in "Appendix: Example of Data Availability Due to Calendar Releases" for an indicative example.

3.2 Harmonised Consumer Price Index

Tables 17 to 28 present the results for the HICP. In particular, Tables 17 to 19 refer to DE, Tables 20 to 22 to FR, Tables 23 to 25 to IT and Tables 26 to 28 to the UK.

For this target we see that, for Germany, models such as factor models such as PLS(5) with MacroFin, Google and Reuters, machine learning models such as EN with MacroFin and Google, and LASSO provide accurate nowcasts and outperform the univariate models in terms of both MAE and RMSFE.

For France, LASSO, AR(AIC) and Best strategy models are top performers. However, for Italy we again see that univariate models seem to perform better. For the UK, we have that LASSO with MacroFin and Google provide the smallest MAE of 0.314, 0.32, 0.313, 0.297 and 0.297 for $h = \{-5, -4, -3, -2, -1\}$ respectively.

Figures 5 to 8 display the nowcasting performance of some indicative models, excluding the univariate ones, which illustrate the way new releases of various predictors affect the nowcasting performance. For HICP it is even more evident that in most cases, $h = -3$ is a cut-off point after which nowcasts stay relatively similar.

Starting with PLS(5) with MacroFin, Google and Reuters, we see that for Germany returns a MAE of 0.377, 0.345, 0.269, 0.261 and 0.26, for the various horizons. After $h = -3$, we see that the mean error is around 0.26. For France, the Best1 model has a MAE of 0.414 and 0.365 for $h = -5, -4$ respectively and after that stays at about 0.23. In particular, 0.237, 0.228 and 0.228 $h = \{-3, -2, -1\}$. The conclusion is qualitatively similar for Italy and UK where the Best3 and the LASSO models return 1.024, 1.021, 0.386, 0.294, 0.292 and 0.239, 0.23, 0.207, 0.197 and 0.19 MAE respectively. In both cases, after $h = -3$ the error is stabilised around 0.3 and 0.2 respectively.

3.3 Unemployment Rate

Tables 29 to 40 are concerned with the results for unemployment. In particular, Tables 29 to 31 present the results for DE, Tables 32 to 34 for FR, Tables 35 to 37 for IT and Tables 38 to 40 for the UK.

For the German unemployment, the Google and Reuters uncertainty indexes seem to perform well. A simple linear regression with the Google uncertainty index results in the smallest RMSFE. Also simple linear regressions using Google, Reuters and the

first lag of the target variable are the top performers.

For France, Reuters with the first lag of the dependent variable returns a MAE of 0.06, 0.059 and 0.059 for $h = \{-3, -2, -1\}$ weeks prior to the release. Before that, for $h = -5, -4$ the MAE is much different with values of 0.096 and 0.095. Google with the first three lags of the target variable returns the smallest RMSFE for Italy for $h = \{-3, -2, -1\}$ weeks prior to the release. Instead, for the UK the PLS and Spike and Slab methods perform particularly well, but adding the uncertainty indexes to the macro financial indicators is not considered helpful.

As in the cases of IP and HICP, we also use some indicative figures of models, excluding the univariate ones, with good nowcasting performance. Figures 9 to 12 again provide evidence that, in most series, nowcasting error reduces after $h = -3$.

Now we see that the MAE for Google with one lag for Germany is 0.052 for $h = \{-5, -4\}$ and decreases after $h = -3$ to 0.041 and 0.038. Reuters linear regression model also presents a similar conclusion where MAE is stabilised around 0.06 after $h = -3$. In particular, the MAE is 0.096, 0.095, 0.06, 0.059, 0.059 across h. For Italy and the UK the MAE of the models illustrated in the figures also point out that $h = -3$ is a cut-off period. The MAE for these models is 0.233, 0.229, 0.185, 0.193, 0.193 and 0.129, 0.132, 0.085, 0.077, 0.078 for Italy and the UK respectively.

4 Gross Domestic Product

In this section we focus on quarterly GDP, so that the frequency mismatch with respect to the weekly uncertainty indicators is larger than for the monthly targets previously considered. Tables 50 to 52 present the results for DE, Tables 44 to 46 for FR, Tables 47 to 49 for IT and Tables 50 to 52 for the UK. It is important to highlight that GDP has a strong uptrend during the evaluation period (2014-16), which works in favour of the simple univariate models.

Starting with Germany, SPC(4), PLS(5) and PLS(3) with MacroFin, Google and Reuters are the top performing models in terms of MAE. In particular, SPC(4) with MacroFin and Google returns one of the smallest MAE, 0.367, for $h = -5$, and the SPC(4) with MacroFin, Google and Reuters returns one of the smallest MAE, 0.344, for $h = -4$. PLS(5) with MacroFin, Google and Reuters returns the smallest MAE, 0.359, for $h = -3$. For $h = -2$, AR(AIC) returns the smallest MAE equal to 0.359.

Finally, PLS(3) with MacroFin and Google is the top model for $h = -1$ with MAE equal to 0.358.

For France, in terms of both MAE and RMSFE, the top model is BaggedETS across all $h = \{-5, -4, -3, -2, -1\}$ week estimates. However, it is followed by Best1, PLS(5) with MacroFin and Reuters and DFA(5) with MacroFin and Google.

For Italy, we have the same result: ETS and BaggedETS are the top performers. However, a simple linear regression using Reuters and the first three lags of the GDP results in a small MAE of 0.19, 0.19, 0.182, 0.166 and 0.166 across all h respectively.

Finally, for the UK, the Spline and the ETS are the top performers across all horizons in terms of both MAE and RMSFE. As in the case of Italy, a simple linear regression using Reuters and the first three lags of the GDP results, however, in a small MAE of 0.663, 0.663, 0.351, 0.307, 0.294 across all h indicating the $h = -3$ cut-off point suggested in the previous Section.

In Figures 13 to 16 we have the nowcasting performance across all horizons for the models which show the best performance in h=-3. As expected, the strong trend in the relatively short evaluation period works in favour of the univariate cases. Using univariate models, their performance is only affected by newer releases of the target variable. Therefore, a cut-off point in the horizons is not present here.

5 Conclusions

The main goal of this paper is to assess whether the use of big data, Reuters news and Google searches summarized to construct uncertainty indicators, can, either in isolation or in combination with high frequency economic and financial indicators, improve the precision of nowcasts and flash estimates. We are interested in gains in terms of both standard measures such as MAE and MSE and in increased timeliness. We focus on four key macroeconomic indicators and the GDP. In particular, we nowcast (i) the industrial production, (ii) the harmonised index of consumer prices, (iii) the unemployment rate and (iv) the quarterly GDP. The exercise is conducted recursively in a pseudo out-of-sample framework, considering the ragged edge of the data, for four economies (Germany, France, Italy and the UK) and various forecast horizons (from 5 until 0 weeks from the official release date).

The econometric methodologies we consider include: (i) Naive and autoregressive

(AR) models, as benchmarks; (ii) Dynamic Factor Analysis (DFA); (iii) Partial Least Squares (PLS); (iv) Sparse Principal Components (SPC), (v) LASSO and Elastic Net sparse regressions, (vi) Spike and Slab regressions, and (vii) various univariate methods. DFA, PLS and SPC are representatives of data reduction methods and LASSO, Elastic Net and Spike and Slab are representatives of machine learning techniques.

We find that the nowcast error decreases significantly when we estimate three, two and one weeks prior to the official release. The inclusion of big data-based uncertainty indexes results in improved nowcasting performance. In some cases, as for the quarterly GDP of Italy and the UK, even a simple linear regression model using the Reuters index and three lags of the target variable results in accurate and robust nowcasts. Various univariate models also seem to perform well. However, it must be highlighted that the evaluation sample is short (2014-2016) and there is a strong trend in the series, which works in favour of these simple models.

Overall, this paper provides evidence that big data-based indicators supplement traditional data and could be useful to enhance nowcasting and flash estimation. Hence, official statistical agencies should include them in their toolkit.

6 Bibliography

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7 Tables

DE, Industrial Production										
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	89.147	0.000	92.776	0.000	α	99.204	0.000	94.882	0.000
	β	0.331	0.004	131.911	0.000	β	0.120	0.309	114.959	0.001
	R^2_{Adj}	0.145		0.309		R^2_{Adj}	0.001		0.208	
$r=2$	α	89.996	0.000	93.379	0.000	α	99.523	0.000	95.477	0.000
	β	0.316	0.007	127.009	0.000	β	0.116	0.327	109.677	0.001
	R^2_{Adj}	0.131		0.286		R^2_{Adj}	0.000		0.186	
$r=3$	α	90.057	0.000	91.585	0.000	α	99.358	0.000	94.006	0.000
	β	0.316	0.007	151.525	0.000	β	0.121	0.314	130.271	0.000
	R^2_{Adj}	0.130		0.354		R^2_{Adj}	0.001		0.237	
$r=4$	α	90.495	0.000	90.951	0.000	α	99.224	0.000	94.191	0.000
	β	0.302	0.011	159.873	0.000	β	0.119	0.322	126.171	0.001
	R^2_{Adj}	0.138		0.355		R^2_{Adj}	0.222		0.224	
DE, Harmonised CPI										
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	102.005	0.000	108.248	0.000	α	101.948	0.000	108.216	0.000
	β	0.204	0.000	40.618	0.000	β	0.207	0.000	41.992	0.000
	R^2_{Adj}	0.293		0.129		R^2_{Adj}	0.313		0.144	
$r=2$	α	102.022	0.000	108.126	0.000	α	102.025	0.000	108.137	0.000
	β	0.203	0.000	41.514	0.000	β	0.205	0.000	42.351	0.000
	R^2_{Adj}	0.293		0.137		R^2_{Adj}	0.303		0.148	
$r=3$	α	102.088	0.000	108.169	0.000	α	102.013	0.000	108.140	0.000
	β	0.202	0.000	40.999	0.000	β	0.205	0.000	42.333	0.000
	R^2_{Adj}	0.283		0.134		R^2_{Adj}	0.309		0.148	
$r=4$	α	102.181	0.000	107.959	0.000	α	102.042	0.000	107.995	0.000
	β	0.198	0.000	42.281	0.000	β	0.203	0.000	42.836	0.000
	R^2_{Adj}	0.286		0.147		R^2_{Adj}	0.000		0.157	
DE, Unemployment in Thousands of Persons										
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	3524.278	0.000	2884.080	0.000	α	3440.697	0.000	2876.751	0.000
	β	-20.790	0.000	-4232.205	0.000	β	-19.065	0.000	-4176.868	0.001
	R^2_{Adj}	0.220		0.093		R^2_{Adj}	0.184		0.090	
$r=2$	α	3564.526	0.000	2929.120	0.000	α	3501.269	0.000	2907.059	0.000
	β	-21.391	0.000	-4649.320	0.000	β	-20.082	0.000	-4405.782	0.000
	R^2_{Adj}	0.231		0.113		R^2_{Adj}	0.204		0.101	
$r=3$	α	3632.838	0.000	2942.509	0.000	α	3523.388	0.000	2939.277	0.000
	β	-22.742	0.000	-4778.569	0.000	β	-20.505	0.000	-4762.117	0.000
	R^2_{Adj}	0.254		0.116		R^2_{Adj}	0.203		0.115	
$r=4$	α	3657.279	0.000	2994.324	0.000	α	3596.655	0.000	2980.431	0.000
	β	-22.919	0.000	-5192.654	0.000	β	-21.801	0.000	-5038.766	0.000
	R^2_{Adj}	0.264		0.140		R^2_{Adj}	52.756		0.131	

Table 1: Contemporaneous and predictive regressions using Eurostat vintages and uncertainty indexes in levels. Results are reported for IP (top), HICP (mid) and unemployment (bottom).

		FR, Industrial Production								
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	84.132	0.000	88.435	0.000	α	87.159	0.000	89.856	0.000
	β	0.182	0.135	39.618	0.000	β	0.103	0.405	19.168	0.665
	R^2_{Adj}	0.027		0.001		R^2_{Adj}	-0.006		-0.018	
$r=2$	α	84.292	0.000	87.479	0.000	α	86.755	0.000	89.386	0.000
	β	0.181	0.140	56.247	0.156	β	0.118	0.348	28.633	0.521
	R^2_{Adj}	0.026		0.023		R^2_{Adj}	-0.002		-0.013	
$r=3$	α	83.715	0.000	87.078	0.000	α	86.195	0.000	90.088	0.000
	β	0.195	0.121	62.899	0.159	β	0.131	0.309	16.904	0.719
	R^2_{Adj}	0.032		0.022		R^2_{Adj}	0.001		-0.020	
$r=4$	α	83.398	0.000	88.056	0.000	α	86.802	0.000	89.410	0.000
	β	0.202	0.117	47.162	0.317	β	0.114	0.395	26.187	0.585
	R^2_{Adj}	0.055		0.001		R^2_{Adj}	-0.690		-0.016	
		FR, Harmonised CPI								
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	104.608	0.000	108.029	0.000	α	104.725	0.000	108.101	0.000
	β	0.159	0.000	53.260	0.000	β	0.159	0.000	53.275	0.000
	R^2_{Adj}	0.181		0.104		R^2_{Adj}	0.185		0.108	
$r=2$	α	104.692	0.000	107.924	0.000	α	104.752	0.000	108.036	0.000
	β	0.157	0.000	54.216	0.000	β	0.158	0.000	53.580	0.000
	R^2_{Adj}	0.175		0.109		R^2_{Adj}	0.174		0.111	
$r=3$	α	104.621	0.000	107.968	0.000	α	104.769	0.000	108.006	0.000
	β	0.159	0.000	53.538	0.000	β	0.157	0.000	54.102	0.000
	R^2_{Adj}	0.172		0.106		R^2_{Adj}	0.182		0.113	
$r=4$	α	104.767	0.000	107.759	0.000	α	104.889	0.000	107.955	0.000
	β	0.154	0.000	55.402	0.000	β	0.154	0.000	53.461	0.000
	R^2_{Adj}	0.169		0.117		R^2_{Adj}	0.000		0.113	
		FR, Unemployment in Thousands of Persons								
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	2384.432	0.000	2584.414	0.000	α	2492.106	0.000	2583.004	0.000
	β	11.432	0.000	4703.814	0.000	β	8.901	0.001	4834.758	0.000
	R^2_{Adj}	0.148		0.127		R^2_{Adj}	0.086		0.135	
$r=2$	α	2418.635	0.000	2589.545	0.000	α	2519.409	0.000	2584.894	0.000
	β	10.427	0.000	4496.670	0.000	β	8.061	0.003	4684.004	0.000
	R^2_{Adj}	0.125		0.119		R^2_{Adj}	0.071		0.130	
$r=3$	α	2434.057	0.000	2589.142	0.000	α	2469.870	0.000	2565.808	0.000
	β	9.837	0.000	4353.030	0.000	β	9.067	0.001	4844.634	0.000
	R^2_{Adj}	0.110		0.111		R^2_{Adj}	0.092		0.141	
$r=4$	α	2392.686	0.000	2567.723	0.000	α	2450.986	0.000	2551.598	0.000
	β	10.617	0.000	4535.853	0.000	β	9.290	0.001	4888.394	0.000
	R^2_{Adj}	0.139		0.124		R^2_{Adj}	14.752		0.148	

Table 2: Contemporaneous and predictive regressions using Eurostat vintages and uncertainty indexes in levels. Results are reported for IP (top), HICP (mid) and unemployment (bottom).

IT, Industrial Production												
		GOOGLE		REUTERS			GOOGLE		REUTERS			
		Estimate	P-value	Estimate	P-value		Estimate	P-value	Estimate	P-value		
		Contemporaneous Regression					Predictive Regression					
$r=1$	α	79.760	0.000	89.170	0.000	α	92.786	0.000	88.801	0.000		
	β	0.203	0.288	-41.924	0.000	β	-0.253	0.190	-37.450	0.281		
	R^2_{Adj}	0.003		0.012		R^2_{Adj}	0.016		0.004			
$r=2$	α	80.217	0.000	88.849	0.000	α	92.063	0.000	88.441	0.000		
	β	0.194	0.307	-35.963	0.285	β	-0.221	0.251	-31.085	0.369		
	R^2_{Adj}	0.001		0.004		R^2_{Adj}	0.007		-0.004			
$r=3$	α	79.821	0.000	88.492	0.000	α	92.483	0.000	88.216	0.000		
	β	0.218	0.260	-28.448	0.414	β	-0.226	0.256	-24.849	0.488		
	R^2_{Adj}	0.006		-0.007		R^2_{Adj}	0.007		-0.011			
$r=4$	α	80.466	0.000	88.437	0.000	α	91.989	0.000	87.942	0.000		
	β	0.196	0.332	-28.581	0.432	β	-0.209	0.308	-22.218	0.551		
	R^2_{Adj}	0.021		-0.008		R^2_{Adj}	-0.616		-0.014			
IT, Harmonised CPI												
		GOOGLE		REUTERS			GOOGLE		REUTERS			
		Estimate	P-value	Estimate	P-value		Estimate	P-value	Estimate	P-value		
		Contemporaneous Regression					Predictive Regression					
$r=1$	α	109.442	0.000	110.651	0.000	α	109.820	0.000	110.716	0.000		
	β	0.155	0.019	41.643	0.000	β	0.145	0.028	41.932	0.000		
	R^2_{Adj}	0.043		0.149		R^2_{Adj}	0.037		0.156			
$r=2$	α	109.644	0.000	110.527	0.000	α	109.882	0.000	110.568	0.000		
	β	0.146	0.029	42.367	0.000	β	0.141	0.033	42.939	0.000		
	R^2_{Adj}	0.036		0.156		R^2_{Adj}	0.034		0.166			
$r=3$	α	109.501	0.000	110.502	0.000	α	110.039	0.000	110.597	0.000		
	β	0.151	0.022	42.663	0.000	β	0.135	0.044	42.590	0.000		
	R^2_{Adj}	0.040		0.158		R^2_{Adj}	0.030		0.163			
$r=4$	α	109.968	0.000	110.240	0.000	α	109.907	0.000	110.333	0.000		
	β	0.130	0.055	44.149	0.000	β	0.135	0.043	44.115	0.000		
	R^2_{Adj}	0.036		0.175		R^2_{Adj}	0.000		0.181			
IT, Unemployment in Thousands of Persons												
		GOOGLE		REUTERS			GOOGLE		REUTERS			
		Estimate	P-value	Estimate	P-value		Estimate	P-value	Estimate	P-value		
		Contemporaneous Regression					Predictive Regression					
$r=1$	α	2017.839	0.000	2140.731	0.000	α	2200.516	0.000	2116.231	0.000		
	β	15.797	0.048	4249.158	0.000	β	9.307	0.245	4689.289	0.000		
	R^2_{Adj}	0.027		0.100		R^2_{Adj}	0.003		0.125			
$r=2$	α	1981.800	0.000	2130.673	0.000	α	2195.612	0.000	2112.580	0.000		
	β	16.815	0.034	4262.046	0.000	β	9.184	0.250	4623.971	0.000		
	R^2_{Adj}	0.032		0.102		R^2_{Adj}	0.003		0.123			
$r=3$	α	1990.242	0.000	2133.627	0.000	α	2210.838	0.000	2111.003	0.000		
	β	16.256	0.040	4136.540	0.001	β	8.389	0.292	4566.650	0.000		
	R^2_{Adj}	0.030		0.097		R^2_{Adj}	0.001		0.122			
$r=4$	α	1968.742	0.000	2113.989	0.000	α	2184.547	0.000	2098.568	0.000		
	β	16.519	0.037	4201.206	0.000	β	8.821	0.267	4546.583	0.000		
	R^2_{Adj}	0.041		0.102		R^2_{Adj}	4.240		0.123			

Table 3: Contemporaneous and predictive regressions using Eurostat vintages and uncertainty indexes in levels. Results are reported for IP (top), HICP (mid) and unemployment (bottom).

UK, Industrial Production										
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	86.661	0.000	88.525	0.000	α	90.927	0.000	94.206	0.000
	β	0.092	0.216	29.120	0.000	β	-0.005	0.947	-48.712	0.158
	R^2_{Adj}	0.017		-0.008		R^2_{Adj}	-0.030		0.031	
$r=2$	α	87.660	0.000	88.382	0.000	α	90.337	0.000	93.467	0.000
	β	0.075	0.296	34.802	0.291	β	0.015	0.838	-34.629	0.299
	R^2_{Adj}	0.004		0.004		R^2_{Adj}	-0.029		0.003	
$r=3$	α	87.481	0.000	88.720	0.000	α	89.962	0.000	94.245	0.000
	β	0.085	0.243	33.531	0.316	β	0.029	0.691	-42.519	0.216
	R^2_{Adj}	0.012		0.001		R^2_{Adj}	-0.026		0.018	
$r=4$	α	86.724	0.000	87.858	0.000	α	89.942	0.000	94.762	0.000
	β	0.110	0.169	50.271	0.173	β	0.038	0.642	-44.777	0.240
	R^2_{Adj}	0.056		0.027		R^2_{Adj}	-0.096		0.013	
UK, Harmonised CPI										
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	98.936	0.000	111.060	0.000	α	99.166	0.000	111.204	0.000
	β	0.485	0.000	121.256	0.000	β	0.483	0.000	120.934	0.001
	R^2_{Adj}	0.263		0.086		R^2_{Adj}	0.267		0.088	
$r=2$	α	99.093	0.000	110.824	0.000	α	99.328	0.000	111.141	0.000
	β	0.479	0.000	123.411	0.001	β	0.478	0.000	120.438	0.001
	R^2_{Adj}	0.259		0.090		R^2_{Adj}	0.263		0.088	
$r=3$	α	99.102	0.000	110.997	0.000	α	99.261	0.000	110.653	0.000
	β	0.479	0.000	120.731	0.001	β	0.479	0.000	128.027	0.001
	R^2_{Adj}	0.259		0.086		R^2_{Adj}	0.266		0.100	
$r=4$	α	99.363	0.000	110.199	0.000	α	98.971	0.000	110.462	0.000
	β	0.469	0.000	130.082	0.001	β	0.482	0.000	127.951	0.001
	R^2_{Adj}	0.260		0.103		R^2_{Adj}	0.000		0.103	
UK, Unemployment in Thousands of Persons										
		GOOGLE		REUTERS		GOOGLE		REUTERS		
		Estimate	P-value	Estimate	P-value	Estimate	P-value	Estimate	P-value	
		Contemporaneous Regression				Predictive Regression				
$r=1$	α	1617.723	0.000	1642.843	0.000	α	1663.058	0.000	1663.041	0.000
	β	13.163	0.001	8458.979	0.000	β	12.191	0.003	8208.047	0.000
	R^2_{Adj}	0.087		0.212		R^2_{Adj}	0.074		0.203	
$r=2$	α	1611.998	0.000	1642.203	0.000	α	1669.767	0.000	1661.709	0.000
	β	13.291	0.001	8459.701	0.000	β	12.003	0.003	8216.481	0.000
	R^2_{Adj}	0.089		0.211		R^2_{Adj}	0.071		0.202	
$r=3$	α	1598.416	0.000	1647.402	0.000	α	1646.056	0.000	1677.177	0.000
	β	13.765	0.001	8444.677	0.000	β	12.734	0.002	8005.936	0.000
	R^2_{Adj}	0.096		0.213		R^2_{Adj}	0.082		0.193	
$r=4$	α	1583.805	0.000	1666.039	0.000	α	1647.591	0.000	1693.508	0.000
	β	14.333	0.000	8220.993	0.000	β	12.878	0.001	7833.160	0.000
	R^2_{Adj}	0.115		0.205		R^2_{Adj}	10.042		0.189	

Table 4: Contemporaneous and predictive regressions using Eurostat vintages and uncertainty indexes in levels. Results are reported for IP (top), HICP (mid) and unemployment (bottom).

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	1.072	1.072	1.109	1.05	1.05	PLS(3)-MacroFin-GoogleReuters	0.983	0.958	0.998	0.952	0.962
Average(12)	0.965	0.965	1.002	0.943	0.943	PLS(3)-MacroFin-Reuters	0.979	0.955	0.998	0.954	0.963
Average(24)	0.905	0.905	0.946	0.886	0.886	PLS(4)-MacroFin	0.951	0.931	1.046	1	1.01
Naive	1.521	1.521	1.62	1.535	1.535	PLS(4)-MacroFin-Google	0.958	0.946	1.049	1.001	1.011
AR(1)	0.925	0.925	0.954	0.889	0.889	PLS(4)-MacroFin-GoogleReuters	0.957	0.944	1.044	0.997	1.007
AR(4)	0.933	0.933	0.957	0.907	0.907	PLS(4)-MacroFin-Reuters	0.95	0.929	1.04	0.995	1.005
AR(AIC)	0.979	0.979	0.981	0.919	0.919	PLS(5)-MacroFin	0.975	0.929	1.049	1	1.01
AutoArima	0.956	0.956	0.952	0.924	0.924	PLS(5)-MacroFin-Google	0.978	0.94	1.053	1.004	1.013
ETS	0.961	0.961	0.996	0.948	0.948	PLS(5)-MacroFin-GoogleReuters	0.978	0.94	1.048	0.999	1.008
BaggedETS	0.972	0.962	0.908	0.89	0.901	PLS(5)-MacroFin-Reuters	0.973	0.928	1.044	0.996	1.005
BATS	0.971	0.971	0.967	0.939	0.939	SPC(1)-MacroFin	0.945	0.932	0.975	0.925	0.934
TBATS	0.971	0.971	0.967	0.939	0.939	SPC(1)-MacroFin-Google	0.946	0.937	0.982	0.928	0.936
NN	0.91	0.9	0.914	0.896	0.89	SPC(1)-MacroFin-GoogleReuters	0.945	0.935	0.981	0.93	0.937
Spline	1.027	1.027	1.076	1.024	1.024	SPC(1)-MacroFin-Reuters	0.945	0.934	0.976	0.925	0.933
THETA	0.883	0.883	0.907	0.848	0.848	SPC(2)-MacroFin	0.944	0.961	0.959	0.913	0.924
Google	0.958	0.952	1.001	0.951	0.948	SPC(2)-MacroFin-Google	0.956	0.957	0.962	0.931	0.914
Google-L1	1.07	1.076	1.083	1.037	1.036	SPC(2)-MacroFin-GoogleReuters	0.959	0.966	0.972	0.931	0.929
Google-L3	1.006	1.005	0.971	0.932	0.931	SPC(2)-MacroFin-Reuters	0.948	0.95	0.955	0.911	0.919
Reuters	0.9	0.898	0.936	0.889	0.888	SPC(3)-MacroFin	0.974	0.955	0.965	0.931	0.926
Reuters-L1	0.941	0.941	1.036	0.996	0.996	SPC(3)-MacroFin-Google	0.974	0.955	0.969	0.935	0.929
Reuters-L3	1.012	1.003	1.11	1.042	1.041	SPC(3)-MacroFin-GoogleReuters	0.966	0.963	0.983	0.949	0.935
DFA(2)-MacroFin	0.91	0.932	0.951	0.916	0.914	SPC(3)-MacroFin-Reuters	0.983	0.953	0.973	0.924	0.925
DFA(2)-MacroFin-Google	0.912	0.933	0.955	0.919	0.917	SPC(4)-MacroFin	0.981	0.977	1.014	0.961	0.962
DFA(2)-MacroFin-GoogleReuters	0.911	0.932	0.954	0.918	0.916	SPC(4)-MacroFin-Google	0.985	0.98	1.02	0.966	0.97
DFA(2)-MacroFin-Reuters	0.909	0.931	0.95	0.915	0.914	SPC(4)-MacroFin-GoogleReuters	0.983	0.978	1.017	0.96	0.962
DFA(3)-MacroFin	0.929	0.924	0.97	0.93	0.932	SPC(4)-MacroFin-Reuters	0.976	0.979	1.012	0.954	0.955
DFA(3)-MacroFin-Google	0.93	0.926	0.972	0.933	0.934	SPC(5)-MacroFin	0.994	0.958	1.127	1.069	1.071
DFA(3)-MacroFin-GoogleReuters	0.93	0.926	0.972	0.933	0.934	SPC(5)-MacroFin-Google	1.002	0.965	1.12	1.078	1.073
DFA(3)-MacroFin-Reuters	0.929	0.924	0.969	0.93	0.932	SPC(5)-MacroFin-GoogleReuters	0.993	0.952	1.125	1.063	1.077
DFA(4)-MacroFin	0.934	0.929	0.981	0.932	0.934	SPC(5)-MacroFin-Reuters	1.004	0.952	1.115	1.049	1.066
DFA(4)-MacroFin-Google	0.936	0.93	0.984	0.935	0.937	LASSO-MacroFin	0.968	0.949	0.996	0.92	0.921
DFA(4)-MacroFin-GoogleReuters	0.935	0.931	0.981	0.933	0.935	LASSO-MacroFin-Google	0.988	0.953	0.997	0.913	0.927
DFA(4)-MacroFin-Reuters	0.933	0.929	0.979	0.93	0.932	LASSO-MacroFin-GoogleReuters	0.962	0.969	1.001	0.919	0.902
DFA(5)-MacroFin	0.956	0.923	1.109	1.058	1.061	LASSO-MacroFin-Reuters	0.947	0.989	1.002	0.913	0.913
DFA(5)-MacroFin-Google	0.956	0.931	1.106	1.053	1.058	EN-MacroFin	0.987	0.958	0.983	0.901	0.92
DFA(5)-MacroFin-GoogleReuters	0.958	0.931	1.104	1.051	1.056	EN-MacroFin-Google	0.995	0.967	0.969	0.916	0.894
DFA(5)-MacroFin-Reuters	0.959	0.931	1.107	1.055	1.06	EN-MacroFin-GoogleReuters	0.969	0.95	0.978	0.901	0.897
PLS(1)-MacroFin	0.961	0.971	0.969	0.906	0.908	EN-MacroFin-Reuters	0.947	0.97	0.96	0.886	0.891
PLS(1)-MacroFin-Google	0.965	0.977	0.971	0.908	0.911	SSlab-MacroFin	0.908	0.86	1.075	1.011	0.998
PLS(1)-MacroFin-GoogleReuters	0.963	0.975	0.971	0.909	0.912	SSlab-MacroFin-Google	0.908	0.862	1.084	1.038	1.008
PLS(1)-MacroFin-Reuters	0.959	0.969	0.969	0.907	0.909	SSlab-MacroFin-GoogleReuters	0.899	0.862	1.054	1.031	1.001
PLS(2)-MacroFin	0.961	0.968	0.977	0.922	0.93	SSlab-MacroFin-Reuters	0.903	0.861	1.056	1.025	1.027
PLS(2)-MacroFin-Google	0.967	0.972	0.981	0.925	0.933	Best1	0.997	1.039	0.996	0.987	1.027
PLS(2)-MacroFin-GoogleReuters	0.965	0.97	0.979	0.924	0.932	Best3	1.017	1	1.038	0.99	0.998
PLS(2)-MacroFin-Reuters	0.959	0.965	0.975	0.921	0.929	Best5	0.992	0.992	1.037	1.005	1.006
PLS(3)-MacroFin	0.981	0.958	1.002	0.958	0.968	Best10	0.96	0.96	1.017	0.978	0.977
PLS(3)-MacroFin-Google	0.986	0.961	1.002	0.957	0.966						

Table 5: DE, Industrial-Production, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	1.38	1.38	1.454	1.415	1.415	PLS(3)-MacroFin-GoogleReuters	1.237	1.203	1.296	1.268	1.276
Average(12)	1.213	1.213	1.322	1.282	1.282	PLS(3)-MacroFin-Reuters	1.232	1.198	1.292	1.266	1.274
Average(24)	1.173	1.173	1.271	1.236	1.236	PLS(4)-MacroFin	1.26	1.192	1.319	1.286	1.293
Naive	2.041	2.041	2.182	2.113	2.113	PLS(4)-MacroFin-Google	1.267	1.198	1.322	1.287	1.295
AR(1)	1.208	1.208	1.305	1.27	1.27	PLS(4)-MacroFin-GoogleReuters	1.271	1.2	1.319	1.285	1.292
AR(4)	1.135	1.135	1.234	1.2	1.2	PLS(4)-MacroFin-Reuters	1.264	1.194	1.315	1.283	1.29
AR(AIC)	1.213	1.213	1.251	1.219	1.219	PLS(5)-MacroFin	1.273	1.194	1.303	1.266	1.273
AutoArima	1.128	1.128	1.202	1.183	1.183	PLS(5)-MacroFin-Google	1.277	1.199	1.306	1.268	1.275
ETS	1.183	1.183	1.268	1.236	1.236	PLS(5)-MacroFin-GoogleReuters	1.281	1.201	1.306	1.268	1.275
BaggedETS	1.161	1.144	1.149	1.128	1.151	PLS(5)-MacroFin-Reuters	1.276	1.197	1.302	1.266	1.272
BATS	1.184	1.184	1.244	1.227	1.227	SPC(1)-MacroFin	1.252	1.221	1.362	1.336	1.338
TBATS	1.184	1.184	1.244	1.227	1.227	SPC(1)-MacroFin-Google	1.257	1.227	1.369	1.338	1.342
NN	1.16	1.146	1.194	1.163	1.166	SPC(1)-MacroFin-GoogleReuters	1.254	1.225	1.368	1.34	1.342
Spline	1.266	1.266	1.362	1.325	1.325	SPC(1)-MacroFin-Reuters	1.254	1.221	1.365	1.337	1.338
THETA	1.14	1.14	1.233	1.2	1.2	SPC(2)-MacroFin	1.186	1.203	1.265	1.238	1.244
Google	1.214	1.205	1.32	1.291	1.29	SPC(2)-MacroFin-Google	1.2	1.2	1.273	1.247	1.24
Google-L1	1.279	1.284	1.333	1.309	1.309	SPC(2)-MacroFin-GoogleReuters	1.206	1.208	1.274	1.244	1.247
Google-L3	1.174	1.173	1.268	1.244	1.244	SPC(2)-MacroFin-Reuters	1.193	1.197	1.256	1.233	1.236
Reuters	1.175	1.163	1.269	1.239	1.239	SPC(3)-MacroFin	1.265	1.233	1.281	1.257	1.258
Reuters-L1	1.17	1.17	1.32	1.297	1.297	SPC(3)-MacroFin-Google	1.274	1.221	1.278	1.26	1.262
Reuters-L3	1.226	1.219	1.453	1.381	1.381	SPC(3)-MacroFin-GoogleReuters	1.257	1.228	1.302	1.277	1.263
DFA(2)-MacroFin	1.164	1.183	1.235	1.213	1.213	SPC(3)-MacroFin-Reuters	1.269	1.235	1.289	1.264	1.258
DFA(2)-MacroFin-Google	1.17	1.187	1.24	1.217	1.216	SPC(4)-MacroFin	1.264	1.231	1.325	1.293	1.294
DFA(2)-MacroFin-GoogleReuters	1.17	1.187	1.24	1.217	1.216	SPC(4)-MacroFin-Google	1.267	1.236	1.33	1.297	1.301
DFA(2)-MacroFin-Reuters	1.164	1.183	1.235	1.213	1.212	SPC(4)-MacroFin-GoogleReuters	1.268	1.233	1.328	1.294	1.294
DFA(3)-MacroFin	1.245	1.214	1.265	1.241	1.242	SPC(4)-MacroFin-Reuters	1.265	1.232	1.325	1.288	1.289
DFA(3)-MacroFin-Google	1.246	1.215	1.266	1.243	1.244	SPC(5)-MacroFin	1.274	1.242	1.29	1.25	1.254
DFA(3)-MacroFin-GoogleReuters	1.246	1.215	1.266	1.243	1.244	SPC(5)-MacroFin-Google	1.272	1.25	1.285	1.256	1.254
DFA(3)-MacroFin-Reuters	1.245	1.214	1.264	1.241	1.242	SPC(5)-MacroFin-GoogleReuters	1.279	1.239	1.287	1.25	1.26
DFA(4)-MacroFin	1.238	1.205	1.279	1.249	1.25	SPC(5)-MacroFin-Reuters	1.286	1.244	1.278	1.233	1.249
DFA(4)-MacroFin-Google	1.24	1.206	1.282	1.252	1.253	LASSO-MacroFin	1.295	1.275	1.271	1.226	1.236
DFA(4)-MacroFin-GoogleReuters	1.24	1.206	1.28	1.25	1.251	LASSO-MacroFin-Google	1.286	1.253	1.275	1.22	1.236
DFA(4)-MacroFin-Reuters	1.238	1.205	1.277	1.248	1.249	LASSO-MacroFin-GoogleReuters	1.222	1.279	1.275	1.223	1.221
DFA(5)-MacroFin	1.25	1.209	1.259	1.224	1.225	LASSO-MacroFin-Reuters	1.248	1.276	1.283	1.218	1.214
DFA(5)-MacroFin-Google	1.253	1.212	1.256	1.221	1.222	EN-MacroFin	1.335	1.251	1.266	1.215	1.236
DFA(5)-MacroFin-GoogleReuters	1.258	1.212	1.255	1.22	1.22	EN-MacroFin-Google	1.3	1.274	1.252	1.232	1.212
DFA(5)-MacroFin-Reuters	1.256	1.21	1.257	1.223	1.223	EN-MacroFin-GoogleReuters	1.251	1.249	1.265	1.205	1.206
PLS(1)-MacroFin	1.25	1.255	1.354	1.314	1.315	EN-MacroFin-Reuters	1.25	1.251	1.252	1.199	1.206
PLS(1)-MacroFin-Google	1.255	1.259	1.356	1.317	1.317	SSlab-MacroFin	1.155	1.136	1.37	1.314	1.314
PLS(1)-MacroFin-GoogleReuters	1.255	1.258	1.357	1.318	1.318	SSlab-MacroFin-Google	1.153	1.139	1.365	1.339	1.302
PLS(1)-MacroFin-Reuters	1.25	1.254	1.355	1.316	1.316	SSlab-MacroFin-GoogleReuters	1.148	1.139	1.356	1.329	1.294
PLS(2)-MacroFin	1.238	1.237	1.365	1.332	1.334	SSlab-MacroFin-Reuters	1.154	1.138	1.348	1.323	1.329
PLS(2)-MacroFin-Google	1.246	1.243	1.368	1.334	1.336	Best1	1.302	1.322	1.248	1.269	1.324
PLS(2)-MacroFin-GoogleReuters	1.245	1.242	1.366	1.333	1.336	Best3	1.307	1.275	1.31	1.298	1.314
PLS(2)-MacroFin-Reuters	1.238	1.236	1.364	1.331	1.333	Best5	1.281	1.27	1.304	1.327	1.333
PLS(3)-MacroFin	1.234	1.2	1.296	1.27	1.278	Best10	1.245	1.243	1.271	1.266	1.265
PLS(3)-MacroFin-Google	1.239	1.206	1.299	1.272	1.28						

Table 6: DE, Industrial-Production, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.01	0.01	0.01	0.01	0.01	PLS(3)-MacroFin-GoogleReuters	0.67	0.95	0.94	0.99	0.96
Average(12)	0.84	0.85	0.36	0.5	0.5	PLS(3)-MacroFin-Reuters	0.72	0.9	0.92	0.98	0.97
Average(24)	0.18	0.18	0.21	0.23	0.23	PLS(4)-MacroFin	0.67	0.9	0.87	0.86	0.8
Naive	0.01	0.01	0	0	0	PLS(4)-MacroFin-Google	0.63	0.94	0.85	0.85	0.79
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.62	0.95	0.88	0.87	0.81
AR(4)	0.25	0.25	0.22	0.24	0.24	PLS(4)-MacroFin-Reuters	0.65	0.92	0.91	0.88	0.82
AR(AIC)	0.96	0.96	0.63	0.65	0.65	PLS(5)-MacroFin	0.61	0.92	0.99	0.97	0.97
AutoArima	0.39	0.39	0.25	0.34	0.34	PLS(5)-MacroFin-Google	0.59	0.94	0.99	0.99	0.96
ETS	0.67	0.67	0.52	0.56	0.56	PLS(5)-MacroFin-GoogleReuters	0.57	0.96	0.99	0.99	0.96
BaggedETS	0.65	0.55	0.17	0.23	0.31	PLS(5)-MacroFin-Reuters	0.6	0.93	0.98	0.97	0.98
BATS	0.63	0.63	0.29	0.46	0.46	SPC(1)-MacroFin	0.52	0.86	0.4	0.34	0.33
TBATS	0.63	0.63	0.29	0.46	0.46	SPC(1)-MacroFin-Google	0.49	0.8	0.37	0.33	0.31
NN	0.72	0.66	0.44	0.46	0.47	SPC(1)-MacroFin-GoogleReuters	0.51	0.81	0.36	0.32	0.3
Spline	0.27	0.27	0.22	0.25	0.25	SPC(1)-MacroFin-Reuters	0.51	0.85	0.39	0.34	0.32
THETA	0.05	0.04	0.03	0.04	0.04	SPC(2)-MacroFin	0.76	0.95	0.59	0.68	0.75
Google	0.85	0.91	0.73	0.63	0.64	SPC(2)-MacroFin-Google	0.92	0.92	0.68	0.77	0.69
Google-L1	0.4	0.36	0.74	0.64	0.65	SPC(2)-MacroFin-GoogleReuters	0.98	1	0.7	0.74	0.79
Google-L3	0.74	0.73	0.73	0.82	0.81	SPC(2)-MacroFin-Reuters	0.84	0.88	0.55	0.64	0.67
Reuters	0.27	0.17	0.51	0.58	0.58	SPC(3)-MacroFin	0.6	0.82	0.75	0.87	0.88
Reuters-L1	0.61	0.61	0.85	0.74	0.74	SPC(3)-MacroFin-Google	0.52	0.9	0.72	0.89	0.92
Reuters-L3	0.86	0.92	0.19	0.3	0.3	SPC(3)-MacroFin-GoogleReuters	0.61	0.85	0.97	0.92	0.93
DFA(2)-MacroFin	0.52	0.7	0.42	0.52	0.52	SPC(3)-MacroFin-Reuters	0.53	0.81	0.84	0.94	0.89
DFA(2)-MacroFin-Google	0.58	0.75	0.45	0.55	0.54	SPC(4)-MacroFin	0.53	0.82	0.78	0.75	0.75
DFA(2)-MacroFin-GoogleReuters	0.58	0.75	0.45	0.55	0.54	SPC(4)-MacroFin-Google	0.53	0.79	0.73	0.72	0.68
DFA(2)-MacroFin-Reuters	0.52	0.7	0.42	0.52	0.51	SPC(4)-MacroFin-GoogleReuters	0.53	0.81	0.76	0.75	0.74
DFA(3)-MacroFin	0.66	0.94	0.59	0.71	0.72	SPC(4)-MacroFin-Reuters	0.54	0.82	0.78	0.81	0.8
DFA(3)-MacroFin-Google	0.66	0.93	0.61	0.72	0.73	SPC(5)-MacroFin	0.59	0.81	0.91	0.88	0.91
DFA(3)-MacroFin-GoogleReuters	0.66	0.94	0.6	0.72	0.73	SPC(5)-MacroFin-Google	0.58	0.77	0.88	0.92	0.9
DFA(3)-MacroFin-Reuters	0.66	0.95	0.59	0.7	0.71	SPC(5)-MacroFin-GoogleReuters	0.59	0.83	0.89	0.88	0.94
DFA(4)-MacroFin	0.7	0.97	0.76	0.81	0.82	SPC(5)-MacroFin-Reuters	0.56	0.8	0.84	0.78	0.87
DFA(4)-MacroFin-Google	0.69	0.98	0.78	0.83	0.84	LASSO-MacroFin	0.58	0.55	0.8	0.75	0.8
DFA(4)-MacroFin-GoogleReuters	0.69	0.98	0.77	0.82	0.83	LASSO-MacroFin-Google	0.55	0.66	0.83	0.72	0.81
DFA(4)-MacroFin-Reuters	0.7	0.97	0.75	0.8	0.81	LASSO-MacroFin-GoogleReuters	0.88	0.55	0.83	0.73	0.73
DFA(5)-MacroFin	0.68	0.99	0.75	0.76	0.76	LASSO-MacroFin-Reuters	0.77	0.5	0.88	0.71	0.69
DFA(5)-MacroFin-Google	0.67	0.98	0.74	0.74	0.75	EN-MacroFin	0.4	0.67	0.76	0.68	0.81
DFA(5)-MacroFin-GoogleReuters	0.64	0.97	0.73	0.74	0.74	EN-MacroFin-Google	0.5	0.56	0.68	0.77	0.65
DFA(5)-MacroFin-Reuters	0.64	0.99	0.74	0.75	0.75	EN-MacroFin-GoogleReuters	0.7	0.7	0.76	0.61	0.63
PLS(1)-MacroFin	0.32	0.3	0.43	0.49	0.48	EN-MacroFin-Reuters	0.73	0.67	0.68	0.59	0.63
PLS(1)-MacroFin-Google	0.27	0.27	0.42	0.47	0.46	SSlab-MacroFin	0.26	0.36	0.57	0.71	0.7
PLS(1)-MacroFin-GoogleReuters	0.28	0.28	0.41	0.46	0.45	SSlab-MacroFin-Google	0.25	0.39	0.64	0.55	0.76
PLS(1)-MacroFin-Reuters	0.32	0.32	0.43	0.48	0.47	SSlab-MacroFin-GoogleReuters	0.2	0.37	0.67	0.59	0.83
PLS(2)-MacroFin	0.67	0.69	0.48	0.47	0.46	SSlab-MacroFin-Reuters	0.25	0.36	0.71	0.63	0.57
PLS(2)-MacroFin-Google	0.59	0.63	0.46	0.46	0.44	Best1	0.5	0.46	0.6	0.99	0.56
PLS(2)-MacroFin-GoogleReuters	0.6	0.64	0.47	0.46	0.45	Best3	0.4	0.63	0.96	0.8	0.69
PLS(2)-MacroFin-Reuters	0.67	0.7	0.49	0.48	0.46	Best5	0.51	0.62	0.99	0.61	0.58
PLS(3)-MacroFin	0.7	0.92	0.94	1	0.95	Best10	0.72	0.76	0.72	0.97	0.96
PLS(3)-MacroFin-Google	0.65	0.98	0.97	0.99	0.93						

Table 7: DE, Industrial-Production, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	1.204	1.204	1.179	1.201	1.201	PLS(3)-MacroFin-GoogleReuters	0.93	0.975	1.091	1.081	1.085
Average(12)	1.085	1.085	1.089	1.102	1.102	PLS(3)-MacroFin-Reuters	0.937	0.978	1.09	1.079	1.084
Average(24)	1.05	1.05	1.078	1.095	1.095	PLS(4)-MacroFin	0.969	0.987	1.118	1.105	1.104
Naive	1.856	1.856	1.664	1.772	1.772	PLS(4)-MacroFin-Google	0.963	0.986	1.117	1.106	1.105
AR(1)	0.818	0.818	0.959	0.954	0.954	PLS(4)-MacroFin-GoogleReuters	0.946	0.97	1.12	1.103	1.102
AR(4)	0.858	0.859	0.984	0.983	0.983	PLS(4)-MacroFin-Reuters	0.953	0.973	1.122	1.103	1.102
AR(AIC)	0.804	0.804	0.91	0.916	0.916	PLS(5)-MacroFin	0.98	1.007	1.125	1.098	1.092
AutoArima	0.891	0.891	1.006	0.983	0.983	PLS(5)-MacroFin-Google	0.971	0.998	1.123	1.098	1.094
ETS	0.853	0.853	0.924	0.906	0.906	PLS(5)-MacroFin-GoogleReuters	0.958	0.988	1.126	1.094	1.089
BaggedETS	0.845	0.857	0.925	0.894	0.898	PLS(5)-MacroFin-Reuters	0.965	0.996	1.13	1.094	1.088
BATS	0.856	0.856	0.926	0.907	0.907	SPC(1)-MacroFin	1.025	1.003	1.076	1.096	1.093
TBATS	0.856	0.856	0.926	0.907	0.907	SPC(1)-MacroFin-Google	1.024	1.003	1.077	1.097	1.094
NN	0.953	0.957	0.914	0.922	0.927	SPC(1)-MacroFin-GoogleReuters	1.024	1.002	1.076	1.097	1.094
Spline	0.916	0.916	1.017	1.002	1.002	SPC(1)-MacroFin-Reuters	1.023	1.001	1.076	1.098	1.093
THETA	0.871	0.871	0.927	0.931	0.931	SPC(2)-MacroFin	1.036	1.004	1.034	1.054	1.052
Google	1.028	1.026	1.054	1.082	1.081	SPC(2)-MacroFin-Google	1.036	1.007	1.035	1.052	1.053
Google-L1	1.065	1.049	1.099	1.126	1.125	SPC(2)-MacroFin-GoogleReuters	1.035	1.006	1.037	1.053	1.052
Google-L3	1.186	1.162	1.094	1.144	1.143	SPC(2)-MacroFin-Reuters	1.033	1.004	1.033	1.052	1.05
Reuters	1.009	1.015	1.044	1.065	1.064	SPC(3)-MacroFin	1.074	1.03	1.037	1.048	1.049
Reuters-L1	1.032	1.032	1.111	1.115	1.114	SPC(3)-MacroFin-Google	1.074	1.032	1.039	1.05	1.05
Reuters-L3	1.152	1.168	1.18	1.194	1.193	SPC(3)-MacroFin-GoogleReuters	1.075	1.03	1.04	1.05	1.049
DFA(2)-MacroFin	1.041	1.012	1.023	1.039	1.039	SPC(3)-MacroFin-Reuters	1.073	1.029	1.038	1.048	1.048
DFA(2)-MacroFin-Google	1.042	1.012	1.024	1.039	1.039	SPC(4)-MacroFin	1.19	1.133	1.052	1.053	1.055
DFA(2)-MacroFin-GoogleReuters	1.041	1.012	1.024	1.039	1.039	SPC(4)-MacroFin-Google	1.196	1.14	1.052	1.058	1.055
DFA(2)-MacroFin-Reuters	1.041	1.011	1.023	1.039	1.038	SPC(4)-MacroFin-GoogleReuters	1.189	1.142	1.053	1.058	1.053
DFA(3)-MacroFin	1.077	1.027	1.039	1.05	1.049	SPC(4)-MacroFin-Reuters	1.189	1.132	1.047	1.056	1.051
DFA(3)-MacroFin-Google	1.078	1.028	1.04	1.05	1.05	SPC(5)-MacroFin	1.199	1.151	1.075	1.076	1.066
DFA(3)-MacroFin-GoogleReuters	1.078	1.028	1.04	1.05	1.05	SPC(5)-MacroFin-Google	1.186	1.181	1.075	1.068	1.071
DFA(3)-MacroFin-Reuters	1.076	1.027	1.038	1.049	1.049	SPC(5)-MacroFin-GoogleReuters	1.194	1.198	1.08	1.069	1.073
DFA(4)-MacroFin	1.196	1.142	1.052	1.057	1.057	SPC(5)-MacroFin-Reuters	1.196	1.169	1.075	1.067	1.054
DFA(4)-MacroFin-Google	1.198	1.145	1.056	1.059	1.059	LASSO-MacroFin	1.11	1.122	1.014	1.063	1.091
DFA(4)-MacroFin-GoogleReuters	1.198	1.146	1.056	1.059	1.059	LASSO-MacroFin-Google	1.123	1.04	1.018	1.04	1.056
DFA(4)-MacroFin-Reuters	1.195	1.142	1.052	1.057	1.057	LASSO-MacroFin-GoogleReuters	1.118	1.109	1.059	1.104	1.046
DFA(5)-MacroFin	1.192	1.136	1.068	1.07	1.069	LASSO-MacroFin-Reuters	1.133	1.09	1.053	1.056	1.12
DFA(5)-MacroFin-Google	1.193	1.145	1.076	1.073	1.072	EN-MacroFin	1.131	1.174	1.016	1.057	1.078
DFA(5)-MacroFin-GoogleReuters	1.203	1.15	1.071	1.071	1.07	EN-MacroFin-Google	1.104	1.124	1.047	1.069	1.06
DFA(5)-MacroFin-Reuters	1.194	1.148	1.07	1.066	1.066	EN-MacroFin-GoogleReuters	1.107	1.092	1.001	1.068	1.032
PLS(1)-MacroFin	1.018	1.016	1.061	1.085	1.085	EN-MacroFin-Reuters	1.072	1.126	0.967	1.139	1.064
PLS(1)-MacroFin-Google	1.018	1.015	1.061	1.085	1.085	SSlab-MacroFin	1.009	1.011	1.029	1.065	1.065
PLS(1)-MacroFin-GoogleReuters	1.018	1.015	1.061	1.085	1.085	SSlab-MacroFin-Google	1.008	1.012	1.03	1.067	1.065
PLS(1)-MacroFin-Reuters	1.018	1.016	1.061	1.085	1.085	SSlab-MacroFin-GoogleReuters	1.011	1.011	1.028	1.066	1.064
PLS(2)-MacroFin	0.98	0.982	1.041	1.043	1.038	SSlab-MacroFin-Reuters	1.009	1.009	1.028	1.064	1.066
PLS(2)-MacroFin-Google	0.968	0.981	1.038	1.041	1.037	Best1	0.921	0.889	0.972	0.941	0.937
PLS(2)-MacroFin-GoogleReuters	0.957	0.97	1.038	1.039	1.034	Best3	0.905	0.888	0.967	0.948	0.948
PLS(2)-MacroFin-Reuters	0.971	0.969	1.041	1.041	1.035	Best5	0.909	0.888	0.964	0.95	0.952
PLS(3)-MacroFin	0.949	0.99	1.088	1.082	1.086	Best10	0.901	0.877	0.978	0.959	0.963
PLS(3)-MacroFin-Google	0.948	0.991	1.089	1.084	1.088						

Table 8: FR, Industrial-Production, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	1.554	1.554	1.409	1.429	1.429	PLS(3)-MacroFin-GoogleReuters	1.201	1.232	1.289	1.291	1.291
Average(12)	1.421	1.421	1.294	1.312	1.312	PLS(3)-MacroFin-Reuters	1.212	1.236	1.288	1.289	1.29
Average(24)	1.372	1.372	1.265	1.285	1.285	PLS(4)-MacroFin	1.221	1.239	1.334	1.334	1.334
Naive	2.327	2.327	2.049	2.133	2.133	PLS(4)-MacroFin-Google	1.215	1.236	1.336	1.337	1.337
AR(1)	1.14	1.14	1.144	1.142	1.142	PLS(4)-MacroFin-GoogleReuters	1.202	1.226	1.333	1.332	1.332
AR(4)	1.188	1.188	1.157	1.154	1.154	PLS(4)-MacroFin-Reuters	1.207	1.23	1.331	1.329	1.329
AR(AIC)	1.143	1.144	1.106	1.108	1.108	PLS(5)-MacroFin	1.231	1.253	1.329	1.317	1.317
AutoArima	1.193	1.193	1.196	1.193	1.193	PLS(5)-MacroFin-Google	1.222	1.251	1.335	1.325	1.325
ETS	1.148	1.148	1.109	1.107	1.107	PLS(5)-MacroFin-GoogleReuters	1.209	1.242	1.332	1.318	1.318
BaggedETS	1.116	1.135	1.111	1.087	1.097	PLS(5)-MacroFin-Reuters	1.217	1.244	1.326	1.31	1.309
BATS	1.148	1.148	1.11	1.109	1.109	SPC(1)-MacroFin	1.39	1.358	1.281	1.299	1.297
TBATS	1.148	1.148	1.11	1.109	1.109	SPC(1)-MacroFin-Google	1.391	1.358	1.281	1.299	1.298
NN	1.17	1.177	1.141	1.147	1.147	SPC(1)-MacroFin-GoogleReuters	1.39	1.358	1.279	1.298	1.297
Spline	1.242	1.242	1.201	1.203	1.203	SPC(1)-MacroFin-Reuters	1.389	1.357	1.281	1.3	1.296
THETA	1.176	1.176	1.116	1.121	1.121	SPC(2)-MacroFin	1.395	1.362	1.234	1.253	1.254
Google	1.371	1.368	1.26	1.282	1.282	SPC(2)-MacroFin-Google	1.397	1.364	1.234	1.252	1.251
Google-L1	1.399	1.384	1.345	1.37	1.37	SPC(2)-MacroFin-GoogleReuters	1.394	1.364	1.235	1.252	1.252
Google-L3	1.469	1.451	1.325	1.371	1.371	SPC(2)-MacroFin-Reuters	1.392	1.361	1.233	1.253	1.251
Reuters	1.348	1.353	1.234	1.252	1.251	SPC(3)-MacroFin	1.427	1.379	1.236	1.251	1.251
Reuters-L1	1.378	1.38	1.308	1.315	1.315	SPC(3)-MacroFin-Google	1.427	1.379	1.236	1.251	1.251
Reuters-L3	1.466	1.478	1.355	1.389	1.388	SPC(3)-MacroFin-GoogleReuters	1.427	1.378	1.236	1.25	1.25
DFA(2)-MacroFin	1.393	1.36	1.221	1.239	1.239	SPC(3)-MacroFin-Reuters	1.425	1.377	1.236	1.25	1.25
DFA(2)-MacroFin-Google	1.395	1.36	1.221	1.239	1.239	SPC(4)-MacroFin	1.516	1.472	1.253	1.261	1.263
DFA(2)-MacroFin-GoogleReuters	1.394	1.36	1.22	1.238	1.238	SPC(4)-MacroFin-Google	1.519	1.48	1.252	1.264	1.263
DFA(2)-MacroFin-Reuters	1.393	1.359	1.22	1.239	1.238	SPC(4)-MacroFin-GoogleReuters	1.515	1.478	1.252	1.262	1.26
DFA(3)-MacroFin	1.417	1.366	1.232	1.247	1.246	SPC(4)-MacroFin-Reuters	1.513	1.469	1.248	1.26	1.258
DFA(3)-MacroFin-Google	1.419	1.367	1.232	1.247	1.246	SPC(5)-MacroFin	1.509	1.467	1.266	1.283	1.271
DFA(3)-MacroFin-GoogleReuters	1.418	1.366	1.232	1.246	1.246	SPC(5)-MacroFin-Google	1.495	1.49	1.272	1.267	1.278
DFA(3)-MacroFin-Reuters	1.417	1.365	1.232	1.246	1.246	SPC(5)-MacroFin-GoogleReuters	1.499	1.501	1.273	1.27	1.273
DFA(4)-MacroFin	1.511	1.464	1.252	1.262	1.262	SPC(5)-MacroFin-Reuters	1.506	1.477	1.273	1.273	1.263
DFA(4)-MacroFin-Google	1.514	1.468	1.254	1.264	1.264	LASSO-MacroFin	1.47	1.427	1.239	1.279	1.285
DFA(4)-MacroFin-GoogleReuters	1.513	1.469	1.254	1.264	1.263	LASSO-MacroFin-Google	1.455	1.339	1.233	1.251	1.257
DFA(4)-MacroFin-Reuters	1.509	1.463	1.251	1.262	1.262	LASSO-MacroFin-GoogleReuters	1.451	1.435	1.283	1.299	1.247
DFA(5)-MacroFin	1.496	1.443	1.269	1.275	1.275	LASSO-MacroFin-Reuters	1.452	1.414	1.259	1.276	1.308
DFA(5)-MacroFin-Google	1.492	1.451	1.272	1.277	1.276	EN-MacroFin	1.459	1.49	1.263	1.269	1.272
DFA(5)-MacroFin-GoogleReuters	1.502	1.456	1.27	1.275	1.275	EN-MacroFin-Google	1.45	1.44	1.274	1.273	1.271
DFA(5)-MacroFin-Reuters	1.496	1.452	1.269	1.273	1.272	EN-MacroFin-GoogleReuters	1.444	1.403	1.232	1.281	1.237
PLS(1)-MacroFin	1.372	1.369	1.268	1.289	1.288	EN-MacroFin-Reuters	1.423	1.432	1.205	1.351	1.285
PLS(1)-MacroFin-Google	1.372	1.369	1.268	1.289	1.289	SSlab-MacroFin	1.315	1.319	1.246	1.261	1.261
PLS(1)-MacroFin-GoogleReuters	1.372	1.369	1.268	1.289	1.289	SSlab-MacroFin-Google	1.318	1.32	1.247	1.264	1.261
PLS(1)-MacroFin-Reuters	1.372	1.369	1.268	1.288	1.288	SSlab-MacroFin-GoogleReuters	1.32	1.32	1.244	1.262	1.261
PLS(2)-MacroFin	1.254	1.248	1.241	1.251	1.25	SSlab-MacroFin-Reuters	1.317	1.32	1.245	1.261	1.262
PLS(2)-MacroFin-Google	1.24	1.243	1.238	1.248	1.248	Best1	1.196	1.221	1.163	1.13	1.132
PLS(2)-MacroFin-GoogleReuters	1.23	1.237	1.237	1.245	1.245	Best3	1.222	1.228	1.145	1.13	1.135
PLS(2)-MacroFin-Reuters	1.243	1.241	1.239	1.247	1.247	Best5	1.219	1.221	1.14	1.131	1.138
PLS(3)-MacroFin	1.226	1.246	1.291	1.295	1.295	Best10	1.223	1.215	1.16	1.142	1.154
PLS(3)-MacroFin-Google	1.213	1.241	1.292	1.296	1.297						

Table 9: FR, Industrial-Production, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0	0	0.03	0.03	0.03	PLS(3)-MacroFin-GoogleReuters	0.24	0.09	0	0	0
Average(12)	0.01	0.01	0.09	0.07	0.07	PLS(3)-MacroFin-Reuters	0.13	0.08	0	0	0
Average(24)	0.01	0.01	0.12	0.08	0.08	PLS(4)-MacroFin	0.25	0.14	0	0	0
Naive	0	0	0	0	0	PLS(4)-MacroFin-Google	0.32	0.17	0.01	0.01	0.01
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.4	0.21	0.01	0.01	0.01
AR(4)	0.24	0.24	0.76	0.79	0.79	PLS(4)-MacroFin-Reuters	0.34	0.18	0	0	0
AR(AIC)	0.96	0.96	0.65	0.68	0.68	PLS(5)-MacroFin	0.24	0.14	0.01	0.01	0.01
AutoArima	0.03	0.03	0.05	0.06	0.06	PLS(5)-MacroFin-Google	0.31	0.16	0.01	0.01	0.01
ETS	0.85	0.85	0.38	0.37	0.37	PLS(5)-MacroFin-GoogleReuters	0.37	0.18	0.01	0.02	0.02
BaggedETS	0.58	0.92	0.49	0.23	0.31	PLS(5)-MacroFin-Reuters	0.3	0.16	0.01	0.01	0.01
BATS	0.84	0.84	0.4	0.4	0.4	SPC(1)-MacroFin	0.01	0.01	0.1	0.06	0.07
TBATS	0.84	0.84	0.4	0.4	0.4	SPC(1)-MacroFin-Google	0.01	0.02	0.1	0.06	0.06
NN	0.82	0.79	0.98	0.97	0.97	SPC(1)-MacroFin-GoogleReuters	0.01	0.02	0.1	0.06	0.07
Spline	0.05	0.05	0.17	0.16	0.16	SPC(1)-MacroFin-Reuters	0.01	0.01	0.1	0.06	0.07
THETA	0.3	0.3	0.37	0.51	0.51	SPC(2)-MacroFin	0.01	0.01	0.25	0.17	0.16
Google	0.03	0.03	0.13	0.08	0.08	SPC(2)-MacroFin-Google	0.01	0.01	0.25	0.17	0.17
Google-L1	0.01	0.01	0.04	0.02	0.02	SPC(2)-MacroFin-GoogleReuters	0.01	0.01	0.24	0.17	0.17
Google-L3	0	0	0.11	0.07	0.07	SPC(2)-MacroFin-Reuters	0.01	0.01	0.25	0.17	0.17
Reuters	0.01	0.01	0.2	0.13	0.13	SPC(3)-MacroFin	0.01	0.01	0.23	0.18	0.18
Reuters-L1	0	0	0.02	0.02	0.02	SPC(3)-MacroFin-Google	0.01	0.01	0.23	0.17	0.18
Reuters-L3	0	0	0.02	0.02	0.02	SPC(3)-MacroFin-GoogleReuters	0.01	0.01	0.23	0.18	0.18
DFA(2)-MacroFin	0.01	0.02	0.3	0.21	0.21	SPC(3)-MacroFin-Reuters	0.01	0.02	0.23	0.18	0.18
DFA(2)-MacroFin-Google	0.01	0.02	0.3	0.22	0.22	SPC(4)-MacroFin	0	0	0.18	0.16	0.15
DFA(2)-MacroFin-GoogleReuters	0.01	0.02	0.31	0.22	0.22	SPC(4)-MacroFin-Google	0	0	0.19	0.15	0.16
DFA(2)-MacroFin-Reuters	0.01	0.02	0.3	0.22	0.22	SPC(4)-MacroFin-GoogleReuters	0	0	0.18	0.15	0.16
DFA(3)-MacroFin	0.01	0.02	0.24	0.18	0.18	SPC(4)-MacroFin-Reuters	0	0	0.2	0.16	0.17
DFA(3)-MacroFin-Google	0.01	0.02	0.24	0.18	0.18	SPC(5)-MacroFin	0	0	0.11	0.09	0.12
DFA(3)-MacroFin-GoogleReuters	0.01	0.02	0.24	0.18	0.19	SPC(5)-MacroFin-Google	0	0	0.11	0.12	0.1
DFA(3)-MacroFin-Reuters	0.01	0.02	0.24	0.18	0.19	SPC(5)-MacroFin-GoogleReuters	0	0	0.11	0.12	0.11
DFA(4)-MacroFin	0	0	0.18	0.15	0.15	SPC(5)-MacroFin-Reuters	0	0	0.11	0.12	0.14
DFA(4)-MacroFin-Google	0	0	0.17	0.14	0.14	LASSO-MacroFin	0.04	0.04	0.24	0.06	0.08
DFA(4)-MacroFin-GoogleReuters	0	0	0.17	0.14	0.14	LASSO-MacroFin-Google	0.03	0.12	0.21	0.2	0.14
DFA(4)-MacroFin-Reuters	0	0	0.18	0.15	0.15	LASSO-MacroFin-GoogleReuters	0.03	0.04	0.09	0.07	0.17
DFA(5)-MacroFin	0	0	0.11	0.1	0.1	LASSO-MacroFin-Reuters	0.03	0.04	0.14	0.09	0.04
DFA(5)-MacroFin-Google	0	0	0.1	0.09	0.09	EN-MacroFin	0.03	0.02	0.17	0.14	0.09
DFA(5)-MacroFin-GoogleReuters	0	0	0.11	0.1	0.1	EN-MacroFin-Google	0.03	0.04	0.15	0.09	0.11
DFA(5)-MacroFin-Reuters	0	0	0.11	0.11	0.11	EN-MacroFin-GoogleReuters	0.03	0.05	0.26	0.09	0.22
PLS(1)-MacroFin	0.01	0.01	0.12	0.07	0.07	EN-MacroFin-Reuters	0.05	0.04	0.41	0.04	0.07
PLS(1)-MacroFin-Google	0.01	0.01	0.12	0.07	0.07	SSlab-MacroFin	0.06	0.05	0.18	0.12	0.12
PLS(1)-MacroFin-GoogleReuters	0.01	0.01	0.12	0.07	0.07	SSlab-MacroFin-Google	0.05	0.05	0.17	0.11	0.12
PLS(1)-MacroFin-Reuters	0.01	0.01	0.12	0.07	0.07	SSlab-MacroFin-GoogleReuters	0.05	0.05	0.18	0.11	0.12
PLS(2)-MacroFin	0.06	0.05	0.04	0.03	0.03	SSlab-MacroFin-Reuters	0.06	0.06	0.18	0.12	0.12
PLS(2)-MacroFin-Google	0.07	0.05	0.05	0.03	0.03	Best1	0.4	0.18	0.42	0.77	0.8
PLS(2)-MacroFin-GoogleReuters	0.1	0.07	0.05	0.03	0.04	Best3	0.19	0.16	0.97	0.73	0.85
PLS(2)-MacroFin-Reuters	0.07	0.07	0.04	0.03	0.03	Best5	0.22	0.19	0.92	0.76	0.91
PLS(3)-MacroFin	0.08	0.05	0	0	0	Best10	0.2	0.23	0.65	1	0.74
PLS(3)-MacroFin-Google	0.17	0.07	0	0	0						

Table 10: FR, Industrial-Production, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.988	0.988	1.03	1.017	1.017	PLS(3)-MacroFin-GoogleReuters	1.075	1.052	1.054	1.04	1.047
Average(12)	0.928	0.928	1.008	0.983	0.983	PLS(3)-MacroFin-Reuters	1.071	1.044	1.022	1.005	1.011
Average(24)	0.899	0.899	0.959	0.937	0.937	PLS(4)-MacroFin	1.042	1.036	1.03	1.008	1.015
Naive	1.544	1.544	1.556	1.595	1.595	PLS(4)-MacroFin-Google	1.061	1.06	1.039	1.019	1.026
AR(1)	0.951	0.951	0.914	0.862	0.862	PLS(4)-MacroFin-GoogleReuters	1.06	1.056	1.04	1.02	1.027
AR(4)	0.852	0.852	0.856	0.827	0.827	PLS(4)-MacroFin-Reuters	1.043	1.037	1.026	1.004	1.01
AR(AIC)	0.841	0.841	0.866	0.805	0.805	PLS(5)-MacroFin	1.024	0.978	1.018	1.005	1.02
AutoArima	1.019	1.019	0.964	0.925	0.925	PLS(5)-MacroFin-Google	1.048	1.001	1.001	0.997	1.01
ETS	0.763	0.763	0.823	0.8	0.8	PLS(5)-MacroFin-GoogleReuters	1.042	1.011	1.014	1.014	1.027
BaggedETS	0.735	0.736	0.778	0.765	0.772	PLS(5)-MacroFin-Reuters	1.028	0.988	1.006	0.998	1.011
BATS	0.767	0.767	0.83	0.807	0.807	SPC(1)-MacroFin	0.994	0.998	0.927	0.883	0.882
TBATS	0.767	0.767	0.83	0.807	0.807	SPC(1)-MacroFin-Google	0.994	0.997	0.927	0.883	0.88
NN	0.8	0.796	0.894	0.855	0.854	SPC(1)-MacroFin-GoogleReuters	0.994	0.996	0.928	0.882	0.879
Spline	0.798	0.798	0.874	0.856	0.856	SPC(1)-MacroFin-Reuters	0.994	0.999	0.927	0.881	0.88
THETA	0.926	0.926	0.921	0.878	0.878	SPC(2)-MacroFin	1.026	0.994	0.926	0.892	0.903
Google	1.13	1.158	0.965	0.928	0.927	SPC(2)-MacroFin-Google	1.035	0.999	0.926	0.89	0.897
Google-L1	1.02	1.066	1.081	1.042	1.043	SPC(2)-MacroFin-GoogleReuters	1.035	0.995	0.919	0.891	0.896
Google-L3	0.925	0.979	1.039	1.011	1.014	SPC(2)-MacroFin-Reuters	1.03	0.992	0.915	0.89	0.895
Reuters	0.995	0.988	0.94	0.902	0.903	SPC(3)-MacroFin	1.022	0.969	0.917	0.874	0.88
Reuters-L1	0.924	0.916	0.956	0.92	0.918	SPC(3)-MacroFin-Google	1.038	0.982	0.921	0.879	0.876
Reuters-L3	0.893	0.884	0.921	0.898	0.896	SPC(3)-MacroFin-GoogleReuters	1.039	0.978	0.924	0.869	0.875
DFA(2)-MacroFin	1.036	0.991	0.928	0.892	0.896	SPC(3)-MacroFin-Reuters	1.022	0.981	0.911	0.869	0.876
DFA(2)-MacroFin-Google	1.039	0.993	0.929	0.893	0.896	SPC(4)-MacroFin	0.987	0.961	0.939	0.867	0.901
DFA(2)-MacroFin-GoogleReuters	1.04	0.993	0.928	0.891	0.895	SPC(4)-MacroFin-Google	0.988	1.003	0.898	0.841	0.871
DFA(2)-MacroFin-Reuters	1.036	0.991	0.927	0.891	0.894	SPC(4)-MacroFin-GoogleReuters	1	0.972	0.907	0.86	0.864
DFA(3)-MacroFin	1.04	0.982	0.937	0.899	0.896	SPC(4)-MacroFin-Reuters	0.982	0.971	0.896	0.876	0.897
DFA(3)-MacroFin-Google	1.046	0.984	0.938	0.901	0.895	SPC(5)-MacroFin	0.962	0.961	0.928	0.891	0.903
DFA(3)-MacroFin-GoogleReuters	1.046	0.984	0.938	0.901	0.895	SPC(5)-MacroFin-Google	0.961	0.953	0.94	0.891	0.909
DFA(3)-MacroFin-Reuters	1.041	0.982	0.937	0.899	0.895	SPC(5)-MacroFin-GoogleReuters	0.969	0.971	0.927	0.889	0.913
DFA(4)-MacroFin	1.001	1.011	0.944	0.92	0.908	SPC(5)-MacroFin-Reuters	0.984	0.95	0.927	0.895	0.904
DFA(4)-MacroFin-Google	1.005	1.009	0.902	0.87	0.872	LASSO-MacroFin	0.847	0.844	0.787	0.824	0.806
DFA(4)-MacroFin-GoogleReuters	1.005	1.009	0.907	0.877	0.877	LASSO-MacroFin-Google	0.847	0.839	0.795	0.815	0.838
DFA(4)-MacroFin-Reuters	1.003	1.006	0.94	0.916	0.9	LASSO-MacroFin-GoogleReuters	0.857	0.855	0.792	0.822	0.813
DFA(5)-MacroFin	1.002	0.988	0.947	0.904	0.913	LASSO-MacroFin-Reuters	0.847	0.842	0.787	0.822	0.819
DFA(5)-MacroFin-Google	1	0.986	0.947	0.903	0.912	EN-MacroFin	0.862	0.851	0.805	0.805	0.834
DFA(5)-MacroFin-GoogleReuters	0.999	0.984	0.946	0.903	0.912	EN-MacroFin-Google	0.856	0.846	0.813	0.833	0.81
DFA(5)-MacroFin-Reuters	1.002	0.986	0.946	0.905	0.913	EN-MacroFin-GoogleReuters	0.856	0.867	0.811	0.832	0.83
PLS(1)-MacroFin	1.02	0.998	0.965	0.926	0.926	EN-MacroFin-Reuters	0.867	0.847	0.81	0.837	0.819
PLS(1)-MacroFin-Google	1.027	1.002	0.965	0.926	0.926	SSlab-MacroFin	0.849	0.849	0.863	0.887	0.885
PLS(1)-MacroFin-GoogleReuters	1.027	1.002	0.965	0.926	0.926	SSlab-MacroFin-Google	0.848	0.848	0.862	0.885	0.889
PLS(1)-MacroFin-Reuters	1.02	0.998	0.965	0.926	0.926	SSlab-MacroFin-GoogleReuters	0.851	0.853	0.861	0.884	0.885
PLS(2)-MacroFin	1.014	1.009	0.954	0.921	0.922	SSlab-MacroFin-Reuters	0.848	0.849	0.864	0.886	0.884
PLS(2)-MacroFin-Google	1.023	1.015	0.954	0.921	0.921	Best1	0.745	0.745	0.916	0.921	0.9
PLS(2)-MacroFin-GoogleReuters	1.023	1.016	0.955	0.921	0.921	Best3	0.804	0.816	0.844	0.828	0.841
PLS(2)-MacroFin-Reuters	1.014	1.01	0.954	0.922	0.922	Best5	0.827	0.835	0.857	0.835	0.842
PLS(3)-MacroFin	1.069	1.043	1.025	1.009	1.015	Best10	0.853	0.847	0.835	0.834	0.839
PLS(3)-MacroFin-Google	1.072	1.05	1.057	1.043	1.05						

Table 11: IT, Industrial-Production, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	1.225	1.225	1.223	1.214	1.214	PLS(3)-MacroFin-GoogleReuters	1.271	1.238	1.258	1.251	1.254
Average(12)	1.154	1.154	1.18	1.166	1.166	PLS(3)-MacroFin-Reuters	1.268	1.23	1.241	1.233	1.235
Average(24)	1.118	1.118	1.125	1.113	1.113	PLS(4)-MacroFin	1.233	1.216	1.244	1.232	1.235
Naive	1.928	1.928	1.891	1.897	1.897	PLS(4)-MacroFin-Google	1.254	1.243	1.258	1.246	1.249
AR(1)	1.119	1.119	1.13	1.104	1.104	PLS(4)-MacroFin-GoogleReuters	1.251	1.237	1.252	1.24	1.244
AR(4)	1.027	1.027	1.05	1.028	1.028	PLS(4)-MacroFin-Reuters	1.235	1.218	1.235	1.222	1.225
AR(AIC)	1.045	1.045	1.097	1.045	1.045	PLS(5)-MacroFin	1.215	1.144	1.233	1.226	1.232
AutoArima	1.199	1.199	1.185	1.164	1.164	PLS(5)-MacroFin-Google	1.23	1.161	1.217	1.213	1.22
ETS	0.952	0.952	1.013	0.993	0.993	PLS(5)-MacroFin-GoogleReuters	1.222	1.168	1.228	1.226	1.233
BaggedETS	0.909	0.916	0.977	0.975	0.971	PLS(5)-MacroFin-Reuters	1.219	1.152	1.219	1.214	1.221
BATS	0.956	0.956	1.017	0.997	0.997	SPC(1)-MacroFin	1.176	1.18	1.162	1.14	1.14
TBATS	0.956	0.956	1.017	0.997	0.997	SPC(1)-MacroFin-Google	1.176	1.179	1.162	1.14	1.14
NN	1.013	1.012	1.067	1.035	1.033	SPC(1)-MacroFin-GoogleReuters	1.176	1.179	1.163	1.14	1.14
Spline	1.002	1.002	1.061	1.046	1.046	SPC(1)-MacroFin-Reuters	1.177	1.181	1.162	1.14	1.14
THETA	1.108	1.108	1.114	1.094	1.094	SPC(2)-MacroFin	1.217	1.185	1.157	1.143	1.151
Google	1.337	1.352	1.185	1.167	1.167	SPC(2)-MacroFin-Google	1.225	1.189	1.158	1.144	1.147
Google-L1	1.215	1.251	1.309	1.288	1.288	SPC(2)-MacroFin-GoogleReuters	1.225	1.187	1.15	1.144	1.144
Google-L3	1.217	1.285	1.384	1.372	1.373	SPC(2)-MacroFin-Reuters	1.221	1.184	1.149	1.143	1.135
Reuters	1.182	1.173	1.162	1.141	1.141	SPC(3)-MacroFin	1.225	1.166	1.148	1.126	1.128
Reuters-L1	1.158	1.147	1.165	1.146	1.145	SPC(3)-MacroFin-Google	1.234	1.178	1.154	1.128	1.128
Reuters-L3	1.115	1.103	1.116	1.101	1.101	SPC(3)-MacroFin-GoogleReuters	1.239	1.176	1.159	1.126	1.126
DFA(2)-MacroFin	1.231	1.185	1.157	1.143	1.144	SPC(3)-MacroFin-Reuters	1.226	1.178	1.142	1.124	1.123
DFA(2)-MacroFin-Google	1.233	1.186	1.158	1.144	1.144	SPC(4)-MacroFin	1.22	1.17	1.157	1.124	1.145
DFA(2)-MacroFin-GoogleReuters	1.234	1.186	1.158	1.144	1.144	SPC(4)-MacroFin-Google	1.216	1.21	1.134	1.111	1.127
DFA(2)-MacroFin-Reuters	1.232	1.185	1.157	1.143	1.143	SPC(4)-MacroFin-GoogleReuters	1.229	1.192	1.14	1.133	1.118
DFA(3)-MacroFin	1.246	1.181	1.158	1.14	1.14	SPC(4)-MacroFin-Reuters	1.207	1.175	1.144	1.127	1.135
DFA(3)-MacroFin-Google	1.251	1.183	1.16	1.142	1.141	SPC(5)-MacroFin	1.193	1.155	1.149	1.123	1.128
DFA(3)-MacroFin-GoogleReuters	1.252	1.184	1.16	1.142	1.141	SPC(5)-MacroFin-Google	1.191	1.163	1.159	1.118	1.139
DFA(3)-MacroFin-Reuters	1.246	1.182	1.158	1.14	1.139	SPC(5)-MacroFin-GoogleReuters	1.197	1.17	1.157	1.124	1.137
DFA(4)-MacroFin	1.239	1.229	1.163	1.149	1.146	SPC(5)-MacroFin-Reuters	1.209	1.15	1.153	1.124	1.134
DFA(4)-MacroFin-Google	1.245	1.225	1.136	1.119	1.12	LASSO-MacroFin	1.089	1.081	1.005	1.036	1.011
DFA(4)-MacroFin-GoogleReuters	1.244	1.225	1.142	1.126	1.126	LASSO-MacroFin-Google	1.085	1.069	1.024	1.023	1.03
DFA(4)-MacroFin-Reuters	1.24	1.223	1.161	1.147	1.145	LASSO-MacroFin-GoogleReuters	1.085	1.09	1.014	1.036	1.012
DFA(5)-MacroFin	1.218	1.19	1.167	1.14	1.142	LASSO-MacroFin-Reuters	1.083	1.08	1.015	1.027	1.036
DFA(5)-MacroFin-Google	1.218	1.189	1.167	1.139	1.141	EN-MacroFin	1.096	1.082	1.027	1.027	1.036
DFA(5)-MacroFin-GoogleReuters	1.216	1.187	1.166	1.139	1.141	EN-MacroFin-Google	1.098	1.082	1.029	1.041	1.03
DFA(5)-MacroFin-Reuters	1.217	1.188	1.166	1.14	1.142	EN-MacroFin-GoogleReuters	1.088	1.104	1.033	1.048	1.05
PLS(1)-MacroFin	1.215	1.191	1.187	1.168	1.168	EN-MacroFin-Reuters	1.109	1.073	1.042	1.054	1.032
PLS(1)-MacroFin-Google	1.219	1.192	1.187	1.168	1.168	SSlab-MacroFin	1.115	1.114	1.105	1.116	1.114
PLS(1)-MacroFin-GoogleReuters	1.219	1.193	1.187	1.168	1.168	SSlab-MacroFin-Google	1.116	1.114	1.105	1.113	1.117
PLS(1)-MacroFin-Reuters	1.216	1.191	1.187	1.168	1.168	SSlab-MacroFin-GoogleReuters	1.116	1.117	1.1	1.113	1.114
PLS(2)-MacroFin	1.205	1.196	1.177	1.163	1.163	SSlab-MacroFin-Reuters	1.115	1.115	1.105	1.115	1.112
PLS(2)-MacroFin-Google	1.209	1.199	1.177	1.162	1.162	Best1	0.946	0.954	1.093	1.109	1.081
PLS(2)-MacroFin-GoogleReuters	1.21	1.2	1.177	1.162	1.162	Best3	0.997	1.003	1.052	1.044	1.068
PLS(2)-MacroFin-Reuters	1.205	1.197	1.177	1.163	1.163	Best5	1.021	1.029	1.068	1.038	1.057
PLS(3)-MacroFin	1.266	1.229	1.245	1.237	1.24	Best10	1.051	1.047	1.037	1.043	1.041
PLS(3)-MacroFin-Google	1.268	1.236	1.263	1.256	1.259						

Table 12: IT, Industrial-Production, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.35	0.35	0.39	0.3	0.3	PLS(3)-MacroFin-GoogleReuters	0.06	0.09	0.19	0.14	0.13
Average(12)	0.69	0.69	0.55	0.45	0.45	PLS(3)-MacroFin-Reuters	0.04	0.08	0.24	0.18	0.17
Average(24)	1	1	0.94	0.9	0.9	PLS(4)-MacroFin	0.04	0.06	0.21	0.16	0.15
Naive	0.02	0.02	0.02	0.02	0.02	PLS(4)-MacroFin-Google	0.04	0.05	0.16	0.12	0.12
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.04	0.05	0.17	0.13	0.12
AR(4)	0.05	0.05	0.11	0.15	0.15	PLS(4)-MacroFin-Reuters	0.04	0.06	0.24	0.19	0.18
AR(AIC)	0.36	0.36	0.76	0.58	0.58	PLS(5)-MacroFin	0.13	0.58	0.25	0.18	0.16
AutoArima	0.01	0.01	0.1	0.06	0.06	PLS(5)-MacroFin-Google	0.11	0.49	0.32	0.22	0.19
ETS	0.02	0.02	0.16	0.2	0.2	PLS(5)-MacroFin-GoogleReuters	0.12	0.41	0.27	0.17	0.15
BaggedETS	0.02	0.02	0.08	0.19	0.14	PLS(5)-MacroFin-Reuters	0.12	0.47	0.31	0.22	0.19
BATS	0.02	0.02	0.16	0.21	0.21	SPC(1)-MacroFin	0.09	0.07	0.5	0.44	0.43
TBATS	0.02	0.02	0.16	0.21	0.21	SPC(1)-MacroFin-Google	0.09	0.07	0.51	0.44	0.44
NN	0.26	0.26	0.54	0.48	0.47	SPC(1)-MacroFin-GoogleReuters	0.09	0.07	0.49	0.45	0.45
Spline	0.1	0.1	0.35	0.45	0.45	SPC(1)-MacroFin-Reuters	0.09	0.06	0.49	0.45	0.44
THETA	0.72	0.72	0.61	0.76	0.76	SPC(2)-MacroFin	0.05	0.1	0.59	0.43	0.37
Google	0.01	0.01	0.11	0.05	0.05	SPC(2)-MacroFin-Google	0.05	0.09	0.56	0.43	0.41
Google-L1	0.26	0.12	0.1	0.09	0.09	SPC(2)-MacroFin-GoogleReuters	0.04	0.1	0.68	0.44	0.44
Google-L3	0.48	0.29	0.22	0.2	0.2	SPC(2)-MacroFin-Reuters	0.05	0.11	0.7	0.45	0.52
Reuters	0.04	0.09	0.45	0.37	0.37	SPC(3)-MacroFin	0.12	0.38	0.76	0.7	0.69
Reuters-L1	0.44	0.58	0.33	0.23	0.23	SPC(3)-MacroFin-Google	0.12	0.33	0.68	0.68	0.69
Reuters-L3	0.94	0.77	0.77	0.96	0.95	SPC(3)-MacroFin-GoogleReuters	0.11	0.37	0.64	0.71	0.71
DFA(2)-MacroFin	0.06	0.17	0.57	0.42	0.42	SPC(3)-MacroFin-Reuters	0.12	0.32	0.83	0.74	0.75
DFA(2)-MacroFin-Google	0.05	0.17	0.56	0.42	0.41	SPC(4)-MacroFin	0.31	0.53	0.65	0.73	0.5
DFA(2)-MacroFin-GoogleReuters	0.05	0.17	0.56	0.43	0.42	SPC(4)-MacroFin-Google	0.38	0.3	0.95	0.91	0.69
DFA(2)-MacroFin-Reuters	0.06	0.17	0.58	0.43	0.43	SPC(4)-MacroFin-GoogleReuters	0.3	0.46	0.88	0.65	0.82
DFA(3)-MacroFin	0.08	0.3	0.6	0.51	0.51	SPC(4)-MacroFin-Reuters	0.37	0.49	0.82	0.71	0.63
DFA(3)-MacroFin-Google	0.08	0.31	0.58	0.49	0.49	SPC(5)-MacroFin	0.46	0.68	0.75	0.74	0.67
DFA(3)-MacroFin-GoogleReuters	0.08	0.3	0.58	0.49	0.5	SPC(5)-MacroFin-Google	0.49	0.63	0.63	0.8	0.56
DFA(3)-MacroFin-Reuters	0.08	0.3	0.6	0.51	0.51	SPC(5)-MacroFin-GoogleReuters	0.42	0.56	0.68	0.73	0.57
DFA(4)-MacroFin	0.28	0.32	0.58	0.45	0.48	SPC(5)-MacroFin-Reuters	0.37	0.71	0.71	0.73	0.6
DFA(4)-MacroFin-Google	0.28	0.34	0.92	0.77	0.77	LASSO-MacroFin	0.56	0.44	0.01	0.09	0.02
DFA(4)-MacroFin-GoogleReuters	0.28	0.33	0.83	0.69	0.69	LASSO-MacroFin-Google	0.55	0.36	0.03	0.05	0.08
DFA(4)-MacroFin-Reuters	0.27	0.33	0.6	0.46	0.49	LASSO-MacroFin-GoogleReuters	0.54	0.57	0.02	0.12	0.03
DFA(5)-MacroFin	0.33	0.45	0.51	0.5	0.47	LASSO-MacroFin-Reuters	0.48	0.44	0.02	0.06	0.12
DFA(5)-MacroFin-Google	0.33	0.45	0.51	0.51	0.48	EN-MacroFin	0.66	0.47	0.03	0.07	0.1
DFA(5)-MacroFin-GoogleReuters	0.33	0.45	0.52	0.51	0.48	EN-MacroFin-Google	0.71	0.5	0.03	0.11	0.07
DFA(5)-MacroFin-Reuters	0.32	0.46	0.52	0.5	0.47	EN-MacroFin-GoogleReuters	0.57	0.77	0.03	0.15	0.17
PLS(1)-MacroFin	0.06	0.09	0.12	0.07	0.07	EN-MacroFin-Reuters	0.85	0.39	0.05	0.2	0.07
PLS(1)-MacroFin-Google	0.05	0.09	0.13	0.07	0.07	SSlab-MacroFin	0.96	0.94	0.61	0.77	0.79
PLS(1)-MacroFin-GoogleReuters	0.06	0.09	0.13	0.07	0.07	SSlab-MacroFin-Google	0.96	0.94	0.6	0.81	0.75
PLS(1)-MacroFin-Reuters	0.06	0.09	0.12	0.07	0.07	SSlab-MacroFin-GoogleReuters	0.97	0.98	0.53	0.81	0.79
PLS(2)-MacroFin	0.08	0.09	0.2	0.09	0.09	SSlab-MacroFin-Reuters	0.95	0.95	0.61	0.79	0.84
PLS(2)-MacroFin-Google	0.08	0.08	0.2	0.09	0.09	Best1	0.03	0.04	0.66	0.95	0.81
PLS(2)-MacroFin-GoogleReuters	0.08	0.08	0.2	0.09	0.09	Best3	0.1	0.12	0.26	0.4	0.53
PLS(2)-MacroFin-Reuters	0.08	0.08	0.2	0.08	0.08	Best5	0.17	0.23	0.27	0.37	0.43
PLS(3)-MacroFin	0.05	0.08	0.23	0.17	0.16	Best10	0.23	0.2	0.07	0.26	0.25
PLS(3)-MacroFin-Google	0.06	0.09	0.18	0.13	0.12						

Table 13: IT, Industrial-Production, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.681	0.681	0.593	0.564	0.564	PLS(3)-MacroFin-GoogleReuters	0.64	0.628	0.508	0.462	0.465
Average(12)	0.573	0.573	0.506	0.476	0.476	PLS(3)-MacroFin-Reuters	0.66	0.648	0.519	0.47	0.472
Average(24)	0.599	0.599	0.528	0.485	0.485	PLS(4)-MacroFin	0.672	0.654	0.532	0.478	0.482
Naive	0.879	0.879	0.735	0.759	0.759	PLS(4)-MacroFin-Google	0.652	0.635	0.519	0.469	0.473
AR(1)	0.636	0.636	0.492	0.462	0.462	PLS(4)-MacroFin-GoogleReuters	0.639	0.629	0.512	0.47	0.474
AR(4)	0.614	0.614	0.491	0.467	0.467	PLS(4)-MacroFin-Reuters	0.658	0.649	0.525	0.478	0.482
AR(AIC)	0.71	0.708	0.534	0.532	0.532	PLS(5)-MacroFin	0.671	0.656	0.544	0.494	0.499
AutoArima	0.582	0.582	0.498	0.461	0.461	PLS(5)-MacroFin-Google	0.658	0.638	0.535	0.492	0.498
ETS	0.58	0.58	0.495	0.459	0.459	PLS(5)-MacroFin-GoogleReuters	0.647	0.635	0.531	0.493	0.499
BaggedETS	0.596	0.582	0.516	0.476	0.476	PLS(5)-MacroFin-Reuters	0.659	0.655	0.54	0.494	0.499
BATS	0.58	0.58	0.497	0.46	0.46	SPC(1)-MacroFin	0.647	0.641	0.501	0.461	0.459
TBATS	0.58	0.58	0.497	0.46	0.46	SPC(1)-MacroFin-Google	0.646	0.64	0.501	0.462	0.461
NN	0.735	0.741	0.583	0.534	0.521	SPC(1)-MacroFin-GoogleReuters	0.646	0.641	0.501	0.461	0.46
Spline	0.597	0.597	0.549	0.505	0.505	SPC(1)-MacroFin-Reuters	0.645	0.642	0.5	0.459	0.46
THETA	0.622	0.622	0.483	0.453	0.453	SPC(2)-MacroFin	0.683	0.644	0.5	0.457	0.458
Google	0.646	0.656	0.521	0.487	0.485	SPC(2)-MacroFin-Google	0.682	0.637	0.499	0.457	0.459
Google-L1	0.655	0.648	0.501	0.467	0.466	SPC(2)-MacroFin-GoogleReuters	0.681	0.641	0.497	0.455	0.459
Google-L3	0.644	0.651	0.618	0.571	0.571	SPC(2)-MacroFin-Reuters	0.683	0.646	0.497	0.457	0.458
Reuters	0.651	0.658	0.506	0.48	0.481	SPC(3)-MacroFin	0.648	0.625	0.506	0.46	0.46
Reuters-L1	0.639	0.645	0.544	0.522	0.525	SPC(3)-MacroFin-Google	0.649	0.626	0.5	0.462	0.462
Reuters-L3	0.618	0.624	0.491	0.488	0.488	SPC(3)-MacroFin-GoogleReuters	0.649	0.624	0.505	0.458	0.456
DFA(2)-MacroFin	0.673	0.631	0.498	0.464	0.465	SPC(3)-MacroFin-Reuters	0.646	0.623	0.514	0.465	0.463
DFA(2)-MacroFin-Google	0.672	0.629	0.497	0.463	0.464	SPC(4)-MacroFin	0.647	0.629	0.524	0.492	0.501
DFA(2)-MacroFin-GoogleReuters	0.673	0.629	0.496	0.463	0.464	SPC(4)-MacroFin-Google	0.648	0.622	0.531	0.496	0.476
DFA(2)-MacroFin-Reuters	0.674	0.631	0.497	0.463	0.465	SPC(4)-MacroFin-GoogleReuters	0.646	0.624	0.527	0.487	0.497
DFA(3)-MacroFin	0.634	0.613	0.494	0.457	0.458	SPC(4)-MacroFin-Reuters	0.652	0.625	0.534	0.496	0.49
DFA(3)-MacroFin-Google	0.634	0.607	0.493	0.458	0.459	SPC(5)-MacroFin	0.644	0.623	0.508	0.465	0.457
DFA(3)-MacroFin-GoogleReuters	0.634	0.606	0.492	0.457	0.458	SPC(5)-MacroFin-Google	0.653	0.612	0.5	0.446	0.463
DFA(3)-MacroFin-Reuters	0.633	0.612	0.494	0.457	0.458	SPC(5)-MacroFin-GoogleReuters	0.649	0.613	0.478	0.46	0.479
DFA(4)-MacroFin	0.64	0.611	0.529	0.501	0.502	SPC(5)-MacroFin-Reuters	0.654	0.623	0.503	0.469	0.47
DFA(4)-MacroFin-Google	0.632	0.608	0.527	0.501	0.501	LASSO-MacroFin	0.608	0.605	0.505	0.486	0.484
DFA(4)-MacroFin-GoogleReuters	0.632	0.609	0.526	0.5	0.501	LASSO-MacroFin-Google	0.612	0.595	0.497	0.479	0.485
DFA(4)-MacroFin-Reuters	0.64	0.611	0.528	0.5	0.501	LASSO-MacroFin-GoogleReuters	0.602	0.593	0.49	0.472	0.474
DFA(5)-MacroFin	0.645	0.605	0.481	0.465	0.466	LASSO-MacroFin-Reuters	0.603	0.593	0.493	0.477	0.492
DFA(5)-MacroFin-Google	0.635	0.604	0.478	0.46	0.461	EN-MacroFin	0.604	0.588	0.491	0.465	0.475
DFA(5)-MacroFin-GoogleReuters	0.636	0.603	0.482	0.464	0.465	EN-MacroFin-Google	0.616	0.591	0.509	0.48	0.462
DFA(5)-MacroFin-Reuters	0.646	0.606	0.484	0.468	0.469	EN-MacroFin-GoogleReuters	0.601	0.591	0.486	0.465	0.47
PLS(1)-MacroFin	0.639	0.635	0.498	0.467	0.467	EN-MacroFin-Reuters	0.612	0.595	0.491	0.464	0.47
PLS(1)-MacroFin-Google	0.646	0.641	0.499	0.467	0.467	SSlab-MacroFin	0.637	0.635	0.509	0.482	0.48
PLS(1)-MacroFin-GoogleReuters	0.649	0.641	0.5	0.467	0.467	SSlab-MacroFin-Google	0.637	0.639	0.509	0.483	0.483
PLS(1)-MacroFin-Reuters	0.641	0.635	0.499	0.467	0.466	SSlab-MacroFin-GoogleReuters	0.638	0.636	0.51	0.48	0.479
PLS(2)-MacroFin	0.663	0.634	0.513	0.468	0.471	SSlab-MacroFin-Reuters	0.638	0.635	0.51	0.481	0.481
PLS(2)-MacroFin-Google	0.654	0.625	0.504	0.461	0.463	Best1	0.687	0.685	0.572	0.468	0.47
PLS(2)-MacroFin-GoogleReuters	0.65	0.624	0.5	0.461	0.464	Best3	0.664	0.665	0.536	0.461	0.461
PLS(2)-MacroFin-Reuters	0.659	0.633	0.509	0.469	0.471	Best5	0.658	0.662	0.521	0.451	0.452
PLS(3)-MacroFin	0.673	0.654	0.527	0.469	0.472	Best10	0.65	0.657	0.47	0.437	0.441
PLS(3)-MacroFin-Google	0.655	0.636	0.516	0.462	0.464						

Table 14: UK, Industrial-Production, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.861	0.861	0.773	0.753	0.753	PLS(3)-MacroFin-GoogleReuters	0.82	0.805	0.716	0.671	0.675
Average(12)	0.774	0.774	0.713	0.696	0.696	PLS(3)-MacroFin-Reuters	0.846	0.833	0.732	0.678	0.681
Average(24)	0.806	0.806	0.73	0.699	0.699	PLS(4)-MacroFin	0.849	0.836	0.746	0.688	0.694
Naive	1.198	1.198	1.057	1.077	1.077	PLS(4)-MacroFin-Google	0.824	0.809	0.728	0.68	0.687
AR(1)	0.855	0.855	0.736	0.702	0.702	PLS(4)-MacroFin-GoogleReuters	0.819	0.808	0.72	0.677	0.685
AR(4)	0.802	0.801	0.692	0.669	0.669	PLS(4)-MacroFin-Reuters	0.845	0.836	0.738	0.685	0.692
AR(AIC)	0.957	0.957	0.801	0.775	0.775	PLS(5)-MacroFin	0.852	0.833	0.761	0.706	0.715
AutoArima	0.774	0.774	0.695	0.658	0.658	PLS(5)-MacroFin-Google	0.834	0.81	0.749	0.705	0.714
ETS	0.771	0.771	0.693	0.656	0.656	PLS(5)-MacroFin-GoogleReuters	0.831	0.813	0.744	0.703	0.713
BaggedETS	0.788	0.781	0.703	0.664	0.658	PLS(5)-MacroFin-Reuters	0.849	0.837	0.757	0.704	0.713
BATS	0.772	0.772	0.694	0.657	0.657	SPC(1)-MacroFin	0.851	0.842	0.736	0.711	0.709
TBATS	0.772	0.772	0.694	0.657	0.657	SPC(1)-MacroFin-Google	0.85	0.843	0.738	0.714	0.712
NN	0.939	0.942	0.818	0.775	0.763	SPC(1)-MacroFin-GoogleReuters	0.851	0.845	0.74	0.712	0.711
Spline	0.778	0.778	0.728	0.687	0.687	SPC(1)-MacroFin-Reuters	0.85	0.842	0.735	0.709	0.711
THETA	0.831	0.831	0.715	0.686	0.686	SPC(2)-MacroFin	0.865	0.823	0.73	0.701	0.701
Google	0.868	0.871	0.741	0.712	0.71	SPC(2)-MacroFin-Google	0.863	0.817	0.728	0.7	0.701
Google-L1	0.866	0.857	0.747	0.712	0.711	SPC(2)-MacroFin-GoogleReuters	0.862	0.82	0.728	0.698	0.702
Google-L3	0.843	0.837	0.78	0.732	0.731	SPC(2)-MacroFin-Reuters	0.866	0.825	0.727	0.7	0.702
Reuters	0.867	0.872	0.741	0.717	0.717	SPC(3)-MacroFin	0.831	0.8	0.728	0.693	0.695
Reuters-L1	0.847	0.85	0.765	0.744	0.748	SPC(3)-MacroFin-Google	0.83	0.803	0.72	0.691	0.692
Reuters-L3	0.816	0.818	0.695	0.691	0.691	SPC(3)-MacroFin-GoogleReuters	0.834	0.803	0.726	0.691	0.69
DFA(2)-MacroFin	0.863	0.819	0.72	0.696	0.698	SPC(3)-MacroFin-Reuters	0.829	0.801	0.733	0.694	0.695
DFA(2)-MacroFin-Google	0.86	0.816	0.719	0.696	0.698	SPC(4)-MacroFin	0.822	0.804	0.733	0.698	0.709
DFA(2)-MacroFin-GoogleReuters	0.862	0.816	0.719	0.696	0.698	SPC(4)-MacroFin-Google	0.827	0.803	0.734	0.701	0.686
DFA(2)-MacroFin-Reuters	0.864	0.819	0.719	0.696	0.698	SPC(4)-MacroFin-GoogleReuters	0.821	0.806	0.733	0.696	0.703
DFA(3)-MacroFin	0.831	0.795	0.715	0.688	0.689	SPC(4)-MacroFin-Reuters	0.823	0.804	0.735	0.703	0.701
DFA(3)-MacroFin-Google	0.832	0.792	0.714	0.687	0.688	SPC(5)-MacroFin	0.832	0.8	0.719	0.671	0.662
DFA(3)-MacroFin-GoogleReuters	0.832	0.792	0.713	0.686	0.688	SPC(5)-MacroFin-Google	0.825	0.783	0.703	0.661	0.678
DFA(3)-MacroFin-Reuters	0.831	0.794	0.715	0.687	0.689	SPC(5)-MacroFin-GoogleReuters	0.822	0.787	0.691	0.673	0.681
DFA(4)-MacroFin	0.823	0.798	0.729	0.706	0.706	SPC(5)-MacroFin-Reuters	0.835	0.796	0.701	0.672	0.674
DFA(4)-MacroFin-Google	0.822	0.797	0.728	0.706	0.707	LASSO-MacroFin	0.811	0.821	0.742	0.723	0.72
DFA(4)-MacroFin-GoogleReuters	0.822	0.797	0.727	0.705	0.706	LASSO-MacroFin-Google	0.821	0.813	0.725	0.713	0.716
DFA(4)-MacroFin-Reuters	0.822	0.798	0.728	0.705	0.706	LASSO-MacroFin-GoogleReuters	0.824	0.82	0.72	0.716	0.707
DFA(5)-MacroFin	0.832	0.781	0.714	0.697	0.698	LASSO-MacroFin-Reuters	0.822	0.815	0.719	0.718	0.728
DFA(5)-MacroFin-Google	0.821	0.779	0.71	0.694	0.695	EN-MacroFin	0.822	0.811	0.721	0.704	0.708
DFA(5)-MacroFin-GoogleReuters	0.824	0.779	0.711	0.695	0.697	EN-MacroFin-Google	0.838	0.804	0.735	0.716	0.699
DFA(5)-MacroFin-Reuters	0.832	0.781	0.715	0.698	0.699	EN-MacroFin-GoogleReuters	0.822	0.814	0.727	0.696	0.702
PLS(1)-MacroFin	0.841	0.837	0.729	0.707	0.707	EN-MacroFin-Reuters	0.829	0.819	0.725	0.706	0.717
PLS(1)-MacroFin-Google	0.85	0.844	0.731	0.708	0.708	SSlab-MacroFin	0.856	0.856	0.737	0.712	0.711
PLS(1)-MacroFin-GoogleReuters	0.851	0.844	0.732	0.708	0.708	SSlab-MacroFin-Google	0.856	0.858	0.736	0.712	0.712
PLS(1)-MacroFin-Reuters	0.842	0.836	0.73	0.707	0.707	SSlab-MacroFin-GoogleReuters	0.857	0.855	0.735	0.71	0.711
PLS(2)-MacroFin	0.848	0.819	0.713	0.677	0.681	SSlab-MacroFin-Reuters	0.858	0.855	0.736	0.712	0.712
PLS(2)-MacroFin-Google	0.836	0.806	0.703	0.671	0.675	Best1	0.901	0.894	0.795	0.712	0.718
PLS(2)-MacroFin-GoogleReuters	0.834	0.806	0.698	0.67	0.674	Best3	0.883	0.883	0.767	0.716	0.708
PLS(2)-MacroFin-Reuters	0.847	0.819	0.708	0.677	0.68	Best5	0.875	0.88	0.753	0.702	0.688
PLS(3)-MacroFin	0.849	0.835	0.739	0.678	0.682	Best10	0.877	0.877	0.705	0.67	0.672
PLS(3)-MacroFin-Google	0.824	0.808	0.724	0.671	0.675						

Table 15: UK, Industrial-Production, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.92	0.92	0.55	0.39	0.39	PLS(3)-MacroFin-GoogleReuters	0.41	0.23	0.56	0.37	0.44
Average(12)	0.08	0.08	0.62	0.89	0.89	PLS(3)-MacroFin-Reuters	0.83	0.62	0.91	0.45	0.53
Average(24)	0.22	0.22	0.87	0.93	0.93	PLS(4)-MacroFin	0.88	0.68	0.77	0.62	0.8
Naive	0.12	0.12	0.17	0.11	0.11	PLS(4)-MacroFin-Google	0.46	0.32	0.8	0.48	0.65
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.39	0.26	0.62	0.45	0.62
AR(4)	0.09	0.08	0.1	0.19	0.19	PLS(4)-MacroFin-Reuters	0.82	0.66	0.96	0.57	0.75
AR(AIC)	0.24	0.25	0.34	0.13	0.13	PLS(5)-MacroFin	0.94	0.65	0.38	0.89	0.67
AutoArima	0.02	0.02	0.23	0.14	0.14	PLS(5)-MacroFin-Google	0.61	0.32	0.62	0.93	0.68
ETS	0.02	0.02	0.2	0.13	0.13	PLS(5)-MacroFin-GoogleReuters	0.55	0.3	0.76	0.98	0.72
BaggedETS	0.13	0.1	0.41	0.28	0.25	PLS(5)-MacroFin-Reuters	0.88	0.68	0.46	0.94	0.71
BATS	0.02	0.02	0.23	0.14	0.14	SPC(1)-MacroFin	0.87	0.59	1	0.81	0.86
TBATS	0.02	0.02	0.23	0.14	0.14	SPC(1)-MacroFin-Google	0.83	0.62	0.97	0.75	0.78
NN	0	0	0	0.01	0.06	SPC(1)-MacroFin-GoogleReuters	0.87	0.67	0.92	0.79	0.8
Spline	0.11	0.11	0.85	0.7	0.7	SPC(1)-MacroFin-Reuters	0.84	0.61	0.98	0.85	0.8
THETA	0	0	0.03	0.05	0.05	SPC(2)-MacroFin	0.83	0.44	0.83	0.95	0.96
Google	0.56	0.46	0.76	0.63	0.7	SPC(2)-MacroFin-Google	0.86	0.36	0.8	0.93	0.97
Google-L1	0.72	0.95	0.62	0.68	0.73	SPC(2)-MacroFin-GoogleReuters	0.87	0.39	0.79	0.87	0.98
Google-L3	0.79	0.64	0.5	0.66	0.68	SPC(2)-MacroFin-Reuters	0.81	0.46	0.76	0.93	0.99
Reuters	0.6	0.49	0.82	0.48	0.45	SPC(3)-MacroFin	0.6	0.18	0.79	0.78	0.81
Reuters-L1	0.77	0.84	0.13	0.04	0.03	SPC(3)-MacroFin-Google	0.57	0.21	0.62	0.73	0.75
Reuters-L3	0.32	0.36	0.21	0.63	0.63	SPC(3)-MacroFin-GoogleReuters	0.65	0.21	0.73	0.72	0.7
DFA(2)-MacroFin	0.85	0.35	0.63	0.85	0.9	SPC(3)-MacroFin-Reuters	0.57	0.19	0.93	0.78	0.79
DFA(2)-MacroFin-Google	0.9	0.32	0.63	0.84	0.89	SPC(4)-MacroFin	0.44	0.23	0.93	0.9	0.85
DFA(2)-MacroFin-GoogleReuters	0.88	0.33	0.61	0.84	0.89	SPC(4)-MacroFin-Google	0.54	0.23	0.94	0.98	0.62
DFA(2)-MacroFin-Reuters	0.83	0.36	0.62	0.85	0.9	SPC(4)-MacroFin-GoogleReuters	0.44	0.26	0.92	0.85	0.99
DFA(3)-MacroFin	0.59	0.12	0.58	0.69	0.72	SPC(4)-MacroFin-Reuters	0.46	0.23	0.98	0.98	0.97
DFA(3)-MacroFin-Google	0.6	0.11	0.56	0.68	0.71	SPC(5)-MacroFin	0.6	0.22	0.73	0.5	0.41
DFA(3)-MacroFin-GoogleReuters	0.61	0.11	0.55	0.66	0.7	SPC(5)-MacroFin-Google	0.51	0.13	0.46	0.37	0.6
DFA(3)-MacroFin-Reuters	0.6	0.12	0.57	0.68	0.72	SPC(5)-MacroFin-GoogleReuters	0.44	0.15	0.34	0.52	0.62
DFA(4)-MacroFin	0.44	0.15	0.85	0.94	0.92	SPC(5)-MacroFin-Reuters	0.65	0.19	0.46	0.52	0.54
DFA(4)-MacroFin-Google	0.44	0.14	0.84	0.93	0.92	LASSO-MacroFin	0.18	0.35	0.91	0.64	0.66
DFA(4)-MacroFin-GoogleReuters	0.44	0.14	0.82	0.95	0.93	LASSO-MacroFin-Google	0.33	0.27	0.79	0.8	0.73
DFA(4)-MacroFin-Reuters	0.43	0.15	0.84	0.96	0.94	LASSO-MacroFin-GoogleReuters	0.41	0.36	0.71	0.8	0.91
DFA(5)-MacroFin	0.57	0.08	0.68	0.92	0.94	LASSO-MacroFin-Reuters	0.38	0.27	0.71	0.68	0.52
DFA(5)-MacroFin-Google	0.42	0.08	0.62	0.87	0.89	EN-MacroFin	0.34	0.16	0.73	0.97	0.89
DFA(5)-MacroFin-GoogleReuters	0.45	0.08	0.64	0.89	0.91	EN-MacroFin-Google	0.64	0.12	0.97	0.72	0.92
DFA(5)-MacroFin-Reuters	0.57	0.08	0.7	0.93	0.95	EN-MacroFin-GoogleReuters	0.29	0.22	0.86	0.89	0.99
PLS(1)-MacroFin	0.7	0.6	0.8	0.86	0.87	EN-MacroFin-Reuters	0.47	0.29	0.81	0.93	0.71
PLS(1)-MacroFin-Google	0.89	0.76	0.86	0.83	0.84	SSlab-MacroFin	0.98	1	0.98	0.57	0.62
PLS(1)-MacroFin-GoogleReuters	0.91	0.74	0.88	0.83	0.83	SSlab-MacroFin-Google	0.98	0.93	0.98	0.56	0.55
PLS(1)-MacroFin-Reuters	0.73	0.59	0.82	0.86	0.86	SSlab-MacroFin-GoogleReuters	0.93	0.98	0.96	0.64	0.62
PLS(2)-MacroFin	0.86	0.33	0.48	0.42	0.51	SSlab-MacroFin-Reuters	0.91	0.98	0.98	0.58	0.57
PLS(2)-MacroFin-Google	0.62	0.19	0.34	0.34	0.42	Best1	0.53	0.6	0.28	0.86	0.78
PLS(2)-MacroFin-GoogleReuters	0.6	0.18	0.27	0.35	0.42	Best3	0.7	0.7	0.58	0.81	0.92
PLS(2)-MacroFin-Reuters	0.85	0.33	0.38	0.42	0.5	Best5	0.78	0.73	0.75	0.99	0.76
PLS(3)-MacroFin	0.89	0.66	0.92	0.45	0.54	Best10	0.76	0.76	0.5	0.44	0.47
PLS(3)-MacroFin-Google	0.47	0.3	0.72	0.37	0.44						

Table 16: UK, Industrial-Production, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.39	0.39	0.34	0.354	0.354	PLS(3)-MacroFin-GoogleReuters	0.362	0.325	0.301	0.295	0.295
Average(12)	0.37	0.37	0.313	0.315	0.315	PLS(3)-MacroFin-Reuters	0.355	0.324	0.299	0.294	0.294
Average(24)	0.376	0.376	0.317	0.318	0.318	PLS(4)-MacroFin	0.356	0.338	0.308	0.301	0.302
Naive	0.573	0.573	0.497	0.503	0.503	PLS(4)-MacroFin-Google	0.365	0.337	0.309	0.302	0.303
AR(1)	0.355	0.355	0.312	0.312	0.312	PLS(4)-MacroFin-GoogleReuters	0.366	0.336	0.308	0.302	0.303
AR(4)	0.354	0.354	0.307	0.308	0.308	PLS(4)-MacroFin-Reuters	0.357	0.337	0.307	0.301	0.302
AR(AIC)	0.338	0.338	0.276	0.268	0.268	PLS(5)-MacroFin	0.368	0.343	0.272	0.265	0.266
AutoArima	0.358	0.358	0.313	0.31	0.31	PLS(5)-MacroFin-Google	0.376	0.344	0.27	0.262	0.262
ETS	0.376	0.376	0.303	0.309	0.309	PLS(5)-MacroFin-GoogleReuters	0.377	0.345	0.269	0.261	0.262
BaggedETS	0.372	0.366	0.3	0.3	0.302	PLS(5)-MacroFin-Reuters	0.369	0.345	0.271	0.265	0.265
BATS	0.365	0.365	0.29	0.292	0.292	SPC(1)-MacroFin	0.385	0.385	0.325	0.325	0.325
TBATS	0.365	0.365	0.29	0.292	0.292	SPC(1)-MacroFin-Google	0.385	0.384	0.325	0.325	0.325
NN	0.376	0.37	0.309	0.315	0.309	SPC(1)-MacroFin-GoogleReuters	0.384	0.384	0.325	0.325	0.325
Spline	0.382	0.382	0.316	0.323	0.323	SPC(1)-MacroFin-Reuters	0.385	0.384	0.325	0.325	0.325
THETA	0.348	0.348	0.287	0.293	0.293	SPC(2)-MacroFin	0.38	0.376	0.328	0.329	0.327
Google	0.382	0.379	0.329	0.327	0.327	SPC(2)-MacroFin-Google	0.382	0.376	0.328	0.327	0.326
Google-L1	0.399	0.389	0.351	0.339	0.339	SPC(2)-MacroFin-GoogleReuters	0.382	0.376	0.325	0.328	0.329
Google-L3	0.419	0.415	0.356	0.339	0.339	SPC(2)-MacroFin-Reuters	0.381	0.378	0.329	0.328	0.328
Reuters	0.385	0.386	0.322	0.324	0.324	SPC(3)-MacroFin	0.374	0.369	0.322	0.326	0.323
Reuters-L1	0.388	0.385	0.331	0.334	0.334	SPC(3)-MacroFin-Google	0.377	0.369	0.319	0.327	0.323
Reuters-L3	0.391	0.397	0.34	0.354	0.354	SPC(3)-MacroFin-GoogleReuters	0.375	0.366	0.323	0.324	0.323
DFA(2)-MacroFin	0.381	0.376	0.325	0.327	0.327	SPC(3)-MacroFin-Reuters	0.374	0.369	0.324	0.326	0.323
DFA(2)-MacroFin-Google	0.381	0.376	0.325	0.327	0.327	SPC(4)-MacroFin	0.405	0.398	0.281	0.294	0.29
DFA(2)-MacroFin-GoogleReuters	0.381	0.376	0.325	0.327	0.327	SPC(4)-MacroFin-Google	0.406	0.398	0.284	0.295	0.293
DFA(2)-MacroFin-Reuters	0.381	0.376	0.325	0.327	0.327	SPC(4)-MacroFin-GoogleReuters	0.406	0.399	0.284	0.294	0.294
DFA(3)-MacroFin	0.377	0.369	0.325	0.327	0.327	SPC(4)-MacroFin-Reuters	0.403	0.399	0.278	0.295	0.292
DFA(3)-MacroFin-Google	0.377	0.369	0.325	0.327	0.327	SPC(5)-MacroFin	0.394	0.418	0.286	0.286	0.287
DFA(3)-MacroFin-GoogleReuters	0.377	0.369	0.325	0.327	0.327	SPC(5)-MacroFin-Google	0.396	0.424	0.284	0.285	0.289
DFA(3)-MacroFin-Reuters	0.377	0.369	0.325	0.327	0.327	SPC(5)-MacroFin-GoogleReuters	0.404	0.415	0.285	0.282	0.289
DFA(4)-MacroFin	0.41	0.405	0.293	0.305	0.304	SPC(5)-MacroFin-Reuters	0.399	0.418	0.279	0.282	0.284
DFA(4)-MacroFin-Google	0.411	0.406	0.293	0.306	0.305	LASSO-MacroFin	0.32	0.339	0.287	0.286	0.283
DFA(4)-MacroFin-GoogleReuters	0.41	0.406	0.293	0.306	0.304	LASSO-MacroFin-Google	0.324	0.337	0.286	0.287	0.283
DFA(4)-MacroFin-Reuters	0.41	0.405	0.292	0.305	0.304	LASSO-MacroFin-GoogleReuters	0.327	0.338	0.284	0.281	0.282
DFA(5)-MacroFin	0.4	0.414	0.284	0.288	0.288	LASSO-MacroFin-Reuters	0.322	0.342	0.288	0.287	0.286
DFA(5)-MacroFin-Google	0.4	0.414	0.285	0.287	0.287	EN-MacroFin	0.326	0.337	0.286	0.282	0.281
DFA(5)-MacroFin-GoogleReuters	0.401	0.413	0.285	0.287	0.287	EN-MacroFin-Google	0.326	0.338	0.281	0.282	0.28
DFA(5)-MacroFin-Reuters	0.401	0.413	0.283	0.288	0.288	EN-MacroFin-GoogleReuters	0.322	0.338	0.282	0.276	0.28
PLS(1)-MacroFin	0.379	0.382	0.312	0.304	0.304	EN-MacroFin-Reuters	0.323	0.338	0.281	0.282	0.282
PLS(1)-MacroFin-Google	0.38	0.384	0.313	0.305	0.305	SSlab-MacroFin	0.356	0.347	0.311	0.312	0.311
PLS(1)-MacroFin-GoogleReuters	0.38	0.384	0.313	0.305	0.305	SSlab-MacroFin-Google	0.36	0.347	0.31	0.311	0.311
PLS(1)-MacroFin-Reuters	0.379	0.382	0.312	0.304	0.304	SSlab-MacroFin-GoogleReuters	0.362	0.348	0.31	0.31	0.311
PLS(2)-MacroFin	0.353	0.328	0.31	0.306	0.305	SSlab-MacroFin-Reuters	0.361	0.348	0.31	0.312	0.311
PLS(2)-MacroFin-Google	0.359	0.331	0.312	0.307	0.307	Best1	0.404	0.363	0.358	0.348	0.345
PLS(2)-MacroFin-GoogleReuters	0.36	0.332	0.312	0.307	0.307	Best3	0.405	0.377	0.333	0.319	0.317
PLS(2)-MacroFin-Reuters	0.353	0.328	0.31	0.306	0.305	Best5	0.389	0.375	0.329	0.314	0.315
PLS(3)-MacroFin	0.354	0.326	0.3	0.294	0.294	Best10	0.373	0.358	0.319	0.314	0.314
PLS(3)-MacroFin-Google	0.361	0.327	0.302	0.295	0.295						

Table 17: DE, HCPI, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.575	0.575	0.489	0.5	0.5	PLS(3)-MacroFin-GoogleReuters	0.493	0.466	0.404	0.402	0.402
Average(12)	0.529	0.529	0.446	0.451	0.451	PLS(3)-MacroFin-Reuters	0.485	0.464	0.403	0.401	0.401
Average(24)	0.53	0.53	0.447	0.45	0.45	PLS(4)-MacroFin	0.489	0.482	0.4	0.398	0.398
Naive	0.831	0.831	0.698	0.722	0.722	PLS(4)-MacroFin-Google	0.499	0.477	0.401	0.398	0.398
AR(1)	0.476	0.476	0.444	0.444	0.444	PLS(4)-MacroFin-GoogleReuters	0.499	0.476	0.401	0.399	0.399
AR(4)	0.472	0.472	0.435	0.436	0.436	PLS(4)-MacroFin-Reuters	0.489	0.482	0.4	0.398	0.398
AR(AIC)	0.512	0.512	0.348	0.342	0.342	PLS(5)-MacroFin	0.508	0.492	0.37	0.367	0.367
AutoArima	0.482	0.482	0.446	0.445	0.445	PLS(5)-MacroFin-Google	0.518	0.497	0.367	0.364	0.364
ETS	0.487	0.487	0.43	0.431	0.431	PLS(5)-MacroFin-GoogleReuters	0.518	0.498	0.367	0.364	0.364
BaggedETS	0.478	0.477	0.43	0.431	0.43	PLS(5)-MacroFin-Reuters	0.508	0.493	0.369	0.367	0.367
BATS	0.477	0.477	0.417	0.419	0.419	SPC(1)-MacroFin	0.526	0.526	0.45	0.452	0.452
TBATS	0.477	0.477	0.417	0.419	0.419	SPC(1)-MacroFin-Google	0.526	0.526	0.45	0.452	0.452
NN	0.516	0.512	0.433	0.435	0.433	SPC(1)-MacroFin-GoogleReuters	0.526	0.526	0.45	0.452	0.452
Spline	0.519	0.519	0.454	0.458	0.458	SPC(1)-MacroFin-Reuters	0.526	0.526	0.45	0.452	0.452
THETA	0.484	0.484	0.417	0.421	0.421	SPC(2)-MacroFin	0.522	0.516	0.447	0.451	0.449
Google	0.519	0.519	0.449	0.451	0.451	SPC(2)-MacroFin-Google	0.522	0.518	0.449	0.45	0.449
Google-L1	0.528	0.527	0.46	0.454	0.454	SPC(2)-MacroFin-GoogleReuters	0.523	0.517	0.446	0.45	0.451
Google-L3	0.566	0.564	0.465	0.454	0.454	SPC(2)-MacroFin-Reuters	0.522	0.519	0.448	0.45	0.451
Reuters	0.527	0.527	0.447	0.451	0.451	SPC(3)-MacroFin	0.504	0.503	0.441	0.445	0.443
Reuters-L1	0.523	0.519	0.458	0.461	0.461	SPC(3)-MacroFin-Google	0.506	0.502	0.438	0.445	0.442
Reuters-L3	0.545	0.546	0.479	0.493	0.493	SPC(3)-MacroFin-GoogleReuters	0.506	0.499	0.442	0.44	0.439
DFA(2)-MacroFin	0.524	0.518	0.451	0.453	0.453	SPC(3)-MacroFin-Reuters	0.504	0.502	0.444	0.443	0.44
DFA(2)-MacroFin-Google	0.524	0.518	0.451	0.453	0.453	SPC(4)-MacroFin	0.566	0.572	0.368	0.377	0.373
DFA(2)-MacroFin-GoogleReuters	0.524	0.518	0.451	0.453	0.453	SPC(4)-MacroFin-Google	0.567	0.572	0.371	0.375	0.374
DFA(2)-MacroFin-Reuters	0.524	0.518	0.451	0.453	0.453	SPC(4)-MacroFin-GoogleReuters	0.567	0.574	0.37	0.373	0.374
DFA(3)-MacroFin	0.514	0.507	0.448	0.451	0.45	SPC(4)-MacroFin-Reuters	0.566	0.574	0.364	0.376	0.373
DFA(3)-MacroFin-Google	0.514	0.507	0.448	0.451	0.45	SPC(5)-MacroFin	0.56	0.571	0.367	0.367	0.365
DFA(3)-MacroFin-GoogleReuters	0.514	0.507	0.448	0.451	0.451	SPC(5)-MacroFin-Google	0.564	0.577	0.363	0.365	0.367
DFA(3)-MacroFin-Reuters	0.514	0.507	0.448	0.451	0.451	SPC(5)-MacroFin-GoogleReuters	0.566	0.571	0.369	0.363	0.371
DFA(4)-MacroFin	0.58	0.582	0.383	0.389	0.388	SPC(5)-MacroFin-Reuters	0.566	0.568	0.36	0.365	0.362
DFA(4)-MacroFin-Google	0.581	0.583	0.383	0.389	0.389	LASSO-MacroFin	0.454	0.47	0.371	0.374	0.365
DFA(4)-MacroFin-GoogleReuters	0.581	0.583	0.382	0.388	0.388	LASSO-MacroFin-Google	0.46	0.472	0.367	0.372	0.369
DFA(4)-MacroFin-Reuters	0.58	0.582	0.382	0.388	0.388	LASSO-MacroFin-GoogleReuters	0.458	0.473	0.363	0.367	0.368
DFA(5)-MacroFin	0.576	0.584	0.373	0.376	0.376	LASSO-MacroFin-Reuters	0.457	0.477	0.371	0.372	0.371
DFA(5)-MacroFin-Google	0.576	0.585	0.373	0.375	0.375	EN-MacroFin	0.462	0.471	0.367	0.367	0.365
DFA(5)-MacroFin-GoogleReuters	0.578	0.584	0.373	0.375	0.375	EN-MacroFin-Google	0.467	0.474	0.361	0.366	0.364
DFA(5)-MacroFin-Reuters	0.578	0.583	0.373	0.376	0.376	EN-MacroFin-GoogleReuters	0.459	0.474	0.362	0.364	0.361
PLS(1)-MacroFin	0.503	0.508	0.414	0.41	0.41	EN-MacroFin-Reuters	0.461	0.471	0.362	0.366	0.365
PLS(1)-MacroFin-Google	0.505	0.51	0.415	0.411	0.411	SSlab-MacroFin	0.475	0.477	0.389	0.39	0.389
PLS(1)-MacroFin-GoogleReuters	0.505	0.51	0.415	0.411	0.411	SSlab-MacroFin-Google	0.48	0.477	0.388	0.389	0.389
PLS(1)-MacroFin-Reuters	0.503	0.508	0.414	0.41	0.41	SSlab-MacroFin-GoogleReuters	0.477	0.477	0.388	0.388	0.389
PLS(2)-MacroFin	0.487	0.456	0.422	0.42	0.42	SSlab-MacroFin-Reuters	0.476	0.476	0.388	0.39	0.389
PLS(2)-MacroFin-Google	0.494	0.46	0.425	0.423	0.423	Best1	0.529	0.499	0.485	0.472	0.469
PLS(2)-MacroFin-GoogleReuters	0.495	0.459	0.425	0.423	0.423	Best3	0.527	0.509	0.46	0.452	0.452
PLS(2)-MacroFin-Reuters	0.487	0.456	0.422	0.42	0.42	Best5	0.507	0.504	0.457	0.45	0.45
PLS(3)-MacroFin	0.485	0.466	0.403	0.401	0.401	Best10	0.493	0.492	0.444	0.442	0.443
PLS(3)-MacroFin-Google	0.493	0.468	0.405	0.402	0.402						

Table 18: DE, HCPI, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.3	0.3	0.49	0.39	0.39	PLS(3)-MacroFin-GoogleReuters	0.53	0.74	0.24	0.21	0.21
Average(12)	0.36	0.36	0.96	0.87	0.87	PLS(3)-MacroFin-Reuters	0.72	0.68	0.23	0.21	0.21
Average(24)	0.32	0.32	0.93	0.85	0.85	PLS(4)-MacroFin	0.68	0.84	0.3	0.28	0.28
Naive	0.06	0.06	0.07	0.06	0.06	PLS(4)-MacroFin-Google	0.5	0.96	0.3	0.27	0.27
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.5	0.98	0.3	0.27	0.27
AR(4)	0.62	0.62	0.25	0.29	0.29	PLS(4)-MacroFin-Reuters	0.68	0.85	0.3	0.28	0.28
AR(AIC)	0.57	0.57	0.21	0.18	0.18	PLS(5)-MacroFin	0.36	0.65	0.18	0.17	0.17
AutoArima	0.35	0.36	0.87	0.91	0.91	PLS(5)-MacroFin-Google	0.25	0.55	0.18	0.17	0.17
ETS	0.52	0.52	0.37	0.45	0.45	PLS(5)-MacroFin-GoogleReuters	0.26	0.55	0.18	0.17	0.17
BaggedETS	0.89	0.95	0.44	0.5	0.46	PLS(5)-MacroFin-Reuters	0.36	0.63	0.18	0.17	0.17
BATS	0.94	0.95	0.14	0.17	0.17	SPC(1)-MacroFin	0.26	0.26	0.85	0.8	0.8
TBATS	0.94	0.95	0.14	0.17	0.17	SPC(1)-MacroFin-Google	0.26	0.26	0.85	0.8	0.81
NN	0.47	0.52	0.77	0.83	0.79	SPC(1)-MacroFin-GoogleReuters	0.26	0.26	0.84	0.8	0.8
Spline	0.35	0.35	0.79	0.72	0.72	SPC(1)-MacroFin-Reuters	0.26	0.26	0.85	0.79	0.8
THETA	0.77	0.77	0.15	0.25	0.25	SPC(2)-MacroFin	0.32	0.35	0.93	0.83	0.89
Google	0.35	0.34	0.89	0.84	0.84	SPC(2)-MacroFin-Google	0.31	0.34	0.89	0.87	0.89
Google-L1	0.27	0.28	0.58	0.72	0.72	SPC(2)-MacroFin-GoogleReuters	0.3	0.35	0.95	0.86	0.85
Google-L3	0.07	0.07	0.6	0.79	0.79	SPC(2)-MacroFin-Reuters	0.31	0.33	0.91	0.87	0.84
Reuters	0.24	0.24	0.91	0.81	0.81	SPC(3)-MacroFin	0.5	0.5	0.93	0.98	0.98
Reuters-L1	0.26	0.29	0.55	0.48	0.48	SPC(3)-MacroFin-Google	0.46	0.51	0.88	0.98	0.97
Reuters-L3	0.18	0.17	0.29	0.18	0.18	SPC(3)-MacroFin-GoogleReuters	0.46	0.57	0.95	0.92	0.91
DFA(2)-MacroFin	0.29	0.33	0.85	0.79	0.79	SPC(3)-MacroFin-Reuters	0.48	0.52	0.99	0.99	0.93
DFA(2)-MacroFin-Google	0.29	0.33	0.85	0.79	0.79	SPC(4)-MacroFin	0.08	0.07	0.23	0.29	0.27
DFA(2)-MacroFin-GoogleReuters	0.29	0.33	0.85	0.79	0.79	SPC(4)-MacroFin-Google	0.08	0.07	0.24	0.28	0.28
DFA(2)-MacroFin-Reuters	0.29	0.33	0.85	0.79	0.79	SPC(4)-MacroFin-GoogleReuters	0.08	0.07	0.24	0.27	0.27
DFA(3)-MacroFin	0.38	0.45	0.92	0.85	0.85	SPC(4)-MacroFin-Reuters	0.08	0.07	0.22	0.28	0.26
DFA(3)-MacroFin-Google	0.38	0.44	0.92	0.85	0.85	SPC(5)-MacroFin	0.1	0.04	0.23	0.23	0.22
DFA(3)-MacroFin-GoogleReuters	0.37	0.44	0.92	0.85	0.85	SPC(5)-MacroFin-Google	0.09	0.04	0.21	0.23	0.23
DFA(3)-MacroFin-Reuters	0.38	0.45	0.92	0.85	0.85	SPC(5)-MacroFin-GoogleReuters	0.08	0.04	0.24	0.21	0.25
DFA(4)-MacroFin	0.07	0.06	0.33	0.39	0.38	SPC(5)-MacroFin-Reuters	0.08	0.05	0.18	0.22	0.22
DFA(4)-MacroFin-Google	0.07	0.06	0.33	0.39	0.38	LASSO-MacroFin	0.46	0.88	0.31	0.34	0.3
DFA(4)-MacroFin-GoogleReuters	0.07	0.06	0.33	0.38	0.38	LASSO-MacroFin-Google	0.59	0.93	0.3	0.33	0.3
DFA(4)-MacroFin-Reuters	0.07	0.06	0.33	0.38	0.38	LASSO-MacroFin-GoogleReuters	0.57	0.94	0.29	0.31	0.31
DFA(5)-MacroFin	0.08	0.04	0.28	0.3	0.3	LASSO-MacroFin-Reuters	0.52	0.98	0.3	0.32	0.32
DFA(5)-MacroFin-Google	0.07	0.04	0.28	0.3	0.3	EN-MacroFin	0.65	0.91	0.27	0.28	0.27
DFA(5)-MacroFin-GoogleReuters	0.07	0.04	0.28	0.3	0.3	EN-MacroFin-Google	0.77	0.97	0.25	0.28	0.27
DFA(5)-MacroFin-Reuters	0.07	0.04	0.28	0.3	0.3	EN-MacroFin-GoogleReuters	0.54	0.97	0.28	0.26	0.27
PLS(1)-MacroFin	0.33	0.28	0.18	0.13	0.13	EN-MacroFin-Reuters	0.62	0.9	0.26	0.28	0.28
PLS(1)-MacroFin-Google	0.3	0.26	0.19	0.14	0.14	SSlab-MacroFin	0.99	0.98	0.46	0.47	0.46
PLS(1)-MacroFin-GoogleReuters	0.3	0.26	0.19	0.14	0.14	SSlab-MacroFin-Google	0.92	0.98	0.45	0.46	0.46
PLS(1)-MacroFin-Reuters	0.33	0.28	0.18	0.13	0.13	SSlab-MacroFin-GoogleReuters	0.96	0.97	0.45	0.46	0.46
PLS(2)-MacroFin	0.74	0.53	0.29	0.25	0.25	SSlab-MacroFin-Reuters	0.99	0.99	0.45	0.47	0.46
PLS(2)-MacroFin-Google	0.61	0.61	0.33	0.27	0.27	Best1	0.15	0.41	0.52	0.67	0.71
PLS(2)-MacroFin-GoogleReuters	0.61	0.6	0.33	0.27	0.27	Best3	0.16	0.27	0.8	0.9	0.9
PLS(2)-MacroFin-Reuters	0.74	0.52	0.29	0.25	0.25	Best5	0.32	0.31	0.84	0.93	0.92
PLS(3)-MacroFin	0.7	0.72	0.23	0.22	0.22	Best10	0.47	0.47	1	0.98	0.99
PLS(3)-MacroFin-Google	0.52	0.77	0.24	0.21	0.21						

Table 19: DE, HCPI, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.491	0.491	0.41	0.433	0.433	PLS(3)-MacroFin-GoogleReuters	0.445	0.442	0.354	0.365	0.365
Average(12)	0.429	0.429	0.348	0.36	0.36	PLS(3)-MacroFin-Reuters	0.445	0.444	0.356	0.365	0.365
Average(24)	0.429	0.429	0.348	0.358	0.358	PLS(4)-MacroFin	0.442	0.443	0.348	0.358	0.357
Naive	0.581	0.581	0.568	0.587	0.587	PLS(4)-MacroFin-Google	0.441	0.442	0.346	0.357	0.357
AR(1)	0.447	0.447	0.346	0.356	0.356	PLS(4)-MacroFin-GoogleReuters	0.442	0.443	0.346	0.357	0.357
AR(4)	0.457	0.457	0.356	0.366	0.366	PLS(4)-MacroFin-Reuters	0.444	0.444	0.348	0.358	0.357
AR(AIC)	0.397	0.397	0.214	0.205	0.205	PLS(5)-MacroFin	0.445	0.445	0.35	0.359	0.358
AutoArima	0.444	0.444	0.35	0.363	0.363	PLS(5)-MacroFin-Google	0.447	0.446	0.349	0.359	0.359
ETS	0.443	0.443	0.351	0.359	0.359	PLS(5)-MacroFin-GoogleReuters	0.448	0.446	0.349	0.36	0.359
BaggedETS	0.467	0.464	0.361	0.366	0.366	PLS(5)-MacroFin-Reuters	0.447	0.446	0.351	0.359	0.359
BATS	0.415	0.415	0.33	0.344	0.344	SPC(1)-MacroFin	0.443	0.444	0.348	0.359	0.36
TBATS	0.415	0.415	0.33	0.344	0.344	SPC(1)-MacroFin-Google	0.443	0.444	0.348	0.359	0.36
NN	0.405	0.406	0.345	0.354	0.354	SPC(1)-MacroFin-GoogleReuters	0.443	0.444	0.348	0.359	0.36
Spline	0.491	0.491	0.437	0.452	0.452	SPC(1)-MacroFin-Reuters	0.443	0.444	0.348	0.359	0.36
THETA	0.425	0.425	0.336	0.35	0.35	SPC(2)-MacroFin	0.444	0.442	0.349	0.364	0.363
Google	0.452	0.451	0.358	0.366	0.365	SPC(2)-MacroFin-Google	0.445	0.442	0.349	0.364	0.363
Google-L1	0.459	0.455	0.333	0.336	0.336	SPC(2)-MacroFin-GoogleReuters	0.445	0.442	0.349	0.363	0.362
Google-L3	0.431	0.429	0.349	0.346	0.345	SPC(2)-MacroFin-Reuters	0.445	0.442	0.349	0.363	0.363
Reuters	0.427	0.427	0.353	0.365	0.365	SPC(3)-MacroFin	0.444	0.44	0.349	0.36	0.361
Reuters-L1	0.455	0.453	0.368	0.377	0.377	SPC(3)-MacroFin-Google	0.444	0.44	0.349	0.36	0.361
Reuters-L3	0.463	0.463	0.374	0.395	0.395	SPC(3)-MacroFin-GoogleReuters	0.444	0.44	0.349	0.36	0.361
DFA(2)-MacroFin	0.444	0.44	0.351	0.365	0.365	SPC(3)-MacroFin-Reuters	0.444	0.44	0.349	0.36	0.361
DFA(2)-MacroFin-Google	0.444	0.44	0.351	0.365	0.365	SPC(4)-MacroFin	0.447	0.439	0.349	0.36	0.36
DFA(2)-MacroFin-GoogleReuters	0.444	0.44	0.351	0.365	0.365	SPC(4)-MacroFin-Google	0.444	0.44	0.349	0.36	0.36
DFA(2)-MacroFin-Reuters	0.444	0.44	0.351	0.365	0.365	SPC(4)-MacroFin-GoogleReuters	0.446	0.439	0.349	0.36	0.361
DFA(3)-MacroFin	0.445	0.44	0.351	0.363	0.363	SPC(4)-MacroFin-Reuters	0.444	0.439	0.349	0.361	0.36
DFA(3)-MacroFin-Google	0.445	0.44	0.351	0.363	0.363	SPC(5)-MacroFin	0.462	0.438	0.352	0.36	0.359
DFA(3)-MacroFin-GoogleReuters	0.445	0.44	0.351	0.363	0.364	SPC(5)-MacroFin-Google	0.441	0.443	0.352	0.356	0.352
DFA(3)-MacroFin-Reuters	0.445	0.44	0.351	0.363	0.363	SPC(5)-MacroFin-GoogleReuters	0.463	0.437	0.356	0.367	0.36
DFA(4)-MacroFin	0.443	0.439	0.351	0.363	0.363	SPC(5)-MacroFin-Reuters	0.46	0.448	0.35	0.357	0.357
DFA(4)-MacroFin-Google	0.443	0.439	0.351	0.363	0.363	LASSO-MacroFin	0.382	0.357	0.315	0.322	0.317
DFA(4)-MacroFin-GoogleReuters	0.443	0.439	0.352	0.363	0.363	LASSO-MacroFin-Google	0.373	0.355	0.317	0.323	0.324
DFA(4)-MacroFin-Reuters	0.443	0.439	0.352	0.363	0.364	LASSO-MacroFin-GoogleReuters	0.378	0.351	0.318	0.319	0.324
DFA(5)-MacroFin	0.448	0.438	0.353	0.363	0.364	LASSO-MacroFin-Reuters	0.38	0.36	0.323	0.328	0.324
DFA(5)-MacroFin-Google	0.445	0.439	0.353	0.362	0.362	EN-MacroFin	0.373	0.366	0.325	0.324	0.325
DFA(5)-MacroFin-GoogleReuters	0.447	0.441	0.353	0.359	0.36	EN-MacroFin-Google	0.375	0.356	0.321	0.324	0.327
DFA(5)-MacroFin-Reuters	0.455	0.437	0.349	0.36	0.359	EN-MacroFin-GoogleReuters	0.378	0.355	0.326	0.327	0.323
PLS(1)-MacroFin	0.441	0.443	0.352	0.363	0.363	EN-MacroFin-Reuters	0.374	0.364	0.322	0.33	0.329
PLS(1)-MacroFin-Google	0.441	0.442	0.352	0.363	0.363	SSlab-MacroFin	0.41	0.392	0.341	0.352	0.352
PLS(1)-MacroFin-GoogleReuters	0.441	0.442	0.351	0.362	0.362	SSlab-MacroFin-Google	0.411	0.393	0.341	0.351	0.352
PLS(1)-MacroFin-Reuters	0.441	0.443	0.351	0.362	0.362	SSlab-MacroFin-GoogleReuters	0.408	0.394	0.341	0.352	0.353
PLS(2)-MacroFin	0.446	0.443	0.35	0.36	0.361	SSlab-MacroFin-Reuters	0.41	0.395	0.34	0.351	0.353
PLS(2)-MacroFin-Google	0.446	0.444	0.349	0.36	0.361	Best1	0.414	0.365	0.237	0.228	0.228
PLS(2)-MacroFin-GoogleReuters	0.446	0.444	0.349	0.36	0.361	Best3	0.412	0.362	0.264	0.285	0.286
PLS(2)-MacroFin-Reuters	0.446	0.443	0.35	0.36	0.361	Best5	0.4	0.357	0.283	0.303	0.305
PLS(3)-MacroFin	0.445	0.442	0.356	0.365	0.365	Best10	0.406	0.37	0.308	0.321	0.32
PLS(3)-MacroFin-Google	0.445	0.441	0.354	0.364	0.364						

Table 20: FR, HCPI, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.656	0.656	0.514	0.53	0.53	PLS(3)-MacroFin-GoogleReuters	0.555	0.542	0.47	0.476	0.476
Average(12)	0.57	0.57	0.452	0.462	0.462	PLS(3)-MacroFin-Reuters	0.554	0.542	0.471	0.476	0.476
Average(24)	0.567	0.567	0.452	0.46	0.46	PLS(4)-MacroFin	0.546	0.538	0.462	0.468	0.468
Naive	0.804	0.804	0.696	0.722	0.722	PLS(4)-MacroFin-Google	0.548	0.539	0.461	0.467	0.467
AR(1)	0.558	0.558	0.458	0.463	0.463	PLS(4)-MacroFin-GoogleReuters	0.55	0.541	0.461	0.468	0.468
AR(4)	0.572	0.572	0.467	0.473	0.473	PLS(4)-MacroFin-Reuters	0.549	0.542	0.463	0.468	0.468
AR(AIC)	0.512	0.511	0.276	0.267	0.267	PLS(5)-MacroFin	0.548	0.543	0.468	0.474	0.474
AutoArima	0.569	0.569	0.465	0.472	0.472	PLS(5)-MacroFin-Google	0.555	0.543	0.469	0.475	0.475
ETS	0.559	0.559	0.456	0.46	0.46	PLS(5)-MacroFin-GoogleReuters	0.557	0.545	0.47	0.476	0.476
BaggedETS	0.582	0.579	0.466	0.47	0.474	PLS(5)-MacroFin-Reuters	0.551	0.545	0.47	0.475	0.475
BATS	0.555	0.555	0.439	0.45	0.45	SPC(1)-MacroFin	0.566	0.568	0.461	0.468	0.468
TBATS	0.555	0.555	0.439	0.45	0.45	SPC(1)-MacroFin-Google	0.566	0.568	0.461	0.468	0.468
NN	0.556	0.546	0.436	0.443	0.443	SPC(1)-MacroFin-GoogleReuters	0.566	0.568	0.461	0.468	0.468
Spline	0.661	0.661	0.547	0.558	0.558	SPC(1)-MacroFin-Reuters	0.566	0.567	0.461	0.468	0.468
THETA	0.56	0.56	0.447	0.457	0.457	SPC(2)-MacroFin	0.567	0.561	0.467	0.476	0.476
Google	0.589	0.584	0.46	0.467	0.467	SPC(2)-MacroFin-Google	0.568	0.561	0.467	0.477	0.476
Google-L1	0.602	0.596	0.444	0.446	0.445	SPC(2)-MacroFin-GoogleReuters	0.567	0.561	0.469	0.476	0.476
Google-L3	0.549	0.547	0.442	0.439	0.439	SPC(2)-MacroFin-Reuters	0.568	0.561	0.467	0.476	0.476
Reuters	0.555	0.55	0.472	0.48	0.48	SPC(3)-MacroFin	0.566	0.56	0.465	0.472	0.472
Reuters-L1	0.576	0.565	0.491	0.499	0.499	SPC(3)-MacroFin-Google	0.566	0.559	0.466	0.472	0.473
Reuters-L3	0.588	0.578	0.498	0.514	0.514	SPC(3)-MacroFin-GoogleReuters	0.566	0.559	0.466	0.473	0.473
DFA(2)-MacroFin	0.567	0.559	0.469	0.478	0.478	SPC(3)-MacroFin-Reuters	0.566	0.559	0.465	0.472	0.472
DFA(2)-MacroFin-Google	0.567	0.559	0.469	0.478	0.478	SPC(4)-MacroFin	0.572	0.561	0.466	0.472	0.473
DFA(2)-MacroFin-GoogleReuters	0.567	0.559	0.469	0.478	0.478	SPC(4)-MacroFin-Google	0.57	0.562	0.466	0.473	0.473
DFA(2)-MacroFin-Reuters	0.567	0.559	0.469	0.478	0.478	SPC(4)-MacroFin-GoogleReuters	0.572	0.562	0.466	0.473	0.473
DFA(3)-MacroFin	0.567	0.559	0.467	0.474	0.475	SPC(4)-MacroFin-Reuters	0.569	0.561	0.466	0.473	0.473
DFA(3)-MacroFin-Google	0.566	0.559	0.467	0.474	0.475	SPC(5)-MacroFin	0.562	0.546	0.469	0.473	0.471
DFA(3)-MacroFin-GoogleReuters	0.566	0.559	0.467	0.474	0.475	SPC(5)-MacroFin-Google	0.546	0.547	0.47	0.469	0.463
DFA(3)-MacroFin-Reuters	0.567	0.559	0.467	0.474	0.475	SPC(5)-MacroFin-GoogleReuters	0.578	0.546	0.465	0.471	0.464
DFA(4)-MacroFin	0.567	0.56	0.468	0.476	0.476	SPC(5)-MacroFin-Reuters	0.573	0.554	0.461	0.467	0.465
DFA(4)-MacroFin-Google	0.567	0.56	0.468	0.476	0.476	LASSO-MacroFin	0.514	0.476	0.393	0.401	0.397
DFA(4)-MacroFin-GoogleReuters	0.567	0.56	0.469	0.476	0.476	LASSO-MacroFin-Google	0.508	0.475	0.397	0.404	0.407
DFA(4)-MacroFin-Reuters	0.567	0.56	0.468	0.476	0.476	LASSO-MacroFin-GoogleReuters	0.522	0.476	0.398	0.398	0.404
DFA(5)-MacroFin	0.561	0.55	0.472	0.478	0.478	LASSO-MacroFin-Reuters	0.508	0.483	0.404	0.42	0.405
DFA(5)-MacroFin-Google	0.557	0.549	0.471	0.477	0.477	EN-MacroFin	0.506	0.482	0.404	0.404	0.409
DFA(5)-MacroFin-GoogleReuters	0.556	0.553	0.471	0.475	0.475	EN-MacroFin-Google	0.509	0.477	0.401	0.405	0.405
DFA(5)-MacroFin-Reuters	0.569	0.549	0.47	0.475	0.475	EN-MacroFin-GoogleReuters	0.511	0.473	0.408	0.409	0.406
PLS(1)-MacroFin	0.569	0.566	0.465	0.473	0.473	EN-MacroFin-Reuters	0.505	0.48	0.402	0.414	0.41
PLS(1)-MacroFin-Google	0.571	0.566	0.466	0.473	0.473	SSlab-MacroFin	0.552	0.534	0.453	0.462	0.463
PLS(1)-MacroFin-GoogleReuters	0.571	0.566	0.465	0.473	0.473	SSlab-MacroFin-Google	0.553	0.535	0.454	0.461	0.462
PLS(1)-MacroFin-Reuters	0.569	0.566	0.465	0.473	0.473	SSlab-MacroFin-GoogleReuters	0.55	0.536	0.455	0.463	0.464
PLS(2)-MacroFin	0.557	0.546	0.464	0.471	0.471	SSlab-MacroFin-Reuters	0.553	0.536	0.454	0.46	0.464
PLS(2)-MacroFin-Google	0.559	0.548	0.464	0.471	0.471	Best1	0.55	0.501	0.324	0.317	0.317
PLS(2)-MacroFin-GoogleReuters	0.559	0.549	0.464	0.471	0.471	Best3	0.546	0.498	0.361	0.374	0.374
PLS(2)-MacroFin-Reuters	0.557	0.547	0.465	0.471	0.471	Best5	0.534	0.497	0.384	0.394	0.394
PLS(3)-MacroFin	0.552	0.54	0.47	0.475	0.475	Best10	0.529	0.5	0.413	0.418	0.417
PLS(3)-MacroFin-Google	0.554	0.539	0.469	0.475	0.475						

Table 21: FR, HCPI, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.08	0.08	0.17	0.11	0.11	PLS(3)-MacroFin-GoogleReuters	0.84	0.21	0.12	0.13	0.13
Average(12)	0.67	0.67	0.78	0.95	0.95	PLS(3)-MacroFin-Reuters	0.77	0.21	0.08	0.1	0.1
Average(24)	0.71	0.71	0.71	0.86	0.86	PLS(4)-MacroFin	0.41	0.16	0.65	0.61	0.61
Naive	0.1	0.1	0.02	0.01	0.01	PLS(4)-MacroFin-Google	0.5	0.14	0.77	0.69	0.7
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.59	0.18	0.7	0.65	0.65
AR(4)	0.11	0.1	0.3	0.29	0.29	PLS(4)-MacroFin-Reuters	0.56	0.22	0.6	0.57	0.58
AR(AIC)	0.27	0.26	0.02	0.01	0.01	PLS(5)-MacroFin	0.51	0.29	0.3	0.3	0.3
AutoArima	0.42	0.42	0.29	0.19	0.19	PLS(5)-MacroFin-Google	0.85	0.26	0.35	0.32	0.32
ETS	0.92	0.92	0.81	0.72	0.72	PLS(5)-MacroFin-GoogleReuters	0.95	0.29	0.32	0.29	0.3
BaggedETS	0.4	0.49	0.75	0.81	0.69	PLS(5)-MacroFin-Reuters	0.66	0.34	0.28	0.27	0.28
BATS	0.87	0.87	0.31	0.47	0.47	SPC(1)-MacroFin	0.56	0.51	0.66	0.55	0.55
TBATS	0.87	0.87	0.31	0.47	0.47	SPC(1)-MacroFin-Google	0.55	0.49	0.65	0.53	0.53
NN	0.96	0.66	0.46	0.5	0.5	SPC(1)-MacroFin-GoogleReuters	0.55	0.5	0.65	0.55	0.53
Spline	0.14	0.14	0.07	0.05	0.05	SPC(1)-MacroFin-Reuters	0.55	0.51	0.67	0.55	0.55
THETA	0.92	0.92	0.39	0.63	0.63	SPC(2)-MacroFin	0.62	0.84	0.51	0.39	0.38
Google	0.31	0.3	0.88	0.84	0.85	SPC(2)-MacroFin-Google	0.6	0.81	0.53	0.38	0.39
Google-L1	0.22	0.17	0.43	0.3	0.29	SPC(2)-MacroFin-GoogleReuters	0.61	0.84	0.48	0.4	0.41
Google-L3	0.74	0.66	0.56	0.36	0.35	SPC(2)-MacroFin-Reuters	0.61	0.84	0.52	0.41	0.4
Reuters	0.81	0.55	0.14	0.09	0.09	SPC(3)-MacroFin	0.65	0.91	0.53	0.46	0.45
Reuters-L1	0.39	0.76	0.06	0.04	0.04	SPC(3)-MacroFin-Google	0.66	0.92	0.53	0.46	0.43
Reuters-L3	0.2	0.41	0.07	0.03	0.03	SPC(3)-MacroFin-GoogleReuters	0.66	0.92	0.52	0.45	0.44
DFA(2)-MacroFin	0.64	0.94	0.47	0.36	0.36	SPC(3)-MacroFin-Reuters	0.65	0.93	0.53	0.46	0.45
DFA(2)-MacroFin-Google	0.65	0.93	0.46	0.35	0.35	SPC(4)-MacroFin	0.51	0.85	0.52	0.46	0.45
DFA(2)-MacroFin-GoogleReuters	0.65	0.94	0.46	0.36	0.36	SPC(4)-MacroFin-Google	0.59	0.81	0.49	0.43	0.43
DFA(2)-MacroFin-Reuters	0.64	0.94	0.47	0.36	0.36	SPC(4)-MacroFin-GoogleReuters	0.52	0.83	0.51	0.45	0.41
DFA(3)-MacroFin	0.65	0.95	0.45	0.36	0.36	SPC(4)-MacroFin-Reuters	0.59	0.84	0.51	0.42	0.44
DFA(3)-MacroFin-Google	0.65	0.95	0.45	0.36	0.35	SPC(5)-MacroFin	0.89	0.61	0.3	0.32	0.43
DFA(3)-MacroFin-GoogleReuters	0.66	0.96	0.45	0.36	0.35	SPC(5)-MacroFin-Google	0.6	0.57	0.22	0.53	0.98
DFA(3)-MacroFin-Reuters	0.65	0.96	0.45	0.36	0.36	SPC(5)-MacroFin-GoogleReuters	0.44	0.52	0.52	0.55	0.94
DFA(4)-MacroFin	0.66	0.9	0.37	0.29	0.28	SPC(5)-MacroFin-Reuters	0.55	0.87	0.79	0.7	0.82
DFA(4)-MacroFin-Google	0.67	0.9	0.37	0.28	0.28	LASSO-MacroFin	0.18	0.01	0.09	0.09	0.07
DFA(4)-MacroFin-GoogleReuters	0.67	0.91	0.36	0.28	0.28	LASSO-MacroFin-Google	0.16	0.01	0.09	0.1	0.12
DFA(4)-MacroFin-Reuters	0.66	0.91	0.36	0.28	0.28	LASSO-MacroFin-GoogleReuters	0.3	0.01	0.1	0.08	0.1
DFA(5)-MacroFin	0.88	0.64	0.21	0.19	0.19	LASSO-MacroFin-Reuters	0.14	0.02	0.11	0.15	0.11
DFA(5)-MacroFin-Google	0.94	0.59	0.2	0.21	0.21	EN-MacroFin	0.11	0.02	0.12	0.09	0.09
DFA(5)-MacroFin-GoogleReuters	0.93	0.79	0.2	0.25	0.25	EN-MacroFin-Google	0.14	0.01	0.11	0.08	0.09
DFA(5)-MacroFin-Reuters	0.61	0.62	0.25	0.27	0.27	EN-MacroFin-GoogleReuters	0.16	0.01	0.12	0.1	0.1
PLS(1)-MacroFin	0.6	0.63	0.56	0.44	0.44	EN-MacroFin-Reuters	0.11	0.02	0.1	0.1	0.13
PLS(1)-MacroFin-Google	0.58	0.65	0.52	0.41	0.41	SSlab-MacroFin	0.86	0.48	0.59	0.89	0.92
PLS(1)-MacroFin-GoogleReuters	0.58	0.66	0.54	0.43	0.43	SSlab-MacroFin-Google	0.87	0.49	0.61	0.82	0.89
PLS(1)-MacroFin-Reuters	0.6	0.64	0.57	0.46	0.46	SSlab-MacroFin-GoogleReuters	0.79	0.52	0.75	0.92	0.96
PLS(2)-MacroFin	0.95	0.3	0.34	0.27	0.27	SSlab-MacroFin-Reuters	0.86	0.51	0.59	0.7	0.97
PLS(2)-MacroFin-Google	0.95	0.43	0.37	0.29	0.28	Best1	0.82	0.11	0.08	0.05	0.05
PLS(2)-MacroFin-GoogleReuters	0.93	0.44	0.33	0.26	0.25	Best3	0.74	0.07	0.06	0.07	0.07
PLS(2)-MacroFin-Reuters	0.97	0.31	0.3	0.25	0.24	Best5	0.48	0.06	0.09	0.11	0.11
PLS(3)-MacroFin	0.68	0.16	0.11	0.12	0.12	Best10	0.3	0.03	0.23	0.22	0.21
PLS(3)-MacroFin-Google	0.77	0.17	0.16	0.15	0.15						

Table 22: FR, HCPI, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	1.948	1.948	1.229	1.137	1.137	PLS(3)-MacroFin-GoogleReuters	1.57	1.586	0.932	0.859	0.864
Average(12)	1.544	1.544	0.939	0.859	0.859	PLS(3)-MacroFin-Reuters	1.564	1.578	0.948	0.877	0.881
Average(24)	1.544	1.544	0.933	0.854	0.854	PLS(4)-MacroFin	1.643	1.615	0.957	0.876	0.881
Naive	2.106	2.106	1.552	1.46	1.46	PLS(4)-MacroFin-Google	1.688	1.642	0.94	0.859	0.865
AR(1)	1.566	1.566	0.902	0.817	0.817	PLS(4)-MacroFin-GoogleReuters	1.683	1.637	0.94	0.858	0.864
AR(4)	1.014	1.014	0.473	0.391	0.391	PLS(4)-MacroFin-Reuters	1.638	1.611	0.956	0.876	0.881
AR(AIC)	0.896	0.896	0.366	0.288	0.288	PLS(5)-MacroFin	1.658	1.628	0.954	0.873	0.877
AutoArima	1.168	1.168	0.741	0.688	0.688	PLS(5)-MacroFin-Google	1.71	1.667	0.931	0.855	0.859
ETS	1.539	1.539	0.93	0.852	0.852	PLS(5)-MacroFin-GoogleReuters	1.707	1.661	0.931	0.854	0.859
BaggedETS	1.405	1.406	1.122	1.132	1.117	PLS(5)-MacroFin-Reuters	1.653	1.622	0.955	0.874	0.878
BATS	1.073	1.073	0.6	0.513	0.513	SPC(1)-MacroFin	1.559	1.551	0.93	0.851	0.851
TBATS	1.073	1.073	0.6	0.513	0.513	SPC(1)-MacroFin-Google	1.559	1.551	0.93	0.85	0.851
NN	0.944	0.914	0.364	0.249	0.263	SPC(1)-MacroFin-GoogleReuters	1.558	1.551	0.93	0.85	0.851
Spline	2.05	2.05	1.483	1.386	1.386	SPC(1)-MacroFin-Reuters	1.558	1.551	0.931	0.851	0.85
THETA	1.537	1.537	0.922	0.843	0.843	SPC(2)-MacroFin	1.549	1.556	0.935	0.853	0.851
Google	1.558	1.535	0.934	0.866	0.861	SPC(2)-MacroFin-Google	1.55	1.551	0.931	0.853	0.852
Google-L1	1.451	1.457	0.902	0.828	0.822	SPC(2)-MacroFin-GoogleReuters	1.55	1.554	0.932	0.852	0.852
Google-L3	1.006	1.006	0.427	0.36	0.361	SPC(2)-MacroFin-Reuters	1.553	1.555	0.933	0.851	0.851
Reuters	1.544	1.541	0.917	0.838	0.839	SPC(3)-MacroFin	1.527	1.547	0.947	0.875	0.873
Reuters-L1	1.437	1.439	0.823	0.743	0.743	SPC(3)-MacroFin-Google	1.527	1.549	0.951	0.876	0.876
Reuters-L3	1.017	1.024	0.469	0.39	0.391	SPC(3)-MacroFin-GoogleReuters	1.534	1.55	0.943	0.872	0.873
DFA(2)-MacroFin	1.54	1.555	0.937	0.855	0.855	SPC(3)-MacroFin-Reuters	1.529	1.549	0.952	0.874	0.872
DFA(2)-MacroFin-Google	1.539	1.555	0.937	0.855	0.855	SPC(4)-MacroFin	1.534	1.506	0.918	0.87	0.861
DFA(2)-MacroFin-GoogleReuters	1.539	1.555	0.937	0.855	0.855	SPC(4)-MacroFin-Google	1.528	1.499	0.915	0.872	0.875
DFA(2)-MacroFin-Reuters	1.54	1.556	0.937	0.855	0.855	SPC(4)-MacroFin-GoogleReuters	1.544	1.52	0.913	0.862	0.871
DFA(3)-MacroFin	1.516	1.545	0.951	0.874	0.872	SPC(4)-MacroFin-Reuters	1.537	1.507	0.922	0.87	0.871
DFA(3)-MacroFin-Google	1.518	1.545	0.949	0.874	0.872	SPC(5)-MacroFin	1.547	1.49	0.9	0.861	0.86
DFA(3)-MacroFin-GoogleReuters	1.519	1.545	0.949	0.874	0.872	SPC(5)-MacroFin-Google	1.536	1.483	0.908	0.864	0.848
DFA(3)-MacroFin-Reuters	1.517	1.546	0.951	0.874	0.872	SPC(5)-MacroFin-GoogleReuters	1.538	1.487	0.906	0.851	0.851
DFA(4)-MacroFin	1.514	1.519	0.932	0.875	0.872	SPC(5)-MacroFin-Reuters	1.535	1.492	0.9	0.854	0.858
DFA(4)-MacroFin-Google	1.514	1.507	0.932	0.874	0.871	LASSO-MacroFin	1.434	1.444	0.832	0.773	0.774
DFA(4)-MacroFin-GoogleReuters	1.513	1.513	0.931	0.873	0.871	LASSO-MacroFin-Google	1.46	1.41	0.844	0.766	0.777
DFA(4)-MacroFin-Reuters	1.514	1.523	0.932	0.875	0.872	LASSO-MacroFin-GoogleReuters	1.41	1.421	0.839	0.785	0.771
DFA(5)-MacroFin	1.516	1.491	0.914	0.854	0.857	LASSO-MacroFin-Reuters	1.466	1.427	0.839	0.776	0.768
DFA(5)-MacroFin-Google	1.512	1.485	0.911	0.851	0.856	EN-MacroFin	1.443	1.413	0.851	0.777	0.776
DFA(5)-MacroFin-GoogleReuters	1.513	1.484	0.911	0.851	0.855	EN-MacroFin-Google	1.466	1.423	0.847	0.786	0.78
DFA(5)-MacroFin-Reuters	1.517	1.49	0.913	0.853	0.857	EN-MacroFin-GoogleReuters	1.468	1.429	0.85	0.783	0.776
PLS(1)-MacroFin	1.547	1.546	0.914	0.852	0.855	EN-MacroFin-Reuters	1.431	1.435	0.855	0.774	0.786
PLS(1)-MacroFin-Google	1.546	1.544	0.916	0.855	0.859	SSlab-MacroFin	1.491	1.492	0.858	0.79	0.779
PLS(1)-MacroFin-GoogleReuters	1.546	1.544	0.917	0.856	0.86	SSlab-MacroFin-Google	1.489	1.489	0.859	0.767	0.788
PLS(1)-MacroFin-Reuters	1.547	1.546	0.914	0.852	0.856	SSlab-MacroFin-GoogleReuters	1.492	1.484	0.861	0.782	0.776
PLS(2)-MacroFin	1.54	1.543	0.947	0.88	0.883	SSlab-MacroFin-Reuters	1.488	1.494	0.86	0.781	0.782
PLS(2)-MacroFin-Google	1.542	1.542	0.938	0.873	0.876	Best1	1.101	1.126	0.467	0.378	0.371
PLS(2)-MacroFin-GoogleReuters	1.542	1.542	0.937	0.872	0.876	Best3	1.024	1.021	0.386	0.294	0.292
PLS(2)-MacroFin-Reuters	1.54	1.543	0.946	0.88	0.882	Best5	1.046	1.035	0.396	0.308	0.305
PLS(3)-MacroFin	1.565	1.579	0.949	0.877	0.882	Best10	1.12	1.129	0.526	0.442	0.442
PLS(3)-MacroFin-Google	1.571	1.587	0.932	0.86	0.865						

Table 23: IT, HCPI, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	2.218	2.218	1.646	1.575	1.575	PLS(3)-MacroFin-GoogleReuters	1.81	1.825	1.271	1.204	1.205
Average(12)	1.78	1.78	1.299	1.229	1.229	PLS(3)-MacroFin-Reuters	1.803	1.812	1.269	1.209	1.21
Average(24)	1.781	1.781	1.297	1.229	1.229	PLS(4)-MacroFin	1.897	1.863	1.278	1.206	1.207
Naive	2.39	2.39	1.825	1.686	1.686	PLS(4)-MacroFin-Google	1.954	1.904	1.28	1.203	1.204
AR(1)	1.824	1.824	1.312	1.239	1.239	PLS(4)-MacroFin-GoogleReuters	1.951	1.9	1.28	1.201	1.202
AR(4)	1.324	1.324	0.693	0.577	0.577	PLS(4)-MacroFin-Reuters	1.894	1.86	1.277	1.205	1.206
AR(AIC)	1.242	1.242	0.552	0.362	0.362	PLS(5)-MacroFin	1.908	1.882	1.276	1.202	1.203
AutoArima	1.341	1.341	0.955	0.884	0.884	PLS(5)-MacroFin-Google	1.97	1.925	1.258	1.185	1.186
ETS	1.777	1.777	1.296	1.227	1.227	PLS(5)-MacroFin-GoogleReuters	1.969	1.919	1.261	1.186	1.187
BaggedETS	1.611	1.613	1.316	1.324	1.312	PLS(5)-MacroFin-Reuters	1.908	1.877	1.277	1.202	1.203
BATS	1.369	1.369	0.875	0.762	0.762	SPC(1)-MacroFin	1.808	1.798	1.307	1.246	1.246
TBATS	1.369	1.369	0.875	0.762	0.762	SPC(1)-MacroFin-Google	1.808	1.799	1.307	1.246	1.246
NN	1.275	1.252	0.571	0.31	0.325	SPC(1)-MacroFin-GoogleReuters	1.808	1.798	1.307	1.246	1.246
Spline	2.331	2.331	1.77	1.655	1.655	SPC(1)-MacroFin-Reuters	1.807	1.798	1.307	1.246	1.245
THETA	1.778	1.778	1.294	1.229	1.229	SPC(2)-MacroFin	1.796	1.801	1.314	1.249	1.247
Google	1.817	1.778	1.316	1.252	1.25	SPC(2)-MacroFin-Google	1.798	1.798	1.31	1.247	1.247
Google-L1	1.673	1.659	1.246	1.18	1.179	SPC(2)-MacroFin-GoogleReuters	1.797	1.799	1.311	1.248	1.248
Google-L3	1.327	1.317	0.581	0.497	0.497	SPC(2)-MacroFin-Reuters	1.8	1.801	1.313	1.247	1.248
Reuters	1.792	1.792	1.304	1.242	1.242	SPC(3)-MacroFin	1.772	1.794	1.305	1.247	1.246
Reuters-L1	1.655	1.657	1.185	1.125	1.125	SPC(3)-MacroFin-Google	1.773	1.797	1.307	1.245	1.249
Reuters-L3	1.339	1.341	0.698	0.589	0.589	SPC(3)-MacroFin-GoogleReuters	1.779	1.798	1.297	1.246	1.247
DFA(2)-MacroFin	1.775	1.796	1.315	1.249	1.249	SPC(3)-MacroFin-Reuters	1.773	1.796	1.31	1.247	1.247
DFA(2)-MacroFin-Google	1.774	1.796	1.314	1.25	1.25	SPC(4)-MacroFin	1.78	1.734	1.27	1.238	1.234
DFA(2)-MacroFin-GoogleReuters	1.774	1.796	1.314	1.25	1.25	SPC(4)-MacroFin-Google	1.779	1.74	1.259	1.238	1.238
DFA(2)-MacroFin-Reuters	1.775	1.797	1.316	1.25	1.25	SPC(4)-MacroFin-GoogleReuters	1.791	1.757	1.267	1.226	1.239
DFA(3)-MacroFin	1.757	1.792	1.313	1.249	1.249	SPC(4)-MacroFin-Reuters	1.782	1.746	1.274	1.239	1.234
DFA(3)-MacroFin-Google	1.757	1.792	1.311	1.248	1.248	SPC(5)-MacroFin	1.783	1.737	1.257	1.231	1.227
DFA(3)-MacroFin-GoogleReuters	1.757	1.793	1.311	1.248	1.248	SPC(5)-MacroFin-Google	1.774	1.733	1.263	1.232	1.221
DFA(3)-MacroFin-Reuters	1.757	1.793	1.313	1.249	1.249	SPC(5)-MacroFin-GoogleReuters	1.773	1.734	1.263	1.216	1.223
DFA(4)-MacroFin	1.759	1.765	1.279	1.242	1.242	SPC(5)-MacroFin-Reuters	1.774	1.739	1.261	1.222	1.227
DFA(4)-MacroFin-Google	1.757	1.749	1.276	1.239	1.238	LASSO-MacroFin	1.692	1.702	1.178	1.135	1.135
DFA(4)-MacroFin-GoogleReuters	1.757	1.757	1.277	1.239	1.239	LASSO-MacroFin-Google	1.739	1.645	1.19	1.129	1.143
DFA(4)-MacroFin-Reuters	1.759	1.769	1.28	1.243	1.243	LASSO-MacroFin-GoogleReuters	1.658	1.673	1.189	1.149	1.139
DFA(5)-MacroFin	1.754	1.731	1.271	1.229	1.23	LASSO-MacroFin-Reuters	1.754	1.679	1.171	1.136	1.129
DFA(5)-MacroFin-Google	1.751	1.727	1.27	1.228	1.229	EN-MacroFin	1.694	1.639	1.186	1.137	1.135
DFA(5)-MacroFin-GoogleReuters	1.751	1.726	1.269	1.228	1.229	EN-MacroFin-Google	1.731	1.656	1.184	1.152	1.145
DFA(5)-MacroFin-Reuters	1.754	1.73	1.271	1.229	1.23	EN-MacroFin-GoogleReuters	1.738	1.661	1.191	1.151	1.143
PLS(1)-MacroFin	1.789	1.789	1.306	1.257	1.258	EN-MacroFin-Reuters	1.684	1.678	1.194	1.135	1.143
PLS(1)-MacroFin-Google	1.79	1.789	1.312	1.264	1.265	SSlab-MacroFin	1.709	1.709	1.214	1.161	1.153
PLS(1)-MacroFin-GoogleReuters	1.79	1.789	1.312	1.263	1.264	SSlab-MacroFin-Google	1.707	1.707	1.21	1.143	1.157
PLS(1)-MacroFin-Reuters	1.789	1.789	1.306	1.256	1.257	SSlab-MacroFin-GoogleReuters	1.711	1.703	1.216	1.155	1.149
PLS(2)-MacroFin	1.789	1.786	1.295	1.239	1.239	SSlab-MacroFin-Reuters	1.707	1.711	1.215	1.155	1.156
PLS(2)-MacroFin-Google	1.789	1.787	1.291	1.235	1.236	Best1	1.344	1.379	0.778	0.617	0.62
PLS(2)-MacroFin-GoogleReuters	1.789	1.787	1.29	1.234	1.235	Best3	1.32	1.316	0.709	0.574	0.574
PLS(2)-MacroFin-Reuters	1.789	1.786	1.294	1.238	1.239	Best5	1.365	1.334	0.733	0.613	0.615
PLS(3)-MacroFin	1.803	1.813	1.27	1.21	1.211	Best10	1.411	1.418	0.822	0.723	0.725
PLS(3)-MacroFin-Google	1.811	1.826	1.272	1.205	1.207						

Table 24: IT, HCPI, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0	0	0	0	0	PLS(3)-MacroFin-GoogleReuters	0.62	0.93	0.34	0.43	0.45
Average(12)	0.06	0.06	0.61	0.69	0.69	PLS(3)-MacroFin-Reuters	0.33	0.6	0.31	0.46	0.48
Average(24)	0.05	0.05	0.53	0.66	0.66	PLS(4)-MacroFin	0.07	0.12	0.45	0.48	0.49
Naive	0.02	0.02	0.01	0	0	PLS(4)-MacroFin-Google	0.04	0.05	0.48	0.42	0.44
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.05	0.06	0.47	0.4	0.42
AR(4)	0	0	0	0	0	PLS(4)-MacroFin-Reuters	0.09	0.14	0.44	0.46	0.47
AR(AIC)	0	0	0.01	0.01	0.01	PLS(5)-MacroFin	0.24	0.24	0.44	0.44	0.45
AutoArima	0	0	0.04	0.05	0.05	PLS(5)-MacroFin-Google	0.07	0.07	0.36	0.36	0.37
ETS	0.07	0.07	0.56	0.66	0.66	PLS(5)-MacroFin-GoogleReuters	0.07	0.08	0.38	0.37	0.38
BaggedETS	0.05	0.05	0.97	0.37	0.44	PLS(5)-MacroFin-Reuters	0.25	0.26	0.45	0.44	0.45
BATS	0	0	0.01	0.01	0.01	SPC(1)-MacroFin	0.42	0.21	0.73	0.37	0.44
TBATS	0	0	0.01	0.01	0.01	SPC(1)-MacroFin-Google	0.43	0.21	0.73	0.4	0.42
NN	0	0	0.01	0	0	SPC(1)-MacroFin-GoogleReuters	0.43	0.19	0.73	0.42	0.4
Spline	0.01	0.01	0	0	0	SPC(1)-MacroFin-Reuters	0.41	0.21	0.76	0.42	0.44
THETA	0.01	0.01	0.23	0.44	0.44	SPC(2)-MacroFin	0.12	0.25	0.86	0.32	0.45
Google	0.95	0.58	0.91	0.77	0.8	SPC(2)-MacroFin-Google	0.17	0.19	0.89	0.35	0.35
Google-L1	0.2	0.14	0.62	0.66	0.65	SPC(2)-MacroFin-GoogleReuters	0.15	0.2	0.98	0.35	0.33
Google-L3	0.01	0.01	0	0	0	SPC(2)-MacroFin-Reuters	0.19	0.26	0.92	0.36	0.35
Reuters	0.11	0.11	0.59	0.79	0.79	SPC(3)-MacroFin	0.15	0.3	0.72	0.61	0.67
Reuters-L1	0.07	0.07	0.26	0.32	0.32	SPC(3)-MacroFin-Google	0.16	0.33	0.8	0.68	0.44
Reuters-L3	0	0	0	0	0	SPC(3)-MacroFin-GoogleReuters	0.19	0.33	0.49	0.67	0.56
DFA(2)-MacroFin	0.05	0.21	0.76	0.3	0.3	SPC(3)-MacroFin-Reuters	0.17	0.34	0.95	0.56	0.6
DFA(2)-MacroFin-Google	0.04	0.2	0.83	0.3	0.3	SPC(4)-MacroFin	0.17	0.02	0.31	0.94	0.8
DFA(2)-MacroFin-GoogleReuters	0.04	0.2	0.82	0.3	0.3	SPC(4)-MacroFin-Google	0.14	0.16	0.22	0.93	0.93
DFA(2)-MacroFin-Reuters	0.05	0.22	0.76	0.3	0.3	SPC(4)-MacroFin-GoogleReuters	0.27	0.12	0.23	0.63	0.98
DFA(3)-MacroFin	0.13	0.32	0.92	0.44	0.45	SPC(4)-MacroFin-Reuters	0.17	0.07	0.33	1	0.82
DFA(3)-MacroFin-Google	0.12	0.31	0.98	0.49	0.5	SPC(5)-MacroFin	0.19	0.13	0.27	0.83	0.74
DFA(3)-MacroFin-GoogleReuters	0.12	0.31	0.98	0.47	0.48	SPC(5)-MacroFin-Google	0.09	0.1	0.31	0.85	0.62
DFA(3)-MacroFin-Reuters	0.13	0.33	0.91	0.42	0.43	SPC(5)-MacroFin-GoogleReuters	0.12	0.09	0.33	0.56	0.67
DFA(4)-MacroFin	0.08	0.1	0.35	0.89	0.9	SPC(5)-MacroFin-Reuters	0.11	0.13	0.32	0.64	0.75
DFA(4)-MacroFin-Google	0.07	0.05	0.34	0.97	0.96	LASSO-MacroFin	0.15	0.18	0.09	0.15	0.17
DFA(4)-MacroFin-GoogleReuters	0.07	0.07	0.33	1	0.99	LASSO-MacroFin-Google	0.47	0.03	0.12	0.15	0.19
DFA(4)-MacroFin-Reuters	0.08	0.13	0.36	0.83	0.84	LASSO-MacroFin-GoogleReuters	0.08	0.09	0.11	0.21	0.16
DFA(5)-MacroFin	0.04	0.04	0.31	0.73	0.74	LASSO-MacroFin-Reuters	0.56	0.13	0.07	0.16	0.14
DFA(5)-MacroFin-Google	0.03	0.04	0.3	0.7	0.72	EN-MacroFin	0.14	0.03	0.1	0.15	0.14
DFA(5)-MacroFin-GoogleReuters	0.03	0.04	0.3	0.7	0.72	EN-MacroFin-Google	0.38	0.04	0.11	0.2	0.18
DFA(5)-MacroFin-Reuters	0.04	0.04	0.31	0.72	0.74	EN-MacroFin-GoogleReuters	0.44	0.03	0.11	0.2	0.17
PLS(1)-MacroFin	0.12	0.12	0.87	0.59	0.57	EN-MacroFin-Reuters	0.13	0.11	0.1	0.14	0.15
PLS(1)-MacroFin-Google	0.14	0.13	0.98	0.4	0.38	SSlab-MacroFin	0.08	0.08	0.19	0.3	0.26
PLS(1)-MacroFin-GoogleReuters	0.14	0.13	0.99	0.41	0.38	SSlab-MacroFin-Google	0.08	0.08	0.17	0.21	0.27
PLS(1)-MacroFin-Reuters	0.12	0.12	0.86	0.6	0.58	SSlab-MacroFin-GoogleReuters	0.08	0.07	0.2	0.25	0.23
PLS(2)-MacroFin	0.12	0.1	0.61	0.98	1	SSlab-MacroFin-Reuters	0.08	0.09	0.2	0.27	0.26
PLS(2)-MacroFin-Google	0.12	0.1	0.57	0.91	0.93	Best1	0	0.01	0.01	0.01	0.01
PLS(2)-MacroFin-GoogleReuters	0.12	0.1	0.55	0.89	0.91	Best3	0	0	0.01	0	0
PLS(2)-MacroFin-Reuters	0.12	0.1	0.59	0.97	0.98	Best5	0	0	0.01	0.01	0.01
PLS(3)-MacroFin	0.33	0.61	0.31	0.48	0.49	Best10	0	0	0.01	0.01	0.01
PLS(3)-MacroFin-Google	0.63	0.91	0.35	0.44	0.46						

Table 25: IT, HCPI, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.351	0.351	0.273	0.267	0.267	PLS(3)-MacroFin-GoogleReuters	0.295	0.3	0.251	0.234	0.234
Average(12)	0.311	0.311	0.239	0.226	0.226	PLS(3)-MacroFin-Reuters	0.299	0.3	0.249	0.234	0.234
Average(24)	0.31	0.31	0.239	0.225	0.225	PLS(4)-MacroFin	0.304	0.305	0.248	0.234	0.234
Naive	0.361	0.361	0.347	0.356	0.356	PLS(4)-MacroFin-Google	0.308	0.308	0.253	0.234	0.234
AR(1)	0.292	0.291	0.247	0.232	0.232	PLS(4)-MacroFin-GoogleReuters	0.307	0.311	0.254	0.235	0.235
AR(4)	0.303	0.303	0.258	0.243	0.243	PLS(4)-MacroFin-Reuters	0.301	0.308	0.249	0.235	0.235
AR(AIC)	0.278	0.275	0.23	0.224	0.224	PLS(5)-MacroFin	0.318	0.31	0.25	0.235	0.235
AutoArima	0.314	0.314	0.25	0.233	0.233	PLS(5)-MacroFin-Google	0.318	0.313	0.254	0.234	0.234
ETS	0.304	0.304	0.242	0.224	0.224	PLS(5)-MacroFin-GoogleReuters	0.316	0.314	0.254	0.235	0.236
BaggedETS	0.328	0.321	0.272	0.25	0.246	PLS(5)-MacroFin-Reuters	0.315	0.312	0.25	0.236	0.236
BATS	0.302	0.302	0.241	0.223	0.223	SPC(1)-MacroFin	0.293	0.292	0.243	0.231	0.232
TBATS	0.302	0.302	0.241	0.223	0.223	SPC(1)-MacroFin-Google	0.293	0.293	0.243	0.232	0.231
NN	0.317	0.317	0.27	0.238	0.249	SPC(1)-MacroFin-GoogleReuters	0.293	0.293	0.244	0.232	0.232
Spline	0.339	0.339	0.286	0.282	0.282	SPC(1)-MacroFin-Reuters	0.293	0.293	0.243	0.231	0.232
THETA	0.29	0.29	0.223	0.213	0.213	SPC(2)-MacroFin	0.29	0.29	0.265	0.255	0.254
Google	0.303	0.304	0.234	0.223	0.222	SPC(2)-MacroFin-Google	0.29	0.29	0.265	0.254	0.254
Google-L1	0.32	0.322	0.255	0.248	0.247	SPC(2)-MacroFin-GoogleReuters	0.29	0.291	0.264	0.254	0.254
Google-L3	0.278	0.281	0.244	0.234	0.235	SPC(2)-MacroFin-Reuters	0.29	0.29	0.265	0.254	0.254
Reuters	0.267	0.268	0.236	0.234	0.233	SPC(3)-MacroFin	0.276	0.291	0.249	0.238	0.241
Reuters-L1	0.282	0.283	0.244	0.238	0.236	SPC(3)-MacroFin-Google	0.28	0.281	0.245	0.238	0.235
Reuters-L3	0.294	0.295	0.261	0.247	0.245	SPC(3)-MacroFin-GoogleReuters	0.281	0.279	0.25	0.235	0.24
DFA(2)-MacroFin	0.291	0.291	0.266	0.255	0.255	SPC(3)-MacroFin-Reuters	0.274	0.278	0.252	0.239	0.242
DFA(2)-MacroFin-Google	0.291	0.291	0.266	0.254	0.255	SPC(4)-MacroFin	0.276	0.275	0.228	0.225	0.225
DFA(2)-MacroFin-GoogleReuters	0.291	0.291	0.267	0.255	0.255	SPC(4)-MacroFin-Google	0.269	0.268	0.227	0.221	0.223
DFA(2)-MacroFin-Reuters	0.291	0.291	0.267	0.255	0.255	SPC(4)-MacroFin-GoogleReuters	0.269	0.276	0.225	0.218	0.225
DFA(3)-MacroFin	0.277	0.28	0.258	0.249	0.249	SPC(4)-MacroFin-Reuters	0.273	0.274	0.232	0.225	0.225
DFA(3)-MacroFin-Google	0.28	0.28	0.258	0.247	0.248	SPC(5)-MacroFin	0.279	0.262	0.219	0.216	0.221
DFA(3)-MacroFin-GoogleReuters	0.28	0.28	0.258	0.247	0.247	SPC(5)-MacroFin-Google	0.263	0.259	0.226	0.22	0.22
DFA(3)-MacroFin-Reuters	0.275	0.281	0.258	0.248	0.248	SPC(5)-MacroFin-GoogleReuters	0.261	0.266	0.22	0.22	0.221
DFA(4)-MacroFin	0.28	0.276	0.24	0.23	0.23	SPC(5)-MacroFin-Reuters	0.264	0.272	0.224	0.218	0.224
DFA(4)-MacroFin-Google	0.274	0.275	0.239	0.228	0.228	LASSO-MacroFin	0.239	0.23	0.207	0.197	0.19
DFA(4)-MacroFin-GoogleReuters	0.274	0.276	0.24	0.229	0.229	LASSO-MacroFin-Google	0.23	0.228	0.212	0.197	0.207
DFA(4)-MacroFin-Reuters	0.28	0.277	0.242	0.231	0.231	LASSO-MacroFin-GoogleReuters	0.239	0.224	0.218	0.199	0.201
DFA(5)-MacroFin	0.275	0.268	0.231	0.223	0.223	LASSO-MacroFin-Reuters	0.24	0.228	0.209	0.194	0.197
DFA(5)-MacroFin-Google	0.272	0.267	0.23	0.219	0.22	EN-MacroFin	0.236	0.224	0.205	0.203	0.197
DFA(5)-MacroFin-GoogleReuters	0.272	0.269	0.232	0.221	0.222	EN-MacroFin-Google	0.23	0.221	0.218	0.203	0.2
DFA(5)-MacroFin-Reuters	0.274	0.27	0.232	0.224	0.224	EN-MacroFin-GoogleReuters	0.237	0.221	0.217	0.202	0.203
PLS(1)-MacroFin	0.292	0.29	0.241	0.233	0.232	EN-MacroFin-Reuters	0.229	0.223	0.215	0.199	0.194
PLS(1)-MacroFin-Google	0.292	0.29	0.242	0.233	0.233	SSlab-MacroFin	0.231	0.231	0.214	0.202	0.202
PLS(1)-MacroFin-GoogleReuters	0.292	0.29	0.242	0.233	0.233	SSlab-MacroFin-Google	0.23	0.231	0.213	0.201	0.201
PLS(1)-MacroFin-Reuters	0.292	0.289	0.241	0.232	0.232	SSlab-MacroFin-GoogleReuters	0.231	0.231	0.213	0.201	0.2
PLS(2)-MacroFin	0.303	0.3	0.261	0.25	0.25	SSlab-MacroFin-Reuters	0.23	0.231	0.213	0.201	0.202
PLS(2)-MacroFin-Google	0.303	0.301	0.264	0.25	0.25	Best1	0.246	0.255	0.274	0.265	0.263
PLS(2)-MacroFin-GoogleReuters	0.302	0.3	0.263	0.249	0.25	Best3	0.237	0.24	0.222	0.205	0.206
PLS(2)-MacroFin-Reuters	0.301	0.298	0.261	0.249	0.249	Best5	0.247	0.239	0.213	0.201	0.203
PLS(3)-MacroFin	0.303	0.304	0.248	0.232	0.233	Best10	0.239	0.233	0.221	0.201	0.203
PLS(3)-MacroFin-Google	0.299	0.303	0.249	0.233	0.233						

Table 26: UK, HCPI, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.431	0.431	0.351	0.351	0.351	PLS(3)-MacroFin-GoogleReuters	0.402	0.4	0.332	0.324	0.324
Average(12)	0.378	0.378	0.322	0.313	0.313	PLS(3)-MacroFin-Reuters	0.405	0.402	0.336	0.329	0.329
Average(24)	0.383	0.383	0.331	0.32	0.32	PLS(4)-MacroFin	0.395	0.402	0.339	0.329	0.329
Naive	0.513	0.513	0.462	0.484	0.484	PLS(4)-MacroFin-Google	0.4	0.408	0.338	0.326	0.326
AR(1)	0.395	0.395	0.365	0.358	0.358	PLS(4)-MacroFin-GoogleReuters	0.4	0.409	0.338	0.326	0.326
AR(4)	0.404	0.405	0.365	0.356	0.356	PLS(4)-MacroFin-Reuters	0.394	0.403	0.339	0.33	0.33
AR(AIC)	0.369	0.368	0.264	0.257	0.257	PLS(5)-MacroFin	0.405	0.404	0.341	0.33	0.33
AutoArima	0.401	0.401	0.358	0.349	0.349	PLS(5)-MacroFin-Google	0.404	0.408	0.338	0.324	0.324
ETS	0.393	0.393	0.352	0.341	0.341	PLS(5)-MacroFin-GoogleReuters	0.402	0.407	0.338	0.325	0.325
BaggedETS	0.427	0.419	0.367	0.353	0.351	PLS(5)-MacroFin-Reuters	0.402	0.404	0.341	0.33	0.33
BATS	0.388	0.388	0.347	0.336	0.336	SPC(1)-MacroFin	0.393	0.392	0.361	0.354	0.355
TBATS	0.388	0.388	0.347	0.336	0.336	SPC(1)-MacroFin-Google	0.393	0.393	0.361	0.354	0.354
NN	0.386	0.386	0.354	0.306	0.313	SPC(1)-MacroFin-GoogleReuters	0.393	0.393	0.361	0.354	0.354
Spline	0.439	0.439	0.373	0.376	0.376	SPC(1)-MacroFin-Reuters	0.393	0.393	0.361	0.354	0.354
THETA	0.372	0.372	0.316	0.311	0.311	SPC(2)-MacroFin	0.393	0.395	0.367	0.36	0.361
Google	0.366	0.397	0.319	0.311	0.311	SPC(2)-MacroFin-Google	0.393	0.395	0.368	0.361	0.361
Google-L1	0.391	0.423	0.316	0.308	0.308	SPC(2)-MacroFin-GoogleReuters	0.393	0.396	0.367	0.362	0.361
Google-L3	0.345	0.38	0.295	0.284	0.285	SPC(2)-MacroFin-Reuters	0.393	0.395	0.367	0.361	0.361
Reuters	0.373	0.376	0.357	0.354	0.354	SPC(3)-MacroFin	0.368	0.379	0.35	0.342	0.342
Reuters-L1	0.38	0.382	0.355	0.351	0.35	SPC(3)-MacroFin-Google	0.367	0.365	0.342	0.336	0.332
Reuters-L3	0.403	0.405	0.371	0.362	0.362	SPC(3)-MacroFin-GoogleReuters	0.367	0.364	0.344	0.333	0.335
DFA(2)-MacroFin	0.392	0.393	0.371	0.364	0.364	SPC(3)-MacroFin-Reuters	0.361	0.36	0.351	0.342	0.344
DFA(2)-MacroFin-Google	0.392	0.393	0.372	0.364	0.364	SPC(4)-MacroFin	0.365	0.352	0.334	0.335	0.333
DFA(2)-MacroFin-GoogleReuters	0.392	0.394	0.372	0.364	0.365	SPC(4)-MacroFin-Google	0.361	0.339	0.327	0.319	0.324
DFA(2)-MacroFin-Reuters	0.392	0.393	0.371	0.364	0.364	SPC(4)-MacroFin-GoogleReuters	0.359	0.349	0.324	0.322	0.326
DFA(3)-MacroFin	0.367	0.37	0.363	0.355	0.355	SPC(4)-MacroFin-Reuters	0.364	0.35	0.337	0.334	0.332
DFA(3)-MacroFin-Google	0.366	0.366	0.356	0.348	0.348	SPC(5)-MacroFin	0.358	0.34	0.326	0.324	0.326
DFA(3)-MacroFin-GoogleReuters	0.367	0.366	0.356	0.347	0.347	SPC(5)-MacroFin-Google	0.35	0.332	0.316	0.314	0.315
DFA(3)-MacroFin-Reuters	0.365	0.371	0.363	0.354	0.355	SPC(5)-MacroFin-GoogleReuters	0.351	0.334	0.316	0.317	0.316
DFA(4)-MacroFin	0.366	0.361	0.348	0.34	0.34	SPC(5)-MacroFin-Reuters	0.358	0.339	0.329	0.328	0.325
DFA(4)-MacroFin-Google	0.36	0.356	0.34	0.331	0.331	LASSO-MacroFin	0.32	0.322	0.314	0.298	0.295
DFA(4)-MacroFin-GoogleReuters	0.36	0.357	0.341	0.333	0.333	LASSO-MacroFin-Google	0.315	0.32	0.307	0.287	0.293
DFA(4)-MacroFin-Reuters	0.367	0.362	0.35	0.342	0.342	LASSO-MacroFin-GoogleReuters	0.321	0.314	0.308	0.288	0.287
DFA(5)-MacroFin	0.362	0.352	0.338	0.335	0.335	LASSO-MacroFin-Reuters	0.325	0.319	0.315	0.297	0.297
DFA(5)-MacroFin-Google	0.353	0.349	0.33	0.325	0.325	EN-MacroFin	0.317	0.316	0.312	0.308	0.3
DFA(5)-MacroFin-GoogleReuters	0.355	0.352	0.331	0.326	0.326	EN-MacroFin-Google	0.313	0.316	0.31	0.289	0.289
DFA(5)-MacroFin-Reuters	0.363	0.355	0.34	0.336	0.336	EN-MacroFin-GoogleReuters	0.322	0.314	0.312	0.292	0.29
PLS(1)-MacroFin	0.393	0.392	0.35	0.346	0.346	EN-MacroFin-Reuters	0.312	0.312	0.322	0.3	0.3
PLS(1)-MacroFin-Google	0.394	0.393	0.352	0.348	0.348	SSlab-MacroFin	0.315	0.319	0.313	0.297	0.299
PLS(1)-MacroFin-GoogleReuters	0.394	0.393	0.352	0.347	0.347	SSlab-MacroFin-Google	0.314	0.32	0.313	0.297	0.297
PLS(1)-MacroFin-Reuters	0.393	0.392	0.349	0.346	0.346	SSlab-MacroFin-GoogleReuters	0.315	0.32	0.313	0.297	0.295
PLS(2)-MacroFin	0.406	0.404	0.358	0.351	0.352	SSlab-MacroFin-Reuters	0.314	0.319	0.313	0.297	0.297
PLS(2)-MacroFin-Google	0.409	0.407	0.356	0.348	0.349	Best1	0.35	0.368	0.348	0.334	0.331
PLS(2)-MacroFin-GoogleReuters	0.408	0.406	0.356	0.349	0.349	Best3	0.325	0.332	0.299	0.302	0.301
PLS(2)-MacroFin-Reuters	0.405	0.403	0.358	0.351	0.352	Best5	0.33	0.329	0.306	0.305	0.305
PLS(3)-MacroFin	0.408	0.404	0.336	0.328	0.328	Best10	0.32	0.323	0.32	0.308	0.308
PLS(3)-MacroFin-Google	0.405	0.403	0.332	0.324	0.324						

Table 27: UK, HCPI, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.41	0.41	0.68	0.84	0.84	PLS(3)-MacroFin-GoogleReuters	0.54	0.5	0.33	0.33	0.33
Average(12)	0.61	0.62	0.13	0.12	0.12	PLS(3)-MacroFin-Reuters	0.42	0.42	0.31	0.31	0.32
Average(24)	0.65	0.65	0.16	0.11	0.11	PLS(4)-MacroFin	0.99	0.71	0.34	0.31	0.31
Naive	0.26	0.26	0.13	0.09	0.09	PLS(4)-MacroFin-Google	0.8	0.55	0.42	0.33	0.33
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.81	0.52	0.41	0.34	0.34
AR(4)	0.1	0.09	0.98	0.76	0.76	PLS(4)-MacroFin-Reuters	0.97	0.67	0.34	0.32	0.32
AR(AIC)	0.55	0.55	0.16	0.17	0.17	PLS(5)-MacroFin	0.63	0.68	0.4	0.32	0.32
AutoArima	0.65	0.64	0.46	0.3	0.3	PLS(5)-MacroFin-Google	0.64	0.59	0.43	0.32	0.32
ETS	0.86	0.87	0.29	0.15	0.15	PLS(5)-MacroFin-GoogleReuters	0.71	0.6	0.42	0.34	0.34
BaggedETS	0.14	0.22	0.94	0.78	0.72	PLS(5)-MacroFin-Reuters	0.72	0.69	0.39	0.32	0.33
BATS	0.57	0.59	0.13	0.06	0.06	SPC(1)-MacroFin	0.71	0.69	0.13	0.34	0.38
TBATS	0.57	0.59	0.13	0.06	0.06	SPC(1)-MacroFin-Google	0.69	0.73	0.21	0.32	0.31
NN	0.83	0.84	0.82	0.21	0.28	SPC(1)-MacroFin-GoogleReuters	0.7	0.71	0.23	0.33	0.32
Spline	0.47	0.47	0.85	0.7	0.7	SPC(1)-MacroFin-Reuters	0.71	0.7	0.2	0.3	0.34
THETA	0.34	0.34	0.02	0.03	0.03	SPC(2)-MacroFin	0.85	0.99	0.84	0.78	0.77
Google	0.43	0.93	0.2	0.22	0.22	SPC(2)-MacroFin-Google	0.89	0.96	0.72	0.71	0.74
Google-L1	0.92	0.52	0.3	0.31	0.3	SPC(2)-MacroFin-GoogleReuters	0.89	0.91	0.8	0.66	0.72
Google-L3	0.31	0.73	0.23	0.22	0.22	SPC(2)-MacroFin-Reuters	0.9	0.97	0.8	0.7	0.76
Reuters	0.01	0.01	0.05	0.44	0.38	SPC(3)-MacroFin	0.31	0.5	0.42	0.41	0.39
Reuters-L1	0.15	0.18	0.17	0.32	0.28	SPC(3)-MacroFin-Google	0.3	0.28	0.32	0.33	0.28
Reuters-L3	0.46	0.34	0.71	0.78	0.79	SPC(3)-MacroFin-GoogleReuters	0.32	0.27	0.37	0.29	0.33
DFA(2)-MacroFin	0.76	0.87	0.43	0.43	0.42	SPC(3)-MacroFin-Reuters	0.17	0.23	0.45	0.39	0.45
DFA(2)-MacroFin-Google	0.78	0.9	0.39	0.39	0.39	SPC(4)-MacroFin	0.27	0.19	0.11	0.24	0.2
DFA(2)-MacroFin-GoogleReuters	0.8	0.92	0.38	0.39	0.39	SPC(4)-MacroFin-Google	0.2	0.12	0.1	0.11	0.15
DFA(2)-MacroFin-Reuters	0.78	0.89	0.42	0.43	0.42	SPC(4)-MacroFin-GoogleReuters	0.23	0.16	0.1	0.14	0.19
DFA(3)-MacroFin	0.18	0.23	0.89	0.85	0.86	SPC(4)-MacroFin-Reuters	0.22	0.15	0.15	0.21	0.18
DFA(3)-MacroFin-Google	0.23	0.24	0.67	0.62	0.63	SPC(5)-MacroFin	0.23	0.1	0.03	0.08	0.1
DFA(3)-MacroFin-GoogleReuters	0.24	0.24	0.66	0.61	0.61	SPC(5)-MacroFin-Google	0.17	0.1	0.05	0.1	0.08
DFA(3)-MacroFin-Reuters	0.16	0.24	0.88	0.83	0.84	SPC(5)-MacroFin-GoogleReuters	0.17	0.12	0.04	0.09	0.1
DFA(4)-MacroFin	0.26	0.22	0.34	0.33	0.34	SPC(5)-MacroFin-Reuters	0.22	0.12	0.05	0.09	0.11
DFA(4)-MacroFin-Google	0.2	0.19	0.25	0.24	0.24	LASSO-MacroFin	0.03	0.09	0.09	0.03	0.03
DFA(4)-MacroFin-GoogleReuters	0.21	0.2	0.28	0.26	0.26	LASSO-MacroFin-Google	0.03	0.08	0.11	0.05	0.06
DFA(4)-MacroFin-Reuters	0.26	0.23	0.38	0.37	0.37	LASSO-MacroFin-GoogleReuters	0.03	0.05	0.11	0.06	0.07
DFA(5)-MacroFin	0.22	0.14	0.1	0.17	0.18	LASSO-MacroFin-Reuters	0.04	0.07	0.09	0.03	0.03
DFA(5)-MacroFin-Google	0.15	0.13	0.09	0.12	0.13	EN-MacroFin	0.03	0.07	0.06	0.04	0.02
DFA(5)-MacroFin-GoogleReuters	0.16	0.14	0.1	0.13	0.14	EN-MacroFin-Google	0.02	0.06	0.12	0.07	0.06
DFA(5)-MacroFin-Reuters	0.23	0.15	0.12	0.19	0.19	EN-MacroFin-GoogleReuters	0.03	0.06	0.13	0.06	0.07
PLS(1)-MacroFin	0.66	0.53	0.09	0.24	0.24	EN-MacroFin-Reuters	0.02	0.05	0.11	0.02	0.02
PLS(1)-MacroFin-Google	0.8	0.71	0.1	0.26	0.25	SSlab-MacroFin	0.04	0.08	0.14	0.08	0.08
PLS(1)-MacroFin-GoogleReuters	0.8	0.67	0.1	0.25	0.25	SSlab-MacroFin-Google	0.04	0.08	0.15	0.08	0.08
PLS(1)-MacroFin-Reuters	0.66	0.49	0.09	0.24	0.24	SSlab-MacroFin-GoogleReuters	0.04	0.08	0.15	0.08	0.08
PLS(2)-MacroFin	0.15	0.2	0.7	0.73	0.73	SSlab-MacroFin-Reuters	0.04	0.08	0.14	0.08	0.08
PLS(2)-MacroFin-Google	0.14	0.14	0.68	0.67	0.68	Best1	0.16	0.31	0.71	0.64	0.6
PLS(2)-MacroFin-GoogleReuters	0.16	0.18	0.68	0.68	0.69	Best3	0.03	0.05	0.19	0.17	0.17
PLS(2)-MacroFin-Reuters	0.17	0.24	0.7	0.73	0.74	Best5	0.06	0.06	0.15	0.16	0.16
PLS(3)-MacroFin	0.32	0.28	0.31	0.3	0.3	Best10	0.03	0.06	0.19	0.18	0.18
PLS(3)-MacroFin-Google	0.42	0.34	0.33	0.32	0.32						

Table 28: UK, HCPI, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.055	0.055	0.047	0.047	0.047	PLS(3)-MacroFin-GoogleReuters	0.051	0.052	0.048	0.049	0.049
Average(12)	0.053	0.053	0.044	0.043	0.043	PLS(3)-MacroFin-Reuters	0.051	0.052	0.048	0.049	0.049
Average(24)	0.053	0.053	0.041	0.04	0.04	PLS(4)-MacroFin	0.05	0.051	0.048	0.049	0.049
Naive	0.062	0.062	0.059	0.062	0.062	PLS(4)-MacroFin-Google	0.05	0.051	0.048	0.049	0.049
AR(1)	0.056	0.056	0.053	0.054	0.054	PLS(4)-MacroFin-GoogleReuters	0.05	0.051	0.048	0.049	0.049
AR(4)	0.055	0.055	0.049	0.047	0.047	PLS(4)-MacroFin-Reuters	0.05	0.051	0.048	0.049	0.049
AR(AIC)	0.053	0.053	0.048	0.048	0.048	PLS(5)-MacroFin	0.049	0.05	0.048	0.048	0.048
AutoArima	0.054	0.054	0.05	0.048	0.048	PLS(5)-MacroFin-Google	0.049	0.05	0.048	0.048	0.048
ETS	0.056	0.056	0.044	0.042	0.042	PLS(5)-MacroFin-GoogleReuters	0.049	0.05	0.048	0.048	0.048
BaggedETS	0.056	0.056	0.042	0.038	0.039	PLS(5)-MacroFin-Reuters	0.049	0.05	0.047	0.048	0.048
BATS	0.056	0.056	0.044	0.041	0.041	SPC(1)-MacroFin	0.051	0.052	0.047	0.047	0.047
TBATS	0.056	0.056	0.044	0.041	0.041	SPC(1)-MacroFin-Google	0.051	0.052	0.047	0.047	0.047
NN	0.074	0.074	0.048	0.047	0.047	SPC(1)-MacroFin-GoogleReuters	0.051	0.052	0.047	0.047	0.047
Spline	0.055	0.055	0.047	0.045	0.045	SPC(1)-MacroFin-Reuters	0.051	0.052	0.047	0.047	0.047
THETA	0.056	0.056	0.042	0.04	0.04	SPC(2)-MacroFin	0.048	0.053	0.049	0.048	0.048
Google	0.054	0.055	0.045	0.044	0.044	SPC(2)-MacroFin-Google	0.049	0.053	0.048	0.048	0.048
Google-L1	0.052	0.052	0.041	0.038	0.038	SPC(2)-MacroFin-GoogleReuters	0.05	0.053	0.048	0.047	0.048
Google-L3	0.055	0.056	0.044	0.041	0.041	SPC(2)-MacroFin-Reuters	0.049	0.053	0.048	0.047	0.047
Reuters	0.053	0.053	0.048	0.047	0.047	SPC(3)-MacroFin	0.049	0.052	0.048	0.048	0.048
Reuters-L1	0.05	0.05	0.043	0.04	0.04	SPC(3)-MacroFin-Google	0.049	0.052	0.048	0.047	0.048
Reuters-L3	0.054	0.055	0.047	0.044	0.044	SPC(3)-MacroFin-GoogleReuters	0.049	0.05	0.048	0.048	0.048
DFA(2)-MacroFin	0.049	0.052	0.048	0.048	0.048	SPC(3)-MacroFin-Reuters	0.049	0.052	0.049	0.048	0.048
DFA(2)-MacroFin-Google	0.048	0.052	0.048	0.048	0.048	SPC(4)-MacroFin	0.05	0.053	0.048	0.048	0.048
DFA(2)-MacroFin-GoogleReuters	0.048	0.052	0.048	0.048	0.048	SPC(4)-MacroFin-Google	0.05	0.053	0.049	0.048	0.048
DFA(2)-MacroFin-Reuters	0.048	0.052	0.048	0.048	0.048	SPC(4)-MacroFin-GoogleReuters	0.05	0.053	0.048	0.048	0.048
DFA(3)-MacroFin	0.048	0.052	0.048	0.048	0.048	SPC(4)-MacroFin-Reuters	0.05	0.053	0.049	0.048	0.048
DFA(3)-MacroFin-Google	0.048	0.052	0.048	0.048	0.048	SPC(5)-MacroFin	0.051	0.054	0.049	0.048	0.048
DFA(3)-MacroFin-GoogleReuters	0.048	0.052	0.048	0.048	0.048	SPC(5)-MacroFin-Google	0.051	0.055	0.049	0.048	0.049
DFA(3)-MacroFin-Reuters	0.048	0.052	0.048	0.048	0.048	SPC(5)-MacroFin-GoogleReuters	0.051	0.054	0.049	0.048	0.048
DFA(4)-MacroFin	0.05	0.052	0.049	0.049	0.049	SPC(5)-MacroFin-Reuters	0.051	0.054	0.049	0.048	0.048
DFA(4)-MacroFin-Google	0.05	0.052	0.049	0.049	0.049	LASSO-MacroFin	0.051	0.055	0.045	0.045	0.044
DFA(4)-MacroFin-GoogleReuters	0.05	0.052	0.049	0.049	0.049	LASSO-MacroFin-Google	0.053	0.055	0.046	0.045	0.044
DFA(4)-MacroFin-Reuters	0.05	0.052	0.049	0.049	0.049	LASSO-MacroFin-GoogleReuters	0.053	0.056	0.045	0.045	0.045
DFA(5)-MacroFin	0.05	0.053	0.05	0.05	0.049	LASSO-MacroFin-Reuters	0.052	0.055	0.047	0.044	0.046
DFA(5)-MacroFin-Google	0.05	0.053	0.05	0.05	0.05	EN-MacroFin	0.052	0.055	0.045	0.044	0.046
DFA(5)-MacroFin-GoogleReuters	0.05	0.053	0.05	0.05	0.05	EN-MacroFin-Google	0.052	0.055	0.045	0.045	0.045
DFA(5)-MacroFin-Reuters	0.05	0.053	0.05	0.05	0.049	EN-MacroFin-GoogleReuters	0.052	0.055	0.046	0.045	0.044
PLS(1)-MacroFin	0.05	0.051	0.049	0.049	0.049	EN-MacroFin-Reuters	0.052	0.055	0.045	0.045	0.045
PLS(1)-MacroFin-Google	0.05	0.052	0.049	0.049	0.049	SSlab-MacroFin	0.056	0.057	0.045	0.044	0.044
PLS(1)-MacroFin-GoogleReuters	0.05	0.052	0.049	0.049	0.05	SSlab-MacroFin-Google	0.057	0.057	0.045	0.044	0.044
PLS(1)-MacroFin-Reuters	0.05	0.051	0.049	0.049	0.049	SSlab-MacroFin-GoogleReuters	0.057	0.057	0.045	0.044	0.044
PLS(2)-MacroFin	0.05	0.051	0.049	0.05	0.05	SSlab-MacroFin-Reuters	0.057	0.057	0.045	0.044	0.044
PLS(2)-MacroFin-Google	0.05	0.051	0.049	0.05	0.05	Best1	0.051	0.05	0.041	0.04	0.04
PLS(2)-MacroFin-GoogleReuters	0.05	0.051	0.049	0.05	0.05	Best3	0.053	0.051	0.042	0.042	0.042
PLS(2)-MacroFin-Reuters	0.05	0.051	0.049	0.05	0.05	Best5	0.053	0.052	0.043	0.042	0.042
PLS(3)-MacroFin	0.051	0.052	0.048	0.049	0.049	Best10	0.054	0.054	0.044	0.043	0.043
PLS(3)-MacroFin-Google	0.051	0.052	0.048	0.049	0.049						

Table 29: DE, Unemployment-Rate, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.06	0.06	0.054	0.054	0.054	PLS(3)-MacroFin-GoogleReuters	0.055	0.057	0.052	0.053	0.053
Average(12)	0.058	0.058	0.05	0.049	0.049	PLS(3)-MacroFin-Reuters	0.055	0.057	0.052	0.053	0.053
Average(24)	0.06	0.06	0.049	0.048	0.048	PLS(4)-MacroFin	0.055	0.055	0.052	0.053	0.053
Naive	0.079	0.079	0.077	0.079	0.079	PLS(4)-MacroFin-Google	0.055	0.056	0.052	0.053	0.053
AR(1)	0.062	0.062	0.06	0.06	0.06	PLS(4)-MacroFin-GoogleReuters	0.055	0.056	0.052	0.052	0.053
AR(4)	0.059	0.059	0.054	0.053	0.053	PLS(4)-MacroFin-Reuters	0.055	0.055	0.052	0.052	0.053
AR(AIC)	0.058	0.058	0.055	0.055	0.055	PLS(5)-MacroFin	0.054	0.055	0.052	0.052	0.052
AutoArima	0.058	0.058	0.054	0.053	0.053	PLS(5)-MacroFin-Google	0.054	0.055	0.052	0.052	0.053
ETS	0.064	0.064	0.054	0.052	0.052	PLS(5)-MacroFin-GoogleReuters	0.054	0.055	0.052	0.052	0.052
BaggedETS	0.065	0.065	0.05	0.048	0.048	PLS(5)-MacroFin-Reuters	0.054	0.055	0.052	0.052	0.052
BATS	0.064	0.064	0.054	0.052	0.052	SPC(1)-MacroFin	0.052	0.052	0.048	0.048	0.048
TBATS	0.064	0.064	0.054	0.052	0.052	SPC(1)-MacroFin-Google	0.052	0.053	0.048	0.048	0.048
NN	0.09	0.091	0.067	0.066	0.066	SPC(1)-MacroFin-GoogleReuters	0.052	0.052	0.048	0.048	0.048
Spline	0.062	0.062	0.055	0.053	0.053	SPC(1)-MacroFin-Reuters	0.052	0.052	0.048	0.048	0.048
THETA	0.062	0.062	0.05	0.048	0.048	SPC(2)-MacroFin	0.057	0.059	0.054	0.053	0.053
Google	0.055	0.056	0.048	0.047	0.047	SPC(2)-MacroFin-Google	0.058	0.058	0.053	0.052	0.053
Google-L1	0.06	0.061	0.052	0.049	0.049	SPC(2)-MacroFin-GoogleReuters	0.059	0.058	0.053	0.052	0.053
Google-L3	0.063	0.064	0.052	0.05	0.05	SPC(2)-MacroFin-Reuters	0.058	0.058	0.052	0.052	0.052
Reuters	0.053	0.053	0.049	0.048	0.048	SPC(3)-MacroFin	0.057	0.058	0.053	0.054	0.053
Reuters-L1	0.057	0.057	0.05	0.047	0.047	SPC(3)-MacroFin-Google	0.057	0.059	0.053	0.053	0.053
Reuters-L3	0.059	0.059	0.051	0.048	0.048	SPC(3)-MacroFin-GoogleReuters	0.056	0.057	0.053	0.054	0.053
DFA(2)-MacroFin	0.057	0.057	0.051	0.051	0.051	SPC(3)-MacroFin-Reuters	0.057	0.058	0.054	0.053	0.054
DFA(2)-MacroFin-Google	0.056	0.057	0.051	0.051	0.051	SPC(4)-MacroFin	0.058	0.059	0.053	0.053	0.053
DFA(2)-MacroFin-GoogleReuters	0.056	0.057	0.051	0.051	0.051	SPC(4)-MacroFin-Google	0.058	0.059	0.054	0.053	0.053
DFA(2)-MacroFin-Reuters	0.057	0.057	0.051	0.051	0.051	SPC(4)-MacroFin-GoogleReuters	0.058	0.059	0.054	0.053	0.053
DFA(3)-MacroFin	0.054	0.057	0.053	0.053	0.053	SPC(4)-MacroFin-Reuters	0.058	0.059	0.054	0.053	0.053
DFA(3)-MacroFin-Google	0.054	0.056	0.053	0.053	0.053	SPC(5)-MacroFin	0.057	0.06	0.054	0.054	0.054
DFA(3)-MacroFin-GoogleReuters	0.054	0.056	0.053	0.053	0.053	SPC(5)-MacroFin-Google	0.058	0.061	0.054	0.054	0.054
DFA(3)-MacroFin-Reuters	0.054	0.057	0.053	0.053	0.053	SPC(5)-MacroFin-GoogleReuters	0.058	0.061	0.055	0.054	0.054
DFA(4)-MacroFin	0.056	0.058	0.054	0.054	0.054	SPC(5)-MacroFin-Reuters	0.058	0.061	0.055	0.054	0.054
DFA(4)-MacroFin-Google	0.056	0.058	0.054	0.054	0.054	LASSO-MacroFin	0.057	0.059	0.051	0.051	0.05
DFA(4)-MacroFin-GoogleReuters	0.056	0.058	0.054	0.054	0.054	LASSO-MacroFin-Google	0.058	0.059	0.051	0.051	0.05
DFA(4)-MacroFin-Reuters	0.056	0.058	0.054	0.054	0.054	LASSO-MacroFin-GoogleReuters	0.057	0.059	0.051	0.05	0.05
DFA(5)-MacroFin	0.056	0.059	0.055	0.055	0.055	LASSO-MacroFin-Reuters	0.057	0.059	0.052	0.049	0.051
DFA(5)-MacroFin-Google	0.056	0.059	0.055	0.055	0.055	EN-MacroFin	0.056	0.058	0.05	0.049	0.05
DFA(5)-MacroFin-GoogleReuters	0.056	0.059	0.055	0.055	0.055	EN-MacroFin-Google	0.057	0.059	0.049	0.049	0.05
DFA(5)-MacroFin-Reuters	0.056	0.059	0.055	0.055	0.055	EN-MacroFin-GoogleReuters	0.056	0.059	0.051	0.05	0.049
PLS(1)-MacroFin	0.054	0.055	0.053	0.053	0.053	EN-MacroFin-Reuters	0.057	0.059	0.05	0.049	0.049
PLS(1)-MacroFin-Google	0.054	0.056	0.053	0.053	0.053	SSlab-MacroFin	0.063	0.062	0.054	0.053	0.053
PLS(1)-MacroFin-GoogleReuters	0.054	0.055	0.053	0.053	0.053	SSlab-MacroFin-Google	0.063	0.062	0.054	0.053	0.054
PLS(1)-MacroFin-Reuters	0.054	0.055	0.053	0.053	0.053	SSlab-MacroFin-GoogleReuters	0.063	0.061	0.054	0.053	0.054
PLS(2)-MacroFin	0.054	0.055	0.053	0.053	0.053	SSlab-MacroFin-Reuters	0.063	0.062	0.054	0.053	0.053
PLS(2)-MacroFin-Google	0.054	0.055	0.053	0.053	0.053	Best1	0.055	0.055	0.05	0.05	0.05
PLS(2)-MacroFin-GoogleReuters	0.054	0.055	0.053	0.053	0.053	Best3	0.056	0.055	0.05	0.051	0.05
PLS(2)-MacroFin-Reuters	0.054	0.055	0.053	0.053	0.053	Best5	0.056	0.056	0.05	0.05	0.05
PLS(3)-MacroFin	0.055	0.057	0.053	0.053	0.053	Best10	0.057	0.057	0.05	0.049	0.049
PLS(3)-MacroFin-Google	0.055	0.057	0.053	0.053	0.053						

Table 30: DE, Unemployment-Rate, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.67	0.67	0.08	0.04	0.04	PLS(3)-MacroFin-GoogleReuters	0.14	0.24	0.1	0.08	0.08
Average(12)	0.3	0.29	0	0	0	PLS(3)-MacroFin-Reuters	0.15	0.24	0.1	0.08	0.08
Average(24)	0.54	0.54	0	0	0	PLS(4)-MacroFin	0.14	0.16	0.11	0.09	0.09
Naive	0	0	0	0	0	PLS(4)-MacroFin-Google	0.16	0.17	0.11	0.09	0.09
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.16	0.17	0.09	0.07	0.07
AR(4)	0.35	0.35	0.07	0.01	0.01	PLS(4)-MacroFin-Reuters	0.15	0.16	0.09	0.07	0.08
AR(AIC)	0.17	0.17	0.19	0.13	0.13	PLS(5)-MacroFin	0.13	0.13	0.12	0.09	0.09
AutoArima	0.25	0.25	0.12	0.02	0.02	PLS(5)-MacroFin-Google	0.14	0.14	0.12	0.08	0.09
ETS	0.59	0.59	0.16	0.02	0.02	PLS(5)-MacroFin-GoogleReuters	0.14	0.14	0.08	0.06	0.07
BaggedETS	0.64	0.67	0.06	0.01	0.01	PLS(5)-MacroFin-Reuters	0.12	0.12	0.08	0.06	0.07
BATS	0.56	0.56	0.18	0.02	0.02	SPC(1)-MacroFin	0.01	0.01	0	0	0
TBATS	0.56	0.56	0.18	0.02	0.02	SPC(1)-MacroFin-Google	0.01	0.01	0	0	0
NN	0	0	0.24	0.36	0.36	SPC(1)-MacroFin-GoogleReuters	0.01	0.01	0	0	0
Spline	0.92	0.92	0.17	0.04	0.04	SPC(1)-MacroFin-Reuters	0.01	0.01	0	0	0
THETA	0.96	0.96	0.01	0	0	SPC(2)-MacroFin	0.5	0.56	0.23	0.13	0.11
Google	0.07	0.09	0	0	0	SPC(2)-MacroFin-Google	0.59	0.47	0.21	0.07	0.1
Google-L1	0.78	0.81	0.16	0.04	0.04	SPC(2)-MacroFin-GoogleReuters	0.64	0.44	0.14	0.08	0.13
Google-L3	0.82	0.72	0.16	0.04	0.04	SPC(2)-MacroFin-Reuters	0.54	0.49	0.13	0.07	0.09
Reuters	0.02	0.03	0.01	0	0	SPC(3)-MacroFin	0.44	0.53	0.2	0.21	0.18
Reuters-L1	0.37	0.4	0.09	0.02	0.02	SPC(3)-MacroFin-Google	0.41	0.59	0.21	0.17	0.17
Reuters-L3	0.52	0.62	0.08	0.01	0.01	SPC(3)-MacroFin-GoogleReuters	0.39	0.42	0.23	0.23	0.22
DFA(2)-MacroFin	0.38	0.28	0.03	0.02	0.02	SPC(3)-MacroFin-Reuters	0.42	0.53	0.28	0.18	0.22
DFA(2)-MacroFin-Google	0.35	0.26	0.02	0.02	0.02	SPC(4)-MacroFin	0.55	0.69	0.25	0.2	0.19
DFA(2)-MacroFin-GoogleReuters	0.35	0.26	0.02	0.02	0.02	SPC(4)-MacroFin-Google	0.53	0.69	0.28	0.19	0.2
DFA(2)-MacroFin-Reuters	0.37	0.28	0.03	0.02	0.02	SPC(4)-MacroFin-GoogleReuters	0.53	0.66	0.26	0.19	0.2
DFA(3)-MacroFin	0.2	0.32	0.25	0.2	0.2	SPC(4)-MacroFin-Reuters	0.54	0.66	0.27	0.19	0.19
DFA(3)-MacroFin-Google	0.2	0.32	0.25	0.2	0.2	SPC(5)-MacroFin	0.48	0.79	0.35	0.27	0.26
DFA(3)-MacroFin-GoogleReuters	0.2	0.31	0.26	0.21	0.2	SPC(5)-MacroFin-Google	0.56	0.86	0.35	0.26	0.27
DFA(3)-MacroFin-Reuters	0.2	0.32	0.25	0.2	0.2	SPC(5)-MacroFin-GoogleReuters	0.51	0.83	0.37	0.26	0.27
DFA(4)-MacroFin	0.34	0.47	0.29	0.23	0.23	SPC(5)-MacroFin-Reuters	0.55	0.82	0.36	0.25	0.25
DFA(4)-MacroFin-Google	0.34	0.47	0.29	0.23	0.23	LASSO-MacroFin	0.28	0.6	0.04	0.02	0.02
DFA(4)-MacroFin-GoogleReuters	0.34	0.46	0.29	0.23	0.23	LASSO-MacroFin-Google	0.42	0.57	0.05	0.02	0.01
DFA(4)-MacroFin-Reuters	0.34	0.47	0.29	0.23	0.23	LASSO-MacroFin-GoogleReuters	0.39	0.6	0.04	0.02	0.02
DFA(5)-MacroFin	0.33	0.57	0.43	0.35	0.34	LASSO-MacroFin-Reuters	0.37	0.57	0.07	0.01	0.03
DFA(5)-MacroFin-Google	0.36	0.57	0.43	0.35	0.35	EN-MacroFin	0.28	0.44	0.02	0	0.01
DFA(5)-MacroFin-GoogleReuters	0.35	0.57	0.43	0.35	0.35	EN-MacroFin-Google	0.31	0.48	0.01	0.01	0.01
DFA(5)-MacroFin-Reuters	0.33	0.57	0.42	0.35	0.34	EN-MacroFin-GoogleReuters	0.25	0.55	0.04	0.01	0.01
PLS(1)-MacroFin	0.12	0.15	0.15	0.1	0.1	EN-MacroFin-Reuters	0.28	0.5	0.02	0	0.01
PLS(1)-MacroFin-Google	0.12	0.15	0.15	0.1	0.1	SSlab-MacroFin	0.88	0.99	0.26	0.15	0.14
PLS(1)-MacroFin-GoogleReuters	0.12	0.15	0.15	0.1	0.11	SSlab-MacroFin-Google	0.8	0.99	0.28	0.15	0.17
PLS(1)-MacroFin-Reuters	0.12	0.14	0.15	0.1	0.11	SSlab-MacroFin-GoogleReuters	0.82	0.91	0.28	0.15	0.17
PLS(2)-MacroFin	0.05	0.08	0.07	0.05	0.06	SSlab-MacroFin-Reuters	0.81	0.96	0.23	0.16	0.15
PLS(2)-MacroFin-Google	0.05	0.09	0.07	0.06	0.06	Best1	0.08	0.08	0.08	0.05	0.05
PLS(2)-MacroFin-GoogleReuters	0.05	0.08	0.07	0.06	0.06	Best3	0.12	0.08	0.03	0.04	0.02
PLS(2)-MacroFin-Reuters	0.05	0.08	0.07	0.06	0.06	Best5	0.16	0.09	0.02	0.01	0.01
PLS(3)-MacroFin	0.14	0.24	0.11	0.08	0.08	Best10	0.21	0.15	0.01	0	0
PLS(3)-MacroFin-Google	0.14	0.24	0.1	0.08	0.08						

Table 31: DE, Unemployment-Rate, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.104	0.104	0.071	0.075	0.075	PLS(3)-MacroFin-GoogleReuters	0.083	0.085	0.06	0.068	0.068
Average(12)	0.088	0.088	0.056	0.06	0.06	PLS(3)-MacroFin-Reuters	0.083	0.084	0.06	0.067	0.068
Average(24)	0.08	0.08	0.054	0.059	0.059	PLS(4)-MacroFin	0.084	0.085	0.06	0.068	0.068
Naive	0.103	0.103	0.079	0.088	0.088	PLS(4)-MacroFin-Google	0.084	0.085	0.06	0.068	0.068
AR(1)	0.09	0.09	0.067	0.075	0.075	PLS(4)-MacroFin-GoogleReuters	0.084	0.085	0.061	0.068	0.068
AR(4)	0.09	0.089	0.06	0.065	0.065	PLS(4)-MacroFin-Reuters	0.084	0.085	0.06	0.068	0.068
AR(AIC)	0.095	0.095	0.06	0.063	0.063	PLS(5)-MacroFin	0.084	0.087	0.061	0.069	0.069
AutoArima	0.091	0.091	0.063	0.069	0.069	PLS(5)-MacroFin-Google	0.084	0.087	0.061	0.069	0.069
ETS	0.092	0.092	0.063	0.068	0.068	PLS(5)-MacroFin-GoogleReuters	0.085	0.088	0.061	0.069	0.069
BaggedETS	0.109	0.109	0.072	0.07	0.072	PLS(5)-MacroFin-Reuters	0.085	0.088	0.061	0.069	0.069
BATS	0.092	0.092	0.062	0.067	0.067	SPC(1)-MacroFin	0.089	0.088	0.06	0.065	0.065
TBATS	0.092	0.092	0.062	0.067	0.067	SPC(1)-MacroFin-Google	0.089	0.088	0.06	0.065	0.065
NN	0.082	0.083	0.057	0.063	0.062	SPC(1)-MacroFin-GoogleReuters	0.089	0.088	0.06	0.065	0.065
Spline	0.095	0.095	0.069	0.074	0.074	SPC(1)-MacroFin-Reuters	0.089	0.088	0.06	0.065	0.065
THETA	0.085	0.085	0.056	0.061	0.061	SPC(2)-MacroFin	0.092	0.092	0.063	0.069	0.069
Google	0.087	0.087	0.059	0.065	0.065	SPC(2)-MacroFin-Google	0.092	0.092	0.063	0.068	0.068
Google-L1	0.095	0.095	0.061	0.062	0.062	SPC(2)-MacroFin-GoogleReuters	0.092	0.092	0.063	0.069	0.068
Google-L3	0.105	0.105	0.068	0.066	0.066	SPC(2)-MacroFin-Reuters	0.092	0.093	0.063	0.068	0.068
Reuters	0.09	0.09	0.062	0.067	0.067	SPC(3)-MacroFin	0.085	0.086	0.059	0.064	0.064
Reuters-L1	0.096	0.095	0.06	0.059	0.059	SPC(3)-MacroFin-Google	0.084	0.086	0.059	0.064	0.064
Reuters-L3	0.1	0.099	0.062	0.061	0.061	SPC(3)-MacroFin-GoogleReuters	0.085	0.086	0.059	0.064	0.064
DFA(2)-MacroFin	0.091	0.091	0.061	0.067	0.067	SPC(3)-MacroFin-Reuters	0.084	0.086	0.059	0.064	0.064
DFA(2)-MacroFin-Google	0.091	0.091	0.061	0.067	0.067	SPC(4)-MacroFin	0.086	0.088	0.06	0.064	0.065
DFA(2)-MacroFin-GoogleReuters	0.091	0.091	0.061	0.067	0.067	SPC(4)-MacroFin-Google	0.086	0.088	0.06	0.064	0.064
DFA(2)-MacroFin-Reuters	0.091	0.091	0.061	0.067	0.067	SPC(4)-MacroFin-GoogleReuters	0.086	0.088	0.06	0.064	0.065
DFA(3)-MacroFin	0.084	0.085	0.059	0.064	0.064	SPC(4)-MacroFin-Reuters	0.086	0.088	0.06	0.064	0.065
DFA(3)-MacroFin-Google	0.084	0.086	0.059	0.064	0.064	SPC(5)-MacroFin	0.087	0.088	0.06	0.066	0.067
DFA(3)-MacroFin-GoogleReuters	0.084	0.085	0.058	0.064	0.064	SPC(5)-MacroFin-Google	0.086	0.088	0.061	0.065	0.066
DFA(3)-MacroFin-Reuters	0.084	0.085	0.058	0.064	0.064	SPC(5)-MacroFin-GoogleReuters	0.086	0.088	0.061	0.066	0.066
DFA(4)-MacroFin	0.086	0.088	0.06	0.066	0.066	SPC(5)-MacroFin-Reuters	0.086	0.089	0.06	0.066	0.066
DFA(4)-MacroFin-Google	0.086	0.088	0.06	0.065	0.065	LASSO-MacroFin	0.086	0.084	0.059	0.064	0.064
DFA(4)-MacroFin-GoogleReuters	0.086	0.088	0.06	0.065	0.066	LASSO-MacroFin-Google	0.086	0.085	0.06	0.065	0.064
DFA(4)-MacroFin-Reuters	0.086	0.088	0.06	0.066	0.066	LASSO-MacroFin-GoogleReuters	0.087	0.085	0.061	0.064	0.065
DFA(5)-MacroFin	0.087	0.089	0.061	0.068	0.068	LASSO-MacroFin-Reuters	0.086	0.084	0.059	0.065	0.065
DFA(5)-MacroFin-Google	0.087	0.089	0.062	0.068	0.068	EN-MacroFin	0.088	0.084	0.059	0.063	0.064
DFA(5)-MacroFin-GoogleReuters	0.087	0.088	0.061	0.068	0.068	EN-MacroFin-Google	0.087	0.084	0.06	0.064	0.064
DFA(5)-MacroFin-Reuters	0.087	0.088	0.061	0.068	0.068	EN-MacroFin-GoogleReuters	0.086	0.084	0.059	0.063	0.063
PLS(1)-MacroFin	0.084	0.085	0.058	0.065	0.065	EN-MacroFin-Reuters	0.086	0.085	0.059	0.063	0.063
PLS(1)-MacroFin-Google	0.084	0.085	0.058	0.065	0.065	SSlab-MacroFin	0.086	0.084	0.06	0.067	0.067
PLS(1)-MacroFin-GoogleReuters	0.084	0.085	0.059	0.065	0.065	SSlab-MacroFin-Google	0.086	0.084	0.06	0.067	0.067
PLS(1)-MacroFin-Reuters	0.084	0.085	0.058	0.065	0.065	SSlab-MacroFin-GoogleReuters	0.086	0.084	0.06	0.067	0.067
PLS(2)-MacroFin	0.083	0.084	0.058	0.065	0.065	SSlab-MacroFin-Reuters	0.086	0.084	0.06	0.067	0.067
PLS(2)-MacroFin-Google	0.083	0.085	0.058	0.065	0.065	Best1	0.09	0.092	0.069	0.073	0.072
PLS(2)-MacroFin-GoogleReuters	0.083	0.085	0.058	0.065	0.065	Best3	0.089	0.09	0.065	0.071	0.07
PLS(2)-MacroFin-Reuters	0.083	0.084	0.058	0.065	0.065	Best5	0.089	0.089	0.063	0.07	0.07
PLS(3)-MacroFin	0.083	0.084	0.06	0.067	0.067	Best10	0.086	0.087	0.061	0.068	0.068
PLS(3)-MacroFin-Google	0.083	0.084	0.06	0.068	0.068						

Table 32: FR, Unemployment-Rate, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.12	0.12	0.088	0.092	0.092	PLS(3)-MacroFin-GoogleReuters	0.104	0.106	0.08	0.086	0.086
Average(12)	0.107	0.107	0.076	0.08	0.08	PLS(3)-MacroFin-Reuters	0.104	0.106	0.08	0.086	0.086
Average(24)	0.103	0.103	0.074	0.079	0.079	PLS(4)-MacroFin	0.104	0.106	0.079	0.086	0.086
Naive	0.12	0.12	0.101	0.111	0.111	PLS(4)-MacroFin-Google	0.104	0.106	0.079	0.086	0.086
AR(1)	0.108	0.108	0.083	0.091	0.091	PLS(4)-MacroFin-GoogleReuters	0.104	0.106	0.08	0.087	0.087
AR(4)	0.109	0.109	0.079	0.082	0.082	PLS(4)-MacroFin-Reuters	0.104	0.106	0.08	0.087	0.087
AR(AIC)	0.115	0.115	0.077	0.079	0.079	PLS(5)-MacroFin	0.106	0.11	0.08	0.087	0.087
AutoArima	0.109	0.109	0.079	0.085	0.085	PLS(5)-MacroFin-Google	0.106	0.11	0.08	0.087	0.087
ETS	0.11	0.11	0.079	0.084	0.084	PLS(5)-MacroFin-GoogleReuters	0.107	0.111	0.081	0.087	0.087
BaggedETS	0.125	0.124	0.09	0.086	0.088	PLS(5)-MacroFin-Reuters	0.106	0.11	0.081	0.087	0.087
BATS	0.109	0.109	0.078	0.083	0.083	SPC(1)-MacroFin	0.108	0.108	0.079	0.082	0.082
TBATS	0.109	0.109	0.078	0.083	0.083	SPC(1)-MacroFin-Google	0.108	0.108	0.079	0.082	0.082
NN	0.101	0.102	0.074	0.079	0.078	SPC(1)-MacroFin-GoogleReuters	0.108	0.108	0.078	0.082	0.082
Spline	0.113	0.113	0.087	0.09	0.09	SPC(1)-MacroFin-Reuters	0.108	0.108	0.079	0.082	0.082
THETA	0.106	0.106	0.075	0.079	0.079	SPC(2)-MacroFin	0.115	0.115	0.081	0.084	0.084
Google	0.109	0.109	0.08	0.085	0.085	SPC(2)-MacroFin-Google	0.115	0.115	0.081	0.084	0.084
Google-L1	0.116	0.116	0.085	0.084	0.084	SPC(2)-MacroFin-GoogleReuters	0.116	0.115	0.08	0.085	0.084
Google-L3	0.125	0.124	0.088	0.086	0.086	SPC(2)-MacroFin-Reuters	0.116	0.116	0.081	0.084	0.084
Reuters	0.112	0.112	0.08	0.083	0.083	SPC(3)-MacroFin	0.109	0.111	0.081	0.084	0.084
Reuters-L1	0.118	0.117	0.081	0.08	0.08	SPC(3)-MacroFin-Google	0.109	0.111	0.081	0.084	0.084
Reuters-L3	0.12	0.12	0.081	0.08	0.08	SPC(3)-MacroFin-GoogleReuters	0.109	0.111	0.081	0.084	0.084
DFA(2)-MacroFin	0.115	0.114	0.08	0.084	0.084	SPC(3)-MacroFin-Reuters	0.109	0.111	0.081	0.084	0.085
DFA(2)-MacroFin-Google	0.115	0.114	0.08	0.084	0.084	SPC(4)-MacroFin	0.111	0.112	0.081	0.084	0.085
DFA(2)-MacroFin-GoogleReuters	0.115	0.114	0.08	0.084	0.084	SPC(4)-MacroFin-Google	0.111	0.112	0.081	0.084	0.084
DFA(2)-MacroFin-Reuters	0.115	0.114	0.08	0.084	0.084	SPC(4)-MacroFin-GoogleReuters	0.111	0.112	0.081	0.084	0.084
DFA(3)-MacroFin	0.107	0.109	0.08	0.084	0.084	SPC(4)-MacroFin-Reuters	0.111	0.112	0.082	0.084	0.085
DFA(3)-MacroFin-Google	0.107	0.109	0.08	0.084	0.084	SPC(5)-MacroFin	0.112	0.112	0.083	0.088	0.087
DFA(3)-MacroFin-GoogleReuters	0.107	0.109	0.08	0.084	0.084	SPC(5)-MacroFin-Google	0.111	0.112	0.084	0.087	0.088
DFA(3)-MacroFin-Reuters	0.107	0.109	0.08	0.084	0.084	SPC(5)-MacroFin-GoogleReuters	0.111	0.112	0.084	0.088	0.087
DFA(4)-MacroFin	0.11	0.112	0.082	0.085	0.086	SPC(5)-MacroFin-Reuters	0.111	0.113	0.083	0.087	0.087
DFA(4)-MacroFin-Google	0.11	0.112	0.082	0.085	0.085	LASSO-MacroFin	0.105	0.104	0.074	0.081	0.081
DFA(4)-MacroFin-GoogleReuters	0.11	0.112	0.082	0.085	0.085	LASSO-MacroFin-Google	0.105	0.104	0.077	0.082	0.082
DFA(4)-MacroFin-Reuters	0.11	0.112	0.082	0.085	0.086	LASSO-MacroFin-GoogleReuters	0.105	0.105	0.078	0.082	0.082
DFA(5)-MacroFin	0.111	0.112	0.083	0.088	0.088	LASSO-MacroFin-Reuters	0.105	0.104	0.076	0.082	0.082
DFA(5)-MacroFin-Google	0.111	0.112	0.084	0.088	0.089	EN-MacroFin	0.108	0.104	0.075	0.081	0.081
DFA(5)-MacroFin-GoogleReuters	0.111	0.112	0.084	0.088	0.089	EN-MacroFin-Google	0.106	0.105	0.077	0.082	0.081
DFA(5)-MacroFin-Reuters	0.111	0.112	0.084	0.088	0.089	EN-MacroFin-GoogleReuters	0.106	0.104	0.076	0.08	0.08
PLS(1)-MacroFin	0.107	0.107	0.08	0.085	0.085	EN-MacroFin-Reuters	0.106	0.105	0.076	0.081	0.081
PLS(1)-MacroFin-Google	0.107	0.107	0.08	0.085	0.085	SSlab-MacroFin	0.103	0.102	0.074	0.085	0.085
PLS(1)-MacroFin-GoogleReuters	0.107	0.107	0.08	0.085	0.085	SSlab-MacroFin-Google	0.103	0.102	0.073	0.085	0.085
PLS(1)-MacroFin-Reuters	0.107	0.107	0.08	0.085	0.085	SSlab-MacroFin-GoogleReuters	0.103	0.102	0.074	0.085	0.085
PLS(2)-MacroFin	0.104	0.106	0.08	0.085	0.085	SSlab-MacroFin-Reuters	0.103	0.102	0.074	0.085	0.085
PLS(2)-MacroFin-Google	0.104	0.107	0.08	0.085	0.085	Best1	0.109	0.109	0.087	0.092	0.09
PLS(2)-MacroFin-GoogleReuters	0.105	0.107	0.08	0.085	0.085	Best3	0.108	0.108	0.079	0.087	0.086
PLS(2)-MacroFin-Reuters	0.104	0.106	0.08	0.085	0.085	Best5	0.107	0.108	0.078	0.086	0.086
PLS(3)-MacroFin	0.104	0.106	0.08	0.086	0.086	Best10	0.107	0.106	0.077	0.086	0.086
PLS(3)-MacroFin-Google	0.104	0.106	0.08	0.086	0.086						

Table 33: FR, Unemployment-Rate, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.05	0.05	0.28	0.81	0.81	PLS(3)-MacroFin-GoogleReuters	0.52	0.75	0.49	0.28	0.29
Average(12)	0.8	0.8	0.17	0.06	0.06	PLS(3)-MacroFin-Reuters	0.52	0.74	0.49	0.27	0.28
Average(24)	0.37	0.37	0.11	0.04	0.04	PLS(4)-MacroFin	0.52	0.74	0.44	0.28	0.28
Naive	0.01	0.01	0.01	0	0	PLS(4)-MacroFin-Google	0.55	0.77	0.44	0.28	0.28
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.55	0.78	0.48	0.32	0.32
AR(4)	0.76	0.78	0.25	0.05	0.05	PLS(4)-MacroFin-Reuters	0.53	0.76	0.49	0.32	0.32
AR(AIC)	0.39	0.39	0.44	0.13	0.13	PLS(5)-MacroFin	0.71	0.8	0.57	0.37	0.37
AutoArima	0.92	0.92	0.34	0.11	0.11	PLS(5)-MacroFin-Google	0.76	0.75	0.56	0.37	0.37
ETS	0.71	0.71	0.29	0.09	0.09	PLS(5)-MacroFin-GoogleReuters	0.8	0.67	0.64	0.44	0.44
BaggedETS	0.08	0.1	0.4	0.53	0.72	PLS(5)-MacroFin-Reuters	0.77	0.69	0.65	0.43	0.43
BATS	0.74	0.74	0.24	0.06	0.06	SPC(1)-MacroFin	0.99	0.99	0.45	0.14	0.15
TBATS	0.74	0.74	0.24	0.06	0.06	SPC(1)-MacroFin-Google	0.98	0.96	0.45	0.14	0.14
NN	0.38	0.48	0.3	0.13	0.12	SPC(1)-MacroFin-GoogleReuters	1	0.98	0.44	0.14	0.14
Spline	0.41	0.41	0.43	0.99	0.99	SPC(1)-MacroFin-Reuters	0.98	0.98	0.46	0.15	0.15
THETA	0.74	0.74	0.18	0.05	0.05	SPC(2)-MacroFin	0.37	0.3	0.79	0.38	0.37
Google	0.89	0.87	0.71	0.32	0.32	SPC(2)-MacroFin-Google	0.36	0.31	0.79	0.36	0.34
Google-L1	0.34	0.33	0.74	0.4	0.4	SPC(2)-MacroFin-GoogleReuters	0.33	0.32	0.75	0.39	0.36
Google-L3	0.04	0.04	0.45	0.56	0.56	SPC(2)-MacroFin-Reuters	0.34	0.27	0.84	0.37	0.34
Reuters	0.51	0.52	0.61	0.21	0.21	SPC(3)-MacroFin	0.94	0.74	0.81	0.35	0.38
Reuters-L1	0.24	0.25	0.84	0.18	0.18	SPC(3)-MacroFin-Google	0.93	0.73	0.8	0.34	0.38
Reuters-L3	0.15	0.16	0.77	0.15	0.15	SPC(3)-MacroFin-GoogleReuters	0.93	0.73	0.81	0.35	0.35
DFA(2)-MacroFin	0.37	0.37	0.72	0.34	0.34	SPC(3)-MacroFin-Reuters	0.95	0.73	0.83	0.36	0.39
DFA(2)-MacroFin-Google	0.37	0.38	0.71	0.33	0.33	SPC(4)-MacroFin	0.73	0.65	0.87	0.39	0.39
DFA(2)-MacroFin-GoogleReuters	0.37	0.37	0.72	0.34	0.34	SPC(4)-MacroFin-Google	0.74	0.65	0.86	0.34	0.39
DFA(2)-MacroFin-Reuters	0.37	0.37	0.73	0.34	0.34	SPC(4)-MacroFin-GoogleReuters	0.75	0.65	0.86	0.36	0.38
DFA(3)-MacroFin	0.93	0.87	0.7	0.31	0.33	SPC(4)-MacroFin-Reuters	0.73	0.64	0.89	0.37	0.41
DFA(3)-MacroFin-Google	0.94	0.86	0.7	0.31	0.33	SPC(5)-MacroFin	0.7	0.66	0.95	0.7	0.68
DFA(3)-MacroFin-GoogleReuters	0.94	0.86	0.7	0.31	0.33	SPC(5)-MacroFin-Google	0.72	0.67	0.85	0.65	0.71
DFA(3)-MacroFin-Reuters	0.93	0.87	0.7	0.31	0.33	SPC(5)-MacroFin-GoogleReuters	0.72	0.68	0.83	0.73	0.65
DFA(4)-MacroFin	0.8	0.64	0.92	0.46	0.49	SPC(5)-MacroFin-Reuters	0.74	0.6	0.94	0.67	0.63
DFA(4)-MacroFin-Google	0.81	0.64	0.88	0.44	0.46	LASSO-MacroFin	0.65	0.48	0.13	0.11	0.08
DFA(4)-MacroFin-GoogleReuters	0.81	0.64	0.89	0.44	0.47	LASSO-MacroFin-Google	0.59	0.49	0.31	0.14	0.12
DFA(4)-MacroFin-Reuters	0.8	0.64	0.93	0.47	0.5	LASSO-MacroFin-GoogleReuters	0.67	0.63	0.38	0.12	0.14
DFA(5)-MacroFin	0.71	0.63	0.9	0.73	0.76	LASSO-MacroFin-Reuters	0.57	0.47	0.26	0.15	0.14
DFA(5)-MacroFin-Google	0.72	0.62	0.87	0.77	0.8	EN-MacroFin	0.99	0.57	0.19	0.07	0.09
DFA(5)-MacroFin-GoogleReuters	0.76	0.68	0.87	0.78	0.82	EN-MacroFin-Google	0.75	0.64	0.29	0.11	0.08
DFA(5)-MacroFin-Reuters	0.71	0.68	0.89	0.76	0.79	EN-MacroFin-GoogleReuters	0.75	0.58	0.22	0.06	0.06
PLS(1)-MacroFin	0.85	0.9	0.63	0.31	0.32	EN-MacroFin-Reuters	0.73	0.6	0.24	0.09	0.07
PLS(1)-MacroFin-Google	0.86	0.92	0.64	0.32	0.33	SSlab-MacroFin	0.37	0.35	0.17	0.4	0.42
PLS(1)-MacroFin-GoogleReuters	0.87	0.92	0.65	0.33	0.34	SSlab-MacroFin-Google	0.37	0.34	0.16	0.44	0.39
PLS(1)-MacroFin-Reuters	0.85	0.9	0.65	0.32	0.33	SSlab-MacroFin-GoogleReuters	0.36	0.35	0.16	0.42	0.43
PLS(2)-MacroFin	0.56	0.78	0.6	0.32	0.32	SSlab-MacroFin-Reuters	0.38	0.35	0.16	0.41	0.41
PLS(2)-MacroFin-Google	0.58	0.8	0.61	0.33	0.33	Best1	0.84	0.78	0.55	0.86	0.91
PLS(2)-MacroFin-GoogleReuters	0.59	0.81	0.63	0.34	0.35	Best3	1	0.96	0.56	0.57	0.39
PLS(2)-MacroFin-Reuters	0.57	0.79	0.62	0.33	0.33	Best5	0.91	0.93	0.45	0.43	0.43
PLS(3)-MacroFin	0.51	0.74	0.46	0.25	0.25	Best10	0.85	0.72	0.34	0.4	0.34
PLS(3)-MacroFin-Google	0.52	0.75	0.47	0.26	0.26						

Table 34: FR, Unemployment-Rate, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.235	0.235	0.22	0.218	0.218	PLS(3)-MacroFin-GoogleReuters	0.255	0.253	0.209	0.208	0.208
Average(12)	0.249	0.249	0.219	0.215	0.215	PLS(3)-MacroFin-Reuters	0.254	0.254	0.21	0.209	0.209
Average(24)	0.248	0.248	0.214	0.206	0.206	PLS(4)-MacroFin	0.257	0.255	0.207	0.209	0.209
Naive	0.396	0.396	0.37	0.37	0.37	PLS(4)-MacroFin-Google	0.258	0.256	0.205	0.208	0.208
AR(1)	0.244	0.244	0.211	0.211	0.211	PLS(4)-MacroFin-GoogleReuters	0.257	0.254	0.206	0.209	0.21
AR(4)	0.245	0.245	0.182	0.186	0.186	PLS(4)-MacroFin-Reuters	0.256	0.254	0.208	0.21	0.211
AR(AIC)	0.277	0.277	0.21	0.217	0.217	PLS(5)-MacroFin	0.253	0.253	0.208	0.209	0.209
AutoArima	0.249	0.249	0.2	0.204	0.204	PLS(5)-MacroFin-Google	0.254	0.254	0.205	0.206	0.207
ETS	0.24	0.24	0.205	0.199	0.199	PLS(5)-MacroFin-GoogleReuters	0.253	0.252	0.207	0.208	0.209
BaggedETS	0.241	0.242	0.207	0.201	0.2	PLS(5)-MacroFin-Reuters	0.252	0.251	0.209	0.211	0.211
BATS	0.247	0.247	0.213	0.207	0.207	SPC(1)-MacroFin	0.24	0.24	0.21	0.209	0.21
TBATS	0.247	0.247	0.213	0.207	0.207	SPC(1)-MacroFin-Google	0.241	0.24	0.21	0.209	0.209
NN	0.23	0.23	0.2	0.203	0.203	SPC(1)-MacroFin-GoogleReuters	0.241	0.241	0.21	0.209	0.209
Spline	0.254	0.254	0.245	0.241	0.241	SPC(1)-MacroFin-Reuters	0.241	0.241	0.21	0.209	0.209
THETA	0.233	0.233	0.203	0.201	0.201	SPC(2)-MacroFin	0.244	0.244	0.211	0.211	0.21
Google	0.239	0.233	0.212	0.213	0.214	SPC(2)-MacroFin-Google	0.243	0.244	0.21	0.21	0.21
Google-L1	0.248	0.241	0.203	0.204	0.205	SPC(2)-MacroFin-GoogleReuters	0.244	0.244	0.211	0.21	0.21
Google-L3	0.233	0.229	0.185	0.193	0.193	SPC(2)-MacroFin-Reuters	0.244	0.245	0.211	0.21	0.21
Reuters	0.242	0.238	0.208	0.21	0.21	SPC(3)-MacroFin	0.242	0.242	0.209	0.21	0.21
Reuters-L1	0.239	0.238	0.21	0.212	0.212	SPC(3)-MacroFin-Google	0.242	0.242	0.209	0.21	0.21
Reuters-L3	0.237	0.236	0.187	0.193	0.193	SPC(3)-MacroFin-GoogleReuters	0.242	0.243	0.209	0.209	0.21
DFA(2)-MacroFin	0.245	0.246	0.211	0.211	0.211	SPC(3)-MacroFin-Reuters	0.242	0.242	0.209	0.21	0.21
DFA(2)-MacroFin-Google	0.245	0.246	0.21	0.211	0.211	SPC(4)-MacroFin	0.243	0.238	0.212	0.216	0.216
DFA(2)-MacroFin-GoogleReuters	0.245	0.246	0.21	0.211	0.211	SPC(4)-MacroFin-Google	0.242	0.238	0.212	0.217	0.215
DFA(2)-MacroFin-Reuters	0.245	0.246	0.211	0.211	0.211	SPC(4)-MacroFin-GoogleReuters	0.241	0.236	0.211	0.213	0.214
DFA(3)-MacroFin	0.244	0.243	0.211	0.211	0.211	SPC(4)-MacroFin-Reuters	0.242	0.236	0.213	0.216	0.215
DFA(3)-MacroFin-Google	0.244	0.243	0.21	0.211	0.211	SPC(5)-MacroFin	0.242	0.236	0.217	0.217	0.217
DFA(3)-MacroFin-GoogleReuters	0.244	0.243	0.21	0.211	0.211	SPC(5)-MacroFin-Google	0.241	0.236	0.216	0.216	0.216
DFA(3)-MacroFin-Reuters	0.244	0.243	0.211	0.211	0.211	SPC(5)-MacroFin-GoogleReuters	0.241	0.236	0.216	0.217	0.217
DFA(4)-MacroFin	0.248	0.24	0.215	0.218	0.218	SPC(5)-MacroFin-Reuters	0.242	0.236	0.217	0.218	0.217
DFA(4)-MacroFin-Google	0.247	0.238	0.216	0.22	0.219	LASSO-MacroFin	0.244	0.235	0.213	0.21	0.21
DFA(4)-MacroFin-GoogleReuters	0.247	0.238	0.215	0.219	0.218	LASSO-MacroFin-Google	0.236	0.241	0.213	0.21	0.21
DFA(4)-MacroFin-Reuters	0.248	0.24	0.215	0.218	0.217	LASSO-MacroFin-GoogleReuters	0.25	0.237	0.213	0.21	0.21
DFA(5)-MacroFin	0.247	0.239	0.22	0.22	0.22	LASSO-MacroFin-Reuters	0.244	0.241	0.213	0.21	0.21
DFA(5)-MacroFin-Google	0.246	0.238	0.219	0.22	0.22	EN-MacroFin	0.243	0.24	0.213	0.21	0.21
DFA(5)-MacroFin-GoogleReuters	0.246	0.238	0.219	0.22	0.22	EN-MacroFin-Google	0.246	0.242	0.213	0.21	0.21
DFA(5)-MacroFin-Reuters	0.246	0.239	0.22	0.22	0.22	EN-MacroFin-GoogleReuters	0.245	0.239	0.213	0.21	0.21
PLS(1)-MacroFin	0.242	0.243	0.212	0.211	0.211	EN-MacroFin-Reuters	0.243	0.245	0.212	0.21	0.21
PLS(1)-MacroFin-Google	0.242	0.243	0.212	0.211	0.211	SSlab-MacroFin	0.243	0.238	0.214	0.209	0.209
PLS(1)-MacroFin-GoogleReuters	0.242	0.243	0.212	0.211	0.211	SSlab-MacroFin-Google	0.243	0.238	0.214	0.209	0.209
PLS(1)-MacroFin-Reuters	0.242	0.243	0.212	0.211	0.211	SSlab-MacroFin-GoogleReuters	0.243	0.237	0.214	0.209	0.209
PLS(2)-MacroFin	0.246	0.245	0.209	0.208	0.208	SSlab-MacroFin-Reuters	0.243	0.238	0.214	0.209	0.209
PLS(2)-MacroFin-Google	0.246	0.244	0.209	0.207	0.208	Best1	0.236	0.26	0.218	0.225	0.225
PLS(2)-MacroFin-GoogleReuters	0.246	0.245	0.209	0.208	0.208	Best3	0.239	0.24	0.202	0.208	0.209
PLS(2)-MacroFin-Reuters	0.246	0.245	0.21	0.208	0.208	Best5	0.245	0.244	0.205	0.21	0.21
PLS(3)-MacroFin	0.255	0.255	0.209	0.208	0.208	Best10	0.248	0.246	0.211	0.212	0.211
PLS(3)-MacroFin-Google	0.256	0.255	0.208	0.208	0.208						

Table 35: IT, Unemployment-Rate, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.344	0.344	0.282	0.282	0.282	PLS(3)-MacroFin-GoogleReuters	0.353	0.352	0.28	0.28	0.28
Average(12)	0.341	0.341	0.282	0.279	0.279	PLS(3)-MacroFin-Reuters	0.353	0.351	0.281	0.281	0.281
Average(24)	0.341	0.341	0.278	0.274	0.274	PLS(4)-MacroFin	0.356	0.351	0.279	0.28	0.281
Naive	0.471	0.471	0.428	0.426	0.426	PLS(4)-MacroFin-Google	0.356	0.352	0.278	0.28	0.28
AR(1)	0.348	0.348	0.279	0.279	0.279	PLS(4)-MacroFin-GoogleReuters	0.356	0.351	0.278	0.281	0.281
AR(4)	0.338	0.338	0.256	0.26	0.26	PLS(4)-MacroFin-Reuters	0.355	0.35	0.279	0.281	0.281
AR(AIC)	0.362	0.362	0.285	0.291	0.291	PLS(5)-MacroFin	0.354	0.346	0.281	0.282	0.282
AutoArima	0.35	0.35	0.274	0.278	0.278	PLS(5)-MacroFin-Google	0.353	0.346	0.28	0.28	0.281
ETS	0.322	0.322	0.262	0.26	0.26	PLS(5)-MacroFin-GoogleReuters	0.351	0.342	0.28	0.281	0.281
BaggedETS	0.324	0.321	0.266	0.264	0.263	PLS(5)-MacroFin-Reuters	0.351	0.342	0.281	0.282	0.283
BATS	0.338	0.338	0.276	0.274	0.274	SPC(1)-MacroFin	0.349	0.348	0.282	0.282	0.282
TBATS	0.338	0.338	0.276	0.274	0.274	SPC(1)-MacroFin-Google	0.349	0.348	0.282	0.282	0.282
NN	0.315	0.315	0.262	0.264	0.264	SPC(1)-MacroFin-GoogleReuters	0.349	0.348	0.282	0.282	0.282
Spline	0.358	0.358	0.301	0.3	0.3	SPC(1)-MacroFin-Reuters	0.349	0.349	0.282	0.282	0.282
THETA	0.333	0.333	0.268	0.267	0.267	SPC(2)-MacroFin	0.348	0.347	0.283	0.282	0.282
Google	0.351	0.349	0.285	0.286	0.287	SPC(2)-MacroFin-Google	0.348	0.347	0.283	0.282	0.282
Google-L1	0.347	0.343	0.276	0.277	0.278	SPC(2)-MacroFin-GoogleReuters	0.349	0.347	0.283	0.282	0.282
Google-L3	0.325	0.318	0.25	0.258	0.258	SPC(2)-MacroFin-Reuters	0.348	0.347	0.283	0.282	0.282
Reuters	0.35	0.349	0.277	0.278	0.278	SPC(3)-MacroFin	0.349	0.345	0.282	0.282	0.282
Reuters-L1	0.342	0.34	0.274	0.276	0.276	SPC(3)-MacroFin-Google	0.349	0.346	0.282	0.282	0.282
Reuters-L3	0.331	0.33	0.257	0.264	0.264	SPC(3)-MacroFin-GoogleReuters	0.349	0.346	0.282	0.282	0.282
DFA(2)-MacroFin	0.35	0.349	0.282	0.282	0.282	SPC(3)-MacroFin-Reuters	0.349	0.345	0.282	0.282	0.282
DFA(2)-MacroFin-Google	0.35	0.349	0.282	0.282	0.282	SPC(4)-MacroFin	0.347	0.343	0.282	0.283	0.283
DFA(2)-MacroFin-GoogleReuters	0.35	0.349	0.282	0.282	0.282	SPC(4)-MacroFin-Google	0.348	0.344	0.281	0.283	0.282
DFA(2)-MacroFin-Reuters	0.35	0.349	0.282	0.282	0.282	SPC(4)-MacroFin-GoogleReuters	0.348	0.343	0.281	0.282	0.282
DFA(3)-MacroFin	0.35	0.348	0.282	0.282	0.282	SPC(4)-MacroFin-Reuters	0.348	0.343	0.283	0.284	0.284
DFA(3)-MacroFin-Google	0.35	0.348	0.282	0.282	0.282	SPC(5)-MacroFin	0.348	0.338	0.283	0.283	0.283
DFA(3)-MacroFin-GoogleReuters	0.35	0.348	0.282	0.282	0.282	SPC(5)-MacroFin-Google	0.348	0.339	0.284	0.283	0.283
DFA(3)-MacroFin-Reuters	0.35	0.348	0.282	0.282	0.282	SPC(5)-MacroFin-GoogleReuters	0.348	0.338	0.284	0.284	0.284
DFA(4)-MacroFin	0.35	0.346	0.281	0.282	0.282	SPC(5)-MacroFin-Reuters	0.348	0.338	0.283	0.283	0.283
DFA(4)-MacroFin-Google	0.35	0.345	0.281	0.282	0.281	LASSO-MacroFin	0.357	0.33	0.285	0.282	0.282
DFA(4)-MacroFin-GoogleReuters	0.35	0.345	0.28	0.282	0.281	LASSO-MacroFin-Google	0.348	0.336	0.285	0.282	0.282
DFA(4)-MacroFin-Reuters	0.35	0.346	0.281	0.282	0.282	LASSO-MacroFin-GoogleReuters	0.358	0.335	0.285	0.282	0.282
DFA(5)-MacroFin	0.35	0.342	0.283	0.283	0.283	LASSO-MacroFin-Reuters	0.356	0.335	0.285	0.282	0.282
DFA(5)-MacroFin-Google	0.35	0.342	0.283	0.283	0.283	EN-MacroFin	0.351	0.336	0.284	0.282	0.282
DFA(5)-MacroFin-GoogleReuters	0.35	0.342	0.283	0.283	0.283	EN-MacroFin-Google	0.354	0.339	0.285	0.282	0.282
DFA(5)-MacroFin-Reuters	0.35	0.342	0.283	0.283	0.283	EN-MacroFin-GoogleReuters	0.355	0.332	0.285	0.282	0.282
PLS(1)-MacroFin	0.349	0.349	0.282	0.281	0.281	EN-MacroFin-Reuters	0.353	0.339	0.284	0.282	0.282
PLS(1)-MacroFin-Google	0.349	0.349	0.282	0.281	0.281	SSlab-MacroFin	0.35	0.334	0.285	0.281	0.281
PLS(1)-MacroFin-GoogleReuters	0.349	0.349	0.282	0.281	0.281	SSlab-MacroFin-Google	0.35	0.334	0.286	0.281	0.281
PLS(1)-MacroFin-Reuters	0.35	0.349	0.282	0.281	0.281	SSlab-MacroFin-GoogleReuters	0.35	0.334	0.286	0.281	0.281
PLS(2)-MacroFin	0.351	0.349	0.28	0.28	0.28	SSlab-MacroFin-Reuters	0.35	0.335	0.286	0.281	0.281
PLS(2)-MacroFin-Google	0.35	0.349	0.28	0.279	0.28	Best1	0.35	0.356	0.305	0.311	0.311
PLS(2)-MacroFin-GoogleReuters	0.35	0.349	0.281	0.28	0.28	Best3	0.345	0.344	0.284	0.29	0.29
PLS(2)-MacroFin-Reuters	0.35	0.349	0.281	0.28	0.28	Best5	0.346	0.341	0.287	0.291	0.291
PLS(3)-MacroFin	0.354	0.352	0.28	0.28	0.28	Best10	0.349	0.348	0.289	0.291	0.29
PLS(3)-MacroFin-Google	0.354	0.352	0.28	0.28	0.28						

Table 36: IT, Unemployment-Rate, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.84	0.84	0.88	0.9	0.9	PLS(3)-MacroFin-GoogleReuters	0.52	0.63	0.74	0.84	0.84
Average(12)	0.66	0.66	0.88	0.98	0.98	PLS(3)-MacroFin-Reuters	0.54	0.62	0.65	0.79	0.78
Average(24)	0.6	0.6	0.99	0.71	0.71	PLS(4)-MacroFin	0.34	0.67	0.98	0.81	0.77
Naive	0	0	0	0	0	PLS(4)-MacroFin-Google	0.32	0.61	0.84	0.89	0.84
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.37	0.7	0.97	0.76	0.71
AR(4)	0.41	0.41	0.17	0.25	0.25	PLS(4)-MacroFin-Reuters	0.4	0.79	0.92	0.7	0.66
AR(AIC)	0.19	0.19	0.64	0.39	0.39	PLS(5)-MacroFin	0.56	0.91	0.73	0.7	0.68
AutoArima	0.89	0.89	0.63	0.88	0.88	PLS(5)-MacroFin-Google	0.65	0.88	0.9	0.88	0.85
ETS	0.14	0.14	0.35	0.29	0.29	PLS(5)-MacroFin-GoogleReuters	0.83	0.71	0.86	0.81	0.77
BaggedETS	0.3	0.23	0.62	0.54	0.51	PLS(5)-MacroFin-Reuters	0.76	0.71	0.72	0.63	0.6
BATS	0.36	0.36	0.81	0.67	0.67	SPC(1)-MacroFin	0.93	0.98	0.69	0.76	0.76
TBATS	0.36	0.36	0.81	0.67	0.67	SPC(1)-MacroFin-Google	0.91	1	0.69	0.77	0.76
NN	0.08	0.08	0.36	0.38	0.38	SPC(1)-MacroFin-GoogleReuters	0.91	0.98	0.7	0.77	0.77
Spline	0.7	0.7	0.35	0.39	0.39	SPC(1)-MacroFin-Reuters	0.91	0.95	0.69	0.77	0.76
THETA	0.03	0.03	0.12	0.08	0.08	SPC(2)-MacroFin	0.99	0.91	0.59	0.68	0.7
Google	0.82	0.94	0.63	0.62	0.6	SPC(2)-MacroFin-Google	0.99	0.92	0.61	0.71	0.72
Google-L1	0.9	0.53	0.85	0.88	0.92	SPC(2)-MacroFin-GoogleReuters	0.96	0.87	0.61	0.71	0.69
Google-L3	0.44	0.29	0.35	0.5	0.5	SPC(2)-MacroFin-Reuters	0.98	0.92	0.6	0.7	0.69
Reuters	0.82	0.94	0.84	0.87	0.89	SPC(3)-MacroFin	0.93	0.79	0.66	0.72	0.7
Reuters-L1	0.58	0.48	0.47	0.66	0.66	SPC(3)-MacroFin-Google	0.94	0.8	0.67	0.73	0.71
Reuters-L3	0.39	0.33	0.26	0.43	0.43	SPC(3)-MacroFin-GoogleReuters	0.91	0.83	0.69	0.72	0.72
DFA(2)-MacroFin	0.83	0.91	0.68	0.75	0.74	SPC(3)-MacroFin-Reuters	0.96	0.78	0.66	0.71	0.7
DFA(2)-MacroFin-Google	0.83	0.91	0.7	0.75	0.74	SPC(4)-MacroFin	0.95	0.63	0.68	0.65	0.63
DFA(2)-MacroFin-GoogleReuters	0.83	0.91	0.7	0.75	0.74	SPC(4)-MacroFin-Google	0.98	0.65	0.72	0.6	0.71
DFA(2)-MacroFin-Reuters	0.83	0.9	0.68	0.75	0.74	SPC(4)-MacroFin-GoogleReuters	0.97	0.56	0.76	0.75	0.74
DFA(3)-MacroFin	0.8	0.98	0.66	0.71	0.71	SPC(4)-MacroFin-Reuters	0.96	0.59	0.62	0.58	0.55
DFA(3)-MacroFin-Google	0.8	0.97	0.68	0.71	0.71	SPC(5)-MacroFin	0.97	0.37	0.54	0.62	0.62
DFA(3)-MacroFin-GoogleReuters	0.81	0.96	0.68	0.71	0.71	SPC(5)-MacroFin-Google	0.97	0.43	0.53	0.59	0.61
DFA(3)-MacroFin-Reuters	0.81	0.98	0.66	0.71	0.71	SPC(5)-MacroFin-GoogleReuters	0.98	0.38	0.53	0.56	0.57
DFA(4)-MacroFin	0.85	0.81	0.78	0.71	0.75	SPC(5)-MacroFin-Reuters	0.99	0.36	0.56	0.59	0.62
DFA(4)-MacroFin-Google	0.86	0.72	0.82	0.74	0.79	LASSO-MacroFin	0.42	0.35	0.47	0.75	0.75
DFA(4)-MacroFin-GoogleReuters	0.86	0.74	0.83	0.75	0.8	LASSO-MacroFin-Google	0.97	0.47	0.5	0.75	0.75
DFA(4)-MacroFin-Reuters	0.84	0.83	0.76	0.69	0.72	LASSO-MacroFin-GoogleReuters	0.28	0.45	0.5	0.75	0.75
DFA(5)-MacroFin	0.83	0.54	0.56	0.62	0.62	LASSO-MacroFin-Reuters	0.39	0.5	0.5	0.75	0.75
DFA(5)-MacroFin-Google	0.82	0.53	0.56	0.6	0.61	EN-MacroFin	0.73	0.52	0.51	0.75	0.75
DFA(5)-MacroFin-GoogleReuters	0.82	0.52	0.56	0.59	0.6	EN-MacroFin-Google	0.47	0.61	0.5	0.75	0.75
DFA(5)-MacroFin-Reuters	0.83	0.53	0.56	0.61	0.62	EN-MacroFin-GoogleReuters	0.49	0.39	0.48	0.75	0.75
PLS(1)-MacroFin	0.88	0.96	0.56	0.75	0.75	EN-MacroFin-Reuters	0.65	0.52	0.52	0.75	0.75
PLS(1)-MacroFin-Google	0.89	0.96	0.58	0.76	0.76	SSlab-MacroFin	0.78	0.39	0.47	0.82	0.82
PLS(1)-MacroFin-GoogleReuters	0.88	0.94	0.58	0.75	0.74	SSlab-MacroFin-Google	0.8	0.41	0.47	0.83	0.83
PLS(1)-MacroFin-Reuters	0.87	0.95	0.56	0.73	0.73	SSlab-MacroFin-GoogleReuters	0.81	0.4	0.47	0.82	0.82
PLS(2)-MacroFin	0.75	0.89	0.71	0.94	0.94	SSlab-MacroFin-Reuters	0.79	0.41	0.46	0.82	0.83
PLS(2)-MacroFin-Google	0.78	0.93	0.74	0.97	0.97	Best1	0.95	0.77	0.24	0.16	0.16
PLS(2)-MacroFin-GoogleReuters	0.8	0.94	0.69	0.89	0.88	Best3	0.88	0.83	0.81	0.66	0.63
PLS(2)-MacroFin-Reuters	0.79	0.92	0.66	0.85	0.85	Best5	0.93	0.73	0.7	0.59	0.59
PLS(3)-MacroFin	0.48	0.5	0.7	0.85	0.84	Best10	0.97	0.98	0.62	0.58	0.62
PLS(3)-MacroFin-Google	0.47	0.55	0.8	0.9	0.9						

Table 37: IT, Unemployment-Rate, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.121	0.121	0.085	0.082	0.082	PLS(3)-MacroFin-GoogleReuters	0.128	0.13	0.084	0.077	0.078
Average(12)	0.128	0.128	0.084	0.078	0.078	PLS(3)-MacroFin-Reuters	0.129	0.131	0.084	0.077	0.077
Average(24)	0.129	0.129	0.081	0.075	0.075	PLS(4)-MacroFin	0.128	0.129	0.083	0.076	0.077
Naive	0.129	0.129	0.097	0.1	0.1	PLS(4)-MacroFin-Google	0.127	0.129	0.083	0.076	0.077
AR(1)	0.144	0.144	0.093	0.09	0.09	PLS(4)-MacroFin-GoogleReuters	0.127	0.129	0.083	0.076	0.077
AR(4)	0.135	0.135	0.088	0.083	0.083	PLS(4)-MacroFin-Reuters	0.128	0.129	0.083	0.077	0.077
AR(AIC)	0.143	0.143	0.088	0.087	0.087	PLS(5)-MacroFin	0.129	0.133	0.084	0.075	0.075
AutoArima	0.125	0.125	0.086	0.084	0.084	PLS(5)-MacroFin-Google	0.129	0.131	0.084	0.075	0.075
ETS	0.133	0.133	0.087	0.082	0.082	PLS(5)-MacroFin-GoogleReuters	0.128	0.13	0.084	0.075	0.075
BaggedETS	0.128	0.129	0.088	0.084	0.084	PLS(5)-MacroFin-Reuters	0.128	0.132	0.084	0.075	0.076
BATS	0.135	0.135	0.088	0.082	0.082	SPC(1)-MacroFin	0.166	0.165	0.104	0.101	0.101
TBATS	0.135	0.135	0.088	0.082	0.082	SPC(1)-MacroFin-Google	0.166	0.166	0.105	0.101	0.101
NN	0.175	0.175	0.117	0.114	0.114	SPC(1)-MacroFin-GoogleReuters	0.166	0.166	0.104	0.101	0.101
Spline	0.13	0.13	0.092	0.09	0.09	SPC(1)-MacroFin-Reuters	0.166	0.166	0.105	0.102	0.101
THETA	0.165	0.165	0.103	0.1	0.1	SPC(2)-MacroFin	0.159	0.157	0.105	0.1	0.101
Google	0.159	0.158	0.104	0.098	0.098	SPC(2)-MacroFin-Google	0.159	0.156	0.105	0.101	0.101
Google-L1	0.146	0.146	0.098	0.09	0.09	SPC(2)-MacroFin-GoogleReuters	0.159	0.156	0.105	0.101	0.1
Google-L3	0.142	0.142	0.095	0.085	0.085	SPC(2)-MacroFin-Reuters	0.159	0.156	0.105	0.1	0.101
Reuters	0.169	0.169	0.106	0.102	0.102	SPC(3)-MacroFin	0.14	0.151	0.108	0.102	0.102
Reuters-L1	0.152	0.152	0.096	0.088	0.087	SPC(3)-MacroFin-Google	0.141	0.149	0.109	0.102	0.101
Reuters-L3	0.148	0.148	0.097	0.089	0.089	SPC(3)-MacroFin-GoogleReuters	0.143	0.149	0.108	0.103	0.103
DFA(2)-MacroFin	0.161	0.159	0.104	0.1	0.099	SPC(3)-MacroFin-Reuters	0.14	0.151	0.108	0.103	0.101
DFA(2)-MacroFin-Google	0.161	0.158	0.104	0.1	0.099	SPC(4)-MacroFin	0.139	0.143	0.1	0.094	0.094
DFA(2)-MacroFin-GoogleReuters	0.161	0.158	0.104	0.1	0.099	SPC(4)-MacroFin-Google	0.136	0.142	0.101	0.092	0.092
DFA(2)-MacroFin-Reuters	0.161	0.159	0.104	0.1	0.099	SPC(4)-MacroFin-GoogleReuters	0.136	0.141	0.1	0.092	0.092
DFA(3)-MacroFin	0.145	0.153	0.107	0.103	0.103	SPC(4)-MacroFin-Reuters	0.139	0.145	0.1	0.093	0.094
DFA(3)-MacroFin-Google	0.152	0.154	0.11	0.104	0.104	SPC(5)-MacroFin	0.136	0.139	0.096	0.087	0.089
DFA(3)-MacroFin-GoogleReuters	0.152	0.154	0.11	0.105	0.104	SPC(5)-MacroFin-Google	0.134	0.14	0.094	0.082	0.086
DFA(3)-MacroFin-Reuters	0.145	0.153	0.107	0.103	0.103	SPC(5)-MacroFin-GoogleReuters	0.133	0.14	0.095	0.086	0.086
DFA(4)-MacroFin	0.148	0.152	0.106	0.101	0.101	SPC(5)-MacroFin-Reuters	0.136	0.14	0.096	0.089	0.087
DFA(4)-MacroFin-Google	0.145	0.151	0.106	0.1	0.1	LASSO-MacroFin	0.135	0.135	0.084	0.081	0.082
DFA(4)-MacroFin-GoogleReuters	0.145	0.15	0.106	0.1	0.1	LASSO-MacroFin-Google	0.134	0.135	0.085	0.08	0.081
DFA(4)-MacroFin-Reuters	0.148	0.152	0.106	0.101	0.101	LASSO-MacroFin-GoogleReuters	0.135	0.134	0.084	0.082	0.081
DFA(5)-MacroFin	0.146	0.151	0.1	0.093	0.093	LASSO-MacroFin-Reuters	0.134	0.134	0.086	0.085	0.085
DFA(5)-MacroFin-Google	0.143	0.151	0.101	0.093	0.093	EN-MacroFin	0.135	0.135	0.088	0.081	0.083
DFA(5)-MacroFin-GoogleReuters	0.142	0.151	0.102	0.094	0.094	EN-MacroFin-Google	0.135	0.135	0.084	0.083	0.081
DFA(5)-MacroFin-Reuters	0.145	0.152	0.101	0.094	0.094	EN-MacroFin-GoogleReuters	0.135	0.137	0.088	0.087	0.083
PLS(1)-MacroFin	0.128	0.13	0.09	0.084	0.084	EN-MacroFin-Reuters	0.136	0.135	0.085	0.085	0.083
PLS(1)-MacroFin-Google	0.127	0.129	0.09	0.084	0.084	SSlab-MacroFin	0.13	0.13	0.083	0.078	0.078
PLS(1)-MacroFin-GoogleReuters	0.127	0.129	0.09	0.084	0.084	SSlab-MacroFin-Google	0.13	0.13	0.082	0.078	0.078
PLS(1)-MacroFin-Reuters	0.128	0.13	0.09	0.084	0.084	SSlab-MacroFin-GoogleReuters	0.13	0.13	0.082	0.078	0.078
PLS(2)-MacroFin	0.13	0.132	0.085	0.078	0.078	SSlab-MacroFin-Reuters	0.13	0.13	0.083	0.078	0.078
PLS(2)-MacroFin-Google	0.129	0.131	0.085	0.077	0.077	Best1	0.125	0.125	0.087	0.095	0.093
PLS(2)-MacroFin-GoogleReuters	0.129	0.131	0.085	0.077	0.078	Best3	0.131	0.132	0.087	0.084	0.084
PLS(2)-MacroFin-Reuters	0.13	0.132	0.085	0.078	0.078	Best5	0.129	0.131	0.088	0.081	0.081
PLS(3)-MacroFin	0.129	0.131	0.084	0.077	0.077	Best10	0.129	0.132	0.085	0.077	0.078
PLS(3)-MacroFin-Google	0.128	0.13	0.084	0.077	0.077						

Table 38: UK, Unemployment-Rate, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.147	0.147	0.105	0.098	0.098	PLS(3)-MacroFin-GoogleReuters	0.157	0.16	0.115	0.099	0.1
Average(12)	0.157	0.157	0.113	0.1	0.1	PLS(3)-MacroFin-Reuters	0.159	0.161	0.116	0.099	0.1
Average(24)	0.161	0.161	0.115	0.101	0.101	PLS(4)-MacroFin	0.157	0.16	0.115	0.099	0.099
Naive	0.17	0.17	0.127	0.128	0.128	PLS(4)-MacroFin-Google	0.155	0.159	0.115	0.099	0.1
AR(1)	0.178	0.178	0.122	0.11	0.11	PLS(4)-MacroFin-GoogleReuters	0.155	0.158	0.115	0.099	0.1
AR(4)	0.165	0.165	0.118	0.104	0.104	PLS(4)-MacroFin-Reuters	0.157	0.16	0.115	0.099	0.099
AR(AIC)	0.165	0.165	0.111	0.103	0.103	PLS(5)-MacroFin	0.158	0.165	0.121	0.099	0.099
AutoArima	0.151	0.151	0.109	0.1	0.1	PLS(5)-MacroFin-Google	0.158	0.163	0.12	0.099	0.099
ETS	0.161	0.161	0.114	0.101	0.101	PLS(5)-MacroFin-GoogleReuters	0.157	0.162	0.12	0.099	0.099
BaggedETS	0.158	0.158	0.113	0.103	0.102	PLS(5)-MacroFin-Reuters	0.158	0.164	0.121	0.099	0.099
BATS	0.164	0.164	0.117	0.102	0.102	SPC(1)-MacroFin	0.2	0.199	0.138	0.124	0.124
TBATS	0.164	0.164	0.117	0.102	0.102	SPC(1)-MacroFin-Google	0.2	0.199	0.139	0.123	0.123
NN	0.214	0.214	0.152	0.136	0.137	SPC(1)-MacroFin-GoogleReuters	0.2	0.199	0.138	0.123	0.123
Spline	0.157	0.157	0.118	0.11	0.11	SPC(1)-MacroFin-Reuters	0.2	0.199	0.138	0.124	0.124
THETA	0.204	0.204	0.14	0.125	0.125	SPC(2)-MacroFin	0.194	0.192	0.137	0.122	0.122
Google	0.198	0.196	0.135	0.12	0.12	SPC(2)-MacroFin-Google	0.194	0.191	0.137	0.122	0.122
Google-L1	0.175	0.175	0.135	0.116	0.116	SPC(2)-MacroFin-GoogleReuters	0.193	0.191	0.137	0.121	0.121
Google-L3	0.173	0.172	0.134	0.114	0.114	SPC(2)-MacroFin-Reuters	0.193	0.191	0.137	0.121	0.122
Reuters	0.21	0.21	0.145	0.128	0.128	SPC(3)-MacroFin	0.169	0.182	0.141	0.122	0.123
Reuters-L1	0.183	0.184	0.132	0.112	0.112	SPC(3)-MacroFin-Google	0.172	0.182	0.14	0.122	0.121
Reuters-L3	0.178	0.178	0.129	0.11	0.11	SPC(3)-MacroFin-GoogleReuters	0.175	0.181	0.139	0.123	0.123
DFA(2)-MacroFin	0.198	0.196	0.137	0.122	0.121	SPC(3)-MacroFin-Reuters	0.171	0.183	0.14	0.123	0.121
DFA(2)-MacroFin-Google	0.198	0.195	0.137	0.121	0.121	SPC(4)-MacroFin	0.169	0.174	0.134	0.116	0.117
DFA(2)-MacroFin-GoogleReuters	0.198	0.195	0.137	0.121	0.121	SPC(4)-MacroFin-Google	0.167	0.172	0.135	0.115	0.114
DFA(2)-MacroFin-Reuters	0.198	0.195	0.137	0.122	0.121	SPC(4)-MacroFin-GoogleReuters	0.165	0.172	0.132	0.115	0.115
DFA(3)-MacroFin	0.18	0.189	0.14	0.123	0.123	SPC(4)-MacroFin-Reuters	0.169	0.174	0.133	0.115	0.116
DFA(3)-MacroFin-Google	0.187	0.189	0.142	0.125	0.124	SPC(5)-MacroFin	0.165	0.167	0.129	0.109	0.109
DFA(3)-MacroFin-GoogleReuters	0.187	0.189	0.142	0.124	0.124	SPC(5)-MacroFin-Google	0.162	0.168	0.127	0.107	0.108
DFA(3)-MacroFin-Reuters	0.18	0.189	0.14	0.123	0.123	SPC(5)-MacroFin-GoogleReuters	0.162	0.168	0.128	0.108	0.109
DFA(4)-MacroFin	0.18	0.185	0.138	0.122	0.121	SPC(5)-MacroFin-Reuters	0.165	0.168	0.128	0.111	0.109
DFA(4)-MacroFin-Google	0.178	0.184	0.137	0.121	0.121	LASSO-MacroFin	0.169	0.17	0.118	0.103	0.106
DFA(4)-MacroFin-GoogleReuters	0.178	0.184	0.137	0.121	0.121	LASSO-MacroFin-Google	0.17	0.17	0.118	0.102	0.102
DFA(4)-MacroFin-Reuters	0.18	0.185	0.138	0.122	0.121	LASSO-MacroFin-GoogleReuters	0.17	0.169	0.117	0.106	0.103
DFA(5)-MacroFin	0.178	0.183	0.134	0.115	0.114	LASSO-MacroFin-Reuters	0.169	0.169	0.12	0.109	0.107
DFA(5)-MacroFin-Google	0.175	0.182	0.134	0.115	0.115	EN-MacroFin	0.169	0.169	0.12	0.102	0.105
DFA(5)-MacroFin-GoogleReuters	0.175	0.183	0.135	0.116	0.116	EN-MacroFin-Google	0.169	0.169	0.119	0.105	0.102
DFA(5)-MacroFin-Reuters	0.178	0.183	0.135	0.115	0.115	EN-MacroFin-GoogleReuters	0.169	0.17	0.121	0.108	0.105
PLS(1)-MacroFin	0.158	0.161	0.12	0.104	0.104	EN-MacroFin-Reuters	0.171	0.169	0.116	0.107	0.107
PLS(1)-MacroFin-Google	0.156	0.16	0.119	0.104	0.104	SSlab-MacroFin	0.163	0.164	0.115	0.101	0.101
PLS(1)-MacroFin-GoogleReuters	0.156	0.16	0.119	0.104	0.104	SSlab-MacroFin-Google	0.163	0.164	0.115	0.101	0.101
PLS(1)-MacroFin-Reuters	0.158	0.161	0.12	0.104	0.104	SSlab-MacroFin-GoogleReuters	0.164	0.164	0.115	0.101	0.101
PLS(2)-MacroFin	0.16	0.163	0.116	0.099	0.1	SSlab-MacroFin-Reuters	0.164	0.164	0.115	0.101	0.101
PLS(2)-MacroFin-Google	0.158	0.161	0.116	0.099	0.1	Best1	0.157	0.157	0.108	0.11	0.108
PLS(2)-MacroFin-GoogleReuters	0.158	0.161	0.116	0.1	0.1	Best3	0.163	0.163	0.107	0.1	0.099
PLS(2)-MacroFin-Reuters	0.16	0.163	0.117	0.1	0.1	Best5	0.161	0.162	0.108	0.099	0.099
PLS(3)-MacroFin	0.159	0.161	0.116	0.099	0.099	Best10	0.161	0.165	0.111	0.098	0.098
PLS(3)-MacroFin-Google	0.157	0.16	0.115	0.099	0.099						

Table 39: UK, Unemployment-Rate, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.02	0.02	0.13	0.19	0.19	PLS(3)-MacroFin-GoogleReuters	0.02	0.03	0.29	0.14	0.15
Average(12)	0.04	0.04	0.18	0.15	0.15	PLS(3)-MacroFin-Reuters	0.02	0.03	0.32	0.11	0.12
Average(24)	0.11	0.1	0.26	0.21	0.21	PLS(4)-MacroFin	0.02	0.03	0.3	0.12	0.12
Naive	0.36	0.35	0.6	0.09	0.09	PLS(4)-MacroFin-Google	0.02	0.03	0.3	0.17	0.18
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.02	0.03	0.32	0.18	0.19
AR(4)	0.12	0.11	0.53	0.29	0.29	PLS(4)-MacroFin-Reuters	0.02	0.03	0.31	0.13	0.13
AR(AIC)	0.28	0.28	0.28	0.41	0.41	PLS(5)-MacroFin	0.03	0.16	0.92	0.14	0.14
AutoArima	0.01	0.01	0.1	0.15	0.15	PLS(5)-MacroFin-Google	0.04	0.13	0.87	0.17	0.18
ETS	0.05	0.05	0.08	0.07	0.07	PLS(5)-MacroFin-GoogleReuters	0.03	0.11	0.85	0.18	0.19
BaggedETS	0.22	0.18	0.39	0.49	0.43	PLS(5)-MacroFin-Reuters	0.03	0.14	0.9	0.14	0.15
BATS	0.09	0.08	0.35	0.15	0.15	SPC(1)-MacroFin	0.03	0.03	0.02	0.07	0.07
TBATS	0.09	0.08	0.35	0.15	0.15	SPC(1)-MacroFin-Google	0.02	0.03	0.02	0.07	0.08
NN	0	0	0.01	0.02	0.02	SPC(1)-MacroFin-GoogleReuters	0.02	0.03	0.02	0.07	0.08
Spline	0.07	0.07	0.54	0.92	0.92	SPC(1)-MacroFin-Reuters	0.03	0.03	0.02	0.06	0.06
THETA	0.01	0.01	0.05	0.13	0.13	SPC(2)-MacroFin	0.11	0.09	0.03	0.11	0.1
Google	0.06	0.07	0.1	0.29	0.29	SPC(2)-MacroFin-Google	0.12	0.11	0.03	0.1	0.11
Google-L1	0.86	0.81	0.27	0.63	0.63	SPC(2)-MacroFin-GoogleReuters	0.12	0.12	0.02	0.11	0.13
Google-L3	0.71	0.64	0.34	0.78	0.79	SPC(2)-MacroFin-Reuters	0.12	0.12	0.02	0.12	0.12
Reuters	0.01	0.01	0.05	0.1	0.1	SPC(3)-MacroFin	0.37	0.64	0.06	0.19	0.16
Reuters-L1	0.67	0.64	0.41	0.89	0.89	SPC(3)-MacroFin-Google	0.56	0.7	0.07	0.21	0.28
Reuters-L3	0.98	0.99	0.49	1	1	SPC(3)-MacroFin-GoogleReuters	0.72	0.78	0.1	0.2	0.18
DFA(2)-MacroFin	0.04	0.04	0.03	0.13	0.14	SPC(3)-MacroFin-Reuters	0.45	0.64	0.07	0.17	0.23
DFA(2)-MacroFin-Google	0.05	0.04	0.03	0.13	0.14	SPC(4)-MacroFin	0.31	0.65	0.2	0.45	0.39
DFA(2)-MacroFin-GoogleReuters	0.05	0.04	0.03	0.13	0.14	SPC(4)-MacroFin-Google	0.23	0.54	0.18	0.6	0.65
DFA(2)-MacroFin-Reuters	0.04	0.04	0.03	0.13	0.14	SPC(4)-MacroFin-GoogleReuters	0.2	0.51	0.26	0.56	0.61
DFA(3)-MacroFin	0.77	0.23	0.04	0.11	0.12	SPC(4)-MacroFin-Reuters	0.35	0.7	0.22	0.55	0.44
DFA(3)-MacroFin-Google	0.32	0.25	0.03	0.1	0.11	SPC(5)-MacroFin	0.18	0.29	0.39	0.83	0.9
DFA(3)-MacroFin-GoogleReuters	0.32	0.26	0.03	0.11	0.11	SPC(5)-MacroFin-Google	0.13	0.37	0.56	0.72	0.75
DFA(3)-MacroFin-Reuters	0.78	0.25	0.04	0.12	0.13	SPC(5)-MacroFin-GoogleReuters	0.12	0.35	0.47	0.81	0.84
DFA(4)-MacroFin	0.82	0.39	0.06	0.14	0.14	SPC(5)-MacroFin-Reuters	0.18	0.37	0.44	1	0.84
DFA(4)-MacroFin-Google	1	0.5	0.08	0.19	0.19	LASSO-MacroFin	0.32	0.31	0.36	0.23	0.48
DFA(4)-MacroFin-GoogleReuters	0.98	0.5	0.08	0.19	0.19	LASSO-MacroFin-Google	0.33	0.32	0.44	0.14	0.16
DFA(4)-MacroFin-Reuters	0.85	0.39	0.06	0.14	0.15	LASSO-MacroFin-GoogleReuters	0.33	0.3	0.34	0.47	0.19
DFA(5)-MacroFin	0.96	0.61	0.19	0.63	0.64	LASSO-MacroFin-Reuters	0.3	0.3	0.8	0.86	0.6
DFA(5)-MacroFin-Google	0.77	0.65	0.19	0.6	0.6	EN-MacroFin	0.3	0.28	0.76	0.16	0.42
DFA(5)-MacroFin-GoogleReuters	0.75	0.64	0.16	0.54	0.54	EN-MacroFin-Google	0.3	0.27	0.58	0.44	0.16
DFA(5)-MacroFin-Reuters	1	0.6	0.16	0.55	0.56	EN-MacroFin-GoogleReuters	0.29	0.3	0.83	0.71	0.44
PLS(1)-MacroFin	0.01	0.02	0.69	0.31	0.31	EN-MacroFin-Reuters	0.38	0.28	0.27	0.61	0.69
PLS(1)-MacroFin-Google	0.01	0.02	0.59	0.33	0.33	SSlab-MacroFin	0.12	0.11	0.24	0.18	0.17
PLS(1)-MacroFin-GoogleReuters	0.01	0.02	0.62	0.35	0.35	SSlab-MacroFin-Google	0.12	0.12	0.24	0.18	0.17
PLS(1)-MacroFin-Reuters	0.01	0.02	0.73	0.33	0.34	SSlab-MacroFin-GoogleReuters	0.12	0.12	0.24	0.18	0.18
PLS(2)-MacroFin	0.03	0.04	0.39	0.12	0.13	SSlab-MacroFin-Reuters	0.12	0.12	0.25	0.18	0.17
PLS(2)-MacroFin-Google	0.02	0.03	0.36	0.16	0.16	Best1	0.03	0.03	0.17	0.97	0.76
PLS(2)-MacroFin-GoogleReuters	0.02	0.03	0.38	0.17	0.18	Best3	0.1	0.1	0.1	0.2	0.18
PLS(2)-MacroFin-Reuters	0.02	0.04	0.42	0.14	0.14	Best5	0.05	0.06	0.11	0.15	0.17
PLS(3)-MacroFin	0.02	0.03	0.29	0.1	0.1	Best10	0.04	0.09	0.12	0.13	0.13
PLS(3)-MacroFin-Google	0.02	0.03	0.27	0.13	0.13						

Table 40: UK, Unemployment-Rate, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.435	0.435	0.435	0.435	0.435	PLS(3)-MacroFin-GoogleReuters	0.448	0.433	0.362	0.373	0.359
Average(12)	0.387	0.387	0.387	0.387	0.387	PLS(3)-MacroFin-Reuters	0.446	0.436	0.375	0.386	0.372
Average(24)	0.384	0.384	0.384	0.384	0.384	PLS(4)-MacroFin	0.448	0.436	0.378	0.39	0.379
Naive	0.492	0.492	0.492	0.492	0.492	PLS(4)-MacroFin-Google	0.441	0.429	0.363	0.374	0.364
AR(1)	0.417	0.417	0.425	0.426	0.426	PLS(4)-MacroFin-GoogleReuters	0.441	0.428	0.364	0.375	0.365
AR(4)	0.458	0.458	0.392	0.376	0.376	PLS(4)-MacroFin-Reuters	0.447	0.434	0.379	0.391	0.381
AR(AIC)	0.428	0.428	0.37	0.359	0.359	PLS(5)-MacroFin	0.416	0.364	0.37	0.387	0.379
AutoArima	0.398	0.398	0.398	0.398	0.398	PLS(5)-MacroFin-Google	0.411	0.367	0.364	0.38	0.372
ETS	0.492	0.492	0.492	0.492	0.492	PLS(5)-MacroFin-GoogleReuters	0.407	0.365	0.359	0.377	0.369
BaggedETS	0.406	0.433	0.417	0.424	0.413	PLS(5)-MacroFin-Reuters	0.418	0.36	0.366	0.385	0.377
BATS	0.434	0.434	0.434	0.434	0.434	SPC(1)-MacroFin	0.428	0.424	0.438	0.44	0.432
TBATS	0.434	0.434	0.434	0.434	0.434	SPC(1)-MacroFin-Google	0.431	0.426	0.44	0.443	0.435
NN	0.432	0.433	0.433	0.435	0.435	SPC(1)-MacroFin-GoogleReuters	0.43	0.426	0.44	0.441	0.436
Spline	0.368	0.368	0.368	0.368	0.368	SPC(1)-MacroFin-Reuters	0.429	0.425	0.438	0.443	0.434
THETA	0.373	0.373	0.373	0.373	0.373	SPC(2)-MacroFin	0.43	0.424	0.441	0.452	0.44
Google	0.396	0.409	0.395	0.4	0.402	SPC(2)-MacroFin-Google	0.432	0.426	0.444	0.452	0.448
Google-L1	0.392	0.393	0.379	0.379	0.381	SPC(2)-MacroFin-GoogleReuters	0.43	0.426	0.437	0.455	0.45
Google-L3	0.446	0.449	0.423	0.423	0.426	SPC(2)-MacroFin-Reuters	0.439	0.421	0.444	0.448	0.447
Reuters	0.423	0.422	0.426	0.426	0.426	SPC(3)-MacroFin	0.391	0.366	0.401	0.411	0.403
Reuters-L1	0.437	0.438	0.442	0.438	0.438	SPC(3)-MacroFin-Google	0.371	0.354	0.411	0.411	0.407
Reuters-L3	0.458	0.46	0.368	0.403	0.403	SPC(3)-MacroFin-GoogleReuters	0.38	0.36	0.401	0.418	0.404
DFA(2)-MacroFin	0.412	0.405	0.423	0.429	0.427	SPC(3)-MacroFin-Reuters	0.388	0.354	0.401	0.409	0.406
DFA(2)-MacroFin-Google	0.41	0.404	0.424	0.43	0.428	SPC(4)-MacroFin	0.37	0.345	0.393	0.399	0.391
DFA(2)-MacroFin-GoogleReuters	0.41	0.403	0.424	0.43	0.428	SPC(4)-MacroFin-Google	0.367	0.344	0.389	0.399	0.39
DFA(2)-MacroFin-Reuters	0.412	0.404	0.423	0.429	0.427	SPC(4)-MacroFin-GoogleReuters	0.367	0.344	0.395	0.4	0.391
DFA(3)-MacroFin	0.417	0.376	0.405	0.413	0.406	SPC(4)-MacroFin-Reuters	0.371	0.349	0.397	0.402	0.391
DFA(3)-MacroFin-Google	0.415	0.373	0.404	0.412	0.405	SPC(5)-MacroFin	0.373	0.348	0.397	0.394	0.387
DFA(3)-MacroFin-GoogleReuters	0.414	0.372	0.404	0.412	0.405	SPC(5)-MacroFin-Google	0.37	0.348	0.395	0.39	0.384
DFA(3)-MacroFin-Reuters	0.416	0.375	0.405	0.412	0.406	SPC(5)-MacroFin-GoogleReuters	0.388	0.35	0.392	0.394	0.382
DFA(4)-MacroFin	0.397	0.358	0.394	0.4	0.394	SPC(5)-MacroFin-Reuters	0.376	0.353	0.395	0.393	0.386
DFA(4)-MacroFin-Google	0.395	0.356	0.393	0.4	0.394	LASSO-MacroFin	0.439	0.397	0.411	0.442	0.449
DFA(4)-MacroFin-GoogleReuters	0.394	0.356	0.394	0.401	0.394	LASSO-MacroFin-Google	0.398	0.368	0.425	0.419	0.429
DFA(4)-MacroFin-Reuters	0.396	0.358	0.394	0.401	0.394	LASSO-MacroFin-GoogleReuters	0.387	0.391	0.434	0.435	0.428
DFA(5)-MacroFin	0.382	0.365	0.391	0.388	0.381	LASSO-MacroFin-Reuters	0.423	0.418	0.414	0.427	0.431
DFA(5)-MacroFin-Google	0.379	0.365	0.392	0.387	0.381	EN-MacroFin	0.462	0.384	0.44	0.422	0.438
DFA(5)-MacroFin-GoogleReuters	0.382	0.362	0.39	0.386	0.38	EN-MacroFin-Google	0.411	0.412	0.413	0.444	0.455
DFA(5)-MacroFin-Reuters	0.386	0.361	0.39	0.387	0.381	EN-MacroFin-GoogleReuters	0.425	0.378	0.437	0.434	0.424
PLS(1)-MacroFin	0.475	0.459	0.432	0.442	0.436	EN-MacroFin-Reuters	0.384	0.465	0.43	0.443	0.438
PLS(1)-MacroFin-Google	0.471	0.457	0.434	0.443	0.437	SSlab-MacroFin	0.594	0.428	0.403	0.416	0.401
PLS(1)-MacroFin-GoogleReuters	0.471	0.457	0.434	0.443	0.437	SSlab-MacroFin-Google	0.594	0.433	0.422	0.408	0.393
PLS(1)-MacroFin-Reuters	0.475	0.459	0.432	0.442	0.436	SSlab-MacroFin-GoogleReuters	0.594	0.429	0.416	0.404	0.402
PLS(2)-MacroFin	0.461	0.428	0.426	0.433	0.424	SSlab-MacroFin-Reuters	0.587	0.428	0.419	0.406	0.402
PLS(2)-MacroFin-Google	0.481	0.444	0.427	0.433	0.424	Best1	0.47	0.469	0.502	0.549	0.542
PLS(2)-MacroFin-GoogleReuters	0.482	0.444	0.427	0.433	0.424	Best3	0.463	0.446	0.49	0.49	0.498
PLS(2)-MacroFin-Reuters	0.462	0.428	0.426	0.433	0.424	Best5	0.44	0.458	0.47	0.475	0.48
PLS(3)-MacroFin	0.446	0.436	0.374	0.385	0.371	Best10	0.452	0.455	0.463	0.466	0.464
PLS(3)-MacroFin-Google	0.447	0.433	0.362	0.372	0.358						

Table 41: DE, GDP, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.477	0.477	0.477	0.477	0.477	PLS(3)-MacroFin-GoogleReuters	0.512	0.499	0.501	0.507	0.5
Average(12)	0.438	0.438	0.438	0.438	0.438	PLS(3)-MacroFin-Reuters	0.51	0.505	0.511	0.518	0.51
Average(24)	0.442	0.442	0.442	0.442	0.442	PLS(4)-MacroFin	0.552	0.541	0.52	0.527	0.52
Naive	0.544	0.544	0.544	0.544	0.544	PLS(4)-MacroFin-Google	0.546	0.536	0.509	0.515	0.509
AR(1)	0.473	0.473	0.481	0.482	0.482	PLS(4)-MacroFin-GoogleReuters	0.544	0.534	0.51	0.517	0.511
AR(4)	0.511	0.511	0.44	0.427	0.427	PLS(4)-MacroFin-Reuters	0.548	0.537	0.522	0.529	0.523
AR(AIC)	0.485	0.485	0.434	0.426	0.426	PLS(5)-MacroFin	0.588	0.514	0.536	0.544	0.539
AutoArima	0.445	0.445	0.445	0.445	0.445	PLS(5)-MacroFin-Google	0.585	0.533	0.533	0.54	0.536
ETS	0.544	0.544	0.544	0.544	0.544	PLS(5)-MacroFin-GoogleReuters	0.582	0.528	0.532	0.539	0.535
BaggedETS	0.479	0.501	0.469	0.487	0.463	PLS(5)-MacroFin-Reuters	0.584	0.508	0.537	0.544	0.54
BATS	0.471	0.471	0.471	0.471	0.471	SPC(1)-MacroFin	0.51	0.498	0.514	0.516	0.51
TBATS	0.471	0.471	0.471	0.471	0.471	SPC(1)-MacroFin-Google	0.512	0.5	0.517	0.518	0.512
NN	0.52	0.524	0.515	0.522	0.522	SPC(1)-MacroFin-GoogleReuters	0.512	0.5	0.517	0.516	0.513
Spline	0.48	0.48	0.48	0.48	0.48	SPC(1)-MacroFin-Reuters	0.511	0.5	0.514	0.517	0.512
THETA	0.427	0.427	0.427	0.427	0.427	SPC(2)-MacroFin	0.506	0.495	0.51	0.516	0.507
Google	0.457	0.469	0.447	0.45	0.451	SPC(2)-MacroFin-Google	0.509	0.501	0.512	0.516	0.511
Google-L1	0.46	0.46	0.435	0.435	0.436	SPC(2)-MacroFin-GoogleReuters	0.508	0.501	0.509	0.521	0.517
Google-L3	0.507	0.509	0.483	0.484	0.485	SPC(2)-MacroFin-Reuters	0.514	0.496	0.512	0.512	0.513
Reuters	0.482	0.481	0.489	0.489	0.489	SPC(3)-MacroFin	0.563	0.507	0.508	0.512	0.512
Reuters-L1	0.496	0.495	0.49	0.486	0.486	SPC(3)-MacroFin-Google	0.539	0.492	0.52	0.508	0.516
Reuters-L3	0.533	0.535	0.426	0.47	0.47	SPC(3)-MacroFin-GoogleReuters	0.553	0.501	0.509	0.523	0.518
DFA(2)-MacroFin	0.502	0.486	0.497	0.5	0.499	SPC(3)-MacroFin-Reuters	0.557	0.493	0.51	0.503	0.514
DFA(2)-MacroFin-Google	0.502	0.486	0.499	0.502	0.501	SPC(4)-MacroFin	0.523	0.46	0.491	0.495	0.49
DFA(2)-MacroFin-GoogleReuters	0.502	0.486	0.499	0.502	0.501	SPC(4)-MacroFin-Google	0.52	0.458	0.488	0.494	0.49
DFA(2)-MacroFin-Reuters	0.502	0.486	0.497	0.5	0.499	SPC(4)-MacroFin-GoogleReuters	0.521	0.46	0.49	0.494	0.489
DFA(3)-MacroFin	0.577	0.514	0.509	0.513	0.51	SPC(4)-MacroFin-Reuters	0.524	0.464	0.493	0.497	0.491
DFA(3)-MacroFin-Google	0.573	0.511	0.508	0.512	0.509	SPC(5)-MacroFin	0.533	0.464	0.497	0.495	0.494
DFA(3)-MacroFin-GoogleReuters	0.573	0.51	0.508	0.512	0.508	SPC(5)-MacroFin-Google	0.529	0.454	0.497	0.491	0.491
DFA(3)-MacroFin-Reuters	0.576	0.513	0.508	0.512	0.509	SPC(5)-MacroFin-GoogleReuters	0.549	0.46	0.495	0.495	0.488
DFA(4)-MacroFin	0.54	0.477	0.492	0.495	0.492	SPC(5)-MacroFin-Reuters	0.533	0.463	0.494	0.494	0.492
DFA(4)-MacroFin-Google	0.537	0.474	0.491	0.494	0.491	LASSO-MacroFin	0.529	0.46	0.471	0.485	0.487
DFA(4)-MacroFin-GoogleReuters	0.537	0.474	0.491	0.495	0.492	LASSO-MacroFin-Google	0.467	0.437	0.479	0.479	0.472
DFA(4)-MacroFin-Reuters	0.54	0.477	0.492	0.495	0.492	LASSO-MacroFin-GoogleReuters	0.461	0.452	0.478	0.484	0.479
DFA(5)-MacroFin	0.533	0.47	0.493	0.49	0.488	LASSO-MacroFin-Reuters	0.505	0.466	0.475	0.484	0.476
DFA(5)-MacroFin-Google	0.531	0.469	0.492	0.489	0.486	EN-MacroFin	0.579	0.45	0.485	0.478	0.483
DFA(5)-MacroFin-GoogleReuters	0.536	0.467	0.491	0.489	0.487	EN-MacroFin-Google	0.478	0.493	0.468	0.489	0.49
DFA(5)-MacroFin-Reuters	0.539	0.468	0.492	0.491	0.488	EN-MacroFin-GoogleReuters	0.508	0.452	0.485	0.486	0.474
PLS(1)-MacroFin	0.519	0.508	0.516	0.523	0.518	EN-MacroFin-Reuters	0.45	0.527	0.477	0.482	0.476
PLS(1)-MacroFin-Google	0.515	0.505	0.517	0.524	0.519	SSlab-MacroFin	0.737	0.545	0.446	0.472	0.451
PLS(1)-MacroFin-GoogleReuters	0.515	0.505	0.518	0.525	0.52	SSlab-MacroFin-Google	0.734	0.552	0.475	0.461	0.437
PLS(1)-MacroFin-Reuters	0.519	0.508	0.517	0.524	0.519	SSlab-MacroFin-GoogleReuters	0.734	0.545	0.464	0.454	0.452
PLS(2)-MacroFin	0.504	0.47	0.518	0.522	0.516	SSlab-MacroFin-Reuters	0.727	0.553	0.468	0.455	0.453
PLS(2)-MacroFin-Google	0.526	0.488	0.518	0.522	0.516	Best1	0.601	0.599	0.609	0.644	0.644
PLS(2)-MacroFin-GoogleReuters	0.528	0.489	0.518	0.523	0.517	Best3	0.605	0.586	0.602	0.609	0.609
PLS(2)-MacroFin-Reuters	0.505	0.471	0.518	0.523	0.517	Best5	0.576	0.569	0.587	0.592	0.593
PLS(3)-MacroFin	0.51	0.506	0.511	0.517	0.509	Best10	0.58	0.542	0.576	0.58	0.579
PLS(3)-MacroFin-Google	0.511	0.499	0.501	0.507	0.5						

Table 42: DE, GDP, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.83	0.83	0.84	0.81	0.81	PLS(3)-MacroFin-GoogleReuters	0.39	0.56	0.85	0.81	0.86
Average(12)	0.07	0.07	0.05	0.05	0.05	PLS(3)-MacroFin-Reuters	0.43	0.48	0.78	0.73	0.79
Average(24)	0	0	0	0	0	PLS(4)-MacroFin	0.39	0.35	0.73	0.68	0.73
Naive	0	0	0	0	0	PLS(4)-MacroFin-Google	0.38	0.37	0.8	0.76	0.8
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.38	0.38	0.79	0.75	0.79
AR(4)	0	0	0.47	0.35	0.35	PLS(4)-MacroFin-Reuters	0.4	0.37	0.72	0.67	0.72
AR(AIC)	0.41	0.41	0.32	0.25	0.25	PLS(5)-MacroFin	0.48	0.74	0.65	0.6	0.63
AutoArima	0.59	0.59	0.51	0.5	0.5	PLS(5)-MacroFin-Google	0.49	0.66	0.67	0.63	0.66
ETS	0	0	0	0	0	PLS(5)-MacroFin-GoogleReuters	0.5	0.67	0.68	0.64	0.66
BaggedETS	0.84	0.24	0.54	0.88	0.35	PLS(5)-MacroFin-Reuters	0.49	0.77	0.65	0.6	0.63
BATS	0.95	0.95	0.82	0.81	0.81	SPC(1)-MacroFin	0.54	0.6	0.61	0.58	0.66
TBATS	0.95	0.95	0.82	0.81	0.81	SPC(1)-MacroFin-Google	0.51	0.58	0.58	0.56	0.64
NN	0.43	0.42	0.59	0.48	0.51	SPC(1)-MacroFin-GoogleReuters	0.52	0.57	0.58	0.58	0.62
Spline	0.96	0.96	1	0.99	0.99	SPC(1)-MacroFin-Reuters	0.53	0.59	0.6	0.58	0.64
THETA	0	0	0	0	0	SPC(2)-MacroFin	0.52	0.64	0.62	0.55	0.67
Google	0.39	0.83	0.19	0.21	0.22	SPC(2)-MacroFin-Google	0.49	0.55	0.58	0.57	0.61
Google-L1	0.61	0.6	0.02	0.02	0.02	SPC(2)-MacroFin-GoogleReuters	0.49	0.56	0.63	0.49	0.54
Google-L3	0.25	0.24	0.97	0.98	0.97	SPC(2)-MacroFin-Reuters	0.41	0.64	0.6	0.59	0.6
Reuters	0.14	0.23	0.44	0.46	0.45	SPC(3)-MacroFin	0.38	0.7	0.74	0.72	0.73
Reuters-L1	0.03	0.02	0.63	0.79	0.79	SPC(3)-MacroFin-Google	0.51	0.8	0.65	0.75	0.69
Reuters-L3	0.11	0.1	0.33	0.86	0.86	SPC(3)-MacroFin-GoogleReuters	0.45	0.74	0.76	0.62	0.69
DFA(2)-MacroFin	0.64	0.8	0.72	0.68	0.7	SPC(3)-MacroFin-Reuters	0.39	0.78	0.75	0.79	0.71
DFA(2)-MacroFin-Google	0.64	0.8	0.7	0.66	0.68	SPC(4)-MacroFin	0.58	0.81	0.88	0.84	0.89
DFA(2)-MacroFin-GoogleReuters	0.64	0.8	0.7	0.65	0.68	SPC(4)-MacroFin-Google	0.6	0.79	0.92	0.85	0.9
DFA(2)-MacroFin-Reuters	0.64	0.8	0.72	0.68	0.7	SPC(4)-MacroFin-GoogleReuters	0.6	0.82	0.89	0.86	0.91
DFA(3)-MacroFin	0.36	0.6	0.67	0.63	0.68	SPC(4)-MacroFin-Reuters	0.58	0.87	0.86	0.82	0.89
DFA(3)-MacroFin-Google	0.38	0.62	0.68	0.64	0.68	SPC(5)-MacroFin	0.55	0.88	0.82	0.85	0.86
DFA(3)-MacroFin-GoogleReuters	0.38	0.63	0.69	0.65	0.69	SPC(5)-MacroFin-Google	0.58	0.74	0.82	0.89	0.89
DFA(3)-MacroFin-Reuters	0.36	0.61	0.68	0.64	0.68	SPC(5)-MacroFin-GoogleReuters	0.5	0.82	0.84	0.85	0.93
DFA(4)-MacroFin	0.5	0.95	0.85	0.81	0.86	SPC(5)-MacroFin-Reuters	0.56	0.87	0.85	0.86	0.89
DFA(4)-MacroFin-Google	0.52	0.99	0.86	0.82	0.86	LASSO-MacroFin	0.5	0.69	0.44	0.71	0.8
DFA(4)-MacroFin-GoogleReuters	0.52	0.99	0.85	0.81	0.86	LASSO-MacroFin-Google	0.9	0.09	0.83	0.76	0.47
DFA(4)-MacroFin-Reuters	0.51	0.95	0.84	0.81	0.85	LASSO-MacroFin-GoogleReuters	0.77	0.5	0.81	0.79	0.79
DFA(5)-MacroFin	0.56	0.94	0.85	0.89	0.92	LASSO-MacroFin-Reuters	0.53	0.83	0.59	0.72	0.59
DFA(5)-MacroFin-Google	0.57	0.93	0.86	0.9	0.94	EN-MacroFin	0.27	0.2	0.72	0.77	0.89
DFA(5)-MacroFin-GoogleReuters	0.54	0.91	0.87	0.9	0.94	EN-MacroFin-Google	0.94	0.66	0.4	0.53	0.53
DFA(5)-MacroFin-Reuters	0.53	0.92	0.86	0.89	0.92	EN-MacroFin-GoogleReuters	0.49	0.15	0.81	0.74	0.56
PLS(1)-MacroFin	0.01	0.02	0.54	0.46	0.52	EN-MacroFin-Reuters	0.25	0.39	0.73	0.99	0.77
PLS(1)-MacroFin-Google	0.01	0.03	0.53	0.45	0.51	SSlab-MacroFin	0.1	0.43	0.22	0.74	0.26
PLS(1)-MacroFin-GoogleReuters	0.01	0.03	0.52	0.44	0.5	SSlab-MacroFin-Google	0.11	0.41	0.85	0.5	0.16
PLS(1)-MacroFin-Reuters	0.01	0.02	0.53	0.45	0.51	SSlab-MacroFin-GoogleReuters	0.1	0.44	0.51	0.29	0.31
PLS(2)-MacroFin	0.41	0.94	0.63	0.6	0.66	SSlab-MacroFin-Reuters	0.11	0.41	0.59	0.3	0.32
PLS(2)-MacroFin-Google	0.21	0.7	0.63	0.6	0.66	Best1	0.38	0.24	0.21	0.11	0.11
PLS(2)-MacroFin-GoogleReuters	0.21	0.69	0.63	0.59	0.65	Best3	0.36	0.29	0.25	0.22	0.22
PLS(2)-MacroFin-Reuters	0.4	0.95	0.63	0.59	0.65	Best5	0.4	0.25	0.3	0.28	0.27
PLS(3)-MacroFin	0.44	0.48	0.78	0.74	0.8	Best10	0.27	0.2	0.36	0.34	0.35
PLS(3)-MacroFin-Google	0.41	0.56	0.85	0.81	0.87						

Table 43: DE, GDP, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.298	0.298	0.298	0.298	0.298	PLS(3)-MacroFin-GoogleReuters	0.253	0.261	0.243	0.246	0.238
Average(12)	0.255	0.255	0.255	0.255	0.255	PLS(3)-MacroFin-Reuters	0.253	0.262	0.241	0.243	0.236
Average(24)	0.253	0.253	0.253	0.253	0.253	PLS(4)-MacroFin	0.251	0.255	0.239	0.242	0.235
Naive	0.275	0.275	0.275	0.275	0.275	PLS(4)-MacroFin-Google	0.255	0.254	0.241	0.244	0.238
AR(1)	0.261	0.261	0.262	0.262	0.262	PLS(4)-MacroFin-GoogleReuters	0.254	0.254	0.243	0.246	0.239
AR(4)	0.269	0.269	0.332	0.323	0.323	PLS(4)-MacroFin-Reuters	0.251	0.255	0.241	0.244	0.236
AR(AIC)	0.249	0.249	0.245	0.245	0.245	PLS(5)-MacroFin	0.238	0.234	0.251	0.247	0.241
AutoArima	0.328	0.328	0.328	0.328	0.328	PLS(5)-MacroFin-Google	0.252	0.241	0.254	0.25	0.244
ETS	0.299	0.299	0.299	0.299	0.299	PLS(5)-MacroFin-GoogleReuters	0.256	0.238	0.255	0.25	0.245
BaggedETS	0.223	0.224	0.218	0.2	0.214	PLS(5)-MacroFin-Reuters	0.244	0.23	0.252	0.248	0.242
BATS	0.336	0.336	0.336	0.336	0.336	SPC(1)-MacroFin	0.256	0.25	0.25	0.254	0.249
TBATS	0.336	0.336	0.336	0.336	0.336	SPC(1)-MacroFin-Google	0.257	0.25	0.251	0.254	0.249
NN	0.375	0.379	0.385	0.369	0.362	SPC(1)-MacroFin-GoogleReuters	0.257	0.25	0.251	0.254	0.249
Spline	0.293	0.293	0.293	0.293	0.293	SPC(1)-MacroFin-Reuters	0.256	0.25	0.251	0.254	0.249
THETA	0.25	0.25	0.25	0.25	0.25	SPC(2)-MacroFin	0.25	0.256	0.25	0.253	0.25
Google	0.259	0.25	0.273	0.27	0.27	SPC(2)-MacroFin-Google	0.252	0.256	0.249	0.253	0.25
Google-L1	0.272	0.258	0.276	0.266	0.266	SPC(2)-MacroFin-GoogleReuters	0.251	0.257	0.25	0.252	0.249
Google-L3	0.317	0.309	0.322	0.306	0.305	SPC(2)-MacroFin-Reuters	0.25	0.257	0.251	0.253	0.25
Reuters	0.255	0.255	0.27	0.269	0.268	SPC(3)-MacroFin	0.267	0.253	0.25	0.253	0.249
Reuters-L1	0.275	0.264	0.273	0.272	0.271	SPC(3)-MacroFin-Google	0.267	0.253	0.251	0.253	0.248
Reuters-L3	0.26	0.252	0.33	0.369	0.368	SPC(3)-MacroFin-GoogleReuters	0.267	0.252	0.25	0.253	0.249
DFA(2)-MacroFin	0.247	0.251	0.25	0.252	0.249	SPC(3)-MacroFin-Reuters	0.267	0.253	0.251	0.253	0.249
DFA(2)-MacroFin-Google	0.247	0.251	0.25	0.251	0.248	SPC(4)-MacroFin	0.265	0.246	0.253	0.255	0.251
DFA(2)-MacroFin-GoogleReuters	0.247	0.251	0.25	0.251	0.248	SPC(4)-MacroFin-Google	0.268	0.252	0.252	0.254	0.249
DFA(2)-MacroFin-Reuters	0.247	0.251	0.251	0.252	0.249	SPC(4)-MacroFin-GoogleReuters	0.266	0.248	0.253	0.254	0.249
DFA(3)-MacroFin	0.252	0.239	0.247	0.25	0.246	SPC(4)-MacroFin-Reuters	0.264	0.246	0.254	0.255	0.251
DFA(3)-MacroFin-Google	0.253	0.239	0.247	0.249	0.246	SPC(5)-MacroFin	0.276	0.252	0.244	0.246	0.238
DFA(3)-MacroFin-GoogleReuters	0.253	0.238	0.247	0.25	0.246	SPC(5)-MacroFin-Google	0.284	0.251	0.242	0.244	0.236
DFA(3)-MacroFin-Reuters	0.252	0.238	0.248	0.25	0.247	SPC(5)-MacroFin-GoogleReuters	0.294	0.264	0.243	0.246	0.238
DFA(4)-MacroFin	0.267	0.244	0.248	0.251	0.247	SPC(5)-MacroFin-Reuters	0.286	0.255	0.247	0.244	0.239
DFA(4)-MacroFin-Google	0.271	0.248	0.247	0.249	0.246	LASSO-MacroFin	0.279	0.314	0.258	0.254	0.261
DFA(4)-MacroFin-GoogleReuters	0.269	0.247	0.248	0.25	0.246	LASSO-MacroFin-Google	0.288	0.299	0.293	0.248	0.277
DFA(4)-MacroFin-Reuters	0.264	0.243	0.249	0.251	0.248	LASSO-MacroFin-GoogleReuters	0.238	0.281	0.292	0.264	0.257
DFA(5)-MacroFin	0.273	0.248	0.236	0.238	0.234	LASSO-MacroFin-Reuters	0.253	0.313	0.283	0.26	0.254
DFA(5)-MacroFin-Google	0.276	0.248	0.236	0.237	0.234	EN-MacroFin	0.255	0.289	0.256	0.257	0.273
DFA(5)-MacroFin-GoogleReuters	0.287	0.257	0.238	0.239	0.235	EN-MacroFin-Google	0.272	0.299	0.276	0.268	0.255
DFA(5)-MacroFin-Reuters	0.283	0.252	0.238	0.24	0.236	EN-MacroFin-GoogleReuters	0.276	0.311	0.28	0.253	0.252
PLS(1)-MacroFin	0.268	0.265	0.253	0.257	0.253	EN-MacroFin-Reuters	0.263	0.301	0.274	0.253	0.249
PLS(1)-MacroFin-Google	0.269	0.265	0.253	0.256	0.252	SSlab-MacroFin	0.245	0.252	0.281	0.275	0.266
PLS(1)-MacroFin-GoogleReuters	0.269	0.265	0.252	0.255	0.252	SSlab-MacroFin-Google	0.248	0.253	0.285	0.279	0.271
PLS(1)-MacroFin-Reuters	0.268	0.265	0.253	0.256	0.252	SSlab-MacroFin-GoogleReuters	0.248	0.252	0.289	0.283	0.274
PLS(2)-MacroFin	0.267	0.27	0.249	0.251	0.245	SSlab-MacroFin-Reuters	0.247	0.252	0.283	0.279	0.269
PLS(2)-MacroFin-Google	0.269	0.27	0.25	0.251	0.245	Best1	0.229	0.234	0.254	0.256	0.264
PLS(2)-MacroFin-GoogleReuters	0.269	0.27	0.25	0.252	0.246	Best3	0.254	0.234	0.266	0.263	0.263
PLS(2)-MacroFin-Reuters	0.267	0.27	0.25	0.252	0.246	Best5	0.275	0.24	0.269	0.267	0.27
PLS(3)-MacroFin	0.252	0.262	0.24	0.242	0.235	Best10	0.268	0.26	0.276	0.276	0.274
PLS(3)-MacroFin-Google	0.253	0.261	0.241	0.244	0.237						

Table 44: FR, GDP, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.334	0.334	0.334	0.334	0.334	PLS(3)-MacroFin-GoogleReuters	0.317	0.313	0.316	0.319	0.311
Average(12)	0.301	0.301	0.301	0.301	0.301	PLS(3)-MacroFin-Reuters	0.317	0.314	0.312	0.314	0.306
Average(24)	0.301	0.301	0.301	0.301	0.301	PLS(4)-MacroFin	0.307	0.304	0.311	0.315	0.307
Naive	0.35	0.35	0.35	0.35	0.35	PLS(4)-MacroFin-Google	0.31	0.301	0.316	0.32	0.312
AR(1)	0.32	0.32	0.323	0.323	0.323	PLS(4)-MacroFin-GoogleReuters	0.31	0.301	0.317	0.321	0.313
AR(4)	0.338	0.338	0.354	0.343	0.343	PLS(4)-MacroFin-Reuters	0.306	0.304	0.313	0.316	0.308
AR(AIC)	0.315	0.315	0.303	0.304	0.304	PLS(5)-MacroFin	0.32	0.288	0.321	0.316	0.31
AutoArima	0.348	0.348	0.348	0.348	0.348	PLS(5)-MacroFin-Google	0.33	0.291	0.327	0.322	0.316
ETS	0.329	0.329	0.329	0.329	0.329	PLS(5)-MacroFin-GoogleReuters	0.337	0.29	0.328	0.322	0.316
BaggedETS	0.267	0.266	0.269	0.253	0.26	PLS(5)-MacroFin-Reuters	0.329	0.287	0.322	0.317	0.311
BATS	0.361	0.361	0.361	0.361	0.361	SPC(1)-MacroFin	0.323	0.312	0.318	0.323	0.316
TBATS	0.361	0.361	0.361	0.361	0.361	SPC(1)-MacroFin-Google	0.323	0.312	0.317	0.322	0.315
NN	0.52	0.541	0.55	0.5	0.486	SPC(1)-MacroFin-GoogleReuters	0.323	0.312	0.318	0.322	0.315
Spline	0.341	0.341	0.341	0.341	0.341	SPC(1)-MacroFin-Reuters	0.322	0.312	0.319	0.322	0.315
THETA	0.301	0.301	0.301	0.301	0.301	SPC(2)-MacroFin	0.313	0.311	0.304	0.309	0.304
Google	0.314	0.298	0.324	0.319	0.319	SPC(2)-MacroFin-Google	0.315	0.31	0.302	0.307	0.302
Google-L1	0.33	0.313	0.328	0.315	0.315	SPC(2)-MacroFin-GoogleReuters	0.314	0.31	0.302	0.306	0.302
Google-L3	0.378	0.367	0.358	0.336	0.336	SPC(2)-MacroFin-Reuters	0.313	0.311	0.305	0.309	0.304
Reuters	0.328	0.327	0.326	0.325	0.324	SPC(3)-MacroFin	0.345	0.329	0.309	0.312	0.307
Reuters-L1	0.34	0.328	0.331	0.329	0.328	SPC(3)-MacroFin-Google	0.346	0.328	0.308	0.311	0.305
Reuters-L3	0.332	0.325	0.367	0.41	0.409	SPC(3)-MacroFin-GoogleReuters	0.345	0.326	0.307	0.31	0.305
DFA(2)-MacroFin	0.314	0.308	0.307	0.309	0.305	SPC(3)-MacroFin-Reuters	0.345	0.328	0.308	0.312	0.306
DFA(2)-MacroFin-Google	0.314	0.308	0.306	0.307	0.303	SPC(4)-MacroFin	0.352	0.331	0.311	0.314	0.309
DFA(2)-MacroFin-GoogleReuters	0.314	0.308	0.306	0.307	0.303	SPC(4)-MacroFin-Google	0.354	0.337	0.31	0.312	0.306
DFA(2)-MacroFin-Reuters	0.314	0.308	0.307	0.309	0.304	SPC(4)-MacroFin-GoogleReuters	0.354	0.334	0.309	0.312	0.303
DFA(3)-MacroFin	0.338	0.318	0.306	0.309	0.305	SPC(4)-MacroFin-Reuters	0.352	0.333	0.312	0.314	0.308
DFA(3)-MacroFin-Google	0.338	0.318	0.305	0.308	0.304	SPC(5)-MacroFin	0.365	0.337	0.311	0.313	0.305
DFA(3)-MacroFin-GoogleReuters	0.337	0.318	0.305	0.308	0.304	SPC(5)-MacroFin-Google	0.372	0.336	0.31	0.31	0.302
DFA(3)-MacroFin-Reuters	0.337	0.318	0.306	0.309	0.305	SPC(5)-MacroFin-GoogleReuters	0.404	0.355	0.309	0.314	0.304
DFA(4)-MacroFin	0.355	0.332	0.303	0.307	0.302	SPC(5)-MacroFin-Reuters	0.398	0.343	0.313	0.315	0.307
DFA(4)-MacroFin-Google	0.359	0.336	0.302	0.305	0.3	LASSO-MacroFin	0.363	0.377	0.362	0.327	0.338
DFA(4)-MacroFin-GoogleReuters	0.357	0.335	0.302	0.305	0.3	LASSO-MacroFin-Google	0.376	0.372	0.38	0.325	0.345
DFA(4)-MacroFin-Reuters	0.352	0.331	0.303	0.307	0.302	LASSO-MacroFin-GoogleReuters	0.308	0.37	0.366	0.336	0.328
DFA(5)-MacroFin	0.366	0.341	0.301	0.303	0.299	LASSO-MacroFin-Reuters	0.328	0.382	0.359	0.33	0.332
DFA(5)-MacroFin-Google	0.367	0.34	0.301	0.302	0.297	EN-MacroFin	0.326	0.35	0.348	0.326	0.346
DFA(5)-MacroFin-GoogleReuters	0.385	0.352	0.303	0.304	0.3	EN-MacroFin-Google	0.332	0.386	0.352	0.348	0.328
DFA(5)-MacroFin-Reuters	0.387	0.348	0.305	0.307	0.302	EN-MacroFin-GoogleReuters	0.374	0.374	0.365	0.321	0.327
PLS(1)-MacroFin	0.329	0.32	0.332	0.337	0.332	EN-MacroFin-Reuters	0.347	0.37	0.345	0.319	0.321
PLS(1)-MacroFin-Google	0.328	0.318	0.33	0.335	0.33	SSlab-MacroFin	0.304	0.312	0.34	0.33	0.322
PLS(1)-MacroFin-GoogleReuters	0.328	0.318	0.331	0.335	0.33	SSlab-MacroFin-Google	0.309	0.311	0.346	0.334	0.322
PLS(1)-MacroFin-Reuters	0.329	0.32	0.332	0.337	0.332	SSlab-MacroFin-GoogleReuters	0.308	0.309	0.351	0.343	0.332
PLS(2)-MacroFin	0.325	0.32	0.315	0.317	0.309	SSlab-MacroFin-Reuters	0.309	0.311	0.344	0.334	0.324
PLS(2)-MacroFin-Google	0.327	0.32	0.315	0.317	0.309	Best1	0.271	0.285	0.289	0.294	0.3
PLS(2)-MacroFin-GoogleReuters	0.327	0.319	0.315	0.317	0.309	Best3	0.311	0.292	0.321	0.317	0.317
PLS(2)-MacroFin-Reuters	0.325	0.32	0.315	0.317	0.309	Best5	0.33	0.303	0.323	0.32	0.326
PLS(3)-MacroFin	0.317	0.313	0.312	0.314	0.306	Best10	0.326	0.316	0.333	0.332	0.33
PLS(3)-MacroFin-Google	0.317	0.312	0.316	0.319	0.311						

Table 45: FR, GDP, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.18	0.18	0.29	0.31	0.31	PLS(3)-MacroFin-GoogleReuters	0.88	0.6	0.82	0.9	0.7
Average(12)	0.07	0.07	0.06	0.05	0.05	PLS(3)-MacroFin-Reuters	0.84	0.62	0.69	0.74	0.56
Average(24)	0.04	0.04	0.04	0.03	0.03	PLS(4)-MacroFin	0.41	0.34	0.7	0.77	0.6
Naive	0.01	0.01	0.01	0.01	0.01	PLS(4)-MacroFin-Google	0.56	0.36	0.82	0.92	0.73
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.54	0.35	0.85	0.96	0.75
AR(4)	0.01	0.01	0.43	0.63	0.63	PLS(4)-MacroFin-Reuters	0.39	0.32	0.73	0.8	0.62
AR(AIC)	0.43	0.43	0.56	0.57	0.57	PLS(5)-MacroFin	1	0.13	0.95	0.79	0.65
AutoArima	0.45	0.45	0.5	0.51	0.51	PLS(5)-MacroFin-Google	0.81	0.28	0.87	0.96	0.82
ETS	0.85	0.85	0.9	0.9	0.9	PLS(5)-MacroFin-GoogleReuters	0.71	0.28	0.85	0.98	0.84
BaggedETS	0.08	0.08	0.04	0.03	0.03	PLS(5)-MacroFin-Reuters	0.82	0.12	0.98	0.82	0.68
BATS	0.12	0.12	0.14	0.15	0.15	SPC(1)-MacroFin	0.86	0.5	0.8	1	0.7
TBATS	0.12	0.12	0.14	0.15	0.15	SPC(1)-MacroFin-Google	0.85	0.51	0.76	0.95	0.66
NN	0.36	0.37	0.36	0.37	0.38	SPC(1)-MacroFin-GoogleReuters	0.87	0.49	0.79	0.96	0.64
Spline	0.77	0.77	0.8	0.81	0.81	SPC(1)-MacroFin-Reuters	0.9	0.49	0.85	0.95	0.67
THETA	0.01	0.01	0.01	0.01	0.01	SPC(2)-MacroFin	0.68	0.49	0.29	0.41	0.31
Google	0.65	0.31	0.95	0.85	0.85	SPC(2)-MacroFin-Google	0.78	0.5	0.28	0.35	0.28
Google-L1	0.59	0.8	0.73	0.63	0.61	SPC(2)-MacroFin-GoogleReuters	0.75	0.51	0.28	0.36	0.27
Google-L3	0.02	0.01	0.6	0.85	0.86	SPC(2)-MacroFin-Reuters	0.71	0.5	0.31	0.4	0.28
Reuters	0.33	0.32	0.77	0.85	0.91	SPC(3)-MacroFin	0.49	0.74	0.42	0.52	0.38
Reuters-L1	0.26	0.57	0.49	0.61	0.66	SPC(3)-MacroFin-Google	0.49	0.76	0.43	0.5	0.37
Reuters-L3	0.69	0.87	0.56	0.23	0.23	SPC(3)-MacroFin-GoogleReuters	0.49	0.8	0.4	0.47	0.36
DFA(2)-MacroFin	0.73	0.37	0.38	0.41	0.33	SPC(3)-MacroFin-Reuters	0.48	0.75	0.4	0.49	0.36
DFA(2)-MacroFin-Google	0.74	0.37	0.38	0.4	0.32	SPC(4)-MacroFin	0.48	0.74	0.49	0.57	0.44
DFA(2)-MacroFin-GoogleReuters	0.73	0.37	0.37	0.39	0.32	SPC(4)-MacroFin-Google	0.47	0.63	0.5	0.53	0.37
DFA(2)-MacroFin-Reuters	0.71	0.37	0.37	0.41	0.32	SPC(4)-MacroFin-GoogleReuters	0.48	0.69	0.44	0.51	0.32
DFA(3)-MacroFin	0.65	0.94	0.33	0.4	0.3	SPC(4)-MacroFin-Reuters	0.48	0.69	0.51	0.57	0.41
DFA(3)-MacroFin-Google	0.65	0.96	0.34	0.4	0.3	SPC(5)-MacroFin	0.33	0.62	0.46	0.54	0.35
DFA(3)-MacroFin-GoogleReuters	0.66	0.94	0.33	0.39	0.3	SPC(5)-MacroFin-Google	0.31	0.65	0.44	0.46	0.3
DFA(3)-MacroFin-Reuters	0.66	0.93	0.32	0.39	0.3	SPC(5)-MacroFin-GoogleReuters	0.25	0.43	0.44	0.6	0.29
DFA(4)-MacroFin	0.49	0.74	0.22	0.27	0.19	SPC(5)-MacroFin-Reuters	0.26	0.52	0.62	0.63	0.44
DFA(4)-MacroFin-Google	0.46	0.68	0.2	0.24	0.17	LASSO-MacroFin	0.2	0.11	0.5	0.93	0.69
DFA(4)-MacroFin-GoogleReuters	0.48	0.69	0.2	0.23	0.17	LASSO-MacroFin-Google	0.2	0.13	0.15	0.95	0.56
DFA(4)-MacroFin-Reuters	0.52	0.76	0.22	0.27	0.19	LASSO-MacroFin-GoogleReuters	0.03	0.19	0.35	0.75	0.9
DFA(5)-MacroFin	0.38	0.59	0.19	0.21	0.16	LASSO-MacroFin-Reuters	0.74	0.09	0.48	0.86	0.86
DFA(5)-MacroFin-Google	0.38	0.61	0.17	0.18	0.14	EN-MacroFin	0.71	0.22	0.55	0.94	0.46
DFA(5)-MacroFin-GoogleReuters	0.3	0.48	0.22	0.23	0.18	EN-MacroFin-Google	0.55	0.11	0.52	0.45	0.89
DFA(5)-MacroFin-Reuters	0.3	0.51	0.29	0.31	0.24	EN-MacroFin-GoogleReuters	0.34	0.07	0.35	0.97	0.92
PLS(1)-MacroFin	0.62	0.97	0.69	0.56	0.71	EN-MacroFin-Reuters	0.31	0.09	0.52	0.92	0.97
PLS(1)-MacroFin-Google	0.63	0.9	0.74	0.61	0.77	SSlab-MacroFin	0.1	0.21	0.42	0.75	0.97
PLS(1)-MacroFin-GoogleReuters	0.62	0.9	0.73	0.6	0.77	SSlab-MacroFin-Google	0.13	0.25	0.38	0.51	0.97
PLS(1)-MacroFin-Reuters	0.61	0.98	0.69	0.56	0.71	SSlab-MacroFin-GoogleReuters	0.09	0.07	0.32	0.38	0.68
PLS(2)-MacroFin	0.78	0.99	0.7	0.76	0.5	SSlab-MacroFin-Reuters	0.07	0.22	0.45	0.56	0.96
PLS(2)-MacroFin-Google	0.72	0.98	0.72	0.78	0.52	Best1	0.11	0.22	0.27	0.37	0.42
PLS(2)-MacroFin-GoogleReuters	0.74	0.97	0.71	0.77	0.51	Best3	0.64	0.11	0.94	0.83	0.82
PLS(2)-MacroFin-Reuters	0.8	0.99	0.68	0.75	0.48	Best5	0.6	0.29	0.98	0.92	0.9
PLS(3)-MacroFin	0.86	0.62	0.7	0.75	0.57	Best10	0.6	0.74	0.64	0.7	0.76
PLS(3)-MacroFin-Google	0.89	0.6	0.82	0.9	0.71						

Table 46: FR, GDP, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.181	0.181	0.181	0.181	0.181	PLS(3)-MacroFin-GoogleReuters	0.259	0.252	0.255	0.246	0.247
Average(12)	0.177	0.177	0.177	0.177	0.177	PLS(3)-MacroFin-Reuters	0.257	0.25	0.255	0.246	0.246
Average(24)	0.189	0.189	0.189	0.189	0.189	PLS(4)-MacroFin	0.256	0.25	0.246	0.238	0.238
Naive	0.208	0.208	0.208	0.208	0.208	PLS(4)-MacroFin-Google	0.262	0.25	0.25	0.245	0.245
AR(1)	0.265	0.265	0.264	0.264	0.264	PLS(4)-MacroFin-GoogleReuters	0.257	0.25	0.251	0.246	0.246
AR(4)	0.226	0.226	0.183	0.166	0.166	PLS(4)-MacroFin-Reuters	0.251	0.248	0.246	0.239	0.239
AR(AIC)	0.233	0.233	0.249	0.237	0.237	PLS(5)-MacroFin	0.257	0.241	0.232	0.221	0.221
AutoArima	0.164	0.164	0.164	0.164	0.164	PLS(5)-MacroFin-Google	0.273	0.251	0.245	0.229	0.229
ETS	0.156	0.156	0.156	0.156	0.156	PLS(5)-MacroFin-GoogleReuters	0.276	0.255	0.243	0.227	0.227
BaggedETS	0.16	0.16	0.157	0.139	0.133	PLS(5)-MacroFin-Reuters	0.261	0.246	0.231	0.219	0.219
BATS	0.234	0.234	0.234	0.234	0.234	SPC(1)-MacroFin	0.248	0.245	0.245	0.24	0.242
TBATS	0.234	0.234	0.234	0.234	0.234	SPC(1)-MacroFin-Google	0.251	0.246	0.245	0.241	0.243
NN	0.217	0.214	0.205	0.215	0.192	SPC(1)-MacroFin-GoogleReuters	0.25	0.245	0.245	0.241	0.242
Spline	0.187	0.187	0.187	0.187	0.187	SPC(1)-MacroFin-Reuters	0.249	0.245	0.244	0.241	0.242
THETA	0.318	0.318	0.318	0.318	0.318	SPC(2)-MacroFin	0.255	0.254	0.254	0.241	0.241
Google	0.279	0.288	0.353	0.364	0.368	SPC(2)-MacroFin-Google	0.256	0.256	0.254	0.243	0.242
Google-L1	0.318	0.334	0.412	0.415	0.42	SPC(2)-MacroFin-GoogleReuters	0.255	0.255	0.254	0.244	0.243
Google-L3	0.274	0.251	0.23	0.213	0.217	SPC(2)-MacroFin-Reuters	0.256	0.259	0.252	0.242	0.241
Reuters	0.262	0.261	0.264	0.264	0.264	SPC(3)-MacroFin	0.293	0.283	0.271	0.275	0.27
Reuters-L1	0.263	0.26	0.239	0.247	0.245	SPC(3)-MacroFin-Google	0.303	0.287	0.287	0.284	0.285
Reuters-L3	0.19	0.19	0.182	0.166	0.166	SPC(3)-MacroFin-GoogleReuters	0.305	0.287	0.283	0.279	0.279
DFA(2)-MacroFin	0.265	0.259	0.258	0.246	0.247	SPC(3)-MacroFin-Reuters	0.292	0.28	0.277	0.274	0.269
DFA(2)-MacroFin-Google	0.266	0.26	0.259	0.247	0.247	SPC(4)-MacroFin	0.272	0.247	0.239	0.26	0.255
DFA(2)-MacroFin-GoogleReuters	0.266	0.26	0.259	0.247	0.247	SPC(4)-MacroFin-Google	0.278	0.251	0.265	0.287	0.268
DFA(2)-MacroFin-Reuters	0.265	0.259	0.258	0.247	0.247	SPC(4)-MacroFin-GoogleReuters	0.279	0.258	0.242	0.267	0.254
DFA(3)-MacroFin	0.316	0.3	0.291	0.287	0.285	SPC(4)-MacroFin-Reuters	0.27	0.255	0.25	0.264	0.24
DFA(3)-MacroFin-Google	0.319	0.303	0.298	0.294	0.292	SPC(5)-MacroFin	0.24	0.235	0.253	0.274	0.264
DFA(3)-MacroFin-GoogleReuters	0.319	0.303	0.299	0.295	0.293	SPC(5)-MacroFin-Google	0.241	0.234	0.262	0.283	0.283
DFA(3)-MacroFin-Reuters	0.316	0.3	0.292	0.288	0.285	SPC(5)-MacroFin-GoogleReuters	0.241	0.234	0.257	0.281	0.277
DFA(4)-MacroFin	0.298	0.262	0.25	0.264	0.25	SPC(5)-MacroFin-Reuters	0.241	0.236	0.247	0.269	0.273
DFA(4)-MacroFin-Google	0.302	0.263	0.243	0.257	0.237	LASSO-MacroFin	0.262	0.262	0.27	0.251	0.262
DFA(4)-MacroFin-GoogleReuters	0.299	0.263	0.242	0.256	0.235	LASSO-MacroFin-Google	0.26	0.262	0.265	0.268	0.263
DFA(4)-MacroFin-Reuters	0.296	0.259	0.254	0.268	0.254	LASSO-MacroFin-GoogleReuters	0.261	0.262	0.265	0.262	0.262
DFA(5)-MacroFin	0.237	0.244	0.25	0.268	0.263	LASSO-MacroFin-Reuters	0.262	0.261	0.278	0.252	0.242
DFA(5)-MacroFin-Google	0.24	0.244	0.256	0.276	0.272	EN-MacroFin	0.262	0.262	0.268	0.251	0.262
DFA(5)-MacroFin-GoogleReuters	0.239	0.244	0.256	0.276	0.272	EN-MacroFin-Google	0.25	0.262	0.262	0.265	0.262
DFA(5)-MacroFin-Reuters	0.237	0.244	0.249	0.268	0.263	EN-MacroFin-GoogleReuters	0.261	0.262	0.269	0.292	0.264
PLS(1)-MacroFin	0.253	0.244	0.241	0.242	0.244	EN-MacroFin-Reuters	0.261	0.262	0.265	0.262	0.273
PLS(1)-MacroFin-Google	0.255	0.247	0.242	0.244	0.245	SSlab-MacroFin	0.256	0.256	0.26	0.262	0.261
PLS(1)-MacroFin-GoogleReuters	0.256	0.248	0.242	0.243	0.245	SSlab-MacroFin-Google	0.255	0.256	0.261	0.262	0.263
PLS(1)-MacroFin-Reuters	0.254	0.245	0.241	0.242	0.243	SSlab-MacroFin-GoogleReuters	0.255	0.256	0.261	0.262	0.263
PLS(2)-MacroFin	0.255	0.247	0.237	0.236	0.237	SSlab-MacroFin-Reuters	0.254	0.256	0.26	0.261	0.261
PLS(2)-MacroFin-Google	0.257	0.25	0.239	0.237	0.239	Best1	0.206	0.187	0.195	0.159	0.167
PLS(2)-MacroFin-GoogleReuters	0.258	0.25	0.239	0.237	0.239	Best3	0.196	0.186	0.189	0.17	0.171
PLS(2)-MacroFin-Reuters	0.256	0.248	0.237	0.236	0.237	Best5	0.196	0.185	0.186	0.179	0.178
PLS(3)-MacroFin	0.256	0.248	0.255	0.246	0.246	Best10	0.2	0.198	0.196	0.19	0.19
PLS(3)-MacroFin-Google	0.258	0.251	0.255	0.246	0.247						

Table 47: IT, GDP, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.208	0.208	0.208	0.208	0.208	PLS(3)-MacroFin-GoogleReuters	0.294	0.292	0.296	0.285	0.286
Average(12)	0.2	0.2	0.2	0.2	0.2	PLS(3)-MacroFin-Reuters	0.292	0.29	0.296	0.284	0.285
Average(24)	0.217	0.217	0.217	0.217	0.217	PLS(4)-MacroFin	0.304	0.295	0.29	0.28	0.28
Naive	0.236	0.236	0.236	0.236	0.236	PLS(4)-MacroFin-Google	0.306	0.296	0.291	0.284	0.284
AR(1)	0.303	0.303	0.303	0.303	0.303	PLS(4)-MacroFin-GoogleReuters	0.304	0.295	0.293	0.286	0.286
AR(4)	0.257	0.257	0.225	0.199	0.199	PLS(4)-MacroFin-Reuters	0.302	0.293	0.291	0.282	0.282
AR(AIC)	0.266	0.266	0.298	0.284	0.284	PLS(5)-MacroFin	0.319	0.288	0.276	0.265	0.264
AutoArima	0.206	0.206	0.206	0.206	0.206	PLS(5)-MacroFin-Google	0.327	0.304	0.286	0.269	0.269
ETS	0.192	0.192	0.192	0.192	0.192	PLS(5)-MacroFin-GoogleReuters	0.328	0.307	0.286	0.268	0.268
BaggedETS	0.198	0.198	0.188	0.173	0.158	PLS(5)-MacroFin-Reuters	0.321	0.293	0.276	0.264	0.263
BATS	0.288	0.288	0.288	0.288	0.288	SPC(1)-MacroFin	0.292	0.286	0.286	0.28	0.281
TBATS	0.288	0.288	0.288	0.288	0.288	SPC(1)-MacroFin-Google	0.294	0.287	0.286	0.28	0.282
NN	0.243	0.244	0.239	0.247	0.221	SPC(1)-MacroFin-GoogleReuters	0.293	0.287	0.286	0.28	0.282
Spline	0.239	0.239	0.239	0.239	0.239	SPC(1)-MacroFin-Reuters	0.292	0.286	0.286	0.281	0.282
THETA	0.351	0.351	0.351	0.351	0.351	SPC(2)-MacroFin	0.3	0.3	0.301	0.279	0.28
Google	0.309	0.32	0.391	0.403	0.409	SPC(2)-MacroFin-Google	0.298	0.301	0.301	0.282	0.281
Google-L1	0.39	0.406	0.466	0.47	0.476	SPC(2)-MacroFin-GoogleReuters	0.297	0.299	0.301	0.282	0.282
Google-L3	0.315	0.29	0.3	0.283	0.286	SPC(2)-MacroFin-Reuters	0.302	0.301	0.297	0.281	0.281
Reuters	0.298	0.298	0.301	0.301	0.301	SPC(3)-MacroFin	0.337	0.324	0.304	0.307	0.302
Reuters-L1	0.295	0.294	0.275	0.288	0.286	SPC(3)-MacroFin-Google	0.344	0.326	0.323	0.317	0.318
Reuters-L3	0.229	0.229	0.212	0.188	0.187	SPC(3)-MacroFin-GoogleReuters	0.348	0.325	0.317	0.312	0.311
DFA(2)-MacroFin	0.316	0.304	0.303	0.284	0.284	SPC(3)-MacroFin-Reuters	0.335	0.32	0.311	0.308	0.303
DFA(2)-MacroFin-Google	0.315	0.305	0.304	0.284	0.285	SPC(4)-MacroFin	0.315	0.287	0.293	0.315	0.314
DFA(2)-MacroFin-GoogleReuters	0.315	0.305	0.304	0.284	0.285	SPC(4)-MacroFin-Google	0.317	0.298	0.319	0.341	0.316
DFA(2)-MacroFin-Reuters	0.316	0.304	0.303	0.284	0.285	SPC(4)-MacroFin-GoogleReuters	0.318	0.302	0.295	0.332	0.309
DFA(3)-MacroFin	0.354	0.335	0.326	0.319	0.316	SPC(4)-MacroFin-Reuters	0.314	0.296	0.297	0.316	0.291
DFA(3)-MacroFin-Google	0.356	0.337	0.333	0.327	0.324	SPC(5)-MacroFin	0.278	0.283	0.299	0.324	0.315
DFA(3)-MacroFin-GoogleReuters	0.356	0.338	0.334	0.328	0.325	SPC(5)-MacroFin-Google	0.277	0.281	0.311	0.335	0.337
DFA(3)-MacroFin-Reuters	0.354	0.335	0.327	0.32	0.317	SPC(5)-MacroFin-GoogleReuters	0.279	0.283	0.303	0.335	0.331
DFA(4)-MacroFin	0.336	0.304	0.312	0.33	0.312	SPC(5)-MacroFin-Reuters	0.28	0.28	0.29	0.319	0.32
DFA(4)-MacroFin-Google	0.34	0.311	0.3	0.321	0.294	LASSO-MacroFin	0.301	0.301	0.298	0.297	0.301
DFA(4)-MacroFin-GoogleReuters	0.337	0.308	0.302	0.323	0.294	LASSO-MacroFin-Google	0.299	0.301	0.305	0.304	0.301
DFA(4)-MacroFin-Reuters	0.334	0.298	0.315	0.333	0.316	LASSO-MacroFin-GoogleReuters	0.3	0.301	0.305	0.301	0.301
DFA(5)-MacroFin	0.275	0.297	0.3	0.323	0.317	LASSO-MacroFin-Reuters	0.301	0.299	0.305	0.298	0.284
DFA(5)-MacroFin-Google	0.277	0.297	0.308	0.332	0.326	EN-MacroFin	0.301	0.301	0.306	0.296	0.301
DFA(5)-MacroFin-GoogleReuters	0.276	0.297	0.307	0.332	0.326	EN-MacroFin-Google	0.285	0.301	0.301	0.305	0.301
DFA(5)-MacroFin-Reuters	0.275	0.297	0.3	0.323	0.316	EN-MacroFin-GoogleReuters	0.301	0.301	0.304	0.363	0.302
PLS(1)-MacroFin	0.29	0.286	0.283	0.286	0.288	EN-MacroFin-Reuters	0.301	0.301	0.304	0.301	0.304
PLS(1)-MacroFin-Google	0.292	0.288	0.284	0.287	0.289	SSlab-MacroFin	0.294	0.294	0.299	0.301	0.301
PLS(1)-MacroFin-GoogleReuters	0.293	0.289	0.284	0.287	0.289	SSlab-MacroFin-Google	0.293	0.294	0.299	0.302	0.302
PLS(1)-MacroFin-Reuters	0.291	0.287	0.283	0.286	0.288	SSlab-MacroFin-GoogleReuters	0.293	0.294	0.3	0.302	0.303
PLS(2)-MacroFin	0.292	0.288	0.281	0.278	0.28	SSlab-MacroFin-Reuters	0.292	0.294	0.299	0.301	0.3
PLS(2)-MacroFin-Google	0.295	0.29	0.281	0.278	0.281	Best1	0.261	0.232	0.224	0.204	0.212
PLS(2)-MacroFin-GoogleReuters	0.295	0.291	0.282	0.278	0.281	Best3	0.231	0.224	0.226	0.211	0.207
PLS(2)-MacroFin-Reuters	0.293	0.289	0.281	0.278	0.28	Best5	0.237	0.22	0.218	0.212	0.21
PLS(3)-MacroFin	0.291	0.289	0.295	0.283	0.284	Best10	0.24	0.24	0.231	0.223	0.22
PLS(3)-MacroFin-Google	0.293	0.291	0.296	0.284	0.284						

Table 48: IT, GDP, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0	0	0	0	0	PLS(3)-MacroFin-GoogleReuters	0.45	0.35	0.69	0.4	0.41
Average(12)	0	0	0	0	0	PLS(3)-MacroFin-Reuters	0.35	0.27	0.67	0.38	0.39
Average(24)	0	0	0	0	0	PLS(4)-MacroFin	0.98	0.53	0.38	0.27	0.27
Naive	0	0	0	0	0	PLS(4)-MacroFin-Google	0.94	0.62	0.5	0.38	0.38
AR(1)						PLS(4)-MacroFin-GoogleReuters	0.99	0.56	0.57	0.44	0.44
AR(4)	0	0	0.02	0.02	0.02	PLS(4)-MacroFin-Reuters	0.96	0.47	0.47	0.32	0.33
AR(AIC)	0	0	0.93	0.72	0.72	PLS(5)-MacroFin	0.76	0.59	0.16	0.18	0.18
AutoArima	0.05	0.05	0.06	0.06	0.06	PLS(5)-MacroFin-Google	0.64	0.99	0.33	0.26	0.26
ETS	0.03	0.03	0.03	0.03	0.03	PLS(5)-MacroFin-GoogleReuters	0.62	0.9	0.33	0.25	0.25
BaggedETS	0.01	0.02	0.01	0	0	PLS(5)-MacroFin-Reuters	0.73	0.71	0.16	0.18	0.18
BATS	0.78	0.78	0.79	0.79	0.79	SPC(1)-MacroFin	0.5	0.34	0.25	0.16	0.17
TBATS	0.78	0.78	0.79	0.79	0.79	SPC(1)-MacroFin-Google	0.59	0.35	0.26	0.17	0.21
NN	0.12	0.12	0.1	0.15	0.04	SPC(1)-MacroFin-GoogleReuters	0.56	0.34	0.24	0.18	0.19
Spline	0.27	0.27	0.27	0.27	0.27	SPC(1)-MacroFin-Reuters	0.51	0.34	0.24	0.18	0.18
THETA	0	0	0	0	0	SPC(2)-MacroFin	0.88	0.85	0.93	0.21	0.19
Google	0.83	0.36	0.1	0.05	0.04	SPC(2)-MacroFin-Google	0.8	0.91	0.93	0.27	0.21
Google-L1	0.29	0.21	0.05	0.04	0.04	SPC(2)-MacroFin-GoogleReuters	0.78	0.83	0.91	0.27	0.24
Google-L3	0.69	0.61	0.97	0.77	0.8	SPC(2)-MacroFin-Reuters	0.94	0.9	0.76	0.22	0.2
Reuters	0.42	0.46	0.47	0.45	0.49	SPC(3)-MacroFin	0.33	0.43	0.92	0.8	0.98
Reuters-L1	0.46	0.47	0.3	0.58	0.51	SPC(3)-MacroFin-Google	0.25	0.41	0.37	0.48	0.49
Reuters-L3	0.01	0.01	0	0.01	0.01	SPC(3)-MacroFin-GoogleReuters	0.22	0.42	0.48	0.67	0.67
DFA(2)-MacroFin	0.63	0.99	0.99	0.31	0.32	SPC(3)-MacroFin-Reuters	0.34	0.53	0.65	0.79	1
DFA(2)-MacroFin-Google	0.64	0.96	0.94	0.32	0.32	SPC(4)-MacroFin	0.76	0.63	0.82	0.74	0.76
DFA(2)-MacroFin-GoogleReuters	0.65	0.95	0.94	0.32	0.33	SPC(4)-MacroFin-Google	0.73	0.88	0.74	0.32	0.78
DFA(2)-MacroFin-Reuters	0.63	0.98	0.99	0.31	0.32	SPC(4)-MacroFin-GoogleReuters	0.7	0.96	0.85	0.55	0.9
DFA(3)-MacroFin	0.13	0.25	0.27	0.42	0.52	SPC(4)-MacroFin-Reuters	0.77	0.82	0.91	0.72	0.8
DFA(3)-MacroFin-Google	0.11	0.22	0.2	0.29	0.36	SPC(5)-MacroFin	0.44	0.56	0.92	0.53	0.72
DFA(3)-MacroFin-GoogleReuters	0.11	0.21	0.2	0.28	0.35	SPC(5)-MacroFin-Google	0.44	0.52	0.86	0.42	0.42
DFA(3)-MacroFin-Reuters	0.13	0.25	0.26	0.4	0.51	SPC(5)-MacroFin-GoogleReuters	0.49	0.54	0.99	0.43	0.49
DFA(4)-MacroFin	0.33	0.98	0.84	0.52	0.85	SPC(5)-MacroFin-Reuters	0.47	0.51	0.76	0.64	0.59
DFA(4)-MacroFin-Google	0.3	0.84	0.94	0.57	0.8	LASSO-MacroFin	0	0	0.54	0.18	0
DFA(4)-MacroFin-GoogleReuters	0.34	0.91	0.98	0.57	0.83	LASSO-MacroFin-Google	0.09	0	0.59	0.6	0
DFA(4)-MacroFin-Reuters	0.36	0.88	0.8	0.5	0.79	LASSO-MacroFin-GoogleReuters	0.01	0	0.59	0	0
DFA(5)-MacroFin	0.35	0.86	0.95	0.52	0.67	LASSO-MacroFin-Reuters	0	0.03	0.54	0.18	0.3
DFA(5)-MacroFin-Google	0.39	0.86	0.91	0.42	0.52	EN-MacroFin	0	0	0.42	0.53	0
DFA(5)-MacroFin-GoogleReuters	0.37	0.86	0.92	0.42	0.53	EN-MacroFin-Google	0.27	0	0	0.55	0
DFA(5)-MacroFin-Reuters	0.34	0.86	0.95	0.53	0.67	EN-MacroFin-GoogleReuters	0	0	0.62	0.41	0.25
PLS(1)-MacroFin	0.17	0.14	0.2	0.26	0.32	EN-MacroFin-Reuters	0	0	0.6	0	0.66
PLS(1)-MacroFin-Google	0.26	0.18	0.22	0.29	0.35	SSlab-MacroFin	0.01	0.01	0.33	0.08	0.11
PLS(1)-MacroFin-GoogleReuters	0.28	0.19	0.21	0.28	0.34	SSlab-MacroFin-Google	0.01	0.01	0.39	0.34	0.84
PLS(1)-MacroFin-Reuters	0.19	0.14	0.19	0.25	0.31	SSlab-MacroFin-GoogleReuters	0.01	0.01	0.37	0.52	0.99
PLS(2)-MacroFin	0.28	0.19	0.2	0.17	0.19	SSlab-MacroFin-Reuters	0	0.01	0.34	0.05	0.01
PLS(2)-MacroFin-Google	0.4	0.26	0.23	0.18	0.22	Best1	0.41	0.05	0.01	0.01	0.04
PLS(2)-MacroFin-GoogleReuters	0.43	0.28	0.23	0.19	0.22	Best3	0.04	0.02	0	0.01	0.01
PLS(2)-MacroFin-Reuters	0.3	0.21	0.2	0.17	0.2	Best5	0.07	0.01	0	0.01	0.01
PLS(3)-MacroFin	0.31	0.24	0.61	0.35	0.35	Best10	0.04	0.01	0.01	0.01	0.01
PLS(3)-MacroFin-Google	0.4	0.32	0.63	0.37	0.37						

Table 49: IT, GDP, DM

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.486	0.486	0.486	0.486	0.486	PLS(3)-MacroFin-GoogleReuters	0.445	0.448	0.543	0.549	0.547
Average(12)	0.428	0.428	0.428	0.428	0.428	PLS(3)-MacroFin-Reuters	0.451	0.454	0.544	0.551	0.549
Average(24)	0.432	0.432	0.432	0.432	0.432	PLS(4)-MacroFin	0.429	0.43	0.504	0.512	0.516
Naive	0.642	0.642	0.642	0.642	0.642	PLS(4)-MacroFin-Google	0.422	0.425	0.502	0.509	0.513
AR(1)	0.565	0.565	0.573	0.574	0.574	PLS(4)-MacroFin-GoogleReuters	0.418	0.426	0.509	0.512	0.517
AR(4)	0.624	0.624	0.353	0.324	0.324	PLS(4)-MacroFin-Reuters	0.427	0.431	0.513	0.517	0.522
AR(AIC)	0.579	0.579	0.347	0.303	0.303	PLS(5)-MacroFin	0.466	0.457	0.504	0.512	0.516
AutoArima	0.326	0.326	0.326	0.326	0.326	PLS(5)-MacroFin-Google	0.46	0.453	0.503	0.509	0.513
ETS	0.251	0.251	0.251	0.251	0.251	PLS(5)-MacroFin-GoogleReuters	0.459	0.456	0.507	0.509	0.514
BaggedETS	0.281	0.287	0.285	0.288	0.254	PLS(5)-MacroFin-Reuters	0.467	0.461	0.51	0.514	0.519
BATS	0.334	0.334	0.334	0.334	0.334	SPC(1)-MacroFin	0.572	0.568	0.562	0.566	0.564
TBATS	0.334	0.334	0.334	0.334	0.334	SPC(1)-MacroFin-Google	0.573	0.569	0.564	0.563	0.567
NN	0.591	0.713	0.538	0.579	0.64	SPC(1)-MacroFin-GoogleReuters	0.573	0.567	0.562	0.563	0.567
Spline	0.223	0.223	0.223	0.223	0.223	SPC(1)-MacroFin-Reuters	0.573	0.569	0.56	0.564	0.562
THETA	0.541	0.541	0.541	0.541	0.541	SPC(2)-MacroFin	0.504	0.498	0.542	0.55	0.548
Google	0.534	0.54	0.555	0.551	0.553	SPC(2)-MacroFin-Google	0.5	0.496	0.542	0.548	0.55
Google-L1	0.537	0.547	0.559	0.552	0.553	SPC(2)-MacroFin-GoogleReuters	0.501	0.494	0.543	0.55	0.549
Google-L3	0.588	0.595	0.357	0.327	0.329	SPC(2)-MacroFin-Reuters	0.502	0.498	0.541	0.549	0.549
Reuters	0.592	0.592	0.583	0.578	0.573	SPC(3)-MacroFin	0.486	0.49	0.477	0.48	0.481
Reuters-L1	0.612	0.611	0.567	0.554	0.542	SPC(3)-MacroFin-Google	0.482	0.483	0.47	0.478	0.478
Reuters-L3	0.663	0.663	0.351	0.307	0.294	SPC(3)-MacroFin-GoogleReuters	0.478	0.48	0.474	0.486	0.483
DFA(2)-MacroFin	0.5	0.492	0.537	0.543	0.541	SPC(3)-MacroFin-Reuters	0.488	0.484	0.486	0.492	0.493
DFA(2)-MacroFin-Google	0.498	0.49	0.536	0.542	0.54	SPC(4)-MacroFin	0.5	0.478	0.486	0.488	0.491
DFA(2)-MacroFin-GoogleReuters	0.499	0.491	0.537	0.543	0.541	SPC(4)-MacroFin-Google	0.507	0.473	0.48	0.49	0.485
DFA(2)-MacroFin-Reuters	0.501	0.493	0.538	0.544	0.542	SPC(4)-MacroFin-GoogleReuters	0.501	0.483	0.482	0.487	0.493
DFA(3)-MacroFin	0.478	0.472	0.467	0.473	0.472	SPC(4)-MacroFin-Reuters	0.507	0.478	0.49	0.498	0.498
DFA(3)-MacroFin-Google	0.471	0.465	0.462	0.468	0.467	SPC(5)-MacroFin	0.499	0.47	0.478	0.471	0.486
DFA(3)-MacroFin-GoogleReuters	0.47	0.463	0.463	0.469	0.467	SPC(5)-MacroFin-Google	0.482	0.458	0.473	0.475	0.475
DFA(3)-MacroFin-Reuters	0.472	0.47	0.467	0.473	0.472	SPC(5)-MacroFin-GoogleReuters	0.488	0.461	0.476	0.485	0.49
DFA(4)-MacroFin	0.484	0.472	0.474	0.48	0.479	SPC(5)-MacroFin-Reuters	0.495	0.46	0.474	0.483	0.49
DFA(4)-MacroFin-Google	0.479	0.467	0.47	0.475	0.475	LASSO-MacroFin	0.62	0.622	0.456	0.444	0.474
DFA(4)-MacroFin-GoogleReuters	0.477	0.466	0.472	0.478	0.477	LASSO-MacroFin-Google	0.579	0.564	0.471	0.47	0.489
DFA(4)-MacroFin-Reuters	0.483	0.472	0.477	0.482	0.481	LASSO-MacroFin-GoogleReuters	0.589	0.606	0.459	0.471	0.565
DFA(5)-MacroFin	0.475	0.453	0.462	0.467	0.467	LASSO-MacroFin-Reuters	0.566	0.61	0.435	0.48	0.509
DFA(5)-MacroFin-Google	0.466	0.452	0.461	0.466	0.466	EN-MacroFin	0.551	0.623	0.459	0.47	0.497
DFA(5)-MacroFin-GoogleReuters	0.465	0.453	0.464	0.47	0.47	EN-MacroFin-Google	0.597	0.555	0.459	0.466	0.483
DFA(5)-MacroFin-Reuters	0.472	0.455	0.463	0.469	0.469	EN-MacroFin-GoogleReuters	0.625	0.625	0.445	0.454	0.496
PLS(1)-MacroFin	0.519	0.515	0.513	0.512	0.511	EN-MacroFin-Reuters	0.616	0.621	0.468	0.461	0.501
PLS(1)-MacroFin-Google	0.518	0.513	0.511	0.51	0.509	SSlab-MacroFin	0.501	0.504	0.54	0.555	0.549
PLS(1)-MacroFin-GoogleReuters	0.517	0.512	0.512	0.511	0.51	SSlab-MacroFin-Google	0.499	0.498	0.537	0.551	0.551
PLS(1)-MacroFin-Reuters	0.519	0.514	0.514	0.513	0.513	SSlab-MacroFin-GoogleReuters	0.498	0.497	0.537	0.547	0.554
PLS(2)-MacroFin	0.503	0.498	0.535	0.536	0.535	SSlab-MacroFin-Reuters	0.5	0.498	0.542	0.548	0.553
PLS(2)-MacroFin-Google	0.499	0.494	0.533	0.534	0.532	Best1	0.323	0.306	0.343	0.341	0.348
PLS(2)-MacroFin-GoogleReuters	0.499	0.494	0.532	0.532	0.531	Best3	0.279	0.278	0.34	0.321	0.304
PLS(2)-MacroFin-Reuters	0.503	0.498	0.534	0.535	0.533	Best5	0.312	0.312	0.358	0.343	0.33
PLS(3)-MacroFin	0.45	0.452	0.545	0.552	0.55	Best10	0.357	0.355	0.362	0.355	0.346
PLS(3)-MacroFin-Google	0.445	0.447	0.543	0.55	0.549						

Table 50: UK, GDP, MAE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.552	0.552	0.552	0.552	0.552	PLS(3)-MacroFin-GoogleReuters	0.515	0.529	0.587	0.594	0.592
Average(12)	0.501	0.501	0.501	0.501	0.501	PLS(3)-MacroFin-Reuters	0.52	0.533	0.589	0.596	0.594
Average(24)	0.513	0.513	0.513	0.513	0.513	PLS(4)-MacroFin	0.501	0.502	0.568	0.578	0.583
Naive	0.693	0.693	0.693	0.693	0.693	PLS(4)-MacroFin-Google	0.497	0.5	0.565	0.572	0.578
AR(1)	0.628	0.628	0.635	0.636	0.636	PLS(4)-MacroFin-GoogleReuters	0.492	0.499	0.57	0.572	0.579
AR(4)	0.678	0.678	0.41	0.365	0.365	PLS(4)-MacroFin-Reuters	0.496	0.501	0.573	0.578	0.584
AR(AIC)	0.633	0.633	0.415	0.359	0.359	PLS(5)-MacroFin	0.52	0.511	0.572	0.581	0.586
AutoArima	0.395	0.395	0.395	0.395	0.395	PLS(5)-MacroFin-Google	0.519	0.509	0.568	0.575	0.58
ETS	0.29	0.29	0.29	0.29	0.29	PLS(5)-MacroFin-GoogleReuters	0.515	0.511	0.57	0.573	0.579
BaggedETS	0.312	0.315	0.311	0.322	0.286	PLS(5)-MacroFin-Reuters	0.518	0.513	0.574	0.578	0.585
BATS	0.403	0.403	0.403	0.403	0.403	SPC(1)-MacroFin	0.623	0.622	0.619	0.623	0.62
TBATS	0.403	0.403	0.403	0.403	0.403	SPC(1)-MacroFin-Google	0.624	0.622	0.622	0.62	0.622
NN	0.873	1.262	0.735	0.84	0.99	SPC(1)-MacroFin-GoogleReuters	0.624	0.621	0.621	0.621	0.623
Spline	0.281	0.281	0.281	0.281	0.281	SPC(1)-MacroFin-Reuters	0.625	0.623	0.617	0.622	0.62
THETA	0.61	0.61	0.61	0.61	0.61	SPC(2)-MacroFin	0.557	0.56	0.595	0.603	0.602
Google	0.609	0.61	0.613	0.609	0.611	SPC(2)-MacroFin-Google	0.553	0.559	0.594	0.603	0.603
Google-L1	0.612	0.615	0.626	0.619	0.62	SPC(2)-MacroFin-GoogleReuters	0.555	0.558	0.595	0.603	0.602
Google-L3	0.662	0.664	0.406	0.365	0.366	SPC(2)-MacroFin-Reuters	0.555	0.56	0.594	0.604	0.603
Reuters	0.663	0.663	0.646	0.639	0.632	SPC(3)-MacroFin	0.541	0.552	0.542	0.544	0.549
Reuters-L1	0.699	0.697	0.616	0.601	0.59	SPC(3)-MacroFin-Google	0.537	0.545	0.538	0.542	0.545
Reuters-L3	0.76	0.759	0.411	0.343	0.334	SPC(3)-MacroFin-GoogleReuters	0.531	0.544	0.535	0.551	0.551
DFA(2)-MacroFin	0.556	0.555	0.589	0.596	0.594	SPC(3)-MacroFin-Reuters	0.542	0.545	0.553	0.564	0.561
DFA(2)-MacroFin-Google	0.554	0.553	0.587	0.594	0.592	SPC(4)-MacroFin	0.566	0.543	0.552	0.557	0.559
DFA(2)-MacroFin-GoogleReuters	0.555	0.553	0.588	0.595	0.593	SPC(4)-MacroFin-Google	0.575	0.537	0.545	0.559	0.554
DFA(2)-MacroFin-Reuters	0.557	0.555	0.59	0.596	0.594	SPC(4)-MacroFin-GoogleReuters	0.567	0.548	0.547	0.557	0.561
DFA(3)-MacroFin	0.541	0.539	0.535	0.542	0.541	SPC(4)-MacroFin-Reuters	0.567	0.542	0.56	0.562	0.568
DFA(3)-MacroFin-Google	0.534	0.532	0.53	0.537	0.535	SPC(5)-MacroFin	0.571	0.536	0.55	0.546	0.559
DFA(3)-MacroFin-GoogleReuters	0.532	0.529	0.53	0.538	0.536	SPC(5)-MacroFin-Google	0.551	0.529	0.546	0.547	0.547
DFA(3)-MacroFin-Reuters	0.53	0.536	0.535	0.543	0.541	SPC(5)-MacroFin-GoogleReuters	0.56	0.529	0.549	0.552	0.558
DFA(4)-MacroFin	0.549	0.541	0.543	0.55	0.549	SPC(5)-MacroFin-Reuters	0.569	0.527	0.541	0.555	0.56
DFA(4)-MacroFin-Google	0.544	0.535	0.542	0.548	0.547	LASSO-MacroFin	0.699	0.7	0.541	0.543	0.585
DFA(4)-MacroFin-GoogleReuters	0.542	0.535	0.543	0.55	0.549	LASSO-MacroFin-Google	0.642	0.638	0.552	0.563	0.592
DFA(4)-MacroFin-Reuters	0.547	0.54	0.545	0.552	0.551	LASSO-MacroFin-GoogleReuters	0.634	0.666	0.539	0.561	0.663
DFA(5)-MacroFin	0.55	0.521	0.534	0.541	0.541	LASSO-MacroFin-Reuters	0.621	0.659	0.529	0.566	0.616
DFA(5)-MacroFin-Google	0.539	0.519	0.534	0.541	0.541	EN-MacroFin	0.622	0.703	0.55	0.552	0.594
DFA(5)-MacroFin-GoogleReuters	0.538	0.52	0.537	0.544	0.544	EN-MacroFin-Google	0.661	0.63	0.549	0.557	0.595
DFA(5)-MacroFin-Reuters	0.547	0.522	0.536	0.543	0.543	EN-MacroFin-GoogleReuters	0.701	0.704	0.524	0.538	0.592
PLS(1)-MacroFin	0.57	0.57	0.581	0.579	0.578	EN-MacroFin-Reuters	0.694	0.702	0.546	0.552	0.595
PLS(1)-MacroFin-Google	0.568	0.569	0.578	0.577	0.576	SSlab-MacroFin	0.568	0.571	0.602	0.615	0.611
PLS(1)-MacroFin-GoogleReuters	0.568	0.569	0.58	0.578	0.577	SSlab-MacroFin-Google	0.564	0.565	0.597	0.612	0.616
PLS(1)-MacroFin-Reuters	0.57	0.57	0.582	0.581	0.58	SSlab-MacroFin-GoogleReuters	0.564	0.565	0.596	0.608	0.619
PLS(2)-MacroFin	0.555	0.559	0.579	0.58	0.579	SSlab-MacroFin-Reuters	0.569	0.566	0.604	0.609	0.617
PLS(2)-MacroFin-Google	0.552	0.556	0.577	0.578	0.576	Best1	0.413	0.399	0.44	0.436	0.439
PLS(2)-MacroFin-GoogleReuters	0.551	0.556	0.575	0.576	0.574	Best3	0.367	0.368	0.42	0.418	0.403
PLS(2)-MacroFin-Reuters	0.555	0.559	0.578	0.579	0.577	Best5	0.383	0.383	0.441	0.421	0.417
PLS(3)-MacroFin	0.522	0.534	0.59	0.598	0.596	Best10	0.427	0.424	0.434	0.429	0.424
PLS(3)-MacroFin-Google	0.517	0.529	0.588	0.596	0.594						

Table 51: UK, GDP, RMSFE

Model	-5w	-4w	-3w	-2w	-1w	Model	-5w	-4w	-3w	-2w	-1w
Average(4)	0.03	0.03	0.02	0.02	0.02	PLS(3)-MacroFin-GoogleReuters	0.01	0.03	0.38	0.44	0.41
Average(12)	0	0	0	0	0	PLS(3)-MacroFin-Reuters	0.01	0.04	0.39	0.46	0.43
Average(24)	0	0	0	0	0	PLS(4)-MacroFin	0.01	0.01	0.21	0.27	0.32
Naive	0	0	0	0	0	PLS(4)-MacroFin-Google	0	0.01	0.19	0.23	0.28
AR(1)						PLS(4)-MacroFin-GoogleReuters	0	0.01	0.21	0.22	0.27
AR(4)	0	0	0.02	0.01	0.01	PLS(4)-MacroFin-Reuters	0.01	0.01	0.23	0.25	0.31
AR(AIC)	0.6	0.6	0.01	0	0	PLS(5)-MacroFin	0.03	0.02	0.24	0.31	0.35
AutoArima	0.02	0.02	0.02	0.02	0.02	PLS(5)-MacroFin-Google	0.03	0.02	0.21	0.26	0.3
ETS	0.01	0.01	0.01	0.01	0.01	PLS(5)-MacroFin-GoogleReuters	0.03	0.03	0.22	0.23	0.28
BaggedETS	0.01	0.01	0.01	0.01	0	PLS(5)-MacroFin-Reuters	0.03	0.03	0.24	0.27	0.33
BATS	0.01	0.01	0.01	0.01	0.01	SPC(1)-MacroFin	0.88	0.84	0.79	0.83	0.78
TBATS	0.01	0.01	0.01	0.01	0.01	SPC(1)-MacroFin-Google	0.89	0.85	0.81	0.8	0.82
NN	0.45	0.38	0.61	0.49	0.41	SPC(1)-MacroFin-GoogleReuters	0.91	0.81	0.78	0.8	0.83
Spline	0.01	0.01	0.01	0.01	0.01	SPC(1)-MacroFin-Reuters	0.92	0.87	0.76	0.81	0.79
THETA	0.01	0.01	0	0	0	SPC(2)-MacroFin	0.05	0.08	0.48	0.57	0.55
Google	0.19	0.11	0.11	0.1	0.1	SPC(2)-MacroFin-Google	0.04	0.07	0.47	0.55	0.57
Google-L1	0.4	0.48	0.49	0.32	0.33	SPC(2)-MacroFin-GoogleReuters	0.04	0.06	0.48	0.56	0.55
Google-L3	0.2	0.14	0.03	0.01	0.01	SPC(2)-MacroFin-Reuters	0.04	0.08	0.47	0.58	0.57
Reuters	0.06	0.08	0.59	0.83	0.69	SPC(3)-MacroFin	0.01	0.04	0.14	0.14	0.16
Reuters-L1	0.04	0.03	0.4	0.15	0.13	SPC(3)-MacroFin-Google	0.01	0.02	0.13	0.14	0.15
Reuters-L3	0.07	0.07	0.03	0.01	0.01	SPC(3)-MacroFin-GoogleReuters	0.01	0.02	0.12	0.17	0.18
DFA(2)-MacroFin	0.06	0.07	0.44	0.5	0.48	SPC(3)-MacroFin-Reuters	0.01	0.02	0.19	0.25	0.21
DFA(2)-MacroFin-Google	0.05	0.06	0.43	0.49	0.47	SPC(4)-MacroFin	0.07	0.02	0.21	0.24	0.25
DFA(2)-MacroFin-GoogleReuters	0.05	0.06	0.43	0.49	0.47	SPC(4)-MacroFin-Google	0.06	0.01	0.2	0.26	0.25
DFA(2)-MacroFin-Reuters	0.06	0.07	0.45	0.51	0.48	SPC(4)-MacroFin-GoogleReuters	0.04	0.02	0.22	0.26	0.27
DFA(3)-MacroFin	0.02	0.01	0.14	0.17	0.16	SPC(4)-MacroFin-Reuters	0.04	0.03	0.27	0.28	0.3
DFA(3)-MacroFin-Google	0.01	0.01	0.13	0.15	0.14	SPC(5)-MacroFin	0.1	0.01	0.23	0.21	0.29
DFA(3)-MacroFin-GoogleReuters	0.01	0.01	0.13	0.15	0.14	SPC(5)-MacroFin-Google	0.01	0.01	0.22	0.23	0.22
DFA(3)-MacroFin-Reuters	0.01	0.01	0.14	0.17	0.16	SPC(5)-MacroFin-GoogleReuters	0.02	0.01	0.23	0.25	0.28
DFA(4)-MacroFin	0.02	0.01	0.21	0.24	0.23	SPC(5)-MacroFin-Reuters	0.05	0.01	0.19	0.25	0.27
DFA(4)-MacroFin-Google	0.01	0.01	0.21	0.23	0.23	LASSO-MacroFin	0.36	0.4	0.45	0.44	0.69
DFA(4)-MacroFin-GoogleReuters	0.01	0.01	0.21	0.24	0.23	LASSO-MacroFin-Google	0.7	0.69	0.42	0.54	0.72
DFA(4)-MacroFin-Reuters	0.02	0.01	0.21	0.25	0.24	LASSO-MacroFin-GoogleReuters	0.86	0.43	0.38	0.48	0.8
DFA(5)-MacroFin	0.02	0	0.2	0.22	0.22	LASSO-MacroFin-Reuters	0.84	0.41	0.39	0.54	0.87
DFA(5)-MacroFin-Google	0.01	0	0.2	0.23	0.23	EN-MacroFin	0.85	0.35	0.43	0.41	0.7
DFA(5)-MacroFin-GoogleReuters	0.01	0	0.22	0.24	0.24	EN-MacroFin-Google	0.27	0.91	0.39	0.5	0.74
DFA(5)-MacroFin-Reuters	0.01	0	0.21	0.24	0.24	EN-MacroFin-GoogleReuters	0.37	0.35	0.31	0.39	0.69
PLS(1)-MacroFin	0.04	0.05	0.06	0.05	0.05	EN-MacroFin-Reuters	0.4	0.37	0.37	0.45	0.72
PLS(1)-MacroFin-Google	0.03	0.04	0.05	0.04	0.04	SSlab-MacroFin	0.02	0.01	0.62	0.74	0.71
PLS(1)-MacroFin-GoogleReuters	0.03	0.04	0.05	0.04	0.04	SSlab-MacroFin-Google	0.01	0.01	0.56	0.72	0.76
PLS(1)-MacroFin-Reuters	0.04	0.04	0.06	0.05	0.05	SSlab-MacroFin-GoogleReuters	0.01	0	0.54	0.66	0.8
PLS(2)-MacroFin	0.07	0.11	0.24	0.24	0.22	SSlab-MacroFin-Reuters	0.01	0	0.63	0.68	0.76
PLS(2)-MacroFin-Google	0.06	0.09	0.22	0.22	0.21	Best1	0.04	0.04	0.04	0.04	0.04
PLS(2)-MacroFin-GoogleReuters	0.05	0.09	0.22	0.22	0.2	Best3	0.02	0.02	0.02	0.03	0.01
PLS(2)-MacroFin-Reuters	0.07	0.1	0.23	0.23	0.22	Best5	0.01	0.01	0.02	0.02	0.01
PLS(3)-MacroFin	0.02	0.04	0.4	0.47	0.45	Best10	0.01	0.01	0.01	0.01	0.01
PLS(3)-MacroFin-Google	0.01	0.03	0.38	0.45	0.43						

Table 52: UK, GDP, DM

8 Indicative Figures

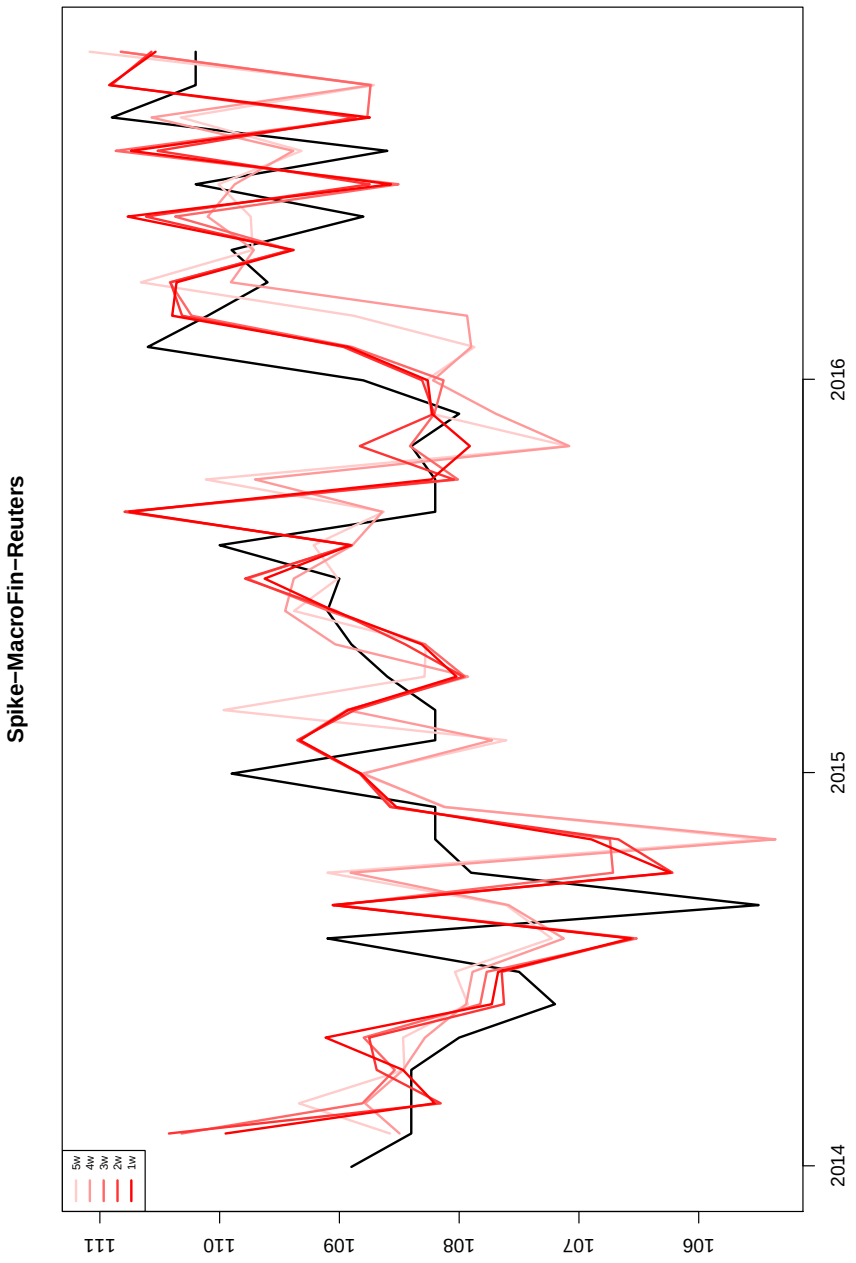

Figure 1: DE, Industrial Production

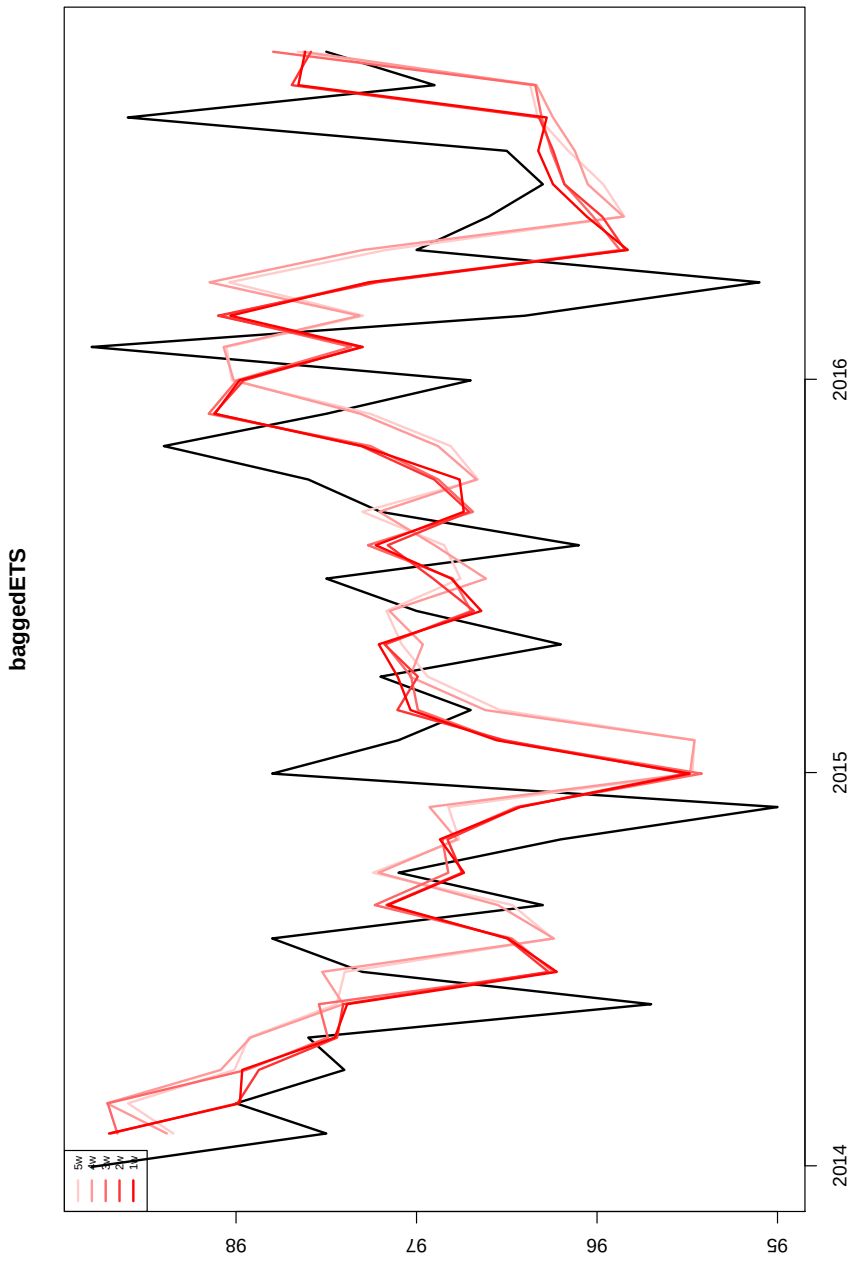

Figure 2: FR, Industrial Production

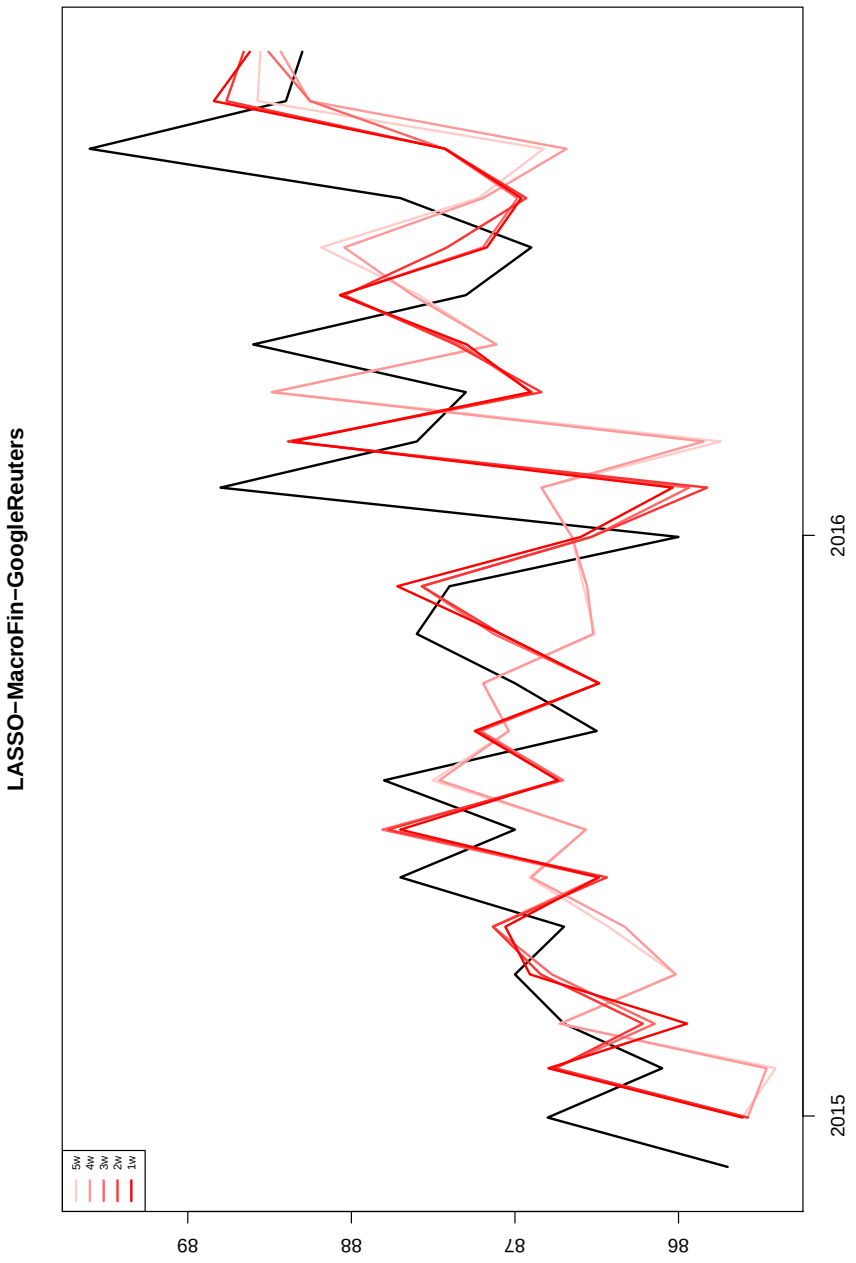

Figure 3: IT, Industrial Production

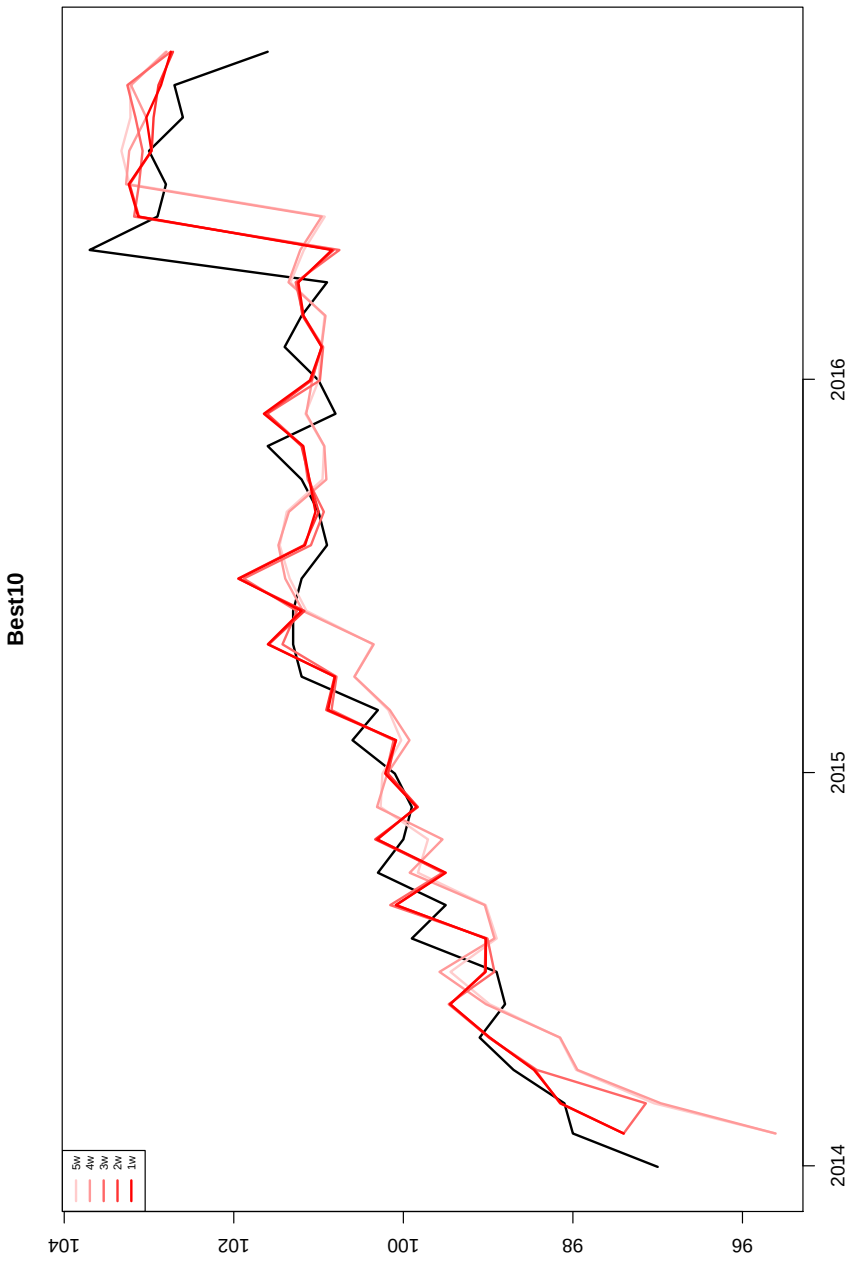

Figure 4: UK, Industrial Production

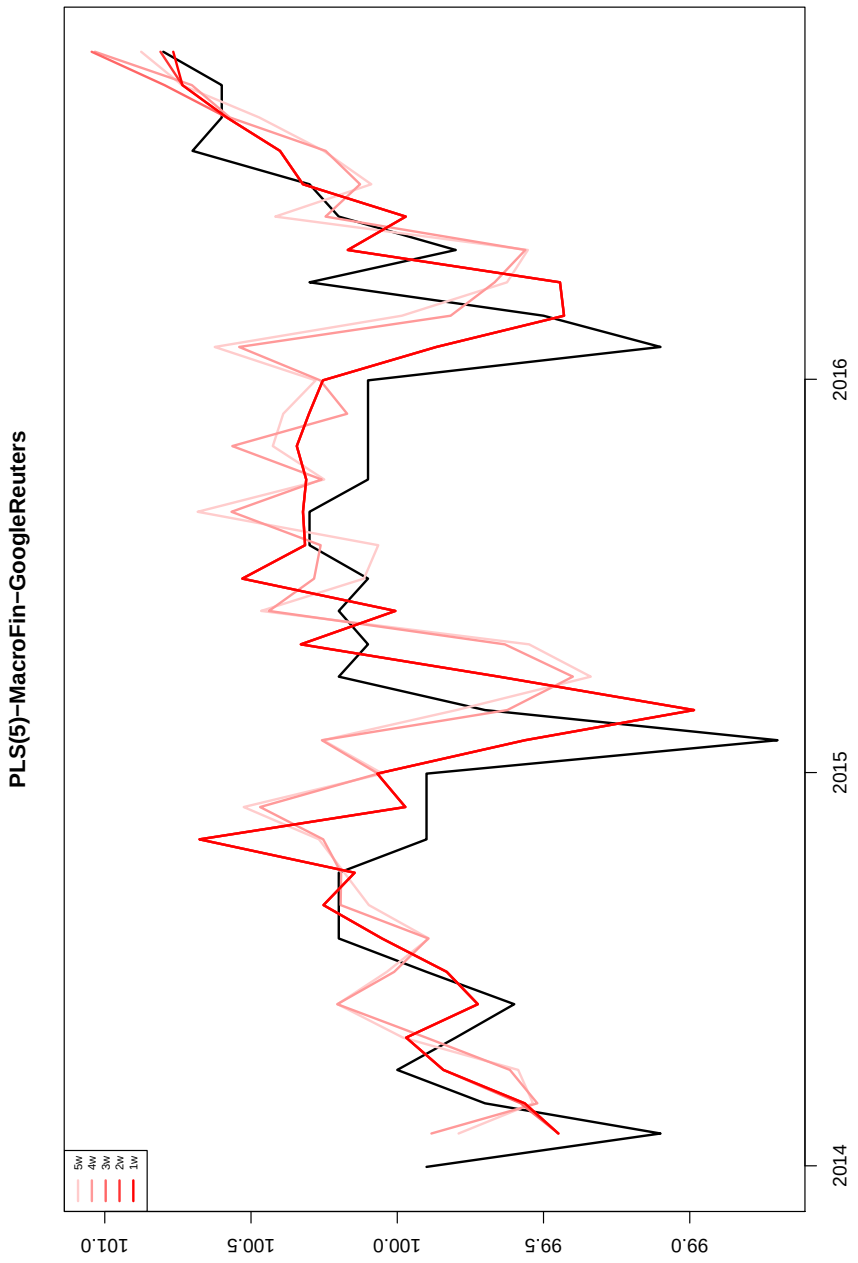

Figure 5: DE, HICP

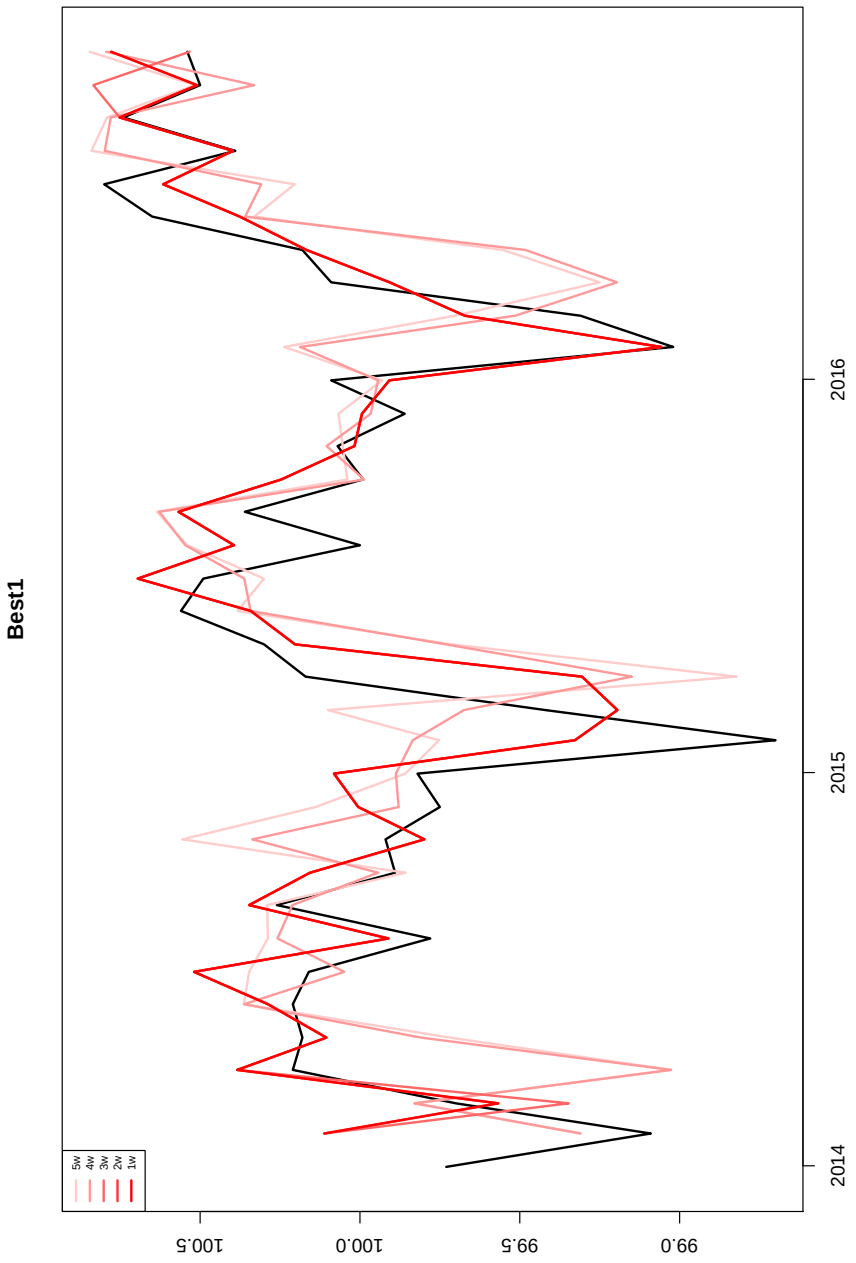

Figure 6: FR, HICP

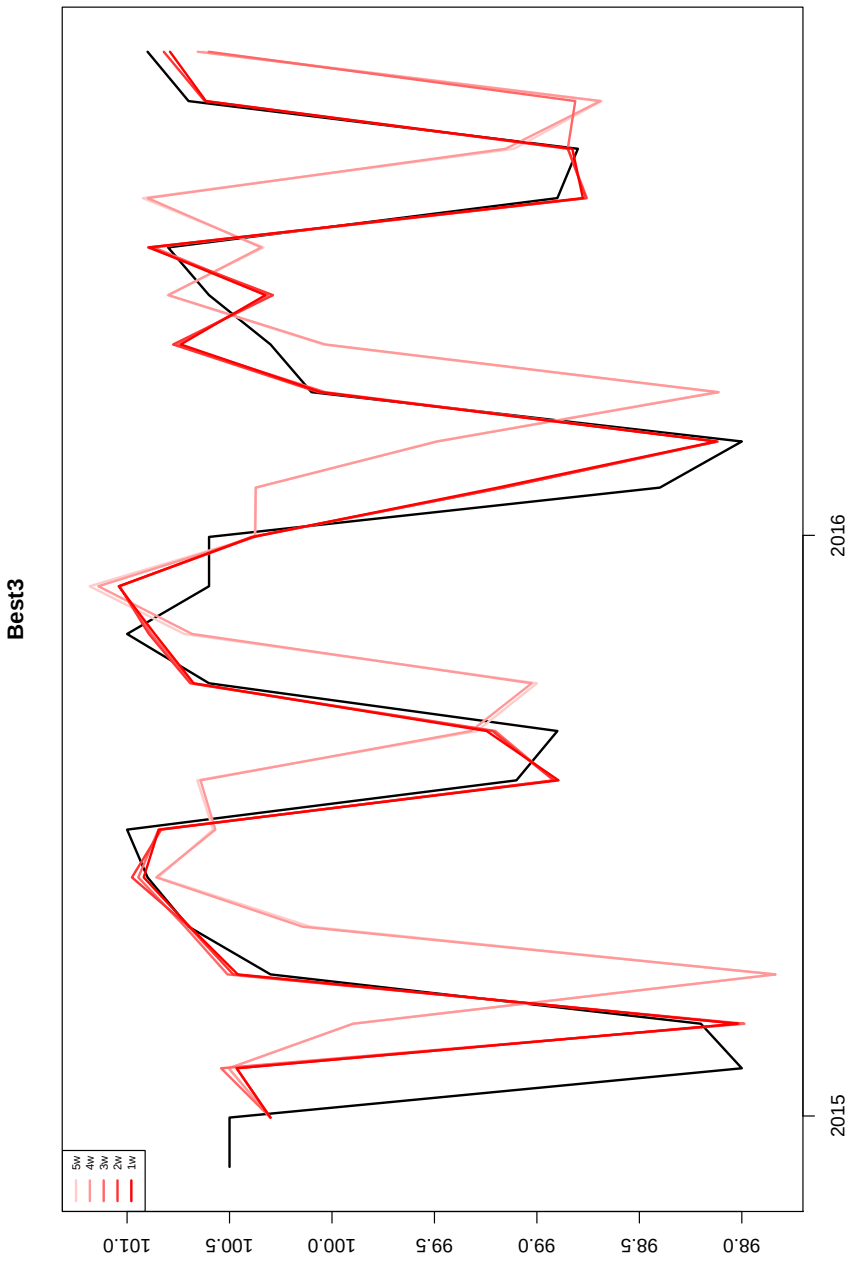

Figure 7: IT, HICP

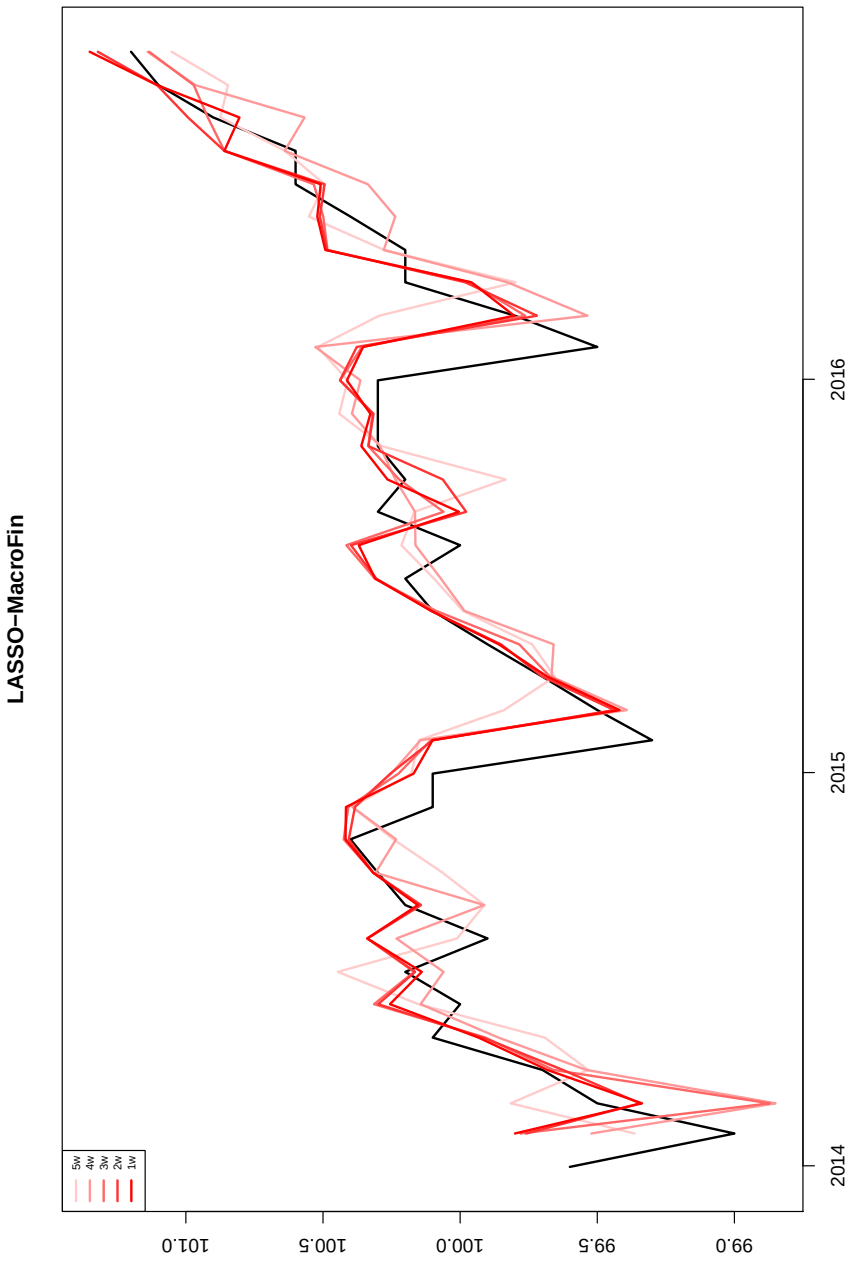

Figure 8: UK, HICP

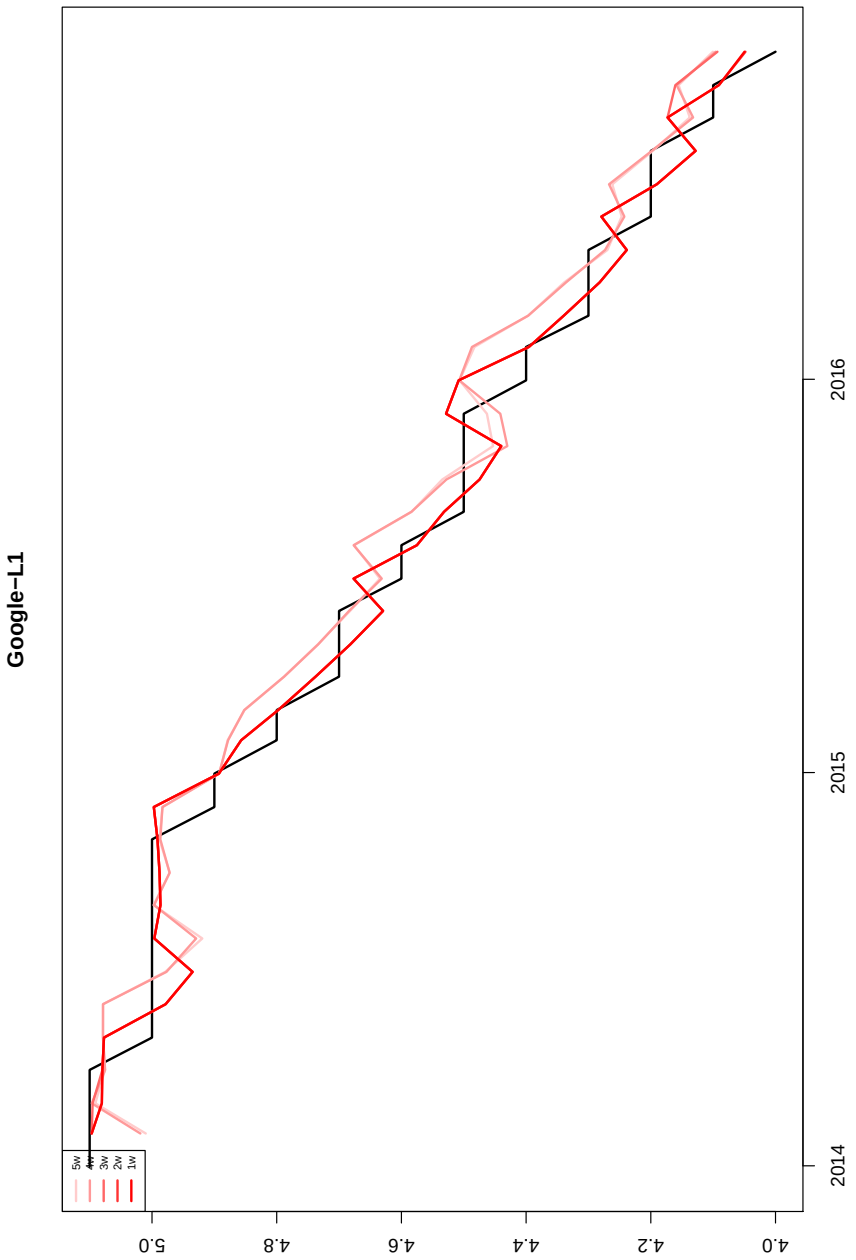

Figure 9: DE, Unemployment Rate

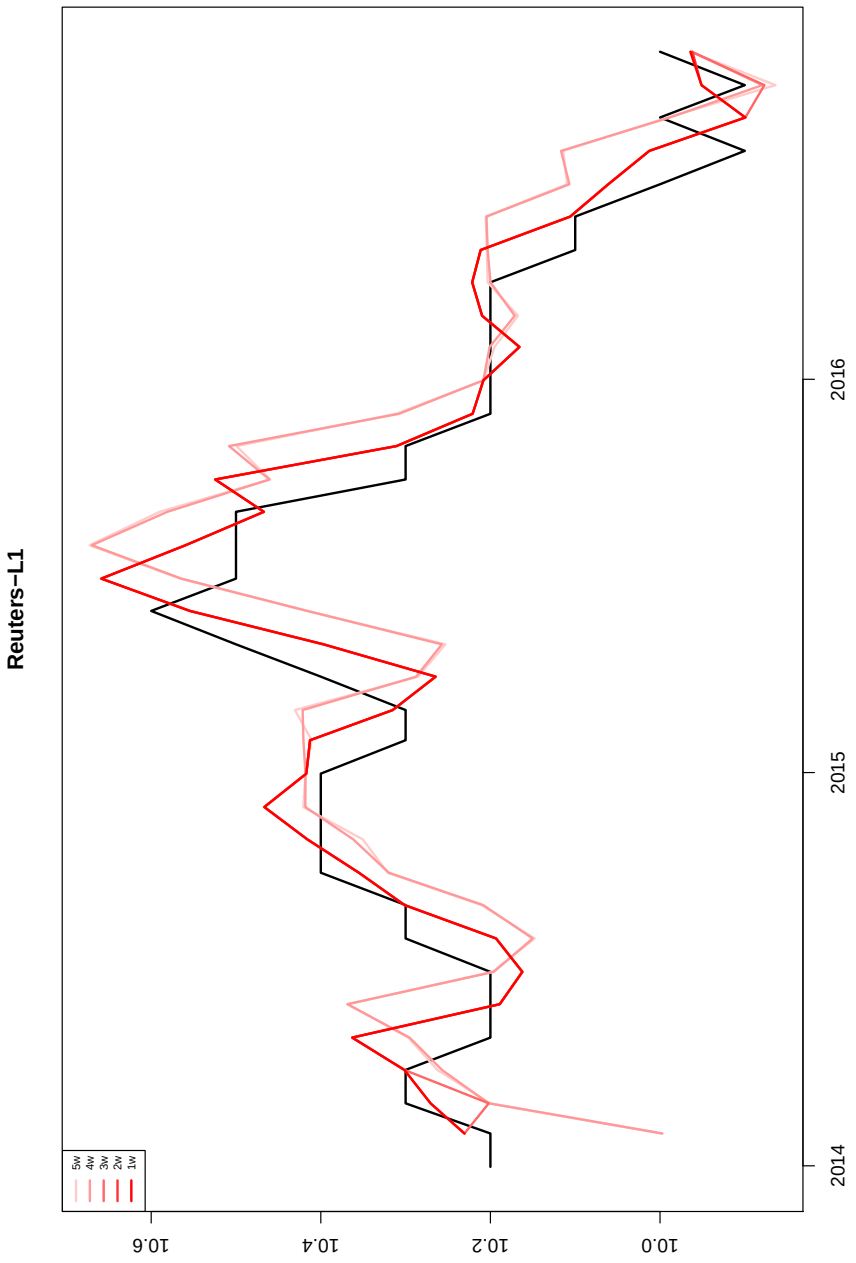

Figure 10: FR, Unemployment Rate

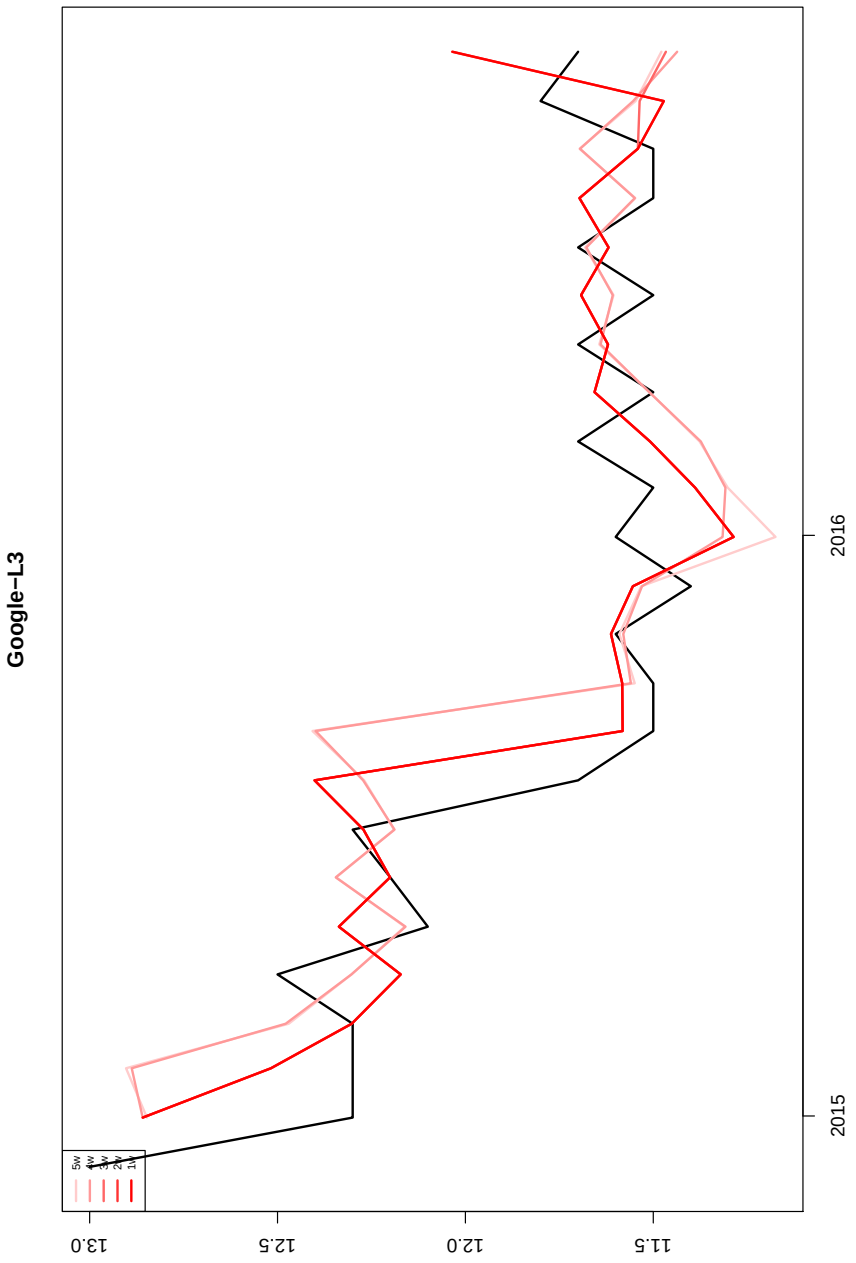

Figure 11: IT, Unemployment Rate

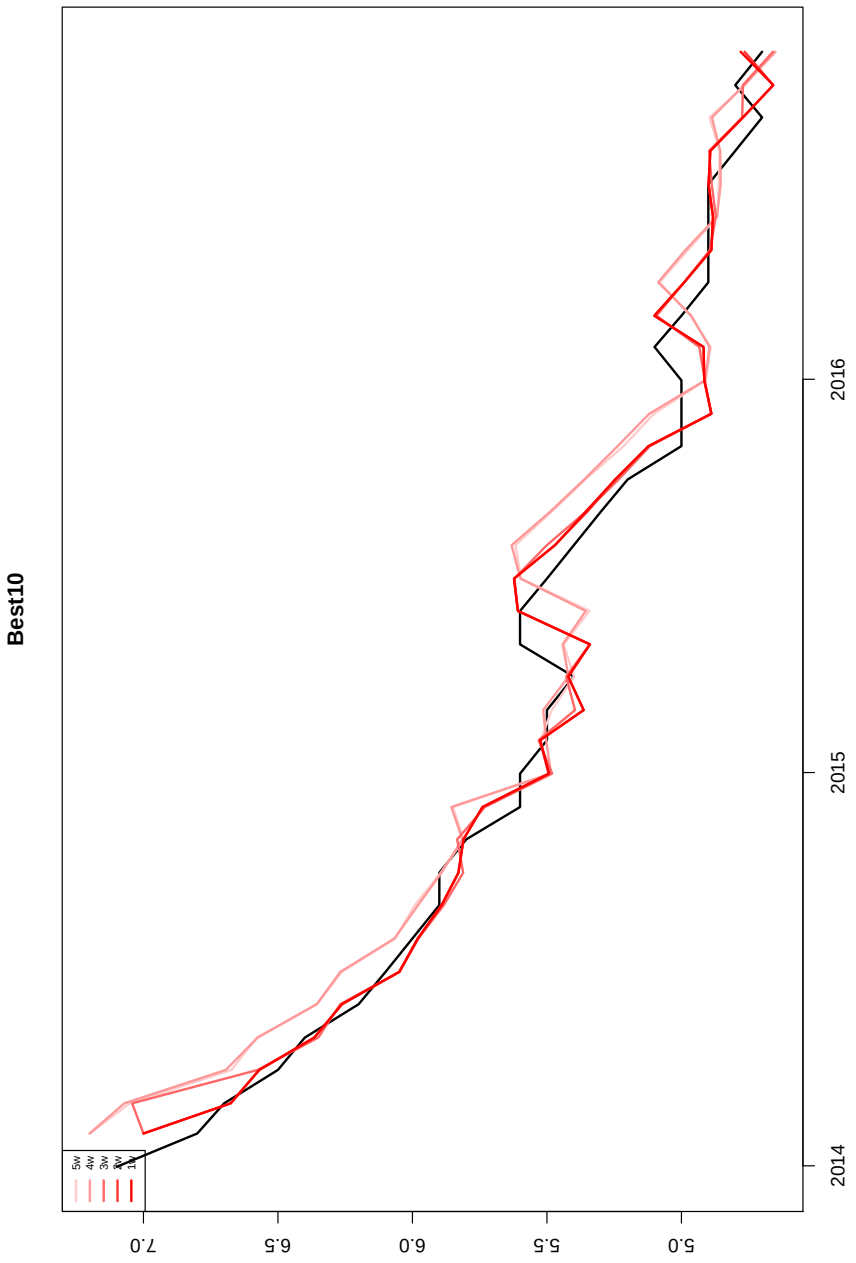

Figure 12: UK, Unemployment Rate

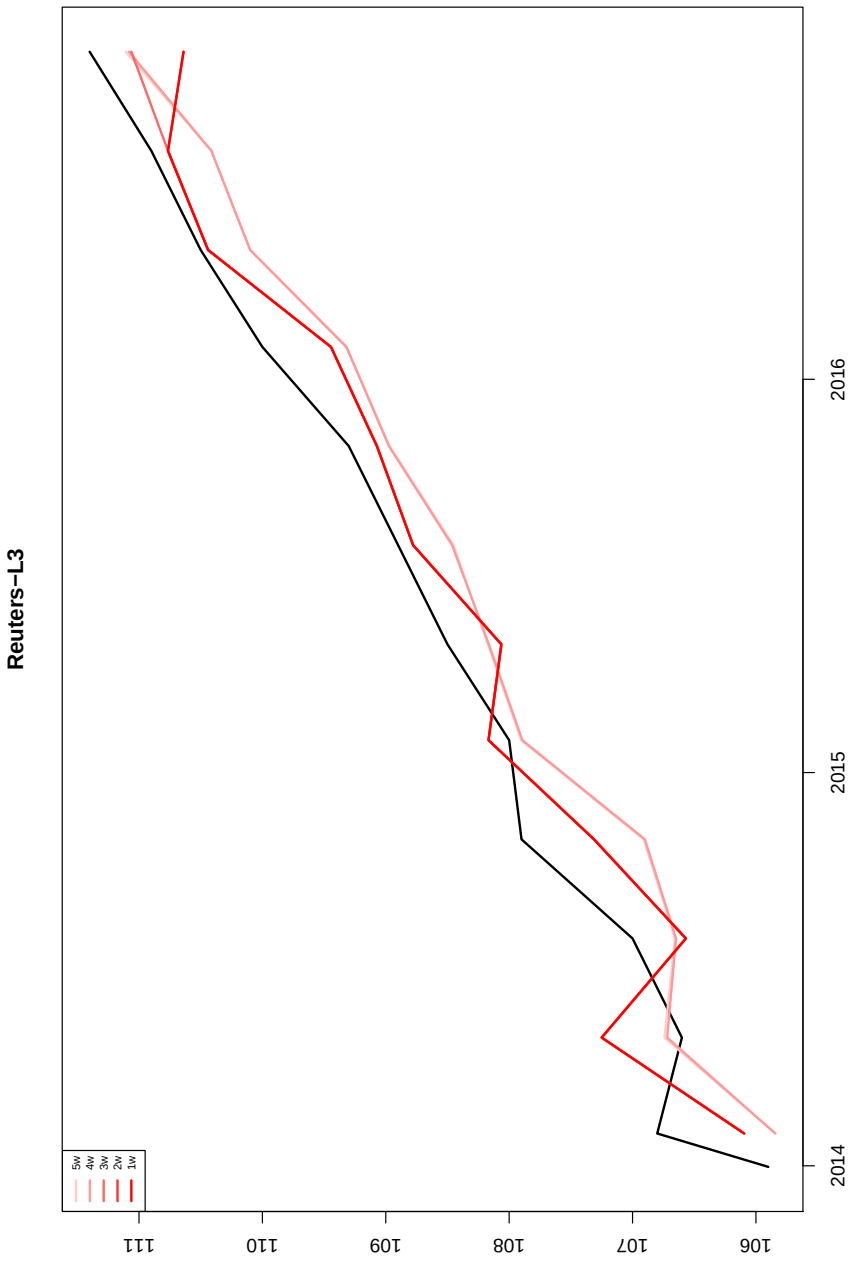

Figure 13: DE, GDP, Best h=-3w model.

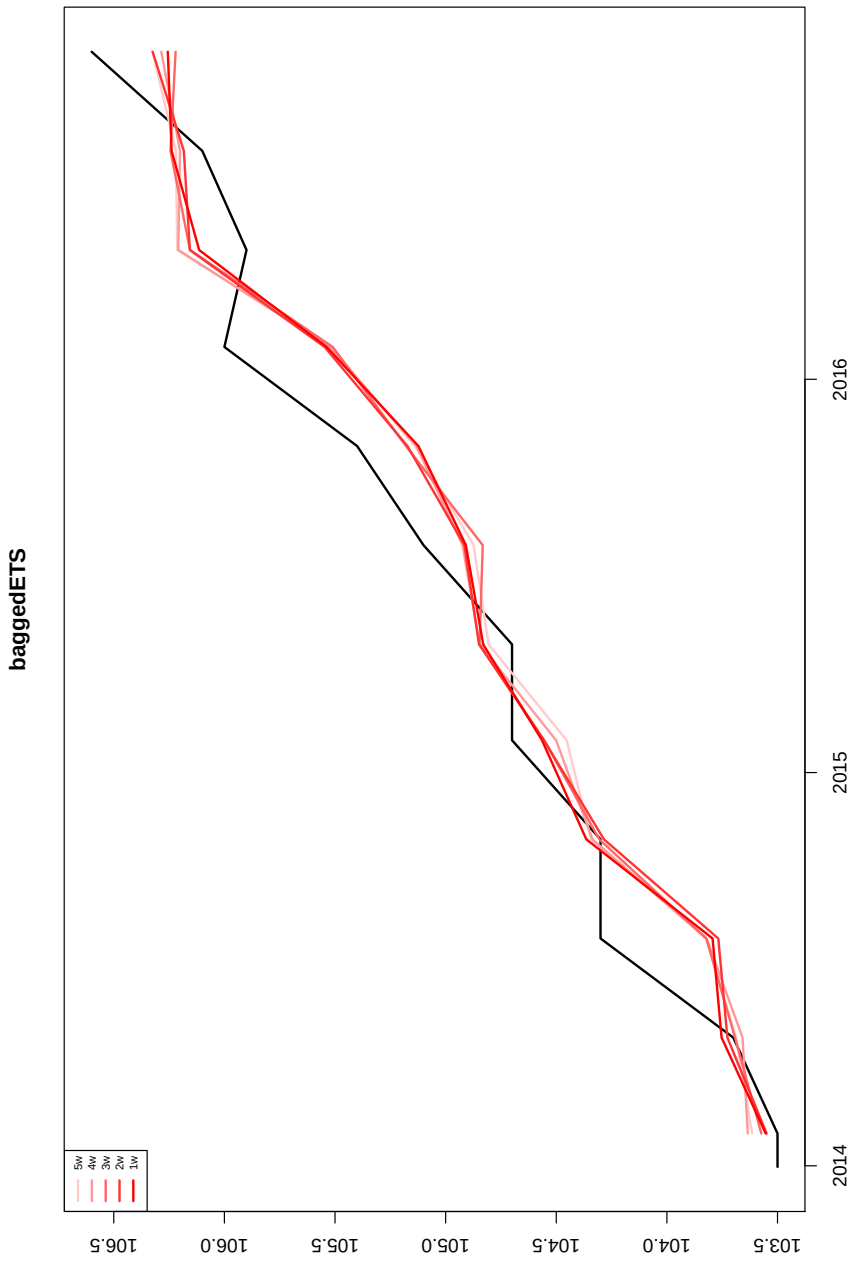

Figure 14: FR, GDP, Best h=-3w model.

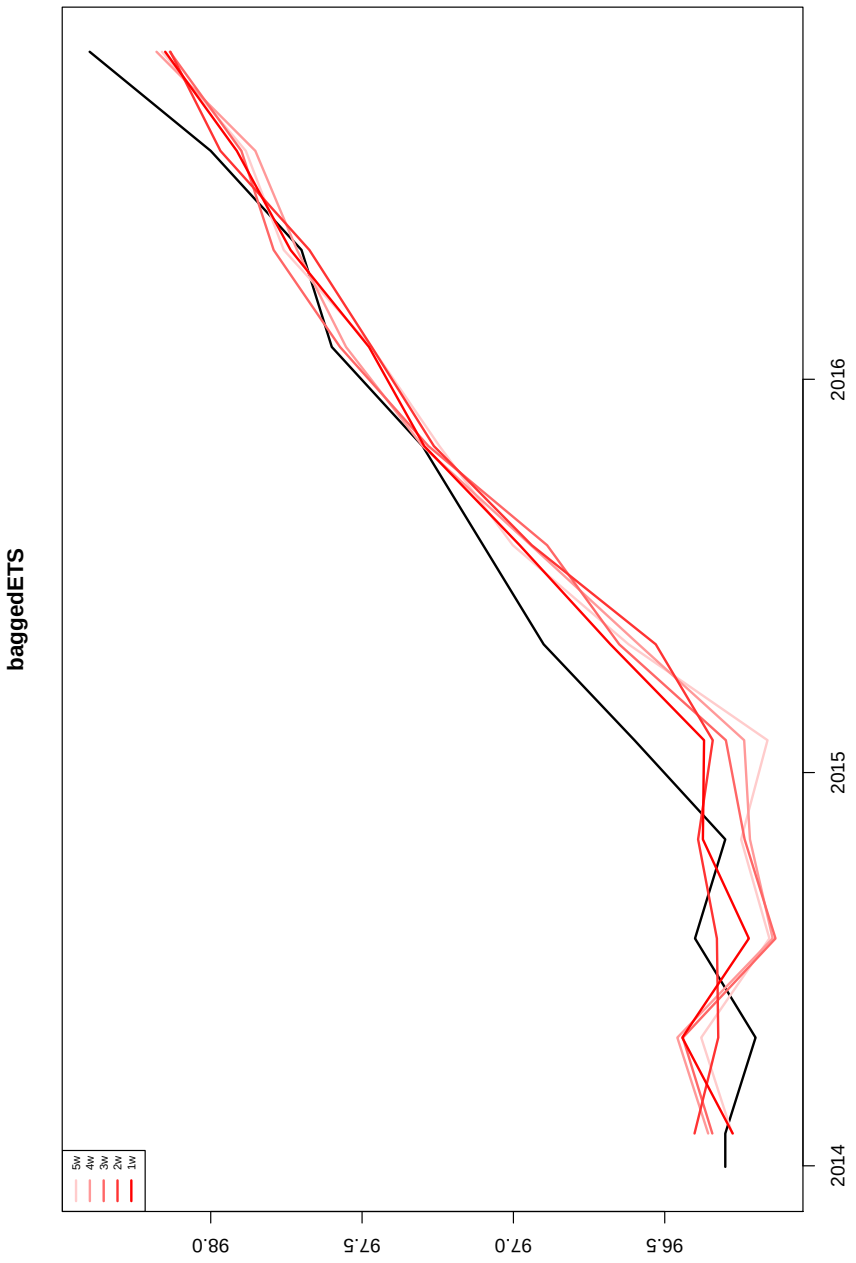

Figure 15: IT, GDP, Best h=-3w model.

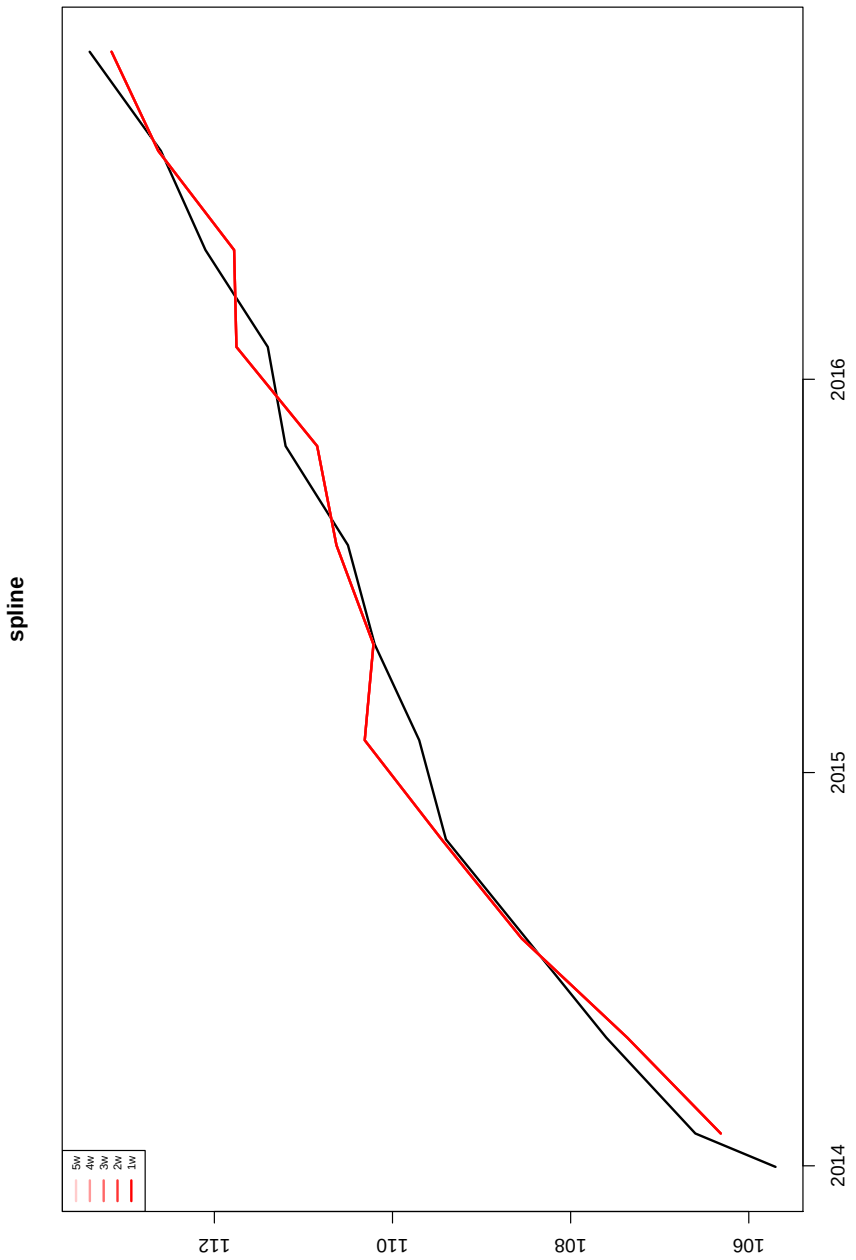

Figure 16: UK, GDP, Best h=-3w model.

9 Appendix A: Example of Data Availability Due to Calendar Releases

	In-Sample data used for forecasting					Nave Nowcast				
TargetDate	5w	4w	3w	2w	1w	5w	4w	3w	2w	1w
2014-01-31	2013-11-30	2013-11-30	2013-12-31	2013-12-31	2013-12-31	110.330	110.330	109.301	109.301	109.301
2014-02-28	2013-12-31	2013-12-31	2013-12-31	2014-01-31	2014-01-31	109.301	109.301	109.301	107.902	107.902
2014-03-31	2014-01-31	2014-01-31	2014-02-28	2014-02-28	2014-02-28	107.902	107.902	108.400	108.400	108.400
2014-04-30	2014-02-28	2014-02-28	2014-03-31	2014-03-31	2014-03-31	108.400	108.400	108.400	108.400	108.400
2014-05-31	2014-03-31	2014-03-31	2014-04-30	2014-04-30	2014-04-30	108.400	108.400	107.601	107.601	107.601
2014-06-30	2014-04-30	2014-04-30	2014-05-31	2014-05-31	2014-05-31	107.601	107.601	106.406	106.406	106.406
2014-07-31	2014-05-31	2014-05-31	2014-06-30	2014-06-30	2014-06-30	106.406	106.406	107.801	107.801	107.801
2014-08-31	2014-06-30	2014-06-30	2014-07-31	2014-07-31	2014-07-31	107.801	107.801	110.724	110.724	110.724
2014-09-30	2014-07-31	2014-07-31	2014-08-31	2014-08-31	2014-08-31	110.724	110.724	102.019	102.019	102.019
2014-10-31	2014-08-31	2014-08-31	2014-09-30	2014-09-30	2014-09-30	102.019	102.019	110.355	110.355	110.355
2014-11-30	2014-09-30	2014-09-30	2014-10-31	2014-10-31	2014-10-31	110.355	110.355	108.501	108.501	108.501
2014-12-31	2014-11-30	2014-11-30	2014-11-30	2014-11-30	2014-11-30	108.200	108.200	108.200	108.200	108.200
2015-01-31	2014-11-30	2014-11-30	2014-12-31	2014-12-31	2014-12-31	108.200	108.200	111.627	111.627	111.627
2015-02-28	2014-12-31	2014-12-31	2015-01-31	2015-01-31	2015-01-31	111.627	111.627	106.526	106.526	106.526
2015-03-31	2015-01-31	2015-01-31	2015-02-28	2015-02-28	2015-02-28	106.526	106.526	108.200	108.200	108.200
2015-04-30	2015-02-28	2015-02-28	2015-03-31	2015-03-31	2015-03-31	108.200	108.200	109.001	109.001	109.001
2015-05-31	2015-03-31	2015-03-31	2015-04-30	2015-04-30	2015-04-30	109.001	109.001	109.201	109.201	109.201
2015-06-30	2015-04-30	2015-04-30	2015-05-31	2015-05-31	2015-05-31	109.201	109.201	109.300	109.300	109.300
2015-07-31	2015-05-31	2015-05-31	2015-06-30	2015-06-30	2015-06-30	109.300	109.300	108.900	108.900	108.900
2015-08-31	2015-06-30	2015-06-30	2015-07-31	2015-07-31	2015-07-31	108.900	108.900	111.009	111.009	111.009
2015-09-30	2015-07-31	2015-07-31	2015-08-31	2015-08-31	2015-08-31	111.009	111.009	106.429	106.429	106.429
2015-10-31	2015-08-31	2015-08-31	2015-09-30	2015-09-30	2015-09-30	106.429	106.429	108.200	108.200	108.200
2015-11-30	2015-09-30	2015-09-30	2015-10-31	2015-10-31	2015-10-31	108.200	108.200	108.600	108.600	108.600
2015-12-31	2015-11-30	2015-11-30	2015-11-30	2015-11-30	2015-11-30	107.601	107.601	107.601	107.601	107.601
2016-01-31	2015-11-30	2015-11-30	2015-12-31	2015-12-31	2015-12-31	107.601	107.601	109.606	109.606	109.606
2016-02-29	2015-12-31	2015-12-31	2016-01-31	2016-01-31	2016-01-31	109.606	109.606	112.430	112.430	112.430
2016-03-31	2016-01-31	2016-01-31	2016-02-29	2016-02-29	2016-02-29	112.430	112.430	109.602	109.602	109.602
2016-04-30	2016-02-29	2016-02-29	2016-03-31	2016-03-31	2016-03-31	109.602	109.602	109.102	109.102	109.102
2016-05-31	2016-03-31	2016-03-31	2016-04-30	2016-04-30	2016-04-30	109.102	109.102	110.201	110.201	110.201
2016-06-30	2016-04-30	2016-04-30	2016-05-31	2016-05-31	2016-05-31	110.201	110.201	107.711	107.711	107.711
2016-07-31	2016-05-31	2016-05-31	2016-06-30	2016-06-30	2016-06-30	107.711	107.711	111.618	111.618	111.618
2016-08-31	2016-06-30	2016-06-30	2016-07-31	2016-07-31	2016-07-31	111.618	111.618	107.023	107.023	107.023
2016-09-30	2016-07-31	2016-07-31	2016-07-31	2016-08-31	2016-08-31	107.023	107.023	107.023	113.249	113.249
2016-10-31	2016-08-31	2016-08-31	2016-08-31	2016-09-30	2016-09-30	113.249	113.249	113.249	109.504	109.504

Table 53: Example of Data Availability Due to Calendar Releases using DE IP. First Observation: 2007-01-31, Last Observation: as seen in table.

10 Appendix B: All Figures

A separate file provides 1,491 detailed figures per model, variable and country.