

**KOF** Konjunkturforschungsstelle**KOF Retail Trade Survey  
Empirical Applications**

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## 1 Introduction

KOF business tendency surveys provide a wide range of indicators which reflect the economic situation and can therefore be applied for business cycle monitoring and analysis. The early availability of the survey data (compared to official statistics) is one of its advantages. This document aims to illustrate few of the possible applications of KOF survey data. For this purpose, we document some of its characteristics, for example correlations between the survey variables and macroeconomic variables, such as retail trade turnovers and GDP. The questionnaires have questions about the past developments, current situation as well as future plans (expectations). In Table 1 the start period of each question and its reference period are documented.

Table 1: Start date of monthly questions

Question	Start date	Type
Business situation, assessment	Feb 1973	Current
Business situation, change past 3 months	Feb 2015	Past
Business situation, expected change next 6 months	Apr 1994	Future
Customer frequency, change previous month compared to same month of previous year	Apr 1994	Past
Number of employees, assessment	Apr 1994	Current
Number of employees, expected change next 3 months	Apr 1994	Future
Profit situation, change past 3 months	Apr 1994	Past
Purchases/orders, expected change next 3 months	Apr 1973	Future
Sales prices, expected change next 3 months	Nov 2009	Future
Stock levels, assessment	Feb 1973	Current
Stock levels, change previous month compared to same month of previous year	Apr 1973	Past
Turnover total, change past 3 months	Feb 2015	Past
Turnover total, expected change next 3 months	Feb 1973	Future
Volume of sales, change past 3 months	Nov 2009	Past

## 2 Correlation Analysis Overview

To examine if the survey variables are rather forward-looking or contemporaneous indicators, the cross-correlations at different lags are documented. When calculating the correlations for the survey variables referring to past, one should keep in mind that these should be actually shifted by one period back (i.e., lagged). This is because the firms are asked for example early January how the change in turnover in the previous month (i.e., December) was compared to the month or year before. Therefore, the value of January is actually indicating the development in December and should be compared to the other macroeconomic indicators in that month.

The following tables show the cross-correlations of to quarterly frequency aggregated monthly (average) survey variables with various macroeconomic variables (see Table 2) for the last 10 years. In Table 3 we present for each survey variable the macroeconomic variable with the highest (absolute) correlation and at which lag. If the highest

correlation is found for negative values (leads), this means that the survey variable in question is leading the macroeconomic variable. In general, higher correlations are found with year-on-year (yoY) growth rates than with quarter-on-quarter (qoq) changes. In Figures 1-6 few example plots are presented.

Table 4 documents the (absolute) highest contemporaneous correlations for each survey variable and Table 5 shows the absolute highest correlations when survey variables are leaded.

Table 2: Macroeconomic variables

Key	Description	Frequency	Source
ts_gdp_nom_qoq	Nominal GDP qoq	Quarterly	SECO
ts_gdp_nom_yoy	Nominal GDP yoy	Quarterly	SECO
ts_gdp_real_qoq	Real GDP qoq	Quarterly	SECO
ts_gdp_real_yoy	Real GDP yoy	Quarterly	SECO
ts_han_nom_qoq	Nominal private consumption qoq	Quarterly	SECO
ts_han_nom_yoy	Nominal private consumption yoy	Quarterly	SECO
ts_han_real_qoq	Real private consumption qoq	Quarterly	SECO
ts_han_real_yoy	Real private consumption yoy	Quarterly	SECO
ts_rtt_nom_qoq	Nominal retail trade turnover qoq	Monthly	BFS
ts_rtt_nom_yoy	Nominal retail trade turnover yoy	Monthly	BFS
ts_rtt_real_qoq	Real retail trade turnover qoq	Monthly	BFS
ts_rtt_real_yoy	Real retail trade turnover yoy	Monthly	BFS
ts_css_qoq	Consumer sentiment index qoq	Quarterly	SECO
ts_css_yoy	Consumer sentiment index yoy	Quarterly	SECO
ts_emp_yoy	Retail trade full-time employment qoq	Quarterly	BFS
ts_emp_qoq	Retail trade full-time employment yoy	Quarterly	BFS
ts_cpi_qoq	Consumer price index qoq	Monthly	BFS
ts_cpi_yoy	Consumer price index yoy	Monthly	BFS

Table 3: Highest correlations

Question	Macro variable	Correlation	Lead(-)/Lag(+)
Business situation, assessment	ts_rtt_nom_yoy	0.70	1
Business situation, change past 3 months	ts_cpi_yoy	0.91	0
Business situation, expected change next 6 months	ts_cpi_yoy	0.80	-1
Customer frequency, change previous month compared to same month of previous year	ts_han_nom_yoy	0.66	2
Number of employees, assessment	ts_rtt_nom_yoy	-0.69	1
Number of employees, expected change next 3 months	ts_han_real_yoy	-0.84	1
Profit situation, change past 3 months	ts_cpi_yoy	0.91	0
Purchases/orders, expected change next 3 months	ts_cpi_yoy	0.89	0
Sales prices, expected change next 3 months	ts_cpi_yoy	0.80	-1
Stock levels, assessment	ts_han_real_yoy	-0.65	2
Stock levels, change previous month compared to same month of previous year	ts_cpi_yoy	0.80	1
Turnover total, change past 3 months	ts_han_nom_yoy	0.87	1
Turnover total, expected change next 3 months	ts_cpi_yoy	0.74	0
Volume of sales, change past 3 months	ts_han_nom_yoy	0.73	2

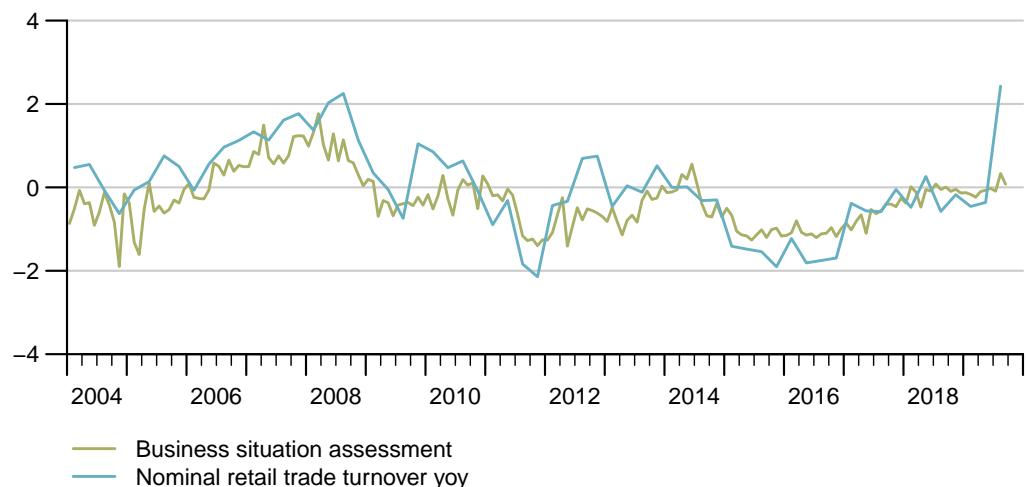


Figure 1: Business situation assessment and nominal retail trade turnover yoy

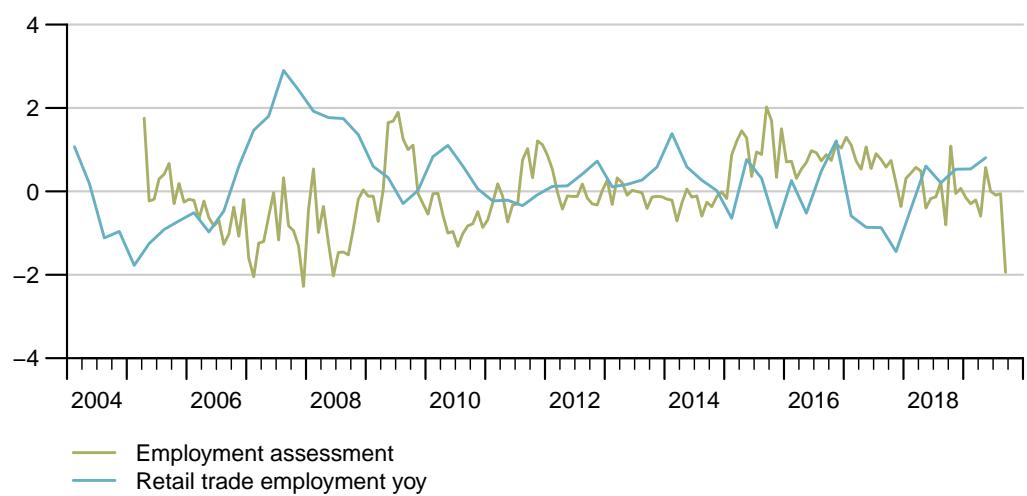


Figure 2: Employment assessment and retail trade employment yoy

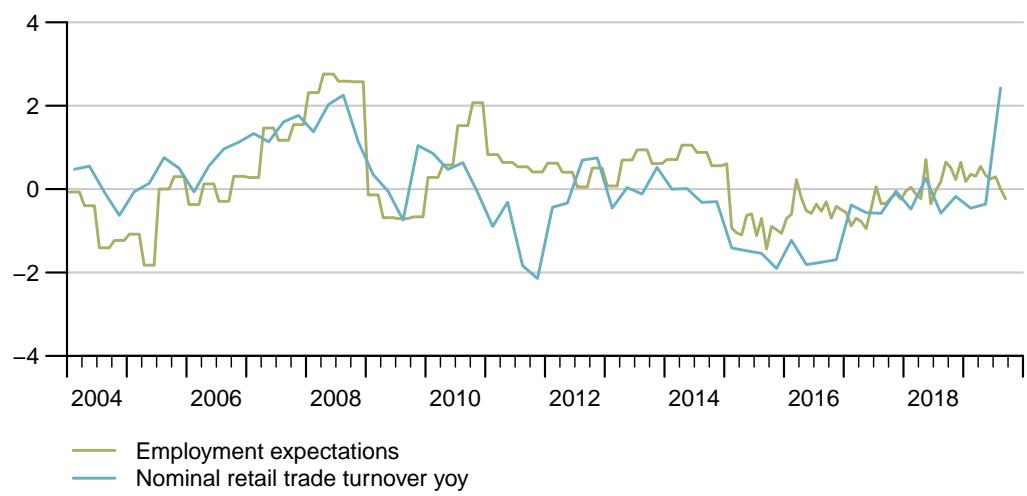


Figure 3: Employment expectations and nominal retail trade turnover yoy

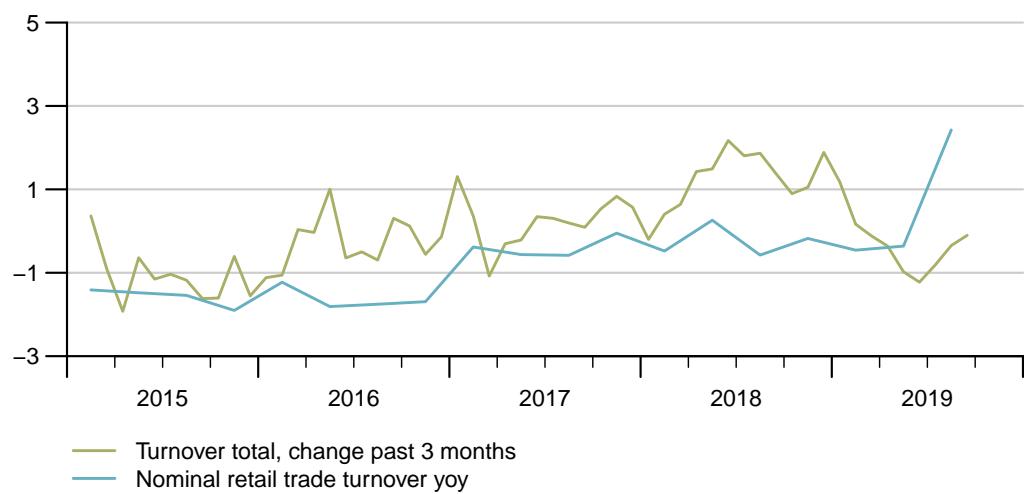


Figure 4: Turnover total change past 3 months and nominal retail trade turnover yoy

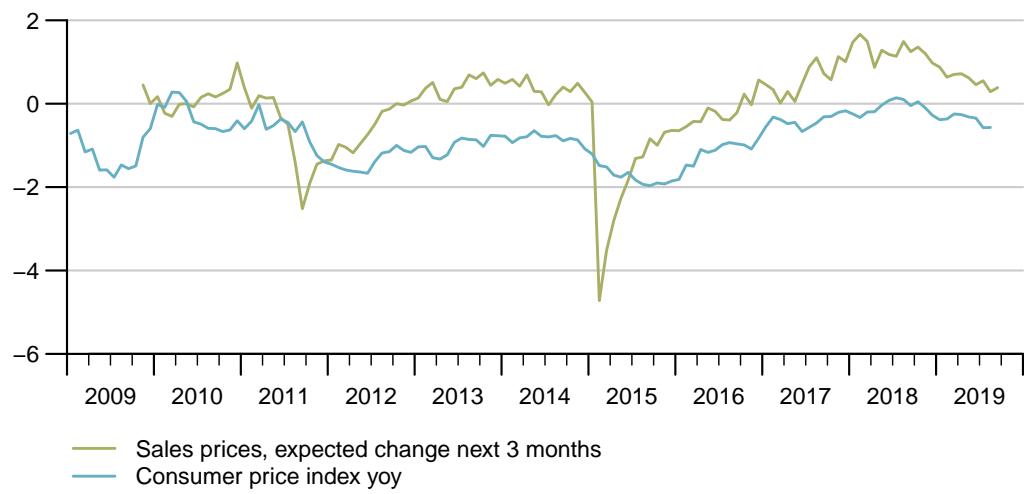


Figure 5: Sales prices expected change next 3 months and consumer price index yoy

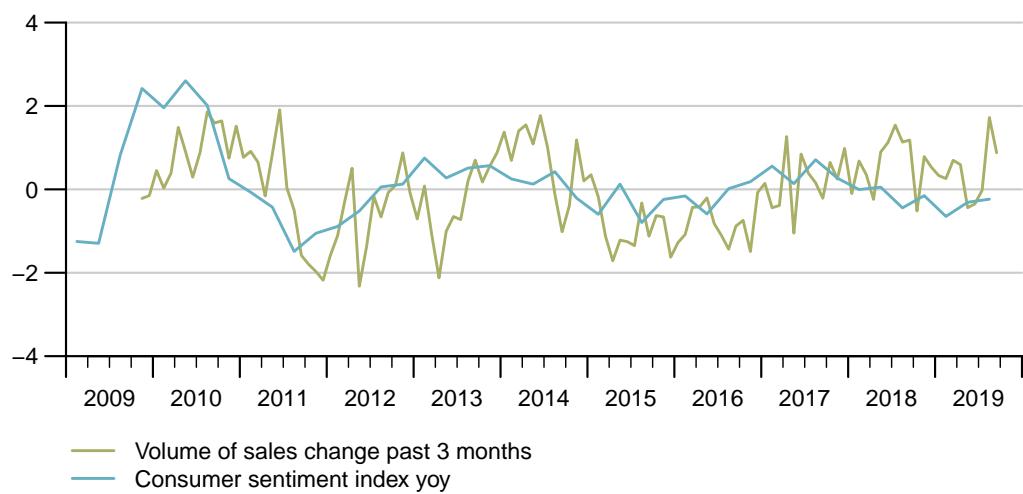


Figure 6: Volume of sales change past 3 months and consumer sentiment index yoy

Table 4: Highest contemporaneous correlations

Survey variable	Macro variable	Correlation
Business situation, assessment	ts_rtt_nom_yoy	0.67
Business situation, change past 3 months	ts_cpi_yoy	0.91
Business situation, expected change next 6 months	ts_cpi_yoy	0.71
Customer frequency, change previous month compared to same month of previous year	ts_rtt_nom_yoy	0.62
Number of employees, assessment	ts_gdp_nom_yoy	-0.68
Number of employees, expected change next 3 months	ts_han_real_yoy	-0.83
Profit situation, change past 3 months	ts_cpi_yoy	0.91
Purchases/orders, expected change next 3 months	ts_cpi_yoy	0.89
Sales prices, expected change next 3 months	ts_cpi_yoy	0.69
Stock levels, assessment	ts_rtt_nom_yoy	-0.49
Stock levels, change previous month compared to same month of previous year	ts_han_real_yoy	-0.66
Turnover total, change past 3 months	ts_cpi_yoy	0.84
Turnover total, expected change next 3 months	ts_cpi_yoy	0.74
Volume of sales, change past 3 months	ts_gdp_nom_yoy	0.70

Table 5: Highest correlations at lead (-1)

Survey variable	Macro variable	Correlation
Business situation, assessment	ts_cpi_yoy	0.60
Business situation, change past 3 months	ts_cpi_yoy	0.88
Business situation, expected change next 6 months	ts_cpi_yoy	0.80
Customer frequency, change previous month compared to same month of previous year	ts_cpi_yoy	0.59
Number of employees, assessment	ts_gdp_nom_yoy	-0.56
Number of employees, expected change next 3 months	ts_han_real_yoy	-0.72
Profit situation, change past 3 months	ts_gdp_nom_yoy	0.85
Purchases/orders, expected change next 3 months	ts_han_real_yoy	-0.87
Sales prices, expected change next 3 months	ts_cpi_yoy	0.80
Stock levels, assessment	ts_gdp_nom_yoy	-0.38
Stock levels, change previous month compared to same month of previous year	ts_rtt_real_yoy	0.51
Turnover total, change past 3 months	ts_han_real_yoy	-0.81
Turnover total, expected change next 3 months	ts_cpi_yoy	0.68
Volume of sales, change past 3 months	ts_cpi_yoy	0.62

### 3 Detailed Correlation Analysis

#### 3.1 Analysis on Quarterly Frequency

##### 3.1.1 GDP

Table 6: Cross-correlations with real GDP yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.087	0.046	0.183	0.216	<b>0.220</b>	0.207	0.110	-0.034	-0.184
Business situation, change past 3 months	-0.103	0.068	0.266	0.394	0.520	0.552	<b>0.572</b>	0.527	0.385
Business situation, expected change next 6 months	0.248	<b>0.357</b>	0.315	0.305	0.195	0.221	0.238	0.214	0.154
Customer frequency, change previous month compared to same month of previous year	-0.085	0.073	0.235	0.275	<b>0.360</b>	0.310	0.141	-0.037	-0.213
Number of employees, assessment	0.176	0.058	-0.154	-0.379	<b>-0.500</b>	-0.313	0.034	0.276	0.403
Number of employees, expected change next 3 months	-0.193	-0.133	-0.031	0.122	0.176	0.313	0.455	0.598	<b>0.628</b>
Profit situation, change past 3 months	-0.103	0.081	0.278	0.390	0.482	0.514	<b>0.555</b>	0.541	0.438
Purchases/orders, expected change next 3 months	-0.018	0.065	0.137	0.190	0.299	0.416	0.536	<b>0.571</b>	0.470
Sales prices, expected change next 3 months	0.164	0.338	<b>0.447</b>	0.446	0.392	0.247	0.134	-0.001	-0.190
Stock levels, assessment	-0.008	-0.122	-0.281	-0.353	-0.345	-0.192	0.110	0.340	<b>0.443</b>
Stock levels, change previous month compared to same month of previous year	-0.136	-0.191	-0.099	0.008	0.212	0.394	0.473	<b>0.512</b>	0.459
Turnover total, change past 3 months	-0.039	0.022	0.115	0.281	0.552	<b>0.634</b>	0.613	0.441	0.205
Turnover total, expected change next 3 months	-0.106	0.025	0.263	0.453	<b>0.572</b>	0.414	0.189	-0.046	-0.263
Volume of sales, change past 3 months	-0.092	0.138	0.392	0.442	<b>0.585</b>	0.533	0.293	0.061	-0.101

Table 7: Cross-correlations with real GDP qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.286	-0.174	0.084	0.098	0.197	<b>0.377</b>	0.265	0.229	0.247
Business situation, change past 3 months	-0.167	-0.119	-0.040	-0.039	0.283	0.448	0.529	<b>0.538</b>	0.403
Business situation, expected change next 6 months	0.205	0.162	-0.077	0.171	<b>0.461</b>	0.404	0.279	0.195	0.194
Customer frequency, change previous month compared to same month of previous year	<b>-0.400</b>	-0.153	0.247	0.011	0.195	0.372	0.244	0.242	0.217
Number of employees, assessment	0.273	0.260	0.078	0.054	-0.190	<b>-0.330</b>	-0.244	-0.042	-0.003
Number of employees, expected change next 3 months	0.199	-0.166	0.163	-0.066	-0.056	0.181	0.298	0.379	<b>0.482</b>
Profit situation, change past 3 months	-0.220	-0.118	0.019	-0.047	0.233	0.425	<b>0.501</b>	0.486	0.434
Purchases/orders, expected change next 3 months	-0.107	-0.107	-0.007	0.014	0.141	0.220	0.400	<b>0.543</b>	0.452
Sales prices, expected change next 3 months	0.033	0.045	0.091	0.207	<b>0.449</b>	0.312	0.101	0.123	0.034
Stock levels, assessment	0.168	0.153	-0.117	-0.201	-0.275	<b>-0.372</b>	-0.161	0.040	0.080
Stock levels, change previous month compared to same month of previous year	-0.040	-0.143	-0.120	-0.145	-0.141	0.014	0.093	0.447	<b>0.632</b>
Turnover total, change past 3 months	-0.133	0.001	0.038	-0.082	0.068	0.243	0.632	<b>0.727</b>	0.462
Turnover total, expected change next 3 months	-0.246	-0.240	0.067	0.055	0.232	<b>0.393</b>	0.300	0.229	0.164
Volume of sales, change past 3 months	-0.358	-0.143	0.222	0.028	0.223	<b>0.469</b>	0.333	0.318	0.164

Table 8: Cross-correlations with nominal GDP yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.031	0.220	0.386	0.435	<b>0.437</b>	0.395	0.258	0.084	-0.095
Business situation, change past 3 months	0.347	0.584	0.770	0.858	<b>0.863</b>	0.744	0.578	0.417	0.207
Business situation, expected change next 6 months	0.508	<b>0.606</b>	0.604	0.564	0.465	0.371	0.268	0.149	0.033
Customer frequency, change previous month compared to same month of previous year	0.022	0.226	0.391	0.445	<b>0.504</b>	0.429	0.231	0.049	-0.149
Number of employees, assessment	0.129	-0.055	-0.313	-0.558	<b>-0.677</b>	-0.492	-0.142	0.082	0.221
Number of employees, expected change next 3 months	0.067	0.221	0.432	0.647	0.745	<b>0.749</b>	0.696	0.624	0.507
Profit situation, change past 3 months	0.338	0.565	0.757	0.846	<b>0.848</b>	0.755	0.610	0.473	0.289
Purchases/orders, expected change next 3 months	0.273	0.464	0.629	0.719	<b>0.761</b>	0.718	0.623	0.500	0.302
Sales prices, expected change next 3 months	0.306	0.500	<b>0.628</b>	0.614	0.510	0.327	0.149	-0.038	-0.256
Stock levels, assessment	0.035	-0.117	-0.300	-0.376	-0.334	-0.168	0.128	0.328	<b>0.387</b>
Stock levels, change previous month compared to same month of previous year	0.053	0.083	0.241	0.435	0.651	<b>0.781</b>	0.737	0.610	0.421
Turnover total, change past 3 months	0.302	0.470	0.612	0.727	<b>0.797</b>	0.702	0.531	0.274	-0.010
Turnover total, expected change next 3 months	-0.068	0.115	0.381	0.586	<b>0.691</b>	0.530	0.284	0.039	-0.198
Volume of sales, change past 3 months	0.066	0.326	0.566	0.612	<b>0.696</b>	0.621	0.351	0.129	-0.038

Table 9: Cross-correlations with nominal GDP qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.226	-0.035	0.214	0.285	0.429	<b>0.580</b>	0.435	0.359	0.362
Business situation, change past 3 months	0.104	0.232	0.339	0.423	0.693	<b>0.765</b>	0.695	0.582	0.376
Business situation, expected change next 6 months	0.421	0.351	0.211	0.469	<b>0.668</b>	0.525	0.386	0.223	0.187
Customer frequency, change previous month compared to same month of previous year	-0.340	-0.009	0.334	0.195	0.360	<b>0.495</b>	0.363	0.329	0.286
Number of employees, assessment	0.312	0.211	-0.013	-0.083	-0.344	<b>-0.541</b>	-0.384	-0.200	-0.175
Number of employees, expected change next 3 months	-0.036	0.037	0.082	0.275	0.394	0.610	<b>0.663</b>	0.596	0.553
Profit situation, change past 3 months	0.063	0.224	0.368	0.415	0.641	<b>0.760</b>	0.698	0.558	0.444
Purchases/orders, expected change next 3 months	0.095	0.168	0.296	0.400	0.566	0.608	<b>0.640</b>	0.635	0.465
Sales prices, expected change next 3 months	0.108	0.147	0.239	0.378	<b>0.599</b>	0.457	0.192	0.125	0.061
Stock levels, assessment	0.270	0.181	-0.071	-0.179	-0.294	<b>-0.393</b>	-0.141	0.109	0.086
Stock levels, change previous month compared to same month of previous year	0.040	0.049	0.106	0.097	0.164	0.391	0.476	0.701	<b>0.736</b>
Turnover total, change past 3 months	0.103	0.291	0.358	0.284	0.461	0.537	<b>0.725</b>	0.712	0.321
Turnover total, expected change next 3 months	-0.241	-0.165	0.106	0.174	0.373	<b>0.513</b>	0.392	0.320	0.267
Volume of sales, change past 3 months	-0.287	-0.008	0.331	0.182	0.372	<b>0.615</b>	0.424	0.352	0.220

### 3.1.2 Private Consumption

Table 10: Cross-correlations with nominal private consumption yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.292	-0.183	-0.120	0.109	0.431	0.568	<b>0.664</b>	0.499	0.227
Business situation, change past 3 months	0.073	0.284	0.454	0.631	0.792	<b>0.832</b>	0.676	0.607	0.406
Business situation, expected change next 6 months	0.249	0.474	0.451	0.603	<b>0.636</b>	0.392	0.365	0.264	0.187
Customer frequency, change previous month compared to same month of previous year	-0.222	-0.106	-0.129	0.135	0.502	0.590	<b>0.661</b>	0.444	0.011
Number of employees, assessment	0.405	0.312	0.174	-0.109	-0.391	<b>-0.473</b>	-0.309	-0.177	-0.019
Number of employees, expected change next 3 months	-0.089	0.068	0.173	0.315	0.479	0.590	<b>0.807</b>	0.703	0.579
Profit situation, change past 3 months	0.090	0.250	0.419	0.593	0.731	<b>0.842</b>	0.722	0.635	0.465
Purchases/orders, expected change next 3 months	0.076	0.259	0.313	0.458	0.667	<b>0.770</b>	0.710	0.628	0.409
Sales prices, expected change next 3 months	0.045	0.249	0.308	0.453	0.621	0.660	<b>0.663</b>	0.415	0.202
Stock levels, assessment	0.100	0.005	0.102	-0.017	-0.300	<b>-0.386</b>	-0.327	-0.059	0.241
Stock levels, change previous month compared to same month of previous year	-0.226	-0.153	0.101	0.194	0.335	0.620	<b>0.696</b>	0.694	0.617
Turnover total, change past 3 months	0.070	0.172	0.367	0.501	0.809	<b>0.866</b>	0.602	0.460	0.147
Turnover total, expected change next 3 months	-0.284	-0.247	-0.108	0.216	0.554	<b>0.655</b>	0.637	0.501	0.190
Volume of sales, change past 3 months	-0.271	-0.154	-0.124	0.068	0.498	0.724	<b>0.734</b>	0.568	0.216

Table 11: Cross-correlations with nominal private consumption qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.235	-0.097	-0.110	-0.192	-0.035	0.096	0.405	<b>0.532</b>	0.400
Business situation, change past 3 months	-0.209	0.072	0.171	0.152	0.340	0.464	0.425	<b>0.495</b>	0.396
Business situation, expected change next 6 months	0.075	0.398	0.097	0.125	<b>0.539</b>	0.261	0.330	0.182	0.070
Customer frequency, change previous month compared to same month of previous year	-0.213	-0.032	-0.072	-0.181	-0.018	0.029	0.416	<b>0.601</b>	0.326
Number of employees, assessment	<b>0.345</b>	0.190	0.246	0.191	0.087	-0.148	-0.228	-0.258	-0.218
Number of employees, expected change next 3 months	-0.240	-0.073	-0.029	0.128	0.208	0.081	0.351	<b>0.453</b>	0.411
Profit situation, change past 3 months	-0.196	0.030	0.181	0.192	0.246	0.402	<b>0.480</b>	0.477	0.450
Purchases/orders, expected change next 3 months	-0.192	0.126	0.128	0.070	0.289	0.340	0.345	<b>0.506</b>	0.445
Sales prices, expected change next 3 months	-0.088	0.143	0.088	0.009	0.284	0.291	0.352	0.378	<b>0.389</b>
Stock levels, assessment	0.244	-0.080	-0.044	0.135	0.102	0.025	-0.242	<b>-0.314</b>	-0.199
Stock levels, change previous month compared to same month of previous year	-0.163	-0.344	-0.058	-0.007	-0.018	0.346	0.286	0.284	<b>0.533</b>
Turnover total, change past 3 months	-0.128	-0.043	0.169	0.050	0.285	0.532	0.386	<b>0.580</b>	0.252
Turnover total, expected change next 3 months	-0.140	-0.148	-0.210	-0.159	-0.020	0.153	0.345	<b>0.470</b>	0.377
Volume of sales, change past 3 months	-0.258	-0.058	-0.011	-0.236	-0.099	0.133	0.355	<b>0.597</b>	0.422

Table 12: Cross-correlations with real privat consumption yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.180	-0.312	<b>-0.521</b>	-0.450	-0.195	-0.015	0.217	0.212	0.089
Business situation, change past 3 months	-0.361	-0.540	-0.707	<b>-0.842</b>	-0.807	-0.608	-0.481	-0.301	-0.162
Business situation, expected change next 6 months	-0.442	-0.444	<b>-0.698</b>	-0.657	-0.584	-0.501	-0.283	-0.148	0.020
Customer frequency, change previous month compared to same month of previous year	-0.158	-0.264	<b>-0.516</b>	-0.411	-0.082	0.073	0.318	0.276	-0.019
Number of employees, assessment	-0.020	0.080	0.170	0.122	-0.079	<b>-0.226</b>	-0.202	-0.177	-0.094
Number of employees, expected change next 3 months	-0.139	-0.197	-0.462	-0.722	-0.831	<b>-0.844</b>	-0.555	-0.370	-0.222
Profit situation, change past 3 months	-0.289	-0.485	-0.677	-0.800	<b>-0.811</b>	-0.662	-0.508	-0.374	-0.234
Purchases/orders, expected change next 3 months	-0.265	-0.389	-0.635	-0.867	<b>-0.881</b>	-0.651	-0.479	-0.305	-0.161
Sales prices, expected change next 3 months	-0.345	-0.361	<b>-0.454</b>	-0.373	-0.161	0.042	0.228	0.207	0.151
Stock levels, assessment	0.044	0.048	0.267	0.186	-0.177	-0.450	<b>-0.647</b>	-0.559	-0.261
Stock levels, change previous month compared to same month of previous year	-0.048	-0.210	-0.154	-0.348	-0.655	<b>-0.753</b>	-0.682	-0.546	-0.271
Turnover total, change past 3 months	-0.270	-0.478	-0.574	<b>-0.811</b>	-0.673	-0.452	-0.419	-0.167	-0.106
Turnover total, expected change next 3 months	-0.171	-0.368	<b>-0.521</b>	-0.431	-0.161	0.042	0.214	0.314	0.207
Volume of sales, change past 3 months	-0.247	-0.393	<b>-0.589</b>	-0.565	-0.236	0.071	0.276	0.315	0.135

Table 13: Cross-correlations with real private consumption qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.013	0.057	-0.131	<b>-0.340</b>	0.332	-0.322	0.008	0.204	0.165
Business situation, change past 3 months	-0.168	-0.076	-0.014	-0.372	<b>-0.433</b>	-0.359	-0.324	-0.177	-0.045
Business situation, expected change next 6 months	-0.183	0.189	-0.238	<b>-0.456</b>	-0.221	-0.247	-0.133	-0.145	-0.187
Customer frequency, change previous month compared to same month of previous year	0.026	0.060	-0.095	<b>-0.362</b>	-0.264	-0.342	0.050	0.336	0.195
Number of employees, assessment	-0.020	-0.130	0.039	0.150	0.145	0.011	-0.050	-0.177	<b>-0.190</b>
Number of employees, expected change next 3 months	0.151	0.039	-0.045	-0.077	-0.167	<b>-0.495</b>	-0.490	-0.266	-0.103
Profit situation, change past 3 months	-0.135	-0.093	-0.009	-0.281	-0.423	<b>-0.440</b>	-0.262	-0.203	-0.083
Purchases/orders, expected change next 3 months	-0.206	-0.021	0.050	-0.291	-0.378	-0.387	<b>-0.429</b>	-0.208	0.016
Sales prices, expected change next 3 months	-0.168	-0.023	-0.182	<b>-0.342</b>	-0.231	-0.186	-0.040	0.139	0.229
Stock levels, assessment	0.111	-0.160	-0.017	0.154	0.221	0.196	-0.189	<b>-0.487</b>	-0.437
Stock levels, change previous month compared to same month of previous year	0.135	-0.312	-0.037	0.078	-0.145	-0.117	-0.348	<b>-0.565</b>	-0.224
Turnover total, change past 3 months	-0.150	-0.161	0.074	-0.289	-0.393	-0.301	<b>-0.394</b>	-0.039	0.006
Turnover total, expected change next 3 months	0.068	0.020	-0.197	<b>-0.322</b>	-0.317	-0.242	-0.065	0.179	0.190
Volume of sales, change past 3 months	-0.036	-0.022	-0.086	-0.402	<b>-0.426</b>	-0.330	-0.056	0.290	0.287

### 3.1.3 Retail Trade Turnover

Table 14: Cross-correlations with nominal retail trade turnover yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.053	0.033	0.186	0.457	<b>0.678</b>	0.597	0.543	0.442	0.286
Business situation, change past 3 months	0.564	0.499	0.564	0.548	<b>0.739</b>	0.530	0.375	0.341	0.166
Business situation, expected change next 6 months	0.472	0.504	0.481	<b>0.584</b>	0.461	0.225	0.141	0.097	0.048
Customer frequency, change previous month compared to same month of previous year	-0.037	0.026	0.165	0.343	<b>0.594</b>	0.576	0.435	0.371	0.088
Number of employees, assessment	0.079	0.066	-0.153	-0.304	<b>-0.703</b>	-0.631	-0.521	-0.471	-0.263
Number of employees, expected change next 3 months	0.397	0.533	0.501	<b>0.609</b>	0.551	0.457	0.501	0.389	0.313
Profit situation, change past 3 months	0.534	0.486	0.565	0.606	<b>0.750</b>	0.566	0.404	0.343	0.194
Purchases/orders, expected change next 3 months	0.609	<b>0.630</b>	0.590	0.522	0.569	0.472	0.368	0.338	0.174
Sales prices, expected change next 3 months	0.167	0.268	0.287	0.417	<b>0.483</b>	0.351	0.249	0.103	-0.073
Stock levels, assessment	0.328	0.259	0.196	-0.067	-0.378	<b>-0.500</b>	-0.354	-0.173	-0.017
Stock levels, change previous month compared to same month of previous year	0.200	0.427	<b>0.537</b>	0.480	0.458	0.432	0.425	0.430	0.366
Turnover total, change past 3 months	<b>0.610</b>	0.606	0.490	0.232	0.370	0.387	0.304	0.207	0.040
Turnover total, expected change next 3 months	-0.036	-0.042	0.086	0.302	0.420	<b>0.523</b>	0.482	0.370	0.182
Volume of sales, change past 3 months	-0.088	-0.100	0.067	0.214	0.592	<b>0.596</b>	0.442	0.394	0.168

Table 15: Cross-correlations with nominal retail trade turnover qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.003	-0.037	-0.083	-0.022	0.207	0.285	<b>0.386</b>	0.374	0.184
Business situation, change past 3 months	0.248	0.339	0.288	0.216	0.258	<b>0.439</b>	0.301	0.412	0.085
Business situation, expected change next 6 months	0.395	0.370	0.138	0.105	<b>0.499</b>	0.335	0.209	0.023	-0.005
Customer frequency, change previous month compared to same month of previous year	-0.111	-0.021	-0.031	-0.014	0.091	0.260	0.342	<b>0.459</b>	0.108
Number of employees, assessment	0.098	-0.030	0.057	0.084	-0.073	-0.374	-0.316	<b>-0.448</b>	-0.146
Number of employees, expected change next 3 months	0.078	0.209	0.328	0.349	0.260	0.116	<b>0.354</b>	0.333	0.233
Profit situation, change past 3 months	0.190	0.327	0.317	0.259	0.186	<b>0.462</b>	0.359	0.403	0.095
Purchases/orders, expected change next 3 months	0.243	0.348	0.318	0.308	0.264	0.258	0.245	<b>0.414</b>	0.191
Sales prices, expected change next 3 months	0.131	0.183	0.001	-0.016	<b>0.299</b>	0.256	0.263	0.144	0.078
Stock levels, assessment	0.112	0.020	0.246	0.284	0.029	-0.184	<b>-0.345</b>	-0.285	-0.197
Stock levels, change previous month compared to same month of previous year	-0.044	0.082	0.177	0.339	0.271	0.253	0.082	0.199	<b>0.397</b>
Turnover total, change past 3 months	0.201	0.304	<b>0.412</b>	0.148	0.099	0.182	0.204	0.409	0.126
Turnover total, expected change next 3 months	0.024	-0.057	-0.142	-0.011	0.039	0.229	<b>0.312</b>	0.303	0.233
Volume of sales, change past 3 months	-0.068	-0.067	-0.015	-0.148	0.017	0.282	0.309	<b>0.479</b>	0.092

Table 16: Cross-correlations with real retail trade turnover yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.152	0.117	0.143	0.286	<b>0.421</b>	0.328	0.278	0.177	0.045
Business situation, change past 3 months	<b>0.592</b>	0.414	0.381	0.264	0.463	0.252	0.134	0.141	-0.009
Business situation, expected change next 6 months	<b>0.407</b>	0.353	0.234	0.315	0.212	0.007	-0.020	-0.007	0.002
Customer frequency, change previous month compared to same month of previous year	0.105	0.055	0.108	0.182	0.378	<b>0.381</b>	0.229	0.186	-0.070
Number of employees, assessment	-0.236	-0.180	-0.321	-0.349	<b>-0.676</b>	-0.578	-0.475	-0.416	-0.225
Number of employees, expected change next 3 months	0.481	<b>0.590</b>	0.427	0.425	0.271	0.161	0.276	0.214	0.142
Profit situation, change past 3 months	<b>0.577</b>	0.424	0.399	0.353	0.482	0.284	0.158	0.112	-0.012
Purchases/orders, expected change next 3 months	<b>0.661</b>	0.587	0.428	0.236	0.264	0.195	0.138	0.157	0.024
Sales prices, expected change next 3 months	0.095	0.075	-0.012	0.030	0.106	0.025	-0.025	-0.106	<b>-0.215</b>
Stock levels, assessment	0.148	0.160	0.187	0.012	-0.283	<b>-0.463</b>	-0.401	-0.247	-0.110
Stock levels, change previous month compared to same month of previous year	0.261	0.510	<b>0.617</b>	0.462	0.276	0.131	0.109	0.167	0.202
Turnover total, change past 3 months	<b>0.630</b>	0.557	0.345	-0.053	0.080	0.125	0.078	0.068	-0.034
Turnover total, expected change next 3 months	0.128	0.013	0.028	0.125	0.184	<b>0.272</b>	0.242	0.150	0.037
Volume of sales, change past 3 months	0.093	-0.043	0.027	0.057	0.335	<b>0.347</b>	0.186	0.146	-0.026

Table 17: Cross-correlations with real retail trade turnover qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.154	0.092	0.013	-0.027	0.106	0.152	<b>0.253</b>	0.245	0.061
Business situation, change past 3 months	0.231	<b>0.324</b>	0.261	0.094	0.072	0.257	0.144	0.293	-0.017
Business situation, expected change next 6 months	0.356	<b>0.366</b>	0.051	-0.073	0.321	0.207	0.114	-0.065	-0.075
Customer frequency, change previous month compared to same month of previous year	0.029	0.054	0.039	-0.036	-0.008	0.185	0.200	<b>0.356</b>	0.046
Number of employees, assessment	-0.065	-0.193	-0.128	-0.052	-0.088	-0.350	-0.270	<b>-0.446</b>	-0.164
Number of employees, expected change next 3 months	0.054	0.220	<b>0.325</b>	0.311	0.148	-0.076	0.170	0.211	0.148
Profit situation, change past 3 months	0.182	<b>0.316</b>	0.295	0.152	0.007	0.268	0.216	0.278	-0.020
Purchases/orders, expected change next 3 months	0.215	<b>0.330</b>	0.296	0.201	0.089	0.079	0.078	0.298	0.114
Sales prices, expected change next 3 months	0.124	<b>0.181</b>	-0.053	-0.175	0.075	0.023	0.061	0.014	-0.029
Stock levels, assessment	0.013	-0.088	0.127	0.210	0.090	-0.087	-0.298	<b>-0.315</b>	-0.284
Stock levels, change previous month compared to same month of previous year	-0.036	0.025	0.161	<b>0.373</b>	0.259	0.171	-0.081	-0.016	0.238
Turnover total, change past 3 months	0.156	0.250	<b>0.397</b>	0.067	-0.027	0.032	0.035	0.299	0.057
Turnover total, expected change next 3 months	0.134	0.046	-0.075	0.000	-0.051	0.102	<b>0.180</b>	0.162	0.134
Volume of sales, change past 3 months	0.093	0.026	0.063	-0.133	-0.077	0.174	0.145	<b>0.327</b>	0.020

### 3.1.4 Consumer Sentiment Index

Table 18: Cross-correlations with consumer sentiment index yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.244	-0.173	-0.027	0.183	0.353	0.473	<b>0.514</b>	0.499	0.329
Business situation, change past 3 months	-0.298	-0.258	-0.111	0.003	0.064	0.369	0.292	<b>0.484</b>	0.481
Business situation, expected change next 6 months	-0.022	0.069	<b>0.287</b>	0.092	0.280	0.200	0.148	0.233	0.234
Customer frequency, change previous month compared to same month of previous year	-0.258	-0.250	-0.073	0.141	0.282	<b>0.491</b>	0.469	0.445	0.281
Number of employees, assessment	0.339	0.288	0.101	-0.048	-0.323	<b>-0.513</b>	-0.457	-0.439	-0.260
Number of employees, expected change next 3 months	-0.226	-0.191	-0.225	-0.262	-0.093	-0.070	0.132	0.352	<b>0.431</b>
Profit situation, change past 3 months	-0.303	-0.284	-0.164	0.040	0.030	0.337	0.302	<b>0.467</b>	0.434
Purchases/orders, expected change next 3 months	-0.206	-0.153	-0.082	-0.097	0.002	0.241	0.194	0.394	<b>0.520</b>
Sales prices, expected change next 3 months	-0.106	-0.031	0.114	0.167	0.304	<b>0.342</b>	0.276	0.185	0.027
Stock levels, assessment	0.245	0.180	0.000	-0.223	-0.461	<b>-0.551</b>	-0.530	-0.340	-0.116
Stock levels, change previous month compared to same month of previous year	-0.342	-0.288	-0.249	-0.069	-0.209	0.002	0.156	0.171	<b>0.399</b>
Turnover total, change past 3 months	-0.225	-0.207	-0.061	0.008	0.152	0.404	0.399	<b>0.525</b>	0.516
Turnover total, expected change next 3 months	-0.341	-0.303	-0.177	0.052	0.318	0.480	<b>0.564</b>	0.519	0.354
Volume of sales, change past 3 months	-0.306	-0.285	-0.085	0.169	0.350	<b>0.607</b>	0.591	0.543	0.367

Table 19: Cross-correlations with consumer sentiment index qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.112	-0.173	0.214	-0.051	0.050	0.137	0.224	<b>0.368</b>	0.315
Business situation, change past 3 months	-0.180	-0.099	-0.080	-0.014	-0.126	0.019	-0.099	0.079	<b>0.241</b>
Business situation, expected change next 6 months	-0.087	-0.034	<b>0.233</b>	-0.112	0.040	-0.040	0.014	0.066	0.017
Customer frequency, change previous month compared to same month of previous year	-0.087	-0.233	-0.243	-0.014	-0.071	0.156	0.222	0.312	<b>0.379</b>
Number of employees, assessment	0.167	0.197	0.126	0.234	0.080	-0.175	-0.211	<b>-0.397</b>	-0.363
Number of employees, expected change next 3 months	-0.031	-0.051	-0.083	-0.101	0.010	<b>-0.191</b>	-0.185	0.062	-0.003
Profit situation, change past 3 months	<b>-0.195</b>	-0.104	-0.153	0.079	-0.159	-0.017	-0.069	0.094	0.193
Purchases/orders, expected change next 3 months	-0.110	-0.011	-0.055	-0.101	-0.051	-0.002	-0.150	-0.021	<b>0.240</b>
Sales prices, expected change next 3 months	-0.093	-0.132	0.031	-0.085	0.093	0.188	0.169	<b>0.235</b>	0.187
Stock levels, assessment	0.095	0.168	0.124	0.149	-0.067	-0.212	<b>-0.386</b>	-0.342	-0.274
Stock levels, change previous month compared to same month of previous year	-0.168	-0.090	-0.134	-0.028	-0.131	0.026	0.003	<b>-0.179</b>	-0.001
Turnover total, change past 3 months	-0.097	-0.153	-0.092	-0.039	-0.066	0.120	-0.096	0.081	<b>0.195</b>
Turnover total, expected change next 3 months	-0.125	-0.185	-0.273	-0.186	-0.032	0.060	0.294	<b>0.365</b>	0.349
Volume of sales, change past 3 months	-0.126	-0.283	-0.269	-0.031	-0.079	0.204	0.247	0.371	<b>0.414</b>

### 3.1.5 Employment

Table 20: Cross-correlations with retail trade employment (FT) yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.132	0.079	0.172	0.207	0.237	<b>0.283</b>	0.172	0.041	-0.084
Business situation, change past 3 months	0.244	0.348	<b>0.380</b>	0.067	-0.061	-0.085	-0.277	-0.244	-0.232
Business situation, expected change next 6 months	-0.054	0.225	0.050	-0.139	<b>0.240</b>	0.008	-0.142	-0.146	-0.232
Customer frequency, change previous month compared to same month of previous year	0.077	-0.076	0.134	0.095	0.167	<b>0.297</b>	0.069	0.041	-0.113
Number of employees, assessment	0.089	-0.055	-0.194	-0.295	<b>-0.370</b>	-0.304	-0.235	-0.141	0.003
Number of employees, expected change next 3 months	-0.014	0.331	<b>0.455</b>	0.365	0.279	-0.054	-0.116	-0.121	-0.240
Profit situation, change past 3 months	0.299	0.319	<b>0.332</b>	0.068	-0.079	-0.081	-0.161	-0.179	-0.237
Purchases/orders, expected change next 3 months	0.034	0.295	<b>0.430</b>	0.168	0.095	0.043	-0.181	-0.212	-0.273
Sales prices, expected change next 3 months	0.039	0.166	0.136	-0.036	0.074	0.075	-0.031	-0.113	<b>-0.358</b>
Stock levels, assessment	0.096	0.156	0.004	-0.077	-0.147	-0.272	<b>-0.315</b>	-0.281	-0.107
Stock levels, change previous month compared to same month of previous year	0.038	-0.211	0.172	<b>0.498</b>	0.267	0.227	-0.028	-0.326	-0.219
Turnover total, change past 3 months	0.086	0.160	<b>0.391</b>	0.183	-0.033	-0.030	-0.340	-0.362	-0.332
Turnover total, expected change next 3 months	-0.182	-0.116	-0.005	0.163	<b>0.309</b>	0.288	0.173	0.005	-0.174
Volume of sales, change past 3 months	-0.011	-0.129	0.042	0.028	0.125	<b>0.309</b>	0.138	0.092	0.001

Table 21: Cross-correlations with retail trade employment (FT) qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.041	0.001	0.055	0.058	-0.004	0.062	<b>0.102</b>	0.072	0.043
Business situation, change past 3 months	0.000	0.030	<b>0.213</b>	0.125	0.067	0.146	0.051	0.041	0.001
Business situation, expected change next 6 months	-0.056	0.098	0.091	-0.146	<b>0.271</b>	0.138	0.118	0.107	-0.111
Customer frequency, change previous month compared to same month of previous year	0.102	0.059	-0.001	-0.055	-0.056	<b>0.214</b>	-0.048	0.040	0.085
Number of employees, assessment	0.045	0.023	-0.029	0.011	-0.061	-0.033	-0.059	<b>-0.166</b>	-0.090
Number of employees, expected change next 3 months	-0.122	0.057	0.067	0.084	<b>0.292</b>	0.132	0.081	0.095	0.015
Profit situation, change past 3 months	0.050	0.013	<b>0.187</b>	0.170	0.059	0.036	0.089	0.099	0.026
Purchases/orders, expected change next 3 months	-0.086	0.031	0.173	0.044	0.155	<b>0.259</b>	0.036	0.013	0.097
Sales prices, expected change next 3 months	0.006	0.064	0.065	-0.063	<b>0.114</b>	0.007	-0.082	0.039	0.093
Stock levels, assessment	0.026	0.068	-0.013	0.036	0.077	-0.059	-0.044	-0.090	<b>-0.099</b>
Stock levels, change previous month compared to same month of previous year	0.171	-0.078	-0.056	0.108	-0.097	0.190	<b>0.291</b>	-0.024	0.026
Turnover total, change past 3 months	0.050	-0.073	0.133	0.082	0.034	<b>0.225</b>	-0.005	0.023	0.083
Turnover total, expected change next 3 months	-0.025	0.069	-0.027	<b>-0.144</b>	0.026	0.060	0.113	0.082	0.021
Volume of sales, change past 3 months	0.072	-0.047	0.024	-0.028	-0.064	<b>0.117</b>	-0.010	0.029	0.102

### 3.1.6 Consumer Price Index

Table 22: Cross-correlations with consumer price index yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.109	0.176	0.452	0.610	<b>0.653</b>	0.621	0.543	0.468	0.367
Business situation, change past 3 months	0.266	0.500	0.681	0.841	<b>0.894</b>	0.821	0.682	0.604	0.480
Business situation, expected change next 6 months	0.440	0.622	0.760	<b>0.810</b>	0.716	0.506	0.367	0.250	0.143
Customer frequency, change previous month compared to same month of previous year	-0.043	0.214	0.417	0.578	<b>0.600</b>	0.530	0.446	0.339	0.206
Number of employees, assessment	0.247	0.083	-0.104	-0.365	<b>-0.505</b>	-0.445	-0.346	-0.272	-0.232
Number of employees, expected change next 3 months	0.058	0.230	0.454	0.660	0.780	<b>0.791</b>	0.733	0.612	0.532
Profit situation, change past 3 months	0.217	0.433	0.632	0.805	<b>0.888</b>	0.870	0.730	0.659	0.542
Purchases/orders, expected change next 3 months	0.234	0.471	0.648	0.823	<b>0.887</b>	0.793	0.655	0.538	0.397
Sales prices, expected change next 3 months	0.332	0.589	0.758	<b>0.802</b>	0.688	0.506	0.325	0.155	0.033
Stock levels, assessment	0.146	-0.022	-0.185	-0.272	-0.202	0.026	0.219	<b>0.304</b>	0.259
Stock levels, change previous month compared to same month of previous year	-0.159	0.017	0.205	0.400	0.652	<b>0.821</b>	0.791	0.699	0.521
Turnover total, change past 3 months	0.248	0.455	0.622	0.776	<b>0.821</b>	0.710	0.530	0.329	0.152
Turnover total, expected change next 3 months	-0.102	0.163	0.420	0.650	<b>0.716</b>	0.605	0.446	0.250	0.084
Volume of sales, change past 3 months	-0.046	0.240	0.455	0.609	<b>0.685</b>	0.610	0.471	0.356	0.265

Table 23: Cross-correlations with consumer price index qoq

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	-0.176	-0.081	-0.008	0.126	0.213	<b>0.335</b>	0.191	0.163	0.166
Business situation, change past 3 months	0.016	0.107	0.138	0.253	0.355	<b>0.488</b>	0.317	0.277	0.255
Business situation, expected change next 6 months	0.133	0.113	0.272	0.239	<b>0.487</b>	0.330	0.180	0.155	0.148
Customer frequency, change previous month compared to same month of previous year	-0.237	-0.011	-0.003	0.212	0.104	<b>0.302</b>	0.189	0.210	0.035
Number of employees, assessment	0.061	0.135	0.053	0.092	-0.152	<b>-0.264</b>	-0.169	-0.030	-0.090
Number of employees, expected change next 3 months	-0.113	-0.024	0.088	0.200	0.217	<b>0.361</b>	0.354	0.336	0.205
Profit situation, change past 3 months	0.008	0.081	0.134	0.193	0.346	<b>0.497</b>	0.339	0.239	0.346
Purchases/orders, expected change next 3 months	-0.032	0.103	0.184	0.241	0.327	<b>0.392</b>	0.390	0.326	0.168
Sales prices, expected change next 3 months	0.014	0.044	0.217	0.206	<b>0.357</b>	0.285	0.249	0.064	0.095
Stock levels, assessment	0.085	0.093	0.019	0.008	-0.129	<b>-0.169</b>	-0.052	0.124	0.163
Stock levels, change previous month compared to same month of previous year	-0.200	-0.060	-0.040	0.103	0.091	<b>0.284</b>	0.287	<b>0.432</b>	0.361
Turnover total, change past 3 months	0.052	0.122	0.155	0.221	0.284	0.356	<b>0.429</b>	0.259	0.092
Turnover total, expected change next 3 months	-0.076	-0.153	0.051	0.053	<b>0.310</b>	0.218	0.298	0.129	0.134
Volume of sales, change past 3 months	-0.172	0.005	0.025	0.098	0.185	<b>0.331</b>	0.249	0.178	0.106

## 3.2 Analysis on Monthly Frequency

### 3.2.1 Retail Trade Turnover

Table 24: Cross-correlations with monthly nominal retail trade turnover yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.235	0.342	0.418	0.448	0.448	<b>0.598</b>	0.485	0.495	0.434
Business situation, change past 3 months	0.445	0.521	0.552	0.520	0.519	<b>0.677</b>	0.548	0.544	0.478
Business situation, expected change next 6 months	0.051	0.062	0.186	0.266	<b>0.285</b>	0.235	0.248	0.272	0.180
Customer frequency, change previous month compared to same month of previous year	0.165	0.231	0.326	0.340	0.280	<b>0.582</b>	0.367	0.398	0.300
Number of employees, assessment	-0.160	-0.275	-0.349	-0.431	-0.484	<b>-0.612</b>	-0.464	-0.469	-0.428
Number of employees, expected change next 3 months	0.134	0.148	0.236	0.268	0.332	0.410	0.367	0.400	<b>0.433</b>
Profit situation, change past 3 months	0.194	0.257	0.351	0.440	0.410	0.561	0.551	<b>0.595</b>	0.452
Purchases/orders, expected change next 3 months	0.027	0.053	0.176	0.300	0.330	0.329	0.327	<b>0.390</b>	0.369
Sales prices, expected change next 3 months	0.265	0.326	0.336	0.380	0.389	<b>0.400</b>	0.307	0.289	0.260
Stock levels, assessment	-0.051	-0.141	-0.222	-0.327	-0.299	<b>-0.497</b>	-0.383	-0.395	-0.319
Stock levels, change previous month compared to same month of previous year	0.183	0.223	0.167	0.191	0.174	0.198	0.252	0.274	<b>0.341</b>
Turnover total, change past 3 months	0.392	0.248	0.403	0.401	0.370	0.349	0.433	<b>0.434</b>	0.400
Turnover total, expected change next 3 months	0.176	0.219	0.301	0.329	0.388	<b>0.481</b>	0.394	0.407	0.428
Volume of sales, change past 3 months	0.093	0.165	0.297	0.359	0.348	<b>0.573</b>	0.464	0.449	0.350

Table 25: Cross-correlations with monthly real retail trade turnover yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.132	0.200	0.254	0.256	0.238	<b>0.378</b>	0.277	0.298	0.241
Business situation, change past 3 months	0.192	0.228	0.260	0.193	0.199	<b>0.394</b>	0.266	0.287	0.238
Business situation, expected change next 6 months	-0.174	<b>-0.180</b>	-0.071	-0.013	0.000	-0.031	-0.033	-0.011	-0.080
Customer frequency, change previous month compared to same month of previous year	0.087	0.113	0.204	0.191	0.133	<b>0.428</b>	0.245	0.284	0.182
Number of employees, assessment	-0.236	-0.300	-0.361	-0.422	-0.468	<b>-0.585</b>	-0.444	-0.456	-0.414
Number of employees, expected change next 3 months	0.309	0.296	0.369	0.378	0.430	<b>0.498</b>	0.443	0.469	0.485
Profit situation, change past 3 months	0.074	0.101	0.174	0.235	0.195	0.335	0.320	<b>0.360</b>	0.254
Purchases/orders, expected change next 3 months	-0.105	-0.107	-0.003	0.093	0.117	0.137	0.129	<b>0.185</b>	0.177
Sales prices, expected change next 3 months	-0.033	-0.006	-0.002	0.045	0.072	<b>0.101</b>	0.025	0.028	0.011
Stock levels, assessment	-0.001	-0.058	-0.142	-0.247	-0.224	<b>-0.427</b>	-0.342	-0.373	-0.324
Stock levels, change previous month compared to same month of previous year	0.325	<b>0.355</b>	0.275	0.272	0.224	0.213	0.243	0.251	0.304
Turnover total, change past 3 months	0.181	-0.028	0.172	0.142	0.112	0.077	<b>0.211</b>	0.207	0.174
Turnover total, expected change next 3 months	0.068	0.072	0.133	0.145	0.191	<b>0.283</b>	0.184	0.214	0.232
Volume of sales, change past 3 months	0.014	0.032	0.148	0.173	0.144	<b>0.367</b>	0.277	0.278	0.189

### 3.2.2 Consumer Price Index

Table 26: Cross-correlations with monthly consumer price index yoy

	-4	-3	-2	-1	0	1	2	3	4
Business situation, assessment	0.534	0.565	0.583	0.601	<b>0.619</b>	0.598	0.576	0.557	0.531
Business situation, change past 3 months	0.733	0.790	0.825	<b>0.859</b>	0.855	0.847	0.803	0.753	0.711
Business situation, expected change next 6 months	0.593	0.638	0.668	<b>0.677</b>	0.650	0.558	0.474	0.402	0.328
Customer frequency, change previous month compared to same month of previous year	0.406	0.436	0.459	0.480	<b>0.485</b>	0.434	0.414	0.396	0.374
Number of employees, assessment	-0.265	-0.323	-0.382	-0.411	<b>-0.439</b>	-0.430	-0.395	-0.357	-0.342
Number of employees, expected change next 3 months	0.104	0.172	0.239	0.297	0.346	0.364	0.391	0.396	<b>0.401</b>
Profit situation, change past 3 months	0.581	0.640	0.668	0.701	<b>0.711</b>	0.692	0.652	0.592	0.499
Purchases/orders, expected change next 3 months	0.444	0.501	0.542	<b>0.579</b>	0.573	0.508	0.462	0.436	0.415
Sales prices, expected change next 3 months	0.726	<b>0.734</b>	0.720	0.672	0.633	0.578	0.515	0.448	0.391
Stock levels, assessment	-0.249	<b>-0.256</b>	-0.227	-0.210	-0.186	-0.115	-0.015	0.066	0.115
Stock levels, change previous month compared to same month of previous year	0.067	0.108	0.155	0.200	0.256	0.335	0.399	0.446	<b>0.466</b>
Turnover total, change past 3 months	0.659	0.701	0.707	<b>0.735</b>	0.716	0.707	0.647	0.599	0.566
Turnover total, expected change next 3 months	0.514	0.564	0.616	0.634	<b>0.661</b>	0.616	0.581	0.527	0.489
Volume of sales, change past 3 months	0.482	0.519	0.532	0.578	<b>0.596</b>	0.568	0.533	0.509	0.461

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